

AGRICULTURAL PRODUCTION IN SIX  
SELECTED QASBAS OF EASTERN RAJASTHAN  
(c.1700-1780)

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## ABSTRACT

This study is an attempt to examine agrarian production in eighteenth century eastern Rajasthan at two levels. First, we attempt to establish the chronology of the trends in major indices of agricultural production using the annual revenue records of six representative qasbas or townships. The wealth of varied data available in the revenue and related records of the eighteenth century Jaipur state made it possible to estimate trends in the size of the agricultural product, the variations in cropping patterns and the secular movements of foodgrain prices. Second, a primary concern of the thesis has been to locate the secular trends in production within the context of the interaction between the state and the agrarian production system.

A discussion of the environmental context of agriculture in the region leads to an analysis of the logic of the system of taxation that these realities predicated. The complexities of the functioning of the socio-economic system have been analysed by an examination of the mechanism of redistribution of the surplus, the marketing of foodgrains and the provision of rural credit that underpinned the agrarian production system. We argue that the policies of the state in these spheres were interlocked elements of a coherent agrarian policy that sought to actively promote private investment and raise productivity in agriculture. The effective implementation of the policy however was crucially dependent upon the ability of the state to maintain effective control over each element. The analysis of the changing interaction between the state and rural society in a phase of agrarian expansion and a period of recession provides a perspective on the nature of the linkage between political stability and agrarian production and the impetus towards institutional changes in the mechanism of revenue collection during the eighteenth century.

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**LIST OF ABBREVIATIONS**

CEHI	Cambridge Economic History of India, Vol.I.
IESHR	Indian Economic and Social History Review.
PIHC	Proceedings of the Indian History Congress.
RSAB	Rajasthan State Archives, Bikaner.
VS	Vikrami Samvat.

## Chapter I

### INTRODUCTION

#### The State and the Agrarian Economy in Pre-Colonial India

The publication of Irfan Habib's *Agrarian System of the Mughal Empire* in 1963 added immensely to our understanding of the pre-colonial state and economy. The image of the Mughal empire presented by Habib was of a highly centralised state that extracted a large proportion of the peasant surplus through an elaborate system of revenue taxation which was increasingly paid in cash. The redistribution of these revenues came to be the principal mode of securing the military might of the empire and the loyalty of its political agents. The bulk of the resources of the empire were distributed among the nobles or mansabdars through transferable assignments of the revenues of designated areas, or jagirs, in proportion to their status and their military contingents. A subordinate share of the land revenue accrued to the hereditary holders of local rural power, collectively termed the zamindars, whose participation in the system was essential to facilitate the process of revenue collection from the peasantry. The system that evolved was riven by the conflict of interest between the state, the jagirdars, the rural aristocracy and the peasantry over the appropriation and redistribution of the agrarian surplus. These conflicts could be contained as long as the administrative machinery operated an elaborate system of "checks and balances" but Mughal decline was inevitable due to the inherent contradictions within the system. The frequent transfer of jagirs exacerbated the tendency towards the over-exploitation of the peasantry and, by the



latter half of the seventeenth century, the increasing rural impoverishment resulted in their flight from land, a fall in cultivation and recurrent famines, culminating finally in armed resistance by the peasantry and the zamindars.<sup>1</sup>

This view of the decline of the Mughal empire was challenged by a number of historians who argued that the collapse of the system was not inherent to its functioning but was causally linked to the political events in the late seventeenth century. They argued that it was the expansion of the empire southwards and its failure to respond effectively to the challenge of the Marathas which sapped the resources of the empire and intensified factional conflict in court culminating in the establishment of independent principalities by ambitious Mughal nobles.<sup>2</sup> While these interpretations of Mughal decline deepened our understanding of the political processes set in motion by the expansion of the empire, they implicitly accepted the view of the Mughal state and economy presented by Habib.<sup>3</sup>

The distinct elements of Habib's characterisation of the Mughal economy were the predominance of peasant production and the appropriation of the bulk of the peasants' produce, over and above subsistence requirements, in the form of land revenue by the ruling classes. The structure of revenue taxation was regressive and enhanced peasant stratification but, in the long-run, the pressure for increasing revenue demand accentuated the levelling tendency of the revenue system by subverting "superior" cultivation.<sup>4</sup> The need to pay a heavy land revenue in cash provided the primary impetus to market an increasing proportion of the agricultural produce but at the same time left the peasantry with little incentive and meagre resources to invest in increasing productivity. This form of "forced commercialisation" accounted for the expansion in commodity production and the

considerable accumulation of merchant capital in the seventeenth century.<sup>5</sup> However, the entire commercial structure was essentially geared towards the provisioning of military retinues, fostering specialised artisan production and towards meeting the culturally specific needs of the Mughal nobility.<sup>6</sup> The expansion in trade and urbanisation in the Mughal period was therefore crucially linked to the economic fortunes of a small ruling elite whose political eclipse in the eighteenth century signalled a period of general economic decline and anarchy.<sup>7</sup>

Subsequent studies drawing on rich regional archival sources of the eighteenth century states have come to question some of Habib's formulations. Much of this work was based on extensive documentation at the village level for eastern Rajasthan and Maharashtra. Satish Chandra and Dilbagh Singh showed the existence of a highly stratified village society with a significant stratum of "rich peasants" whose economic prosperity derived from concessionary taxation and participation in diverse economic spheres that included the production of valuable cash crops for the market, grain trading, moneylending and the lease of agricultural implements.<sup>8</sup> The indices of general trends in agricultural production in Rajasthan and Maharashtra also indicated that after the general crisis at the turn of the eighteenth century, the agrarian economy expanded in the next half century.<sup>9</sup> Moreover, B.R.Grover's investigation of rural commerce in north India also indicated that rural commercial transactions at the level of the small towns or gasbas retained their vitality between the seventeenth and eighteenth century.<sup>10</sup> Increasingly, historians came to question the model of the Mughal economy presented by Habib and to examine more closely the notion of irreversible decline and anarchy in the eighteenth century.

Recent research on the social and economic history of late pre-colonial India has sought to analyse and integrate the broader processes of economic change and state formation in the eighteenth century. Frank Perlin sees the extensive monetisation of the rural economy of the western Deccan as part of a larger process of economic development located in the growth of extensive peasant agriculture, population and monetisation from the sixteenth century onwards. He argues that by the mid-eighteenth century all transactions and rights to resources began to be expressed in monetary values. The new states that emerged in this period used the same "library of categories, terms and techniques", which were flexible enough to adapt to local conditions, to draw and redistribute the agrarian surplus among powerful families with a dispersed rural base. Such a localisation of power and wealth stimulated the growth of "rurban" economies which linked the local exchanges incorporating the bulk of rural inhabitants with wider regional and "world economies".<sup>11</sup> The principal contribution of Perlin's writings has been to systematically integrate the pre-colonial rural countryside with the wider society and to reject the bipolar compartmentalisation of urban and rural, of market exchange confined to servicing a small urban elite and the supposedly "non-market" exchanges characterising a self-sufficient and self-reproducing autonomous peasantry. Although documentation on these linkages is available only for the eighteenth century regional states, the general thrust of Perlin's argument is that these features of the economy were not unique to the eighteenth century but had historically evolved in the preceding centuries during which the monetisation of the economy was as widespread as in the eighteenth century but of a different order. This view ties in with recent research which posits that the political fragmentation of the Mughal empire was the result of the expanding sphere of agrarian production and the growing prosperity of local landed elites in the late seventeenth

century.<sup>12</sup> However, like studies of the Mughal economy and probably for similar reasons of source limitations, Perlin's analysis fails to penetrate below the administrative tax structures and revenue rights to provide a sense of the system of agrarian production in pre-colonial western Deccan.

Over the past decade, the reinterpretations of the eighteenth century in Indian history have proposed hypotheses that attempt to draw together the broad processes linking the social and economic developments in India with the wider crisis of the Islamic empires and the contemporary expansion of European trade.<sup>13</sup> The emerging consensus of opinion with respect to the nature of the eighteenth century regimes is that the political fragmentation of the Mughal empire led to the evolution of successor states that exercised "a much deeper control over commerce and production than any of the regimes they had displaced".<sup>14</sup> The consolidation of regional states in the eighteenth century demanding regular cash revenue payments to meet the growing cost of warfare and maintain a "new, grandiose form of kingship" led to the growing commercialisation of state power and the formation of intermediate social classes between the state and agrarian society.<sup>15</sup> Merchants and traders who had earlier serviced the Mughal revenue system became politically more powerful and Bayly argues that the eighteenth century saw the development of a unified merchant class across the sub-continent. State patronage encouraged the consolidation of another intermediate group, the "service gentry", who combined landownership and privileged rights with military and administrative expertise in the field of revenue management. It was these intermediate social groups between the state and agrarian society that bought rights to farm the revenue in the successor states of Awadh, the Maratha kingdoms, Bengal and Hyderabad.

The consolidation of new social groups and increased social differentiation and vertical mobility can be said to have been the characteristic features of the eighteenth century.<sup>16</sup> Bayly attempts to relate the regional variations in economic growth and decline and the formation of social classes by emphasising the linkages between ecology, agricultural prosperity, political stability and social developments. He argues that it was only in the relatively stable areas of "natural" surplus, such as Benaras and Awadh, marked by sustained agricultural prosperity, the persistence of long-distance trade and relative political stability that the intermediate groups were able to consolidate their position while in the agriculturally unstable areas, the vicissitudes of state patronage and the fragility of agriculture inhibited their emergence.<sup>17</sup>

In what way did the fragmentation of state power and the changing nature of political incorporation and social formation located in the eighteenth century reflect changes in the deeper levels of the economy and agrarian production? David Washbrook and Burton Stein have argued that the imperatives of "military fiscalism" significantly altered the relationship between the state and the economy.<sup>18</sup> In the drive to extract a larger share of the social product, "community" institutions were eroded while at the same time the new instruments of bureaucracy and fiscal control placed the mercantile and scribal groups in positions of power. The centralisation of state power was reversed by the mid-eighteenth century when the new regimes began to farm out their revenues. Washbrook has argued that revenue farming led to the accumulation of de facto private property rights by the new social groups. These property rights were highly significant for the development of capitalism as they provided "increased security to invest capital in production, especially for commercial purposes, and increased command over producers and the

methods of production".<sup>19</sup> Thus the erosion of the "mutualities between surplus appropriation and surplus production and between privilege and responsibility" that had governed resource distribution by erstwhile "community" institutions led increasingly to the subordination of labour and production to the imperatives of commerce.

The above hypothesis provides useful insights to the general processes of change in the eighteenth century, particularly in the changing nature of state power and its relationship with the rural economy. It is chiefly in respect of the efficiency of revenue extraction and in the systematisation of the institutions geared to that purpose that the early eighteenth century regimes distinguish themselves from the Mughal state. In defining the relationship between the state and the agrarian economy, Washbrook captures the essential dynamic of agricultural production in the pre-colonial period by stressing the mutuality in production and revenue appropriation. The mobility of labour and capital and the need to attract and retain producers enforced state patronage and served to check against the process of progressive immiserisation proposed by Habib.

However, certain propositions in Washbrook's arguments relating to the changes in the eighteenth century that signalled the development of capitalism seem to rest on dubious premises. Can one really equate peasant mobility with the existence of a "labour market" in a land surplus economy where the primary producers were forced to migrate in response to subsistence crises? Equally, peasant entrepreneurs who migrated to take advantage of favourable opportunities cannot be considered symptomatic of the development of a labour market. The frequency of references in our sources to non-resident or "pahi" cultivators emphasises the fluidity of labour

and agricultural production in the relatively under-populated economy of pre-colonial north India. The ubiquitous presence of pahis could be treated as equivalent to a demand for labour and a sign that "agrarian managers" were willing to finance rural development through the grant of surplus land, working capital and perhaps more permanent overheads such as irrigational facilities. These features could be interpreted as a sign of capitalistic development. However, we cannot determine whether the impetus behind cultivation by pahis was a result of push or of pull factors. Migrants may be responding to adverse climatic or political situations in adjoining regions or, equally, to favourable conditions and the patronage offered by the Jaipur state.

It is on the question of the spread of revenue farming and its implications for the relationship between revenue farmers, peasant producers and agricultural production that Washbrook's argument appears least convincing. There is little empirical basis for the proposition that there had been an intrinsic change in the organisation and conditions of agricultural production by the mid-eighteenth century which attracted and empowered revenue farmers to subordinate labour and to take control over the production process in preparation for the increased investment and expansion in production envisaged by these new holders of "private" property rights. While there is considerable debate about the deleterious consequences or otherwise of the farming of revenue on the agrarian economy, the rationale for its widespread adoption around the mid-eighteenth century in regions as diverse as Awadh, the Maratha domains and Rajasthan remain obscure. It is not an adequate explanation, as Washbrook suggests, to attribute the spread of revenue farming to the "weakness" of the state. It is clear that the immediate cause for the farming of revenue was financial pressure on the resources of the emergent

regimes. While various factors external to the agrarian economy may be said to have contributed to intensified fiscal pressure – such as the stoppage in bullion imports by the East India Company, the change in military technology or the payment of large war indemnities – the process whereby fiscal pressure was translated into a fundamental change in these states' management of their resources remains unclear. To do this we need to develop a clearer understanding of the logic and functioning of the agrarian system prior to its subversion to the relative ad-hocism of revenue farming. It is this understanding which would enable us to trace the processes whereby the former system of taxation became inoperable and yielded to that time-tested alternative in Islamic taxation – the farming of revenue.

#### Organisation of the Thesis

The larger questions concerning the nature of political control and social formation in eighteenth century regimes inform our study to the extent that the structure and organisation of agrarian production was moulded by and responded to wider socioeconomic changes. The aim of our study is to relate the trends in the quantitative indices of agricultural production in the suburbs of six qasbas in eastern Rajasthan to changes in the agrarian economy in the region during the eighteenth century. The qasbas selected formed part of the emergent state of Jaipur that consolidated itself in the wake of the Mughal decline in the eighteenth century. Qasbas have generally been defined in terms which seek to distinguish them from readily identifiable and distinctive units such as villages and cities and which also emphasise their intermediate status between the wholly rural and the uniquely urban. Thus terms such as "rurban", "nuclear" urban, township and town convey that the qasbas shared certain urban features with the city or "shahr" such as



a fixed market, a concentration of non-agricultural population, military garrisons and forts and administrative functions.<sup>20</sup> Within the rural-urban continuum, the basis for the classification of an urban centre as a qasba rather than a shahr derived primarily from the extent of its administrative jurisdiction. The administrative hierarchy as defined in the *Ain-i-Akbari* consisted of the successive grouping of territorial units from the "mauza" (village) to the "tappa", "pargana", "sarkar" (district) and "suba" (province). The administrative headquarters of larger units such as the sarkar and suba were termed shahr while those of lower administrative units - the parganas and tappas - were termed qasbas. The size and prosperity of urban centres in the pre-colonial period were to a large extent dependent upon external factors such as shifts in political power and trade routes. Hence the gradation in the degree of 'urban-ness' implied in the original classification of shahr and qasba in the *Ain-i-Akbari* became distorted in later periods due to the uneven pace of growth of urban centres. This is evident in a comparison of the relative political and economic importance in the eighteenth century of Jodhpur, a sarkar headquarters and therefore a shahr and Jaipur, which continued to be labelled a qasba.

The selection of six qasbas for the analysis of agricultural production was essentially based on considerations of data consistency which sought to overcome the methodological problems of earlier studies. The trends in rates of taxation, prices of foodgrains and cropping patterns have been compiled from the annual revenue returns maintained for the directly administered or "khalisa" lands. Such revenue abstracts recorded details pertaining to production and taxation at the level of the primary fiscal units - the village or qasba - and aggregations of these corresponding to the administrative boundaries of the pargana. The basic problem

that earlier studies encountered in using pargana level figures was that the number of villages included in the aggregate revenue statistics changed constantly from season to season due to changes in pargana boundaries and the transfer of village revenues outside of khalisa administration.<sup>21</sup> Hence in any analysis using aggregate annual revenue returns as an index of long-term trends in production, it was difficult to isolate changes that were purely the result of administrative reorganisation from those that were representative of secular trends in patterns of production. The database for individual villages was similarly vitiated, and it had the added disadvantage that the range of crops grown was limited.

Crop production in the hinterland of the established qasbas, on the other hand, provided conveniently large units for analysis and, unlike parganas, their boundaries remained constant. Further, the importance of administrative control over the major qasbas in order to co-ordinate the efficient extraction of revenue from the pargana meant that they were almost invariably under direct administration or khalisa. Hence the continuity in the annual revenue series of the qasbas is broken only for years where the records have not survived. In the interpretation of the trends derived from revenue data of the qasbas, however, it was necessary to examine the extent to which the locational advantages of the qasbas influenced their cropping pattern and therefore how representative our analysis was with respect to trends for the region as a whole. On the other hand, the greater access enjoyed by the qasba agriculturists to the local produce market and credit sources meant that the agricultural statistics of the qasbas provided a sensitive indicator of economic change.

The methodology adopted to assess the production trends in the qasbas selected was to separately examine the changes in three component elements that together accounted for annual variations in the revenue obtained. The coexistence of two disparate modes of revenue appropriation meant that the relevant revenue information recorded for cash assessed crops was not comparable to that recorded for foodgrain production. The data recorded for the crops assessed in cash per unit of land by the mode commonly known as the "zabti" method, included details of annual crop acreage, the rate of taxation per unit of land and the total revenue obtained for each crop. The statistics associated with the crop-sharing form of assessment, the "batai" or "jinsi" mode, were the quantity of crop collected in revenue, its sale price and the total revenue obtained. Hence each mode of taxation required the recording of three interlinked elements: namely, a physical measure of production (acreage cultivated or grain produced), a conversion code to assign the state's share of the produce a monetary value (a crop-specific tax rate per unit of land or crop price), and lastly the total revenue obtained. Our major problem with this form of record-keeping is that although we are primarily interested in the changes in the physical measures which act as a proxy for trends in production, these cannot be compared across the two disparate modes of revenue taxation.

Recent studies of the agrarian economy of eastern Rajasthan using similar revenue records have relied solely upon the revenue obtained from each crop as the common basis for studying intra-crop, inter-harvest and annual trends. However, the validity of this method as a measure of production trends is limited. This is because variations in aggregate revenue returns could be caused by actual changes in production - either in terms of a change in the crop-mix or an expansion in production or in the productivity of land - or could equally be caused by changes

in the codes through which production was translated into disposable income – that is, in the prevailing prices or rates of taxation. Hence, as the revenue collected for each crop provides the only element common to all crops, this has been used in the thesis as the basis for comparison after isolating the possible distortions caused by coterminous changes in revenue rates and prices. We have therefore analysed in turn the trends in revenue rates (Chapter VI), foodgrain prices (Chapter VII) and acreage cultivated and quantities produced (Chapter VIII) to inform and deepen our understanding of the overall trends in agricultural production in the six qasbas.

We have attempted to set the investigation of the trends in agricultural production against the background of the changes in the agrarian economy of the region in the eighteenth century in order to better understand and identify the significance of the shifts in agricultural production discernible in the statistical series. We begin in Chapter II by identifying the constraints on agricultural production in a dry farming region prone to frequent droughts, a variable rainfall pattern and a relatively low population density. In such an environment it was not ownership of land but the possession of draught animals that was an essential prerequisite to cultivation. Cattle were particularly vulnerable to the recurrence of drought which severely restricted the ability of settled farmers to breed and maintain them. The precariousness of the principal components of the physical resource base, namely rainfall and animal power, meant that agricultural production in the region was characterised by wide fluctuations from year to year. The crop-mix was dominated by food crops capable of withstanding water-stress such as millets and barley. However, the low natural fertility of the soil could be offset by investment in various types of irrigation methods ranging from costly brick-lined wells to simple water-lifting devices. In the absence of perennial rivers, the

effective utilisation of ground water was crucial for stabilising production and making possible the cultivation of a wide array of crops. In particular, the rabi or winter harvest and the cultivation of high value crops such as sugarcane, indigo and cotton in the kharif harvest were wholly dependent on artificial irrigation. The expansion or intensification of agricultural production therefore required the investment of resources in the construction of wells.

In the long-run however agricultural production was not simply a function of the availability of water. In a period characterised by the mobility of labour and capital, trends in production were underpinned by a complex interaction between demography, the distribution of resources and access to markets. These factors in turn were influenced by political conditions and the patronage and protection offered by states eager to expand their revenue base. The state played a vital role in the management and distribution of resources and agricultural productivity was closely linked to policies which served to attract and retain labour, encourage investment and promote trade. Chapters III to V examine the role of the state in the agrarian production system exercised through the regulation of the social distribution of resources in rural society, the regulation of rural credit and through the mechanism of its control over the marketing of foodgrains. Changes in the nature of state control between the first and second half of the eighteenth century provide an insight into the nature and dynamics of agrarian production and the impact of political and economic change on agricultural productivity.

It is partly due to the limitation of our sources and their overriding concern with revenue transactions that the relations between state and society figure so prominently in our discussion of the agrarian economy. More importantly,

however, one of the primary concerns of the study is to seek to understand the relationship between state action and agrarian productivity. It is on this question that historians offer diverse and contradictory opinions. Habib argues that a 'strong' state stifled normal commercialisation and productive investment in agriculture; and the corollary to this hypothesis echoed in recent re-interpretations of the eighteenth century suggests that it was only in the context of a 'weak' state that an incipient development of capitalist enterprise under the aegis of private entrepreneurs became possible. A resolution of the contradictions between these approaches requires a dynamic view of the nexus of state and society. The lack of correspondence between the empirical evidence and theorisation and the contradictions between these approaches indicates that the little understood linkages between broader economic developments, state forms and the dynamics of peasant production remain subjects for historical investigation.

### Sources

The primary sources consulted are from the Daftar Diwan Hazuri collection of the Jaipur Records, located in the Rajasthan State Archives, Bikaner. The abundance of documentation on land taxation for a variety of eighteenth century regimes is in itself indicative of a fundamental dimension of state formation in this period. The records of the Jaipur state are unique in that we have for the first time detailed information on local conditions as well as numerical data that permits analysis of a kind that is not possible for earlier periods thus marking a new stage in the historiography of rural India. In addition to the range of quantitative information that the revenue records provide, the logic of their organisation gives us an indication of the operational factors of the agrarian production system.

However, the sheer volume of documentation and the fact that it is so scattered necessitates some form of selection that aims to focus on certain aspects of the rural order within defined geographical limits. With regard to quality and accessibility, the documents range from the virtually uncatalogued but extremely informative collections of "chittis" or letters, to the systematically arranged series of annual revenue records. The sources used in this study can be broadly classified into four categories, namely, a) fiscal records, b) taxation schedules, c) censuses and surveys, and d) official correspondence.

A: Fiscal Records:

The data for the statistical series analysed was obtained from the annual account of income and expenditure of a pargana. The annual statement termed the arhsatta mujmil was compiled from a variety of notations some of which, such as the roznamchas or roznamas, were daily running accounts while others, such as the dastur amals remained unchanged over many years. Of the broad spectrum of documents that we have categorised under fiscal records, the arhsattas are the most informative and well catalogued. Apart from the arhsattas, few of the other records have survived and it is only by examining their function and their relationship with the final statement of annual accounts that we can fully appreciate the valuable corroborative and supplementary information that they provide.

An estimate or taqmina of the agricultural revenue for the season was drawn up in the period between the sowing and harvesting of the crop. The taqmina contained an estimate of the area sown with each crop in each revenue unit in the pargana. Depending upon the customary mode of assessment prevailing, the revenue obtainable was calculated by applying cash rates per unit of land for crops

assessed in cash and in the case of foodgrains assessed in kind, the revenue share and its market value were gauged by estimating the average yield and the price of sale. The taqminas therefore provide the only source of information on foodgrain acreage and yields. It is uncertain, however, how reliable these estimates were and in particular if the average yields were based on scientific measurements. Few of these documents have survived and a comparison of the acreages recorded for cash assessed crops in the taqmina of pargana Lalsot for the kharif harvest of VS 1788/AD 1731 with that of the arhsatta of the same year shows that the taqmina figures were underestimated by thirty to forty per cent. As the zabti acreage figures are found to be inaccurate in the taqmina records, the acreage estimates for jinsi crops cannot be relied upon absolutely and can at best provide approximations of relative acreage.

The compilation of the actual revenue demand began with a detailed assessment of the individual liability of each tax payer which was noted in the khasra. Of the khasras examined, only one was considered suitable for analysis. The majority of the khasras had either a few pages missing or were specimens from the early nineteenth century. Generally, the khasras do not record the name of the pargana within which the village lay and hence it was not possible to locate the revenue records of the village and compare the total revenue recorded in the khasra with that recorded in the arhsatta of the same harvest and year.

Based upon the figures in the khasras, the revenue demand was computed by applying the appropriate cash rates per unit of land in accordance with the revenue schedules or dastur amals for crops assessed in cash. In the case of crops assessed in-kind, the khasra recorded the state's share of the revenue after the division of



the crop. Details of the sale of the grain were noted in the daily accounts or roznamchas maintained by the pargana treasurer. The roznamcha records consist of five types of notations: i) daily receipts and expenditure incurred from the pargana treasury and the cash balance (roznamcha potadar), ii) the rate of discount on bills of exchange or hundis (roznamcha hundawani), iii) bazar prices of foodgrains, articles of mass consumption such as coarse cloth, "ghi" and "gur" and the exchange rate for gold, silver and copper coins (roznamcha nirakh bazar), iv) an account of the contracted sale of the state's revenue collected in grain (roznamcha satti) on which was recorded the names of the purchasers, the day of the contract, the price agreed and the quantity of grain sold to each buyer, v) fines imposed for thefts, misdemeanours, fraud and other offences (roznamcha farohi). In parganas where the Jaipur raja was also the local zamindar or bhomia, a separate roznamcha bhomi was also compiled. Separate daily accounts were also maintained for sources of non-agricultural income such as the roznamcha chabutra kotwali. These roznamchas were the daily records of taxes realised on the transit, sale and purchase of commodities at the chabutra kotwali or custom house and police station in the qasba. The detailed income statement is followed by an account of administrative expenses and charitable donations and the final balance.

The finer detail contained in records such as the khasras and roznamchas is lost in the summary statements compiled monthly, the goshwaras, or seasonally and annually such as the jamabandhis and arhsattas. The latter two records appear to have been routinely compiled on a six-monthly basis, the months from early September (Bhadon sudi 3) to early March (Phagun sudi 3) comprising the kharif harvest and the following six months the rabi harvest, and a combined or mujmil statement produced annually. Generally, the jamabandhis provide a greater level of

detail than the arhsattas on aspects like the varying rates of taxation, the gradation in the state's share of the grain heap depending upon the social status of the tax payer and on the manner in which the variety of additional levies imposed to defray the costs of revenue collection and supervision were calculated. The jamabandhis are thought to be statements of assessed land revenue prior to collection while the arhsattas recorded the actual revenue collected. However, a comparison of the two types of records for the 1727 rabi harvest in pargana Phagi shows that the total revenue figures and their disaggregation by crop-type for each revenue unit are identical. Further, the jamabandhis also record the date and price of sale of revenue collected in kind and cannot strictly, therefore, be statements of anticipated or assessed revenue. The difference in the two records appears to be that the arhsattas contain summations of revenue obtained from agricultural as well as non-agricultural sources, or sawai jamabandhi revenue, while the jamabandhi documents record only agricultural revenue. We have therefore used the revenue information in the jamabandhi documents where available to supplement the arhsattas records, particularly for years where the arhsattas are not available.

The logic of the tax system therefore necessitated a very precise form of data collection and monitoring of agricultural production. Although the revenue records provide us with a unique source of quantitative data on vital aspects of the agrarian economy they contain little or no information on related subjects such as population, crop yields, size of holdings, peasant marketing or local trade. The lack of data on such important factors of supply and demand preclude the possibility of a total investigation of the conditions and trends in agrarian production. Further, the source is discontinuous. The availability of the most complete series of records determined the choice of the qasbas to be analysed and defined the limits of the

period of study. For the six qasbas selected, reasonably complete series were available from 1710 to 1770. The arhsattas were generally organised around the fiscal year corresponding to a twelve month period beginning in early September. The convention we have adopted in the thesis for the conversion of the fiscal year to its equivalent in the Christian era is to cite the year in which the fiscal year began – hence we refer to the year 1721 rather than the more accurate 1721/22 to denote the fiscal year VS 1778.

#### B: Taxation Schedules

The second category of documents used are dastur-ul-amals, or official schedules of rates of taxation on agricultural production and trade and commercial activity. The dasturs pertaining to agricultural taxation clarify the principles of agrarian taxation and serve to establish to what degree the official rates were actually implemented by cross-checking with the annual revenue records. The dasturs on the sale and purchase of commodities at the qasba, the periodic village market (hat) and fairs as well as the transit duties on goods transported within and outside the region are equally detailed. The latter afford an insight into the types of goods traded, the categories of traders classified according to their scale of operations and residential status, and the types of carriages used to transport goods. However, till such time as source material on actual taxation of trading and commercial activity, such as the roznamcha chabutra kotwalis mentioned above, are found in sufficiently long series the analytical value of the related taxation schedules is limited.

#### C: Censuses and Surveys

In this category are included the documents termed yaddashtis or haqiqatis

which appear to have been a record of specially commissioned surveys rather than data routinely collected. Although very few of these documents have been located, they provide important information on a variety of subjects such as lists of deserted villages in a pargana, the amounts paid to the revenue staff in each village of a pargana, a listing of revenue arrears and agricultural loans outstanding against individual taxpayers. The most fascinating of such documents are the censuses of cattle owned by each cultivator in a pargana. Such cattle censuses were commissioned to aid in the resettlement of areas that had been depopulated or to assess the productive potential of an area that had been recently transferred to the Jaipur raja. By providing a measure of the variation in the ownership of a vital asset, these records lend themselves to a quantitative examination of questions such as peasant differentiation. The yaddashtis also record the reasons for the increase or decrease in the number of cultivating families in each village surveyed over the past year and thereby enable us to form an estimate of a vital feature of pre-colonial agricultural production – namely, the extent of peasant mobility. Six such cattle censuses have been analysed and these constitute the entire data that could be located for our period and region.

#### D: Official Reports and Correspondence:

The last category of sources, which we have classified as official reports and correspondence, include the arzashts, amber records, parwanas, sanads and the collections of chittis. The arzashts and amber records provide information of a more general nature relating to events of importance at the district or regional level brought to the attention of the raja and his instructions in response. The arzashts are, in essence, minutes of proceedings at the darbar. Parwanas on the other hand contained the raja's directives addressed to individual state functionaries while a

"sanad" was issued by the diwan and listed the entitlements of the addressee, generally a jagirdar.

By far the most numerous and informative source documents are the chittis which record the correspondence between the diwans, the chief administrative and revenue officials of the state, and the subordinate officials at the pargana, particularly the amil. Each chitti contains the substance of the complaint, request or report received by the diwan from various officials or individuals which is followed by his instructions on the matter. Although the majority of chittis are concerned with the minutiae of local administration that are of limited historical interest, amongst the thousands of such letters that have survived are also a select few that provide a rare insight into rural life. Such chittis form an invaluable source as they enable us to grasp the structure of rural relationships through their emphasis on events or developments that deviated from the norm, were exceptional or had led to conflict. The official response to such situations contained in the diwan's reply are a commentary on the aims and policies of the state and the functioning of the system on the ground. Important as these documents are, a comprehensive survey of the chittis by theme, period or geographical location is not possible as they have not been catalogued systematically. Originally, the chittis pertaining to a particular pargana appear to have been chronologically arranged and each years records formed one loose-leaf bundle. Several hundred of such bundles have survived, each containing on average two to three hundred documents, but the original sequence has been disturbed and most bundles contain a mix of various types of documents from different years and parganas. We have therefore compiled a running index of the chittis, sanads and parwanas, amber records and arzdashts that were selected and microfilmed from various bundles and record collections.

A large number of terms in our documents are adapted forms of Persian terms. In the transliteration of these and other Rajasthani words we have, in general, followed the spelling in the original documents without formal diacritical marks. On the first occurrence of an indigenous word in the thesis it has been enclosed within double quotation marks and subsequent references to it have not been highlighted in this way. Indigenous words used frequently in the thesis have been included in the glossary.

Notes to Chapter I: Introduction

1. Irfan Habib, Agrarian System of Mughal India (1556-1707) ( hereafter cited as Agrarian System ), pp.317-51. For a similar view of political conflict in late seventeenth century eastern Rajasthan see R.P.Rana, "Agrarian Revolts in Northern India during the Late 17th. and Early 18th. Century", IESHR, 17, nos. 3 & 4 (1981), pp.287-326.
2. S Chandra, Parties and Politics, Introduction; M Athar Ali, The Mughal Nobility under Aurangzeb; M.N.Pearson, "Shivaji and the Decline of the Mughal Empire", Journal Of Asian Studies, vol.XXXV, no.2 (1976), pp.221-35; J.F.Richards, "The Imperial Crisis in the Deccan", Journal of Asian Studies, vol.XXXV, no.2 (1976), pp.237-56.
3. Peter Hardy offers a brilliant critique in "Commentary and Critique", Journal of Asian Studies, vol.XXXV, no.2 (1976), pp.257-63.
4. Irfan Habib, "Potentialities of Capitalist Development in the Economy of Mughal India", Enquiry, N.S., vol.III, no.3 (1971), pp.65-90; CEHII, p.240.
5. Irfan Habib, "Processes of Accumulation in Pre-Colonial and Colonial India", Indian Historical Review, vol.XI, nos.1 & 2, pp.65-73; and Amit Bhaduri, "Class Relations and Commercialisation in Indian Agriculture", in K.N.Raj teal. eds, Essays on the Commercialisation of Indian Agriculture, pp.307-10.
6. Irfan Habib, Agrarian System, p.89.
7. For a similar view of the cause of the decline of foreign trade in the west coast in the early eighteenth century see Ashin Dasgupta, "Indian Merchants and the Trade in the Indian Ocean", CEHII, pp.407-433.
8. S Chandra, "Some Institutional Factors in Providing Capital Inputs for the Improvement and Extension of Cultivation in Medieval India", Indian Historical Review, vol.III, no.1 (1976), pp.83-98; Dilbagh Singh, "Role of Mahajans in the Rural Economy in Eastern Rajasthan during the 18th. Century", Social Scientist, vol.2, no.10 (1974), pp.360-66; idem, "Caste and the Structure of Village Society in Eastern Rajasthan during the Eighteenth Century", Indian Historical Review, vol.II, no.2 (1976), pp.299-311.
9. S.Nurul Hasan, K.N.Hasan and S P Gupta, "Pattern of Agricultural Production in the Territories of Amber (c.1650-1750)", PIHC, 1966, pp.244-64; Dilbagh Singh, "Local and Land Revenue Administration of the State of Jaipur (c.1750-1800" (hereafter cited as "Revenue Administration"), Ph.D. thesis [Delhi:1975], pp.92-145; Frank Perlin, "Of White Whale and Countrymen in the Eighteenth Century Maratha Deccan", Journal of Peasant Studies, vol.5 (1978), p.178.
10. B.R.Grover, "An Integrated Pattern of Commercial Life in the Rural Society of India during the 17th. and 18th. centuries", Indian Historical Records Commission, vol.XXXVII (1966), pp.137-140.
11. Frank Perlin, "Of White Whale and Countrymen", pp.172-237; idem, "Growth of Money Economy and Some Questions of Transition in Late Pre-Colonial

- India", JPS, 11, 3 (1984), pp.96-107; idem, "Money use in Late Pre-Colonial India and the International Trade in Currency Media", in J.F.Richards ed., The Imperial Monetary System of Mughal India, pp.232-373; idem, "Proto-Industrialisation and Pre-colonial South Asia", Past and Present, 98, Feb.1983, pp.30-95; idem, "State Formation Reconsidered", Modern Asian Studies, 19, 3 (1985), pp.415-480.
12. Andre Wink, Land and Sovereignty in India : Agrarian Society and Politics under the Eighteenth Century Maratha Svarajya, pp.32, 42-43, 318-319; Muzaffar Alam, The Crisis of Empire in Mughal North India: Awadh and the Punjab, 1707-1748, pp.6, 103-108, 132; C.A.Bayly, Rulers, Townsmen and Bazaars: North Indian Society in the Age of British Expansion 1770-1870 (hereafter cited as Rulers, Townsmen and Bazaars), pp.10-11.
  13. C.A.Bayly, "States and Empires 1760-1830", mimeo, Institute of Commonwealth Studies, London, 1987. Also see M Athar Ali, "The Passing of Empire: The Mughal Case", Modern Asian Studies, vol.9, no.3 (1975), pp.385-96 for an early attempt to relate these aspects.
  14. D.A.Washbrook, "Progress and Problems: South Asian Social and Economic History c.1720-1860", Modern Asian Studies, 22, 1 (1988), p.69; Satish Chandra, The Eighteenth Century in India: Its Economy and the Role of the Marathas, the Jats, the Sikhs and the Afghans, pp.6-7; C.A.Bayly, Rulers, Townsmen and Bazaars, pp.3-34.
  15. C.A.Bayly, Indian Society and the Making of the British Empire, New Cambridge History of India, II.1, p.25. C.A.Bayly defines commercialisation as "more than the slow use of money in the economy. It meant the use of objective monetary values to express social relationships". *ibid.*, p.11.
  16. C.A.Bayly, Rulers, Townsmen and Bazaars; Satish Chandra, The Eighteenth Century in India, *op.cit.*, p.11.
  17. C.A.Bayly, Rulers Townsmen and Bazaars, pp.74-109.
  18. Burton Stein and D.A.Washbrook, "Eighteenth Century India: Historiography, Perspectives and Propositions", mimeo, 1985.
  19. D.A.Washbrook, "Progress and Problems", *op.cit.*, p.71.
  20. Gavin R.G.Hambly, "Towns and Cities: Mughal India", CEHII, pp.442; For the population composition of artisan and menial castes in the qasba see S.P.Gupta, "Evidence of Urban Population and its Composition from 17th-18th Century Rajasthan", PIHC, 1976, pp.179-180. Each of the qasbas under study had a fort garrisoned by the troops of the Jaipur state.
  21. S.P.Gupta, Agrarian System of Eastern Rajasthan and Dilbagh Singh, "Revenue Administration", analyse the trends in agricultural production in six parganas of eastern Rajasthan for the periods c.1650-1700 and 1750-1800 respectively.



## Chapter II

### **THE SETTING**

A regional study of agricultural production must begin by placing the region within the context of its natural resource position. The natural endowments of a region, in association with the level and type of technology and patterns of economic exchange, set the broad parameters for such an analysis. It is in this context that a discussion of the topography, soils, availability of water, rivers, and climate of the region under study becomes pertinent.

The region under examination, comprising the six gasbas of Sawai Jaipur, Sanganer, Phagi, Lalsot, Chatsu and Malarna, lies within the modern districts of Jaipur and Sawai Madhopur in eastern Rajasthan. The region is bounded on the northwest by a chain of hills which form a natural boundary between the semi-arid area of the Shekhawati and the more fertile tracts of the core Jaipur territories. To the northeast, the region is demarcated from the Trans-Yamuna plains by the Uplands of Alwar, and to the east lies the Karauli Tableland, separated by a range of low hills marking the border. Westwards from Jaipur lie the Aravalli mountains and the southern boundary of the region is formed by the Banas river after it emerges from the hill ranges at Rajmahal and flows southeast to join the Chambal.<sup>1</sup>

Eastern Rajasthan is characterised by alluvial soils. The alluvial deposits are scanty towards the west where the plain is higher and more irregular due to scattered hills while in the south and east the alluvium increases.<sup>2</sup> To the north

and west of Jaipur, the soil is generally sandy but occasionally stiff clayey soil mixed with gravel or "kankar" is also found. Eastwards, along the Banganga river basin, the soil is rich firm loam becoming sandier but very productive in the area further east around Hindaun. Southwards from Jaipur the soil is rich and fertile especially along the Banas river.<sup>3</sup> The modern tehsils of Dadu, Phagi, Chatsu, Sanganer, Lalsot and Dausa lying to the south and east of Jaipur have loamy soils.<sup>4</sup>

The general drainage of the region follows the slope of the land towards the east and south-east from the Aravalli. The major perennial river, the Banas, provides the macro-identification of the region as the Banas Plain.<sup>5</sup> The Banas has several tributaries, the most important of which is the Morel which rises east of Jaipur and flows south. It is joined by the Aman-i-Shahi and the Dhund, originating in the hills north of Jaipur. After joining the Khari as it emerges from the Lalsot-Toda Bhim range, the Morel flows into the Banas. Another tributary of the Banas, the river Mashi, is joined by the Bandi and flows southeast to the Banas. Besides the Banas, the other two important rivers both originating in the hills north of Jaipur, are the Sabi, which runs in the north-easterly direction towards Gurgaon (Haryana), and the Banganga which flows east to join the Yamuna. The Gambhir, a tributary of the Banganga, drains the Toda Bhim and Hindaun area.<sup>6</sup>

The basins of the major rivers and their tributaries form the micro-regions within the broader geographical zone of the Banas Plain. The Morel basin incorporates the 'core' areas of the erstwhile Jaipur state. Four of the six representative qasbas under study fall within this sub-region.<sup>7</sup> The Morel Basin is characterised by scattered hills and a high water table in the foothill zone. In contrast to the yellow soils of the more fertile Gambhir and Banganga basins, the

Morel basin has inferior brown soil with a high proportion of cultivable waste.<sup>8</sup> To the south of the Morel basin lies the Tonk peneplane subdivided into the Sarwar Tract, Malpura Tract and the Gangapur Mal Tract. This zone is characterised by dark brown or black soil with a hard rocky substratum which makes digging of wells expensive and difficult, though tanks can be easily constructed. The agricultural potential of this peneplane, in terms of fertility of soils and availability of irrigational water, increases considerably proceeding from west to east.<sup>9</sup> The qasbas of Phagi and Malarna were located in what are now the modern tehsils of Phagi (Dist. Jaipur) and Bonli (Dist. Sawai Madhopur) in the zones identified as the Malpura Tract and Gangapur Mal Tract, respectively.

#### Water Resources.

The average annual rainfall in the region under study varies between 500mm. to 700mm.<sup>10</sup> The general trend of the isohyetal lines is in the direction northeast to southwest with annual rainfall increasing from west to east. The region lies on the limits of two monsoon currents - the southeast and the southwest. This, however, results in an extreme variability in annual rainfall determined by whether the region receives rain from both currents or only "the fitful remnants of one".<sup>11</sup> Most of the rainfall is concentrated in the monsoon months from June to September, the winter rainfall being insignificant.<sup>12</sup> The precarious nature of the rainfall is the most significant constraint on agricultural production in the region. In particular, crops grown in the rabi or winter harvest are wholly dependent on artificial irrigation with the exception of limited stretches of seasonally inundated land.

In order to offset the variability in rainfall, both lift and flow methods of irrigation were prevalent in the eighteenth century. As there are no snowfed rivers in the region, the significance of the rivers mentioned as sources of artificial irrigation is very limited and most rivers run dry soon after the monsoon.<sup>13</sup> On the other hand, the high water table, varying from a few feet to 30 or 40 feet, facilitated the digging of wells which were "numerous" at the end of the nineteenth century.<sup>14</sup> The Morel basin, in particular, was characterised by a fairly high water table which was conducive to the proliferation of wells in this region.<sup>15</sup>

Wells were both "kutcha" (temporary) and "pukka" (masonry). The depth of the well determined the type of device to be used for lifting water. The "charas" system was used when the water table was at the level of 30 feet or below. These wells were worked by cattle drawing a leather bucket or charas over a pulley mounted at the top of the well.<sup>16</sup> A masonry or permanent well fitted with a charas was called "kothi kua". These wells were stone or brick lined and though more expensive to construct, were least liable to failure in years of low rainfall as they tapped water at the spring level.<sup>17</sup> Temporary wells using the same lifting mechanism were known as "dhers".<sup>18</sup> Water lying closer to the surface, was lifted by the Persian wheel or "rehat". This device was especially useful for raising water from tanks, channels and rivulets or when the water table was higher than 30 feet.<sup>19</sup> The "dhenkali" was a shallow pit-well dug where water was near the surface but permanent wells could not be constructed as, for example, on the sandy soil of dried river beds. Such temporary wells, rarely lasting more than a season or two, were worked manually using a lever principle.<sup>20</sup> This was the cheapest and simplest device for lifting water.

Some idea of the number of wells in the eighteenth century can be gauged from a report dated 1725 that stated that 1,100 masonry wells had been constructed in the past seven years in the 874 villages of pargana Sawai Jaipur.<sup>21</sup> The total number of wells in the pargana, including the kutchha wells, must have been considerably higher as the expense of constructing pukka wells meant that the number of such brick-lined wells was small compared to the relatively cheaper dhers. In an earlier count of wells in a group of 18 villages, only 41 of the 528 wells were brick-lined.<sup>22</sup>

The rocky substratum of the Tonk region to the south of the Morel basin made well construction difficult. In this region, as is current now, tanks provided the major source of irrigation. The antiquity of tank irrigation in the erstwhile Jaipur State was attested to by the Report of the Irrigation Commission (1901-1903) which recorded their large numbers and commented that "some of the largest and best tanks were made many hundreds of years ago."<sup>23</sup> As a rule, water collected in storage tanks was only used for the rabi crop. At the end of the season, tanks generally ran dry, the large tanks in April and smaller tanks after the first sowings.<sup>24</sup> The margins and moist beds of the tanks were then cultivated.

The importance of irrigation in a dry farming region with "predictable variability" in the quality of the agricultural season was reflected in the complex classification of revenue rates in the eighteenth century. In addition to the basic categorisation between unirrigated or "barani" land and irrigated "chahi" lands, the tax schedules were further differentiated on the basis of the source, quantum and method of irrigation.<sup>25</sup>

### Rural Settlement Pattern

The pattern of rural settlement, being closely related to the cultivation of soil, can be said to be primarily determined by the physiography of the region, the availability and location of water resources and the fertility of the soil. Given the lack of any large-scale modern irrigation works in the region under study, it is perhaps reasonable to assume that the type of rural settlement in the eighteenth century was in general terms, similar to that at present.

Three types of rural settlements - compact, cluster-hamlet and cluster-farmstead - can be found in the study region.<sup>26</sup> The tendency towards dispersed villages is most pronounced in the Morel basin due to a high water table and the need to protect the crops from wild animals. The relative ease with which wells can be dug and the large number of such wells has reduced the need for compact villages. An average village consists of a main site and several farmsteads ("dhanis" or "vas") scattered among the sites of wells. However, the low natural fertility of the soil in the Morel basin as compared to the Banganga and Gambhir basins, results in lower rural densities and a larger percentage of cultivable waste in this zone.<sup>27</sup>

The physiography of the Tonk peneplane, on the other hand, discourages the construction of wells. Tanks formed by blocking the flow of seasonal streams are the most important sources of irrigation. As the sites where tanks can be constructed are limited, the villages in the Gangapur Mal tract are large, compact and widely spaced. The density of rural population varies, being higher in the fertile eastern tracts and lower in the western Sarwar tract.<sup>28</sup>

The village, in the eighteenth century revenue records, was both a primary territorial locus and a fiscal unit. In the arhsatta records, a village was referred to as a "mauza" or "gaon". Villages were classified either as "asli" or established villages or as "dakhili" settlements which were offshoots of older villages. The revenue returns of dakhili villages were included in the returns of the asli village of which it was a part. In the course of time, the dakhili village would acquire an independent fiscal status and if it retained the name of the parent village, the two were identified by the suffixes "buzurg" or "kala", denoting the parent village, and the suffix "khurd" which signified a recent offshoot of the former. Depopulated or abandoned villages were called "viran", "ujar" or "bechiragi". Villages had a definite physical boundary expressed in terms of measured area in "bighas". This was subdivided into: i) habitational area or "abadi" and area not available for cultivation (ponds, jungles, reh or usar lands which were uncultivable) and, ii) the cultivable land or "laik zararati". Cultivable land was further divided into "bahat" or gross cropped area and "padat". In the context of the terminology of modern agricultural statistics, padat land could have two meanings depending on its usage. Records in which the village statistics for a whole year are given - as in the yaddashtis- the bahat would denote the gross cropped land, that is the total area cropped in each cropping season or the net cropped area in kharif and rabi plus the area that was double cropped, and the padat would include the cultivable waste as well as the long-term fallows. However, when figures for a single harvest are mentioned, as in the taqsim records for instance, the bahat was the area cropped in that season while the padat land included the current fallow, the cultivable waste and the long-term fallows. This form of record-keeping which in essence only recorded the land tilled in a season or a year is indicative of the revenue oriented concerns of the eighteenth century administration.<sup>29</sup>

The establishment of a new village was invariably recorded as being constituted from the cultivable waste of adjoining villages with the precise area of each contributory village stated.<sup>30</sup> The boundaries of villages did not necessarily remain fixed – more land could be added to them or, as in the case of dakhili villages, they could separate from the parent village to attain the status of a full-fledged village in due course. The village was viewed as a discrete entity not only in terms of its physical space but also in the sense of a social collective represented by the village community with the patel as its chief spokesman. This is most clearly brought out in representations made to the diwan, who was the head of revenue administration in the Jaipur state, by the patel pleading on behalf of the entire village on a variety of issues common to the whole cultivating community. Disputes with adjoining villages over boundaries, grazing rights, and harassment by the jagirdars are among the issues that emerge from the documents examined.<sup>31</sup>

Unfortunately, the records of the eighteenth century provide little information on the density of rural settlement and population. It is clear from our evidence however that rural migration and the en masse desertion of villages formed an important part of the peasants' response to adversity. Famines, wars, oppression and excessive taxation are all cited as reasons for migration.<sup>32</sup> The census of 78 villages in pargana Malarna provides some measure of the the scale of rural migration.<sup>33</sup> In 1666, of the 2631 asamis owning cattle in pargana Malarna, 268 or 10 per cent were migrants or "pahis" of whom 185 were from neighbouring parganas of the region and almost a third had recently arrived from the Deccan and Malwa. In the previous year, 79 pahis had settled in these villages but within the same period 81 asamis had also emigrated. Thus in the two years 1665 and 1666, of the 2791 peasants for whom we have information, 12.36 per cent were migrants and



for every one bullock owning cultivator who had emigrated from the pargana, three others were settled in the pargana. The recognition by the state of the ability of peasant to migrate in search of better conditions and thereby profoundly affect production and the state's revenue constituted a vital element of the agrarian policy of pre-colonial regimes. The mere threat of migration was often sufficient for the state to respond sympathetically to peasant grievances.<sup>34</sup> Official directives repeatedly exhort administrative staff to rehabilitate deserted villages ("ujar" or "bechiragi") and induce migrating peasants to return with offers of tax reliefs, concessions and loans.<sup>35</sup> State patronage and protection were therefore critical in attracting and retaining labour in a period characterised by peasant mobility and labour shortage.

Changes in the number of villages over the years could provide some indication of the trends in the density of rural settlement. As the village formed the smallest revenue unit, the revenue accounts faithfully record the number of villages in each pargana within the raja's administration. The village counts however need to be treated with caution due to the difficulty in isolating actual changes in the number of villages from shifts arising due to the reorganisation of pargana boundaries and the piecemeal transfer of some parganas in ijara or jagir from the Mughals to the Jaipur raja in the the early eighteenth century. In pargana Chatsu, for example, there appears to have been a spectacular increase in the number of villages from 288 in 1712, the year when Jai Singh acquired it in jagir from Jahandar Shah, to 400 in 1749. In contrast, the increase in villages in pargana Malarna was comparatively modest: from 148 in 1708 to 164 in 1784.<sup>36</sup> The lack of adequate data makes it difficult to interpret these figures and raises doubts about the reliability of village counts as crude indices of population change.

### Cropping System

The agricultural system can be analysed in terms of the cropping pattern and the available farm implements and technology. The specific patterns of regional crop production in the eighteenth century will be analysed in a later chapter. An understanding of the the general features of the cropping system in the region in terms of the sequence of field operations, work rhythms and agricultural practices help us to identify more clearly the constraints on production and the significance of observed shifts in cropping patterns.

The outbreak of the monsoon in late June marks the beginning of the agricultural or harvest year.<sup>37</sup> Sowing of the "sialu" (kharif) or autumn season commences with the first heavy showers on land ploughed and prepared in the preceding months from April to May. The kharif season in the eighteenth century was, and continues to be, the most important harvest cycle within the agricultural year in this region. This is because the regions staple foods – a variety of millets – were grown in this season. As it is rare in this region for the seasonal pattern of rainfall to coincide with the crop water requirements, millets and other crops capable of withstanding water-stress dominate the kharif harvest. These crops were called "barani" or rain-fed crops and required little or no supplementary irrigation. The kharif crops were harvested from October to November.<sup>38</sup>

The winter crop, called rabi or "unhalu", was only possible with artificial irrigation or on retentive black soils. The negligible amount of winter rainfall in this region made this one of the major factors limiting extensive rabi production. The cultivation of rabi crops therefore needed considerable initial investment in the

construction of wells, working capital for their maintenance as well as the provision of additional draught animals to work them. They also required repeated ploughings preparatory to sowing, and frequent weeding and watering. Preparatory tillage for the rabi crops is done initially prior to the monsoon, and then repeated between mid-September and October after the retreat of the monsoons. The crops are sown in the period extending from October till mid-December and harvested in March-April. The major rabi crops in our period were barley, wheat, gram and combinations of these. In irrigated lands, "zaid-rabi" crops like vegetables and various types of melons, cucumbers and gourds were grown in the period between the harvesting of the rabi crops and the kharif sowing of the next harvest cycle.

Our analysis of the cropping pattern in the region in the eighteenth century shows that the rabi harvest was generally as extensive as the kharif harvest.<sup>39</sup> The fact that in the eighteenth century two harvests in the region were the norm can be contrasted with the present-day classification of the region as a kharif monocropping region producing only low value foodgrains in the kharif harvest.<sup>40</sup> This evidence suggests that land productivity and the level of investment in the region was substantially higher in the eighteenth century. However, investment in the management of water resources was crucially affected by political and economic change and depended upon the creation of an environment that fostered agricultural intensification and expansion.

In a landscape marked by low population density and uncertain production, it was not ownership of land but the possession of cattle that was an essential prerequisite to cultivation. In the records of the eighteenth century, the basic distinction between a cultivator and an agricultural labourer was that the latter did

not possess cattle to cultivate land independently. The complementarity of human and animal labour in systems of agricultural production utilising the plough made bullocks an essential asset. The extent of the arable was as closely related to the seasonal pattern of rainfall and the development of irrigation as the availability of draught power. The periodic recurrence of drought and famines in the region, however, must have limited the capacity of agriculturists to breed and maintain cattle. The precariousness of the principal components of the physical resource base, namely rainfall and animal power, meant that agricultural production in the region was characterised by wide fluctuations from year to year.

Our sources provide little evidence on eighteenth century agricultural practices or the implements used. Recent research by Harbans Mukhia on the agricultural technology of medieval north India has drawn on a variety of contemporary sources to highlight the range and suitability of implements used for agricultural operations such as ploughing, levelling and preparing the soil-surface, sowing, weeding, reaping and threshing.<sup>40</sup> Basing himself on the classification of productive or "polaj" land in the *Ain-i-Akbari* as land under continuous cultivation and the absence of a term for fallow in the contemporary literature, Mukhia proposes that in the medieval period most Indian fields produced at least two crops a year.<sup>42</sup> This feature of medieval north Indian agriculture, he argues, accounts for the high fertility of Indian soil. While the production of two crops a year was indeed the norm in large parts of north India, the proposition that both crops were as a rule produced on the same field or, in other words, that double cropping of land was a regular feature of agricultural production in the pre-colonial period appears untenable.

In our sources, polaj land is clearly differentiated from "dofasli" or double-cropped land. In the context of eastern Rajasthan, the extent of double-cropping was primarily limited by the availability of water and the pattern of labour requirements imposed by the harvest cycle.<sup>43</sup> The interval between the harvesting of even the early ripening kharif crops, such as millets, and the sowing of the rabi crops was too short in north India to allow for extensive areas to be prepared and sown again with winter cereals which require many more ploughings and careful soil preparation. One of the current arguments for the adoption of tractorisation in Rajasthan is that despite the availability of adequate irrigation in some areas, the extent of rabi cultivation is severely limited due to the short interval between the harvesting of the kharif crops and rabi sowing. However, if ploughs worked by bullocks were replaced by tractors, the additional power and speed would render such an intensification in agricultural production technically feasible.<sup>44</sup> Double-cropping is also not possible on land sown with crops such as cotton, sugarcane, indigo or the kharif oil-seeds, for example, due to the extended duration these crops occupy the land and also because their harvesting periods overlap with the season when the succeeding crop should optimally be sown. In view of the technical limitations to the double-cropping of land in dry farming areas, the description of polaj as land under continuous cultivation in the *Ain-i-Akbari* probably denoted land that produced one crop within the biannual harvest cycle.

Traditional agricultural practices combined crop-rotation and field-rotation along with manuring in order to maintain the fertility of the soil. Soil that had been annually cultivated for a number of years was allowed a period of rest extending up until four years to allow for natural regeneration. Such land from which the plough had been temporarily withdrawn corresponds to the category of

"parauti" and "chachar" land in the *Ain-i-Akbari*. As Harbans Mukhia points out, these lands should technically be termed lea rather than long-term fallows.<sup>45</sup> Another important traditional method of maintaining soil fertility was the practice of intercropping. This technique involved the sowing of two or more crops, at least one of which was a nitrogen-fixing legume, in the same field which were then harvested separately owing to their different maturation times. The advantages of intercropping in terms of the effective use of land and labour and the minimisation of the risk of total crop failure in an ecologically fragile environment are in themselves important. In addition, recent experimental research has shown that in terms of productivity per unit area and unit time, intercropping is as productive as sole cropping.<sup>46</sup> Watabe suggests that the favourable agronomic effects of intercropping provide an explanation of how traditional agricultural practices maintained the fertility of the soil over long periods without the benefit of fallowing or crop rotation.<sup>47</sup>

### Crops Grown

In the kharif harvest the most important food crops were millets. Of these, bajra (Pearl or bulrush millet, *Pennisitum typhoideum*) predominated in the region. Grown on light soils with no manuring, it is traditionally grown intercropped with pulses such as moth (*Phaseolus aconitifolius*), mung (*Phaseolus radiatus*), and urad (*Phaseolus mungo*).<sup>48</sup> If sown as a mixed crop, the same land can be used year after year without rotation.<sup>49</sup> To the south and east of Jaipur, with better soil and a greater annual rainfall, juwar (*Sorghum vulgare*) cultivation expanded but never supplanted bajra as the principal millet.<sup>50</sup> Juwar was mainly a kharif crop, only occasionally being recorded as a green fodder crop under "chari".<sup>51</sup> The grain and

the straw of juwar is superior to that of bajra in its nutritional content, and can yield a succession of cuttings from July to March when grown as a fodder crop.<sup>52</sup> Juwar, however, completely exhausts the soil of moisture and plant food.<sup>53</sup> In addition to the major millets, small-grain millets such as kodon (*Paspalum scorbiculatum*), ralo/kagani (*Panicum italicum* or *Setaria italica*), chino (*Panicum miliaceum*), mandwa (*Eleusine coracana*), kuri (*Panicum helopus*) and barti (*Panicum crusgalli*(?)) were also cultivated. These small millets were all low value crops, eaten by the poorer sections of the population, low in nutritional content, but agriculturally best suited to the environment. Of these, kuri was "reckoned to be one of the best of Indian fodder grasses for both horses and cattle."<sup>54</sup>

In addition to the millets, the kharif food crops included pulses, maize, sesame and a few condiments. Next in importance to bajra as a food crop was the pulse moth. Of the pulses, moth is least demanding in its soil and water requirements. Given a well distributed rainfall, the pulses mature without watering - with urad requiring maximum moisture and heavier soil, followed by mung and moth. Pulses are generally intercropped with the millets, being sown at the same time but harvested separately due to their differing growing durations.<sup>55</sup> When sown alone, the pulses are an important cash crop of rainfed agriculture in Rajasthan and can be followed by sugarcane or another irrigated rabi crop.<sup>56</sup> They are also a source of valuable fodder.<sup>57</sup> Maize was sown both as a kharif and a rabi crop. It requires a fertile soil, frequent irrigation and careful culture in the form of repeated weeding, thinning and manuring.<sup>58</sup> Maize cultivation, therefore, was probably limited to irrigated and manured land lying close to the habitational site. Small quantities of til (sesame, *Sesamum indicum*), a coarse rice called sali (*Oryza sativa*)

and condiments like ajwain (lovage, *Caryota copticum*) and cumin were grown as kharif crops.

In addition to the food crops, cash crops like cotton, sugarcane, indigo and sunn-hemp were also cultivated.<sup>59</sup> Cotton cultivation was the most widespread both in terms of its acreage and its distribution within the region. Generally, however, cash crop cultivation was more significant at the level of the qasba when compared to the pargana as a whole - particularly for specialised crops such as the natural dye plants, vegetables, and tobacco.<sup>60</sup>

The fields for cotton are prepared in April for the sowing of the early varieties on irrigated land in May, or after the rains in June. The latter was categorised as "sawani" or the monsoonal rainfed crop.<sup>61</sup> Cotton picking begins in mid-October and continues till early December. The stubble is grazed upon by cattle after the picking.<sup>62</sup> In Rajasthan, cotton is sometimes "grown as a mixed crop, usually with til, arhar, san, etc."<sup>63</sup>

Sugarcane, was grown less extensively than cotton in the region in the eighteenth century.<sup>64</sup> Sugarcane occupies the land for twelve months and is the most demanding crop in terms of its labour and water requirements. Ratooning, or taking a crop in the second year from the stubble of the first, was practised. Although this gives a poorer yield, less labour and capital is required. The sucrose content of sugarcane planted on fields that had been left fallow for a whole year prior to planting was the highest. These technicalities of sugarcane production, involving varying levels of capital and labour inputs and yields, were reflected in the differential rates of revenue levied on cane grown on prime land fallowed in



the preceding year, well or dhenkali irrigated land, water retentive or "gundgari" soils, and ratooned or "pedi" sugarcane.<sup>65</sup>

The natural dye plants, of which indigo was commercially the most significant, were cultivated in all the qasbas studied, though in varying degrees of importance. The market for indigo, centred at Agra, must have stimulated its cultivation in our region. Indigo was a triennial plant which was cut every year after the rains in August or September. The revenue rates levied on "nyoti" and "jari" or "tisala" categories of indigo confirms the account presented by the traveller Finch in 1607, that the "produce of the first year is called Nyoti; that of the succeeding years Jari. The crop of the second year gives the best quality neel or indigo dye."<sup>66</sup> After the third cutting, the plant was allowed to seed before being sown again at the beginning of the rains.<sup>67</sup> Besides indigo, dye plants like "kasumbho" (safflower, *Carthamus tinctorius*), "aal" (*Morinda tinctoria*), and henna were also grown in the qasbas.

A wide variety of vegetables, gourds and melons were grown extensively in the immediate environs of the qasbas.<sup>68</sup> The perishable nature of these crops and problems of transportation would have restricted their cultivation as field crops to areas where a market for them was easily accessible. It may perhaps be mentioned here that "sakarkandi" or sweet potato (*Ipomoea batatas*), which was grown more widely as a kharif rather than a rabi crop, was cultivated in the region prior to the eighteenth century and could not have been introduced in India during or later than the eighteenth century as claimed in recent research.<sup>69</sup>

In contrast to the kharif season, the range of crops grown in the rabi season was limited in variety. While high value crops like poppy, tobacco, sugarcane and garden produce required fertile, manured land with an assured supply of water, the staples - wheat, barley and gram - could be grown on retentive soils with little or no additional irrigation. However, the yields of these crops are substantially affected if they were unirrigated. In 1713-14, the differential in the yields of irrigated and non-irrigated rabi food grains was estimated to be 6.75 maunds per bigha and 3 maunds per bigha respectively - a differential of 225 per cent.<sup>70</sup> Though the actual yield figures approximated by the revenue authorities may not be very accurate or pertinent due to the fluctuations in the size of the bigha and the maund in our period and region, the ratio derived is important as it helps in our understanding of differential rent.<sup>71</sup> An appreciation of the differential yields of the principal rabi foodgrains, wheat and barley, owing to varying soil fertility and access to irrigation was reflected in the revenue categories under which the cash rent on them was realised. Barley and wheat lands were subdivided into three tax categories corresponding to the best, poorest and intermediate quality of land - namely, well irrigated "kyari" or "seko" land, dry or "bor" land and "khatli" or manured land located on the dried banks of rivers or tanks.<sup>72</sup>

The food staples - wheat, barley and gram - and their mixed crops constituted the principal winter crops of our region in the eighteenth century. In comparison to the hardier barley and gram, wheat cultivation was relatively restricted due to the higher labour and capital inputs required for its cultivation in terms of repeated preparatory tillage and regular watering and interculture. There were two varieties of wheat grown - the hard or "kantha" and the soft or "vajya" wheats.<sup>73</sup> The latter variety is of finer quality and value while the hard wheats are glutinous and are

normally coarsely ground into "suji" (used for a porridge). It was common in the eighteenth century, as it is today in the wheat growing tracts of northern India, to cultivate mixed crops of wheat, barley and gram. Mixed cropping of this type differs from intercropping of kharif foodgrains and pulses for example, in that the seeds of the constituent crops are mixed and sown together and, at the end of the growing period, harvested at the same time. The combinations grown were called "gojara" or "gojai" (wheat and barley), "gochani" (wheat and gram), and "baijhari" (wheat, barley, and gram). Thus when conditions for the sole cropping of wheat were unsuitable, mixed cropping provided a beneficial alternative.<sup>74</sup> The straw of wheat and barley was also valued as fodder, that of wheat being more nutritious.

The rabi oilseeds - "sarson" (rapeseed) and "alsi" (linseed) - were cultivated in smaller quantities. While sarson was grown in all the qasbas under study, alsi production was confined to qasbas Phagi, Chatsu and Malarna. Oilseed production is difficult and requires a most favourable season for a successful harvest. They are often intercropped with wheat and barley and sown earlier and harvested later than the associated crop.<sup>75</sup> Linseed oil is often blended with other oils and used for cooking, while sarson oil is also used for lighting.<sup>76</sup> The oilcake is used as feed for milch cows.

In the rabi season, cash cropping was dominated by the production of a variety of vegetables, cucumbers, gourds and melons almost exclusively restricted to the environs of the qasbas. They were probably also grown on small homestead plots in the villages, but were liable to taxation only when cultivated as field crops in response to the demand in the qasbas. The winter vegetables commonly grown were onions, carrots, radish, brinjals, spinach, sweet potatoes, pot herbs, pumpkins

and cucumbers. These crops require intensive manuring, weeding and watering and are gathered intermittently as they ripen. Their production was specialised and normally carried on by a separate caste group, the Malis. The different kinds of melons grown - the "tarbuz" and "kharbuza", as well as a variety called "sarda", which was native to Kabul and thought to be the finest quality of melon - are really the "zaid-rabi" crops. These were grown on the banks of dried river beds, the seeds being dropped into heavily manured pits, and bore fruit from April to June.<sup>77</sup> In addition to the vegetables and melons, poppy and tobacco were also cultivated in small, but significant, quantities in the qasbas.

The range of crops that were grown in the region in the eighteenth century clearly attests to the ability of the rural producers to adapt to and overcome the ecological constraints of semi-arid agriculture. Whether cultivators could take advantage of the productive potential of the land depended upon a complex interplay of several factors such as population density, the availability and distribution of resources, the agrarian policy of the state and the development of the exchange economy. It is to these aspects of the agrarian economy of eighteenth century eastern Rajasthan that we now turn.

Notes to Chapter II: The Setting

1. C.A.Baylay, Gazetteer of Jaipur in Rajputana Gazetteer, vol.II, pp.125-126.
2. V.C.Mishra, Geography of Rajasthan, p.35.
3. *ibid.*, p.126.
4. R.L.Singh ed., India. A Regional Geography, p.535.
5. V.C.Misra, *op.cit.*, p.35.
6. C.A.Baylay, Gazetteer of Jaipur, *op.cit.*, pp.128-130.
7. The qasbas of Sawai Jaipur, Sanganer, Lalsot and Chatsu lay in the modern tehsils of the same names in District Jaipur, Rajasthan.
8. Nitya Nand, "Distribution and Spatial Arrangement of Population in East Rajasthan, India", Annals of the Association of American Geographers, vol. 56, 1966, p.214.
9. *ibid.*, p.217.
10. Report of the National Irrigation Commission, vol.IV [G.O.I., 1972], entitled Irrigation Atlas of India, Plate 6.
11. Report of the Indian Irrigation Commission, Pt. II, Section I, 1901-1903, p.213. The coefficient of annual variability in rainfall in the region according to a study using data from 1901-1950 was 30-40%. See K.L.Rao, India's Water Wealth, pp.10-11.
12. The seasonal pattern of rainfall considered 'normal' for the region is:
 

1st. June - 30th. September	625mm.	90.84%
1st. October - 31st. December	26mm.	3.78%
1st. January - 28th. February	13mm.	1.89%
1st. March - 31st. May	24mm.	3.49%
Total: 1st. June - 31st. May	688mm.	100.00%

Distribution based on weekly reports for the year 1962-1963. Indian Crop Calendar [Ministry of Food and Agriculture, G.O.I.:1967], p.20.
13. Indian Irrigation Commission, 1901-1903, p.213.
14. *ibid.*
15. Nitya Nand, "Distribution of Population", *op.cit.*, p.214.
16. See Glimpses of Rural Rajasthan [G.O.I.:1968], p.51, for a sketch of a 'pukka' well with the pulley attachment and a leather bucket, or charas, used in the Jaipur District.

17. Rajasthan District Gazetteer: Alwar [Jaipur:1968], p.214.
18. *ibid.*
19. Rajasthan District Gazetteer: Jhalawar [Jaipur, 1964], p.80. While there are frequent references to the types of wells and lifting devices discussed above in the eighteenth century documents of our region, I have not come across references to the Persian wheel or rehat. The Imperial Gazetteer of 1908 also states that it was only ".in Sirohi and parts of Jodhpur, Kotah, and Udaipur ..(that)..the Persian wheel was used.." Imperial Gazetteer of India, Provincial Series, Rajputana [Calcutta, 1908], p.49.
20. Rajasthan District Gazetteer: Jhalawar, p.80. and Alwar,p.214. Sketch of a dhenkli and its parts in Glimpses of Rural Rajasthan, p.56.
21. Likhtang dt.Pos vadi 8 VS 1782/AD 1725, to Sah Shri Sahibram, [No.418].
22. Harbans Mukhia, "Peasant Production and Medieval Indian Society",Journal of Peasant Studies, vol.12, special issue entitled "Feudalism and Non-European Societies", eds. T.Byres and Harbans Mukhia, pp.236-237
23. Indian Irrigation Commission, 1901 -1903, p.213.
24. Indian Irrigation Commission, 1901-1903, Pt. IV, on Native States compiled by Col.S.S.Jacob, p.301.
25. For a discussion on the variation in rates of taxation applicable to different types of irrigational facilities, soils, location of field, etc., see Chapter IV on Revenue Policy.
26. A.B.Mukerji, "Spacing of Rural Settlements in Rajasthan - A Spatial Analysis", in R.L.Singh and Kashi N Singh eds., Readings in Rural Settlement Geography, p.265.
27. Nitya Nand, "Distribution of Population", *op.cit.*, p.214.
28. *ibid.*, pp.216-217.
29. The general format for the land figures for an entire agricultural year or a single season was as follows :  
(the figures are offered by way of example)

Total Area in Bighas	1250.00
Uncultivable Area	250.00
<u>Laik Zarrati</u> or cultivable area	1000.00
<u>Bahat</u> or gross cultivated area	600.00
<u>Padat</u>	400.00

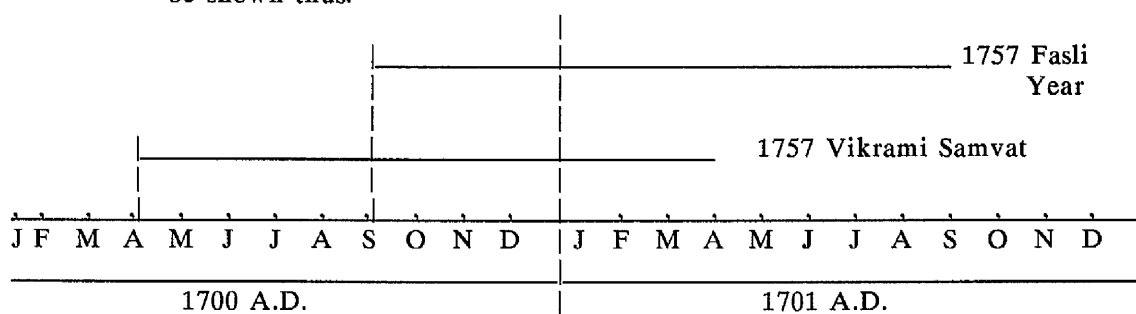
Suppose the above figures. were for a single harvest, say kharif, for a particular year. The bahat would then be the area cropped in kharif only. The padat figure would include the current fallows, i.e. land set aside for the following rabi harvest, as well as the long term fallow or cultivable waste. If, however, the above figures were for a whole agricultural cycle, the bahat

would equal the gross cropped area for the kharif and rabi harvest added together. The padat, however, could not include the current fallows for both these seasons as this would involve double counting. This is because except for a small portion of land which was double-cropped, the current fallows of each season constitute the cropped area of the succeeding harvest. Also see S.P.Gupta, Agrarian System of Eastern Rajasthan, p.43 where he cites the example of 6 villages of pargana Malarna where the bahat area exceeded the total cultivable land in the villages indicating that bahat denoted the annual gross cropped area. The figure entered under padat in the annual accounts therefore was just the arithmetical difference between the cultivable land and the gross cropped acreage.

30. Chitti dt.Sawan sudi 11 VS 1784/AD 1737, pargana Phagi [No.117]; Nakal Chitti dt. Pos vadi 11 VS 1784/AD 1728, Sah Mansaram and Sanghi Ajab Singh [No.411].
31. Chitti dt. Bhadon Sudi 14 VS 1780/AD 1723, pargana Malpura; Chitti dt. Vaisakh Vadi 5 V.S.1800/A.D.1743, pargana Malpura. Discussion and documents cited in M.Bajekal, "Rural Disputes in Eastern Rajasthan in the Eighteenth Century", pp.44-45, 69-73,100-105.
32. References to individual peasant flight from land in response to famines or oppression by jagirdars and moneylenders are frequent. Large scale migration of peasants or the threat of migration finds mention in the reports of the diwan to the durbar, the arzdashts, and they also contain the raja's directives to his officials of the measures they should take to placate the peasants and induce them to resume cultivation. See Sanad dt. Sawan sudi 7 VS 1823/AD 1766, pargana Phagi [No.376]; Chitti dt. Sawan vadi 10 VS 1819/AD 1762, pargana Phagi [No.404]; Chitti dt. Mah vadi 6 VS 1826/AD 1769, pargana Phagi [No.406]; Arzdasht dt Pos vadi 9 VS 1755/AD 1688 [No.155]; Arzdasht dt. Vaisakh sudi 12 VS 1702/AD 1645; Arzdasht dt. Asad sudi 2 VS 1761/AD 1704.
33. Yaddashti Hal Bail, pargana Malarna VS 1723/AD 1666.
34. The example of the peasants of pargana Chatsu is particularly interesting in demonstrating how the peasants collectively negotiate with the state to determine the level of taxation. In 1645 they forward a collective petition to the Mughal emperor complaining against the imposition of a new cess and the reason why they think its imposition was unreasonable. After several years when the pargana was again granted to Jai Singh in 1710, the peasants blame excessive taxation as the cause of their poverty and the depopulation of the pargana. They then suggest that the rate of taxation be reduced - to which the state agrees - to enable them to expand cultivation and more than make up for the steady decline in state revenues. But in 1725-26, they are said to be "saddened" by the proposed enhancement in revenue rates on irrigated cereal production in the rabi harvest and express reluctance in investing in wells in the future. This threat elicits the promise of generous tax rebates on the construction of new wells for a period of ten years with the rider that if the raiyati refuse to work their old wells (in protest?) then the wells should be transferred to other cultivators. Cf. Arzdasht dt. Vaisakh sudi 2 VS 1702/AD 1645; Chitti dt. Asoj vadi 12 VS 1767/AD 1710, pargana Chatsu [No.358];

Likhtang dt.Pos vadi 8 VS 1782/AD 1725 to diwan Narayandas Kirparam, [No.418]; Arzdasht dt. Asoj vadi (nd) VS 1783/AD 1726.

35. Arzdasht dt. Asoj vadi (nd) VS 1783/AD 1726.
36. Dilbagh Singh, "Revenue Administration", pp. 2-3, 7-9, 64-73. S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.11-12.
37. Indian Crop Calendar, p.22, puts it at 22nd. June. The relationship between the Gregorian calendar and the Vikrami Samvat year based on the lunar calendar of north India, the fiscal or "fasli" year and the agricultural cycle can be shown thus:-



The Vikrami Samvat year begins on Chaitra Sudi 1, corresponding to early April.

The fasli year began on Bhadon Sudi 2 or 3, corresponding to about early September while the agricultural year began in early May (Baisakh sudi 1) immediately after the harvesting of the rabi crop.

38. The discussion on the timing of the sowing and harvesting period is based primarily on a district-wise schedule made out for all the major regional crops in the Indian Crop Calendar, pp. 52-162. In addition, material pertaining to Rajasthan has been collated from various pre- and post-Independence gazetteers of Rajasthan and G.Watt, Commercial Products of India.
39. See Chapter VIII on Cropping Patterns. Also James Tod, Papers on Rajasthan, Mackenzie Collection: Private, No.81, India Office Library, p.21.
40. Asim Kumar Sen, "Agroclimatic Regions of Rajasthan", Annals of Arid Zones, vol.II, nos.1 & 2 (1972), pp.31-40.
41. Harbans Mukhia, "Agricultural Technology in Medieval North India", in Aniruddha Roy and S.K.Bagchi eds., Technology in Ancient and Medieval India, pp.107-127.
42. *ibid.*, pp.108-109.
43. P.W.Powlett, Gazetteer of Ulwar (1880), in Rajputana Gazetteer, vol.II, p.238.
44. Techno-Economic Survey of Rajasthan, pp.35-37.
45. *idem*, "Agricultural Technology", p.108.





46. T.Watabe et.al., "Cropping Patterns in Tropical Asia", in Jiro Sugi ed., Comparative Agrobiolgy in Temperate and Tropical Regions, pp.69-82.
47. idem, "Traditional Cropping Systems", Southeast Asian Studies, vol.19, no.2 (1981), pp.205-221.
48. G.Watt, Commercial Products, p.870.
49. World Atlas of Agriculture, vol.II : Asia and Oceania, p.201. Also N.V.Kanitkar, S.S.Sirur and D.H.Gokhale, Dry Farming in India, p.27.
50. See Chapter VIII on Cropping Patterns. Juwar was important in qasbas Phagi and Malarna, and to a lesser extent in Chatsu.
51. "Chari" appears to be the general term for cultivated green fodder. In the kharif revenue returns of qasba Hindaun, the acreage under "chari" is broken up into the respective areas under juwari and moth. This suggests that in addition to being foodcrops, both these plants were also cultivated as fodder and, depending upon their intended usage, were taxed differently - the tax being higher per unit of land for fodder. Arhsatta pargana Hindaun, V.S.1771/A.D.1715-16 and V.S.1774/A.D.1717-1718.
52. G.Watt, Commercial Products, pp.871,1039-1040.
53. Jasbir Singh, Agricultural Atlas of India, p.164.
54. G.Watt, Dictionary of the Economic Products of India, vol.IV, Pt.I, p.10.
55. Jasbir Singh, Agricultural Atlas, p.201; G.Watt, Commercial Products, pp.879,881-882.
56. Jasbir Singh, Agricultural Atlas, p.201.
57. Foodcrops such as pulses, millets and cereals were generally taxed in kind after the chaff and stalks had been removed and the grain threshed. Certain cesses collected in cash under heads such as "nirni" (Sanganer, Phagi, Jhak, and Dausa), "khari khaklo" (Dausa), "bhurdi" (Malarna), and "tuntdo" (Tonk) appear to be additional charges in respect of the valuable dry fodder retained by the peasant. The dictionary meaning of each of these terms corresponds to a variety of dry fodder. See Rajasthani Shabd Kosh, compiled by Sitaram Lalas, pp.2202, 607, 3404, 1549, respectively. Also see note reference 8 in Chapter VI on Trends in Revenue Rates.
58. Jasbir Singh, Agricultural Atlas, p.183.
59. Although all crops were marketed, we have used the term 'cash' crops for those crops that were raised primarily for sale rather than for consumption by the cultivator.
60. This is fully discussed in Chapter VIII on Cropping Patterns.
61. The distinction between the 'deshi' varieties of cotton sown on irrigated lands and under rainfed conditions is noted for Punjab in Indian Cotton : Report by

Arno S.Pearse, p.116. This distinction probably applies to Rajasthan too, where two types of cotton – an 'early' variety sown in May and a 'late' variety sown in June–July – are mentioned (Indian Crop Calendar, pp.28, 188–241.) The revenue categories for cotton grown in qasba Sanganer in the eighteenth century had a corresponding categorisation between the cotton produced on irrigated fields and the 'sawani' or rain-fed cotton. Taxation on irrigated cotton was further scaled according to the quality of land and source of irrigation.

62. Arno S.Pearse, Indian Cotton, p.116.
63. G.Watt, Commercial Products, p.603.
64. Sugarcane cannot technically be classified as either a kharif or a rabi crop as its culture spanned both harvest periods. However, as it was planted and cut before the end of the official kharif period, i.e. the end of February, the revenue returns on the cultivation of sugarcane have been included with the kharif revenue in the arhsattas.
65. In qasba Sanganer the varying revenue rates on sugarcane were as follows :
- |                     |                     |
|---------------------|---------------------|
| Retentive soils     | : Rs. 7 per bigha   |
| Channel irrigated   | : Rs. 5 per bigha   |
| Well irrigated      | : Rs. 3 per bigha   |
| Pedi or ratoon crop | : Rs. 4.5 per bigha |

Arhsattas Sanganer VS 1804–1805, 1812–1813, and 1817–1818.

66. As quoted in G.Watt, Commercial Products, pp.664–665. The revenue rates for indigo in Hindaun were as follows:
- |        |                      |
|--------|----------------------|
| Nyoti  | : Rs. 1.25 per bigha |
| Jari   | : Rs. 1.88 per bigha |
| Tisala | : Rs. 1.31 per bigha |

Arhsatta Hindaun VS 1821/AD 1764.

67. Excerpts of the description of indigo cultivation from seventeenth century accounts in G.Watt, Commercial Products, pp.665–666.
68. The vegetables cultivated as field crops included egg plants, carrots, spinach, onions, arbi, radish, pot herbs (rajgira), tinda, kerala, varieties of cucumber, pumpkins, kachra, and melons such as kharbuza, sarda, tarbuz, and matira.
69. Sweet potato is listed among the kharif crops grown in Sanganer in 1688–89 and again in 1690–91.
70. Taqmina pargana Phagi 1713–14 for the rabi harvest. This differential between the wet and dry farming yields approximates the ratio calculated by a recent quantitative analysis of the impact of irrigation on crop yields in the early twentieth century in the dry farming regions of Punjab where differentials for the rabi crops ranged between 150% to 200%. See M.M. Islam, "Irrigation and Punjab Agriculture 1906 – 1945", South Asia, N.S., vol.I, No.1 (1978), pp.32–33.

71. In Amber the yield of irrigated barley was estimated at 11.5 mans per bigha in 1718-19 A.D. This seems very high in comparison with the estimate for Phagi. Even if a correction is made for the difference in the weight of the man or maund in Phagi and Amber (30 tolas and 28 tolas, respectively) the figure seems anomalous. It is probable that the size of the bigha may have been larger in Amber than in Phagi. The bigha is non-standard in the Jaipur territories, varying from 75 haths in Lalsot and Phagi, 84 hath in Sanganer and 95 hath in parganas Bhojpur and Sonkher Sonkhari. According to La Touche, the traditional bigha in the Ajmer region was equal to 84 haths [idem, Gazetteer of Ajmer(1878), Rajputana Gazetteer, II, p.118]. For a detailed discussion of the varying size of the bigha in the region, refer to endnote reference 27, Chapter IV on Revenue Policy.
72. Khatli is so defined in the Gazetteer of Alwar (1880) by P.W.Powlett, p.280 and H.H.Wilson, A Glossary of Judicial and Revenue Terms, p. 283. Seko is probably the local term for seka defined as "well-watered wheat fields or irrigated fields in general" [ Wilson's Glossary]
73. G.Watt, Commercial Products, pp.1085-1093.
74. Jasbir Singh, An Agricultural Geography of Haryana, p.274.
75. G.Watt, Commercial Products, pp.725, 728-729, 177-178.
76. *ibid.*, pp.725, 181.
77. *ibid.*, pp.437-438.

### Chapter III

#### **AGRARIAN RELATIONS**

In a predominantly agrarian society, all social groups were linked to the land and its product. The state functioned in the context of a larger economy which included a reciprocal relationship between rural areas and urban centres and between economic producers and consumers. It was essential for the state to ensure continuity in agricultural production through regulated access to land and through the redistribution of the agrarian surplus. This involved an interaction between four constituent elements of rural society: the landed elites and the agents of the state; the commercial intermediaries who financed both the state and the agrarian producers; the rural elite who played a vital role in organising village production; and finally, the agricultural producers or peasants. We shall begin with a brief description of the institutionalised means of access to rural resources through the system of rights to the surplus produce and the changes in this mechanism of distribution in the eighteenth century. The principal focus of the discussion which follows will be the nature of land tenures and peasant stratification and we shall also examine the role of credit in generating relationships that provided what has been termed the 'alternative mode of access' to agrarian resources.<sup>1</sup>

#### Nature of Land Control.

Access to land was regulated in eighteenth century eastern Rajasthan through a system of hierarchical and concurrent rights. The right to hereditary occupancy

and cultivation of land, on the one hand, and the political control over land, on the other, had become separated. Political control was expressed as a right to a share in the surplus produce of the land and was held complementary to - but not exclusive of - the subordinate right of hereditary occupancy of the cultivator. Thus, unlike Awadh, where Fox has argued that traditional power derived from the corporate ownership of land by the dominant Rajput lineages, in Rajasthan the basis of political organisation was the shared right to the product of the land by the ruling clan and those linked to it by service and allegiance.<sup>2</sup> This right was, however, differentiated both politically and economically. The differential access to resources is reflected in the social hierarchy within the dominant caste, the Rajputs, which consisted of the raja as the premier Rajput in the realm, followed by the "thikanedars" and various tribute-paying or "peshkashi zamindars", "jagirdars", "bhomias" and lastly, the cultivating or "gharuhala" Rajputs. Political authority and the distribution of resources was based upon two interlocking and conflicting systems: one based on kinship and the other on military merit. The conflict between these two competing systems for the redistribution of the agrarian surplus forms the historical background to an understanding of the relationship between the Jaipur raja and various holders of landed rights in the eighteenth century.

Little is known of the Kachhwahas prior to their incorporation into the Mughal nobility in the sixteenth century.<sup>3</sup> The expansion of the Jaipur raj from its status as an insignificant principality in 1562 to that of the leading Rajput state in the eighteenth century was largely a consequence of the privileged relationship between the house of Amber and the Mughals. The incorporation of the Kachhwahas into the Mughal nobility greatly enhanced their resources and power.

The raja was assigned his ancestral lands as a hereditary watan jagir, outside of Mughal administration and tribute demands, in addition to substantial areas in tankhawah or service jagir.<sup>4</sup> The subsequent development of the Jaipur raj in the seventeenth and eighteenth centuries involved two parallel processes, viz., the extension of local authority and control over a wider territory and, concurrently, the increasing bureaucratisation and centralisation of administration within the expanding raj.

The extension of local authority in the region by the Amber raja appears to have progressed through two stages. Until about the end of the seventeenth century, the added resources and power of the raja were directed towards the displacement of the erstwhile zamindars of the Ajmer-Ranthambhor sarkars, such as the Haras, Chauhans and Bargujars, by the various Kachhwaha lineages.<sup>5</sup> The large scale transfer of zamindari or bhomia rights that took place during this period can perhaps be dated from the early seventeenth century when Mirza Raja Jai Singh (1621-1667) initiated the policy of acquiring areas contiguous to the watan in service jagirs. The claims of the Naruka lineage of the Kachhwahas in the eighteenth century to the zamindari of a cluster of parganas in Mewat, which later constituted the Alwar state, can be traced to the assignment of these parganas in jagir to Mirza Jai Singh in the mid-seventeenth century with an imperial directive to "root out the miscreants and colonise the tract with his own men".<sup>6</sup> Jai Singh sub-assigned the jagir to his soldiers and retainers. Subsequently, when the raja's jagir was transferred, the sub-assignees stayed on as the ijaradars of the new jagirdars and in the late seventeenth century claimed to be the bhomias or zamindars of the region. A similar process of displacement of older zamindaris in the Ajmer-Ranthambhor region by the Kachhwaha lineages appears to have taken

place in the same period. This process was endorsed by the Mughals who, in order to ensure the realisation of revenue from the region, delegated to the Jaipur rajas the overarching authority to intervene in and suppress local conflicts even when the raja did not formally hold any assignments or administrative posts in the region.<sup>7</sup>

The expansion of local authority through the usurpation of older zamindari rights of the non-Kachhwaha clans appears to have been an on-going process well into the eighteenth century.<sup>8</sup> However, during the last quarter of the seventeenth century and the first half of the eighteenth, the expansionary policy of the Jaipur state underwent a change. It was in this period that Raja Bishan Singh and Sawai Jai Singh made a concerted effort to bring the parganas contiguous to the hereditary watan under their direct administration. Whereas earlier the rajas had connived at the displacement of older zamindaris and encouraged the expansion of bhomia rights of various lineages of the Kachhwaha clan, they now began to acquire the zamindaris of these areas themselves.<sup>9</sup> The resistance to such an extension of authority by the raja appears to have been particularly acute in the period from about 1680 to the second decade of the eighteenth century.<sup>10</sup> In this period, it is precisely in those parganas over which the Jaipur raja acquired administrative control through an Imperial appointment as jagirdar, ijaradar or faujdar that the majority of the "bhomia" or zamindar revolts can be located. As R.P.Rana's analysis of these conflicts shows, the zamindars involved in the conflict appear to have been motivated equally by the need to defend their rights from encroachment by the darbar as by a desire to extend, create or acquire new zamindari rights in a period of intensified local conflict.<sup>11</sup> Such resistance varied from region to region and received different levels of support from the peasantry. The success of the bhomias in forging alliances within and outside the region

determined the extent to which they would succeed in their struggle against the raja. In the Ajmer-Ranthambhor region, the rebellious Naruka and Chauhan bhomias were subjugated and, as the evidence for the Chauhans suggests, later assimilated into the state possibly on the rajas terms.<sup>12</sup>

In the region where the the raja was successful against the bhomias, the zamindari rights were usurped by the raja and the areas incorporated into the 'regulation' or directly administered parganas of the state. The eighteenth century evidence suggests that the share of the bhomias in the resources of the state severely declined and became even marginal. The overwhelming majority of them held only one village or a part of it in bhom and their total perquisites did not amount to more than an insignificant fraction of the revenue.<sup>13</sup>

The acquisition of control over these extended tracts was accompanied by the breaking up of local lineage territories and their increasing bureaucratisation. Older relationships based on kinship and shared access to resources were transformed into those based on loyalty and service.<sup>14</sup> Modelled on the Mughal jagir system of prebendal tenures, the kinsmen were assigned revenues of tracts that were conditional on service.<sup>15</sup> A system of valuation ("tan") of the revenue of villages, instituted probably in the early seventeenth century, was used to estimate the income of a jagirdar and accordingly the number of troopers and horses that he was required to maintain.<sup>16</sup> Jagir assignments were made through annually renewable "sanads" or writs legitimising access to the revenue of the assigned tract on specific conditions of service thereby replacing any prior claim to land based on hereditary right. The assignments continued to be made to members of the royal or Kachhwaha clan but the dominance of a particular sub-clan in a pargana was



broken by the expedient of assigning jagirs to numerous lineages in the same pargana. These jagirs tended to become hereditary, thereby leading to a more dispersed land holding pattern in these parganas in the course of the eighteenth century.<sup>17</sup>

The impetus towards the bureaucratisation of tenures by the Jaipur darbar went as far as to attempt to convert thikanedars, or semi-autonomous chieftains, into jagirdars.<sup>18</sup> The relationship between the thikanedars and the raja had traditionally been based on military service and political allegiance by the thikanedar in return for protection and territorial autonomy in the affairs of the thikana.<sup>19</sup> It would appear that efforts were made to restate this traditional relationship in terms akin to the jagirdari tenure by fixing a notional revenue assessment to the thikana and demanding the maintenance of a specified contingent in proportion to the assessment.<sup>20</sup> Although the actual obligations of the thikanedars may not have changed much as a result, the political authority of the raja was enhanced at the cost of the ancestral rights of the clan leaders.<sup>21</sup> On the other hand, new thikanedari rights were also created in the eighteenth century through grants made by the raja of a new kind of permanent tenure called "ijara-istamarari-wa-watan-zamindari". These were conferred on Kachhwaha nobles in areas newly acquired from the Mughals.<sup>22</sup> On the payment of a fixed annual sum, the assignees were granted complete autonomy in the administration and control of their areas. Some of these grantees later claimed thikana status, such as the thikanedars of Barwara and Dhoola.<sup>23</sup> As much of the later controversy regarding the status of thikanedars in the Jaipur State indicates, the long period of political development and transmutation in the preceding centuries had made it virtually

impossible to validate the claim to autonomy made by the thikanedars on the basis of ancestral right and original conquest.<sup>24</sup>

Thus by the eighteenth century, the principal mechanism of the redistribution of the state's share of the agricultural produce was through the jagir assignments. The jagir tenure in the eighteenth century Jaipur state was, however, significantly different from that of the Mughals despite the apparent similarity implied by the use of identical terminology and the official definition of tenures. Unlike the Mughal jagir, the jagirs assigned by the Jaipur raj tended to become hereditary – especially those held by Kachhwaha jagirdars.<sup>25</sup> Many jagirdars were also the local bhomias or zamindars,<sup>26</sup> or had acquired zamindari rights by either dispossessing the older zamindars or forcibly establishing their "kotri" (forts) and demanding bhomia rights over villages that were previously raiyati or peasant held.<sup>27</sup> The de facto long term nature of the jagir assignment, therefore, allowed the jagirdars a greater control over resources and village management. This however did not mean that the jagirdars' collections were completely unregulated by the state. Some degree of supervision was expected of the local administrative officials as is evident in the number of instances where they interceded in disputes between the jagirdars and the cultivators over the assessment and collection of revenue.<sup>28</sup> The practice of demanding an annual confirmation of jagir after official verification of the quality and size of the contingent maintained by the assignee indicates that the tenure continued to be seen as a conditional assignment in lieu of a salary.

In the latter half of the eighteenth century, the economic position of the smaller jagirdars appears to have become increasingly difficult. One indicator of this is the wide discrepancy between the officially estimated proceeds of the jagir

and the actual collections.<sup>29</sup> Undoubtedly, an aggregate fall in agricultural production during this period implied a decline in the income of all surplus appropriators. This was expressed in an intensification of conflict within the rural community over the collection and distribution of revenue in the latter half of the century.<sup>30</sup> This situation was further exacerbated by additional demands imposed by the state. As the financial pressure on the state increased, it began to realise a special levy, called "ganim barar", from the jagirdars in order to pay the Maratha tribute.<sup>31</sup> The financial predicament of the jagirdars made it impossible for them to maintain the required contingents. In an unprecedented move, the darbar was forced to grant the jagirdars of twenty seven parganas a years compulsory leave in 1760 due to their inability to render service.<sup>32</sup> On the basis of the evidence available this appears to have been a temporary response to a crisis.

From the middle of the eighteenth century there was also a significant expansion in revenue farming or "ijaradari" in the Jaipur state. The farming of revenue was an integral part of the Islamic system of taxation and served a variety of functions ranging from a mechanism of political incorporation to a fiscal arrangement to encourage the restoration and extension of cultivation.<sup>33</sup> The ijara contracts in the first half of the century in our region were almost invariably short term and subject to regular supervision by the state's administrative officials. Closely supervised contracts such as these were aimed at rehabilitation and agrarian expansion or were purely administrative arrangements to overcome the problem of multiple collecting agencies in villages whose revenue was shared between a number of assignees.<sup>34</sup> In the second half of the eighteenth century, as the state was faced with increasing demands for tribute from the Marathas as well as an agrarian crisis in production, there was an increase in the villages assigned in jagir and ijara.<sup>35</sup>

The general trend in the distribution of the state's revenues provides some measure of this change.

Table 1 below shows the average variations in the khalisa, ijara and jagir revenues for the eighteenth century based on a sample of six parganas. The proportion of the revenues within the categories of the 'king's share' or khalisa (and within that of ijara) and non-khalisa fluctuated in size and distribution from year to year. Of the latter, the largest proportion was assigned in jagir while the alienation of specific lands through various forms of charitable grants was minor and probably relatively stable over the period.<sup>36</sup> In the initial period of consolidation of political control and subjugation of the recalcitrant local zamindars from about 1700 to 1730, the revenues assigned in jagir were significantly higher than those in khalisa or ijara.<sup>37</sup> Subsequently, until the middle of the eighteenth century, the revenues in khalisa were higher than the assigned revenues. During the same period, there was an increase in the proportion of khalisa revenues that were farmed out from under 15 per cent in the previous period to about 30 per cent.<sup>38</sup> In the second half of the eighteenth century, however, more than half the khalisa revenue was farmed out and there was a parallel expansion in the jagir assignments.

Table 1. Percentage Distribution of State Revenue (c.1700-1785)

PERIOD	KHALISA		JAGIR
	Govt.Admin	Ijara	
1700 - 1730	34	6	60
1730 - 1750	47	13	40
1750 - 1785	23	25	52

Source: See note 39.

The increase in the farming of revenue in the late eighteenth century was in itself significant but equally important was the particular form of ijara that became prevalent. The "ijara istamarari", as these contracts were termed, were generally taken by local rural elites through a system of competitive bidding for periods ranging from three to fifteen years.<sup>40</sup> Such ijaras were generally given for small units comprising one or two villages and the ijaradar took over all the administrative, revenue, and judicial functions of the state for the period of the contract in exchange for a previously agreed upon annual payment to the state. Local moneylenders and traders were involved in revenue farming mostly as guarantors and less frequently as ijaradars themselves.<sup>41</sup>

It has until recently been generally argued that the widespread adoption of such long-term ijara tenures adversely affected the prosperity of the cultivator.<sup>42</sup> However, the available evidence for our region does not appear to support this hypothesis. While there are complaints by peasants of reckless and excessive taxation by the ijaradars.<sup>43</sup>, the number of such petitions are small compared to the extent of area that was farmed out. Further, once the ijara contract ran out in three to five years and the villages reverted to directly administered khalisa lands, there was no appreciable difference in the revenue collected before and after the ijara tenure.<sup>44</sup> Given the lack of any direct evidence on the actual collections made by the ijaradars, such a comparison of revenue returns provides a reasonably accurate proxy for the continuity in agricultural production in a economy where the most effective deterrent against over-exploitation of the peasantry was their flight from land.<sup>45</sup> On the contrary, the ijara contracts were taken on terms suggesting a twelve to twenty five per cent annual rate of increase over the previous collections made by the state.<sup>46</sup> This seems to indicate that there was a considerable leakage

of resources inherent in the system of revenue management which more than adequately covered the additional risk and the costs of collection and supervision incurred by the ijaradar. Perhaps it was in the light of this knowledge that the zamindars, village headmen and local officials, and even the peasants are reported to have taken on ijaras in the second half of the eighteenth century.<sup>47</sup>

The increased farming of revenue by the Jaipur state in the second half of the eighteenth century appears to have been in response to a financial crisis caused by the regular payment of tribute to the Marathas and which ultimately undermined the state's ability to command its resources. The complex interaction between agrarian production, the provision of credit, state finances and the adoption of revenue farming forms the subject of the later discussion on credit relationships.

#### Peasant Stratification

It is necessary to briefly explain the various terms used to describe the sections of village society in our region. In the documents examined, a primary distinction is made between cultivators, collectively termed "haljotas", and non-cultivating artisans and menials or "kamins".<sup>48</sup> Cultivators may be further divided into village residents, referred to as "gavetis", and non-residents or "pahis". Gavetis were broadly categorised into privileged taxpayers or rural elites, the "gharuhalas", who were granted concessionary rates of revenue payment and the "raiyati" or "palti" who paid the standard tax.

The privileged taxpayers comprised agriculturists who belonged to the upper castes such as Brahmans, Rajputs, Kayasthas, and Mahajans, as well as the

zamindars and hereditary village officials, the "chaudhuri", "qanungo", "patel" and "patwari". The latter were generally not members of the upper castes and their privileged tenure was in recognition of their status as holders of superior agrarian rights.<sup>49</sup> These sections of the rural elite were granted concessionary rates of revenue payment on their gharuhala cultivation as well as a complete or partial exemption from contributing to the common fiscal pool of the village from which the additional taxes of the state and the expenses of the village were met.<sup>50</sup> It has been argued by Dilbagh Singh that the defining features of the gharuhala tenure were the use of personal ploughs and family labour to till the land and the payment of revenue at concessional rates.<sup>51</sup> He sees this definition as being consistent with the state's objective to limit the size of gharuhala holdings because of the reduction in revenue that an expansion in gharuhala holdings entailed. The stipulation regarding the use of family labour to till the land was a major constraint on the secular expansion of acreage under gharuhala cultivation. Land cultivated by non-family labour was not reckoned as "gharujot" and concessionary rates of taxation could not be claimed on such cultivation.<sup>52</sup> Dilbagh Singh has further asserted that the gharuhalas did not differ from the paltis in the nature of their land rights and that like paltis, gharuhalas could be "maliks" or proprietors as well as tenants.<sup>53</sup> In both situations they paid revenue at concessionary rates.

This characterisation of gharuhala tenure needs to be qualified on several points. There is evidence to show that the right to concessional revenue terms on gharuhala land could be claimed even when the tenure holders employed "halis" or ploughmen to work the land.<sup>54</sup> Dilbagh Singh himself cites evidence that "majurs" or agricultural labourers were hired to cultivate gharuhala land in pargana Phagi in 1723 and that this did not affect the gharuhalas entitlement to concessionary

taxation. He, however, adds that this was an exceptional situation as the paltis of the village were "not in a position to till their entire holdings".<sup>55</sup> The hypothesis regarding the exclusive use of family labour on gharuhala holdings appears untenable on another account. A single family's gharuhala holdings were occasionally dispersed over more than one village making it impossible to cultivate these holdings solely with family labour.<sup>56</sup> For example, the qanungo family of gasba Hindaun had its gharuhala holdings spread over seven villages in the pargana.<sup>57</sup> It appears reasonable therefore to infer that family labour could not have been the only form of labour on gharuhala holdings in all cases and that the use of family labour cannot be seen as an essential element of gharuhala tenure. However, there is evidence to indicate that if gharuhala holdings were cultivated by tenants, then the lower tax rates applicable to gharuhala cultivation were withdrawn.<sup>58</sup>

In view of these qualifications, gharuhala tenure can best be described as the privileged tenure extended to the rural elite on the cultivation of land for which they provided the necessary inputs of ploughs, bullocks and seed and retained the option of supplementing or replacing family labour with wage labour. The limitations to the increase in the gharuhala holding would then rest on the availability of labour and capital to sustain such an expansion and the institutional limits imposed by the state. In the latter half of the eighteenth century, the recurring conflict between the gharuhalas and the raiyati arising from the transfer of raiyati land to the privileged taxpayers brings into sharp focus the ambiguities in the nature of gharuhala tenure and the states' inability to contain an expansion in gharuhala holdings at the expense of raiyati cultivation.<sup>59</sup>



Further, Dilbagh Singh's contention that an agriculturist who was entitled to gharuhala status by virtue of his caste or social position could claim gharuhala privileges even when he was a tenant also needs to be questioned. The evidence cited by him to show that gharuhalas could be tenants comes from a document that states that Todarmal qanungo cultivated ten bighas of well irrigated land as a khudkasht or gharuhala cultivator in the "patti" of Harchand Dhakar (Jat).<sup>60</sup> It is plausible to argue that the Jat was one of the patels of qasba Hindaun in which case the patti referred to denoted his pateli jurisdiction as was generally the case. For example, in qasba Sanganer there were nine pattis corresponding to nine pateli jurisdictions. Of the nine patels, two were Ahirs and one each a Mali, Jat, Kumhar, Gujar, Mewati, and Guwar.<sup>61</sup> Interpreted in this way, the qanungo was not a tenant of the Jat but simply had his gharuhala holding within the latter's pateli jurisdiction. It is feasible that members of the upper castes could be tenants, but in such cases the revenue category by which their land would be assessed would depend upon the status of the taxpayer or proprietor of the land.

The other category of agriculturists, comprising the majority of the village residents, were the raiyati or paltis. The paltis or the unprivileged cultivators were taxed at higher rates than the gharuhalas and all the additional cesses and communal expenses of the village were met by them. A fuller discussion of the revenue and other fiscal obligations of the paltis is contained in Chapter IV on Revenue Policy. The paltis consisted of peasants belonging to the intermediate agricultural castes such as the Jats, Gujars, Malis, Kumhar-Malis, Ahirs and Meenas. The term palti was used to describe both proprietors with the right to sell or mortgage their holding, as well as those peasants cultivating the personal lands of the revenue grantees and zamindars over which they had no more than hereditary occupancy

rights. In a land surplus economy that was subject to frequent droughts and the loss of cattle, the feature that distinguished the paltis from the agricultural labourers was the possession of oxen. In the records enumerating the number of asamis or taxpayers owning oxen or plough-teams, called yaddashti hal bail, there are numerous references to erstwhile labourers, such as majurs, halis and "naukars", who had acquired bullocks during the current year and begun to cultivate independently.<sup>62</sup>

It is not entirely clear whether the category of palti also included cultivators belonging to the professional and service castes collectively termed the kamins. Irfan Habib is of the opinion that the hereditary division of labour imposed by the caste system prohibited the kamins from acquiring the status of peasants, thereby creating a "fixed labour reserve force for agricultural production".<sup>63</sup> Dilbagh Singh has pointed out, however, that in eastern Rajasthan kamins could become full-time agriculturists and cultivate land on their own in exceptional circumstances such as in the process of resettling depopulated villages.<sup>64</sup> He goes on to suggest that as cultivators, the kamins were probably economically better off than the majority of the paltis as they paid land revenue at lower rates than the paltis.<sup>65</sup> It is our contention that the status of kamins as agriculturists was more widespread than has hitherto been recognised and that Dilbagh Singh's evidence of the concessional rates of tax applicable to kamins is based on a misinterpretation. To amplify this point, it is our view that the misunderstanding arises from a confusion of the caste category of kamin and the treatment of this caste in the tax and revenue records.

Kamins who performed labour services or begar for the village community customarily claimed a share of the grain heap before the division between the state

and the peasant.<sup>66</sup> The tax schedules of parganas Udehi and Chatsu specifically mention that the kamins were subject to taxation in the proportions specified on the grain received by them from the agriculturists.<sup>67</sup> This interpretation also accords with our evidence from the khasra of village Naelo (see appendix 7). In this khasra, there is a clear uniformity in the taxable grain quantities recorded against those taxpayers denoted kamins.<sup>68</sup> These quantities appear to be too low to have been the output from the cultivation of land and the element of regular gradation in the amounts suggests that the amounts of grain taxed were those received by the kamins through the customary redistribution within the village. That it was not unusual for the state to tax the kamins on this source of income is corroborated by a similar practice noted by Sykes in the Deccan where the perquisites of the balutedars or village servants were taxed "on the ground that their fees were more than commensurate with the value of the labour performed."<sup>69</sup> It is possible therefore that the lower rates of taxation mentioned under the category of kamins in the various tax schedules were specific to the tax rate levied on the income of non-agriculturist kamins.

As distinct from the kamins who were non-agriculturists, those who were cultivators were referred to as paltis or haljotas and it is reasonable to infer that they paid land revenue at the standard rates applicable to the paltis. The confusion between the caste category of the kamins and their tax treatment is illustrated by the predicament of the agriculturist kamins of qasba Sanganer. In qasba Sanganer all kamins were required to pay a caste-based levy called kholri. The list of kholri taxpayers in the jamabandhi of 1695 reveals that the Malis, Kumhar-Malis and Mewatis were included in the category of kamin but were referred to as paltis and haljotas as they were full-time agriculturists.<sup>70</sup> Although the kholri levy was

relatively small, the average annual tax per house being eighteen takas (or one rupee), the Malis, Mewatis and Kumhars of the qasba submitted a joint petition asking for exemption. The petitioners stated that they objected to paying a caste-based levy in addition to the land revenue imposed on their agricultural output and promised to expand their cultivation and hence the revenue of the qasba substantially if their request was granted.<sup>71</sup> The petitioners also resort to the veiled threat of migration if their request were to be refused by referring to the fact that large numbers of their kinsmen had already migrated to Gujrat and Mewar because of the excessive taxes imposed on them.

There is evidence in other documents that similar arguments were advanced by full-time agriculturist kamins to justify their claim for exemption from other caste-linked obligations such as labour services or begar. For instance, the telis of qasba Phagi state that they cultivate land as well as work oil-presses and complain that they were being harassed to perform begar.<sup>72</sup> Harbans Mukhia also notes that the oil-pressers of qasbas Chatsu and Phagi, besides carrying on their caste-profession, were also agriculturists and were exempt from begar.<sup>73</sup> There are numerous petitions from kamins alleging that although they were exempt from begar they were being harassed by various sections of the rural elite.<sup>74</sup> From the available evidence it is clear that an exemption from begar was only granted to agriculturist kamins in recognition of their status as cultivators.<sup>75</sup> The fact that in the revenue records the cultivating kamins were identified with the paltis as well as their own perception of their rights as agriculturists leads us to suggest that their status and fiscal obligations were similar to the unprivileged caste peasants.

In records enumerating the numbers of oxen owned by each taxpayer or asami we find numerous references to lower castes such as carpenters (Khati), oilpressers (Teli), barbers (Nai), potters (Kumhars), distillers (Kalal), and service castes such as Chamars or Balahis.<sup>76</sup> While members from these castes are included in virtually every village in such censuses, there are fewer references to castes such as washermen (Dhobi), printers (Cheepa), goldsmiths (Sonar) and cotton carders (Pinyara). The yaddashtis do not, however, consistently record the caste names of all taxpayers thus making it impossible to accurately quantify the relative importance of each caste as taxpayers in the pargana.

An analysis of the caste structure of a few villages in pargana Chatsu in 1666 shows that the castes generally included in the category of kamins constituted as many as one in five of all taxpayers. For example in mauza Datvas, pargana Chatsu, of the 87 cultivators recorded in 1666, 9 were oil-pressers, 7 distillers, and one a calico-printer or cheepa. Excluding the Malis or market-gardeners, other castes belonging to the kamin category formed about seventeen per cent of the recorded asamis in qasba Chatsu in the same year.<sup>77</sup> Another indicator of their number is provided by the yaddashti of pargana Chala Kalyan. This gives details of the increase in the number of ploughs over the previous year and a sample survey of twenty-nine khalisa villages of tappa Sanghvani reveals that over twenty per cent of the 'new ploughs' added within this period were owned by the kamins.<sup>78</sup> Of the 201.5 new ploughs added to the previous years total of 380 ploughs, immigrants or pahis brought in 40 ploughs. Of the other 161.5 new ploughs that had been acquired by the resident village population, over twenty per cent (33 ploughs) were owned by castes such as Chamars (20.5), Khatis (3.5), Kumhars (4.5), Nais (3), Cheepa (1) and Maniyar (0.5). The considerable annual

addition to assets that these censuses record, ranging from 10 to 20 per cent for a pargana, indicate that the vast majority if not all of the newly-acquired bullocks were purchased in the cattle market. Occasional references in the documents confirm this view. For example, in mauzas Jhak, Dhaman, and Jaisinghpura in pargana Mauzabad, all the bullocks added to the village stock within the past year, numbering 27, 13 and 5 respectively, had been purchased.<sup>79</sup> The evidence of the few cattle censuses that are available indicate that the number of cultivating kamins was significant and widespread.

We have little evidence on the kamins' rights to the land they cultivated. A 'sanad' of 1766 records that Lalo Kumhar of village Choru in pargana Phagi left the village during the drought of 1755.<sup>80</sup> During his absence, the well and the land that he had cultivated were declared 'bewaris' or without heir and sold to a Purohit for Rs.84. On the return of the Kumhar after eleven years, the amil was instructed to ensure that the Kumhar's land and well were restored to him and that the Purohit was given back the money that he had paid for it. The diwan's instructions regarding the return of the money to the Purohit state that if the money had been deposited in the treasury, a government hundi (varat) for the amount be issued to the Purohit. Alternatively, if the proceeds of the sale had been given to the moneylender to clear the Kumhar's outstanding debts and an examination of the bohra's accounts established that his claim to the money was valid, then the Kumhar must pay the eighty-four rupees to the Purohit. The fact that the Kumhar regained possession of his land despite his long absence and the interim sale of the land to another cultivator indicates that his title to the land was essentially similar to the permanent and hereditary occupancy right claimed by the peasant in Mughal India.<sup>81</sup>

It is apparent from the discussion in this chapter that village society consisted of a variety of social groups. The question arises as to what extent the social strata in terms of caste corresponded to the economic status of each group. In a region where the extent of cultivation and land-holding were closely related to the numbers of bullocks or plough teams, data showing the distribution of bullock-ownership could be used as a proxy for determining the nature of economic differentiation. In an earlier study, Satish Chandra showed that the majority of peasants belonged to the 'middle peasant' category owning two to four bullocks per head.<sup>82</sup> The number of peasants owning just one bullock, classified as 'poor', constituted about twenty to thirty per cent of the population enumerated while the number of asamis with more than four bullocks was variable, fluctuating between less than one per cent to over nine per cent in different parganas.<sup>83</sup> It is possible to extend the important findings of this study by correlating economic differentiation with social status in terms of caste and official position in the village. The significance of such an exercise lies in the attempt to assess whether the favourable tax treatment of the socially superior strata of rural society was reflected systematically in the differential ownership of a key production resource. The results of a sample study of the distribution of bullocks among the most numerous castes resident in the qasba and four large villages of pargana Chatsu are shown in Table 2.<sup>83</sup>

The figures under oxen per head in the table show that although the upper caste asamis owned more bullocks on average than the unprivileged castes, the disparity in ownership was not acute. The only group which appears to have control over draught power that was significantly higher than average were the village

Table 2: Distribution of Bullock Ownership by Caste Categories.

	Asamis nos.	Oxen nos.	Oxen per head	% Distribution of oxen			Total
				1	2-4	>4	
<u>Qasba Chatsu</u>	200	422	2.1	30.5	64.5	5.0	100.0
Brahman	51	115	2.3	23.5	72.6	3.9	100.0
Nagori	14	35	2.5	28.6	57.1	14.3	100.0
Mali	70	123	1.8	40.0	58.6	1.4	100.0
Teli	28	51	1.8	46.4	53.6	0.0	100.0
<u>Mauza Chandlai</u>	165	502	3.0	12.0	72.3	15.7	100.0
Patel	9	78	8.7	0.0	11.1	88.9	100.0
Brahman	84	235	2.8	9.5	79.8	10.7	100.0
Jat	33	93	2.8	15.2	66.7	18.2	100.0
Mali	10	22	2.2	10.0	90.0	0.0	100.0
<u>Mauza Kotkhayda</u>	154	376	2.4	18.2	74.0	7.8	100.0
Patel	12	41	3.4	0.0	75.0	25.0	100.0
Sah (baniya)	14	48	3.4	0.0	78.6	21.4	100.0
Pande Brahman	27	53	2.0	33.3	66.7	0.0	100.0
Jat	22	50	2.3	18.2	77.3	4.5	100.0
Mali	14	27	1.9	28.6	71.4	0.0	100.0
<u>Mauza Datwas.</u>	78	193	2.5	20.5	69.2	10.3	100.0
Patel/Patwari	6	30	5.0	0.0	33.3	66.7	100.0
Mali	17	30	1.8	29.4	70.6	0.0	100.0
Gujar	13	25	1.9	23.1	76.9	0.0	100.0
Teli	9	18	2.0	44.4	55.6	0.0	100.0
<u>Mauza Bikarya</u>	34	81	2.4	29.4	64.7	5.9	100.0
<u>Buzurg</u>							
Meena	20	47	2.4	20.0	80.0	0.0	100.0
Mali	7	10	1.4	57.1	42.9	0.0	100.0

Source: Yaddashti Hal Bail Jubani Patel Patwari, pargana Chatsu, VS 1723/AD 1666.

Note: The figures alongside the name of each of the five units (village or qasba) show the aggregate numbers and the percentage distribution of the total population within the unit. The caste groups which comprised the majority of the residents in each unit have then been selected for further analysis.



officials, notably the patels.<sup>84</sup> Conversely, the Malis have the lowest average ownership ratio in each of the five units analysed. This may be due to the fact that they were specialist cultivators of cash crops on small and intensively cultivated plots of land. Therefore, an index of economic stratification based on bullock ownership alone is a misleading measure of their relative economic position. The distribution of oxen across various categories shown in the table appears to bear a remarkable approximation to a normal distribution. The majority of the asamis of every caste are clustered within the 'middle peasant' category owning two to four bullocks each.

Clearly we would need a wider range of information on aspects such as agricultural investment and output to permit inferences to be drawn regarding the relative economic status of various caste groups. But the absence of a sharp differentiation in the ownership of a vital production resource does bring into question formulations that assume a systematic correspondence between caste hierarchies and economic strata. Our evidence suggests that while the majority of the upper caste agriculturists appear to be no better off than the ordinary peasants, of the few prosperous cultivators besides the village headmen who owned more than five bullocks each, most were from the higher castes. Thus although caste membership cannot be seen as an automatic proxy for economic status, the fiscal and other concessions accorded to the upper castes and the village officials meant that prosperous agriculturists were generally members of this privileged section of village society.

The analysis of the variation in bullock ownership between individual cultivators indicates a stratified village society. The absence of extreme inequalities

in the distribution of resources reinforces the view that the basic unit of production in medieval north India was the peasant family farm. Harbans Mukhia has characterised the agrarian economy of medieval north India as a 'free peasant economy'. He defines a 'free peasant' as a producer who "neither rendered his nor his family's labour to any one in any form for purposes of production, nor employed outside labour; he cultivated his family farm with his own family's labour and resources" and was free of any form of extraneous control over his process of production.<sup>85</sup> This definition reiterates the notion of a self-sufficient peasant by emphasising the economic 'freedom' of the individual peasant in his control over his choice of cropping pattern, within the universal constraints of the regional ecology and the specific allocation of his family labour. Mukhia's characterisation however, does not allow for the various ways in which the economic freedom of action of the peasant was constrained. In a recent work, Frank Perlin has argued that the concept of a self-sufficient, self-regulatory and self-reproducing autonomous peasantry derives from an uncritical acceptance of the tax-contracting revenue categories and that these official categories conceal the sub-tenurial grid of sharecropping, hired labour and temporary leases.<sup>86</sup> Evidence from other regions of north India corroborates Perlin's argument and shows that the lack of adequate resources resulted in various forms of agrarian dependence.<sup>87</sup>

Agricultural labourers represented the most extreme form of agrarian dependence. The little that our sources tell us of them suggests that the halis, majurs and naukars could begin cultivating as independent cultivators or asamis once they had acquired their own oxen or a plough team.<sup>88</sup> Cattle were particularly vulnerable to the periodic recurrence of drought in this region. The distress caused by famine and the consequent lack of resources provides one

explanation of the process whereby peasants were reduced to the status of agricultural labourers.<sup>89</sup> Bayly suggests that political factors also need to be considered as these may create conditions where the peasants trade their independence for protection.<sup>90</sup> While we have no direct evidence to support this view, periods of intensified local conflict did coincide with the disruption in agricultural production and trade, the withdrawal of money-lending capital, an increasing frequency of devastating famine and the general impoverishment of the peasantry.<sup>91</sup> Hence, the prevalence of this form of agrarian dependence in a region should be seen as arising from an interplay of factors such as demography and the supply of land, climatic imbalances and political conditions.

While agricultural labourers were totally dependent upon their employers for their subsistence, poor peasants also supplemented their income through casual labour for which they received wages or "majuri".<sup>92</sup> This feature may perhaps have been seasonal as suggested by P.M.Blaikie who argues that well ownership is a source of power in the village exercised through providing work and food for those cultivators who were unable to farm their land in the rabi season because they lacked irrigation facilities.<sup>93</sup> Such paid seasonal labour to supplement income was clearly different from the labour services rendered by the kamins for which they received a customary share of the agricultural product.<sup>94</sup> Sharecropping or "sanjha" contracts can also be seen as a form of securing labour where the landlord closely supervised and controlled production by regulating the provision of agricultural inputs.<sup>95</sup>

While the lack of physical resources such as adequate draught power or irrigation forced peasants into relations of dependence, the widespread prevalence

of peasant indebtedness must also have severely reduced the autonomy of the peasant in crucial spheres such as cropping decisions. Intervention in the peasant's labour process on his own land may have been indirectly exercised through the manipulation of the terms of debt repayment. In one instance we find that the moneylender demanded repayment of grain advances made at the commencement of the sowing season in form of raw cotton after the harvest.<sup>96</sup> Hypothecation of valuable cash-crops in order to service debts appears to have been widespread in the adjoining Agra-Bayana region even in the seventeenth century.<sup>97</sup>

In view of the various forms of inter-dependence that existed in rural society, it would conceptually be more accurate to view the individual cultivating family units as part of a complex production system as emphasised by Baker.<sup>98</sup> Christopher Baker stresses that few farms enjoyed any chance of economic and political independence and that the control over local capital in the hands of the commercial and landed elites meant that the principal unit of organisation of the agrarian production system was an 'agrarian manager'. The latter provided the necessary facilities for production in exchange for labour. Intrinsic to the system of production was moneylending and it is to the provision of credit that we now turn.

### Credit Relationships

The agriculturists' needs and demand for credit can be attributed to their revenue obligations, to the seasonal demand for consumption and seed loans, to finance investment in wells and cattle and the need to provide for social ceremonies such as marriages or bereavements. In his study of agricultural credit in

medieval India, Habib cites evidence from eighteenth century Bengal to suggest that peasants took loans "mostly" because of the need to pay land revenue.<sup>99</sup> Our evidence shows, however, that loans were generally "bij khaj" or seed and consumption loans and the explanation for this difference can be found in the fact that the revenue demand in our region was largely levied in kind. There are also instances in our documents of loans taken to finance the digging of wells, the purchase of cattle and the rehabilitation of villages.<sup>100</sup> A clear indication of the important role of credit in agricultural production is provided in the response of the diwan to a jagirdars' complaint that the patel and paltis of the village had stopped cultivation without offering any explanation.<sup>101</sup> The diwan in his reply suggests three possible reasons and the appropriate actions to be taken; first, that the raiyatis refusal was deliberate and therefore if they did not cultivate village lands then the jagirdar should get the land tilled by other paltis; second, that the village moneylender was not providing them with adequate credit in which case a sum proportionate to the average output of the village be advanced to the raiyati; and, third, that the raiyati may not be cultivating because the moneylender was harassing them to repay old debts and that this must not be permitted.

The two principal sources of credit for needy peasants were the state and the moneylenders who are referred to in our sources by the generic term of "bohras". These two agencies for agricultural loans should not, however, be seen as competing alternatives but rather as being complementary to each other. Our evidence indicates that the normal seasonal demand for seed and consumption loans (bij khaj) was generally provided by the rural moneylenders. The "tagai" or agricultural loans extended by the state on the other hand were generally fairly large amounts advanced to finance productive investment or to aid in the agricultural recovery of

an area when the bohras refused to extend credit due to perceived risk. Tagai was also the term used to denote loans made by revenue farmers, assignees and grantees.<sup>102</sup> While our documents clearly indicate that rural moneylending was widespread and that the bohra was an integral part of village society, they offer little information for the historian on questions related to the operation of the system and the terms of credit. A greater body of information is available regarding the state's tagai loans and the control exercised by the state on the rural moneylenders and it is through the analysis of this evidence that we can obtain a partial insight into rural moneylending.

The Jaipur state's objectives in financing agrarian development appears to derive from the Mughal conception of development which consisted of the extension of the area under cultivation and an increase in the production of cash-crops.<sup>103</sup> Thus tagai loans were advanced for investments such as the construction of a dam in Sanganer and the introduction of sugarcane cultivation in pargana Bhusawar. In 1714 the raiyati of qasba Sanganer submitted a petition to the state requesting a loan of Rs. 6,000 to finance the construction of a dam and stated that such a scheme would benefit the state in the form of increased revenues of approximately Rs. 3,000 per year. The raiyati also undertook to repay the principal within the next five to seven years.<sup>104</sup> In pargana Bhusawar, on the other hand, the state provided substantial sums to encourage the expansion in the cultivation of sugarcane.<sup>105</sup> The document states that the target set by the state to double the production of sugarcane in the tappa of Pavta, pargana Bhusawar, had not been met as the raiyati of some of the villages were unable to obtain credit from the bohras to purchase seed. The diwans response was to emphasise that the cultivation of sugarcane was essential for the prosperity of the village and, therefore, tagai loans

were sanctioned to these villages at the rate of six rupees per bigha of cane grown and the total amount lent was fixed at Rs. 2,000-2,500.

Tagai loans were generally advanced through the village patel but records were maintained of their distribution to individual asamis within the village. It was on the basis of such records that individual liability was calculated and attempts by the patel to pass on his debt burden to the raiyati were met with official reprimands.<sup>106</sup> The state levied interest on tagai loans which was approximately 9 per cent in the fiscal year 1760-1761.<sup>107</sup> This was also the standard rate charged to traders who contracted to sell the state's share of grain and may have corresponded to the prevailing commercial rate of interest.<sup>108</sup> Tagai loans advanced by the state for seed and consumption were also distributed in grain and the value of the loan was calculated in cash at the prevailing high pre-harvest prices.<sup>109</sup> Repayment with interest on the loan generally demanded immediately after the following harvest and occasionally in instalments spread over the fiscal year.<sup>110</sup> This convention of debiting a grain loan as a cash loan involved a gain irrespective of whether payment was demanded in cash or the grain-equivalent at the low prices after the harvest. The local revenue officials were quick to spot the potential loss to the state during the fiscal year 1726-27 when there was an unusual rise in post-harvest prices. The rise in post-harvest prices was perhaps due to the famine in the territories around Delhi and the export of substantial amounts of the winter grains to the affected areas by the state.<sup>111</sup> In this year it was estimated that the state would incur a loss of about Rs. 15,000 on the recovery of tagai loans that had been distributed when the prices were much lower than those at the time of repayment.<sup>112</sup> The local officials were therefore instructed to revise the price at

which the commutation into cash had been fixed and recover grain at this inflated rate which was then to be sold immediately in order to make up the notional loss.

There is relatively meagre information regarding the terms of credit on loans advanced by the bohras. A recent study suggests that the rates of interest charged by the moneylenders were usurious and ranged from ten to twenty-five per cent per annum.<sup>113</sup> An analysis of the family papers of a Brahman priest who invested in moneylending and trade in the adjoining state of Marwar (Jodhpur) in the same period, concludes that the range in the rates of interest, fluctuating between ten to thirty-six per cent in this region, was a reflection of the nature of security offered on loans. Thus the higher rate of 36 per cent was charged on unsecured loans while only half that rate was levied on loans secured on land, oxen or ornaments.<sup>114</sup> Part of the capital of the rural moneylender appears to have been obtained through advances from the substantial traders and sarrafs or money-changers resident in the qasbas. These men lent money to the village bohra as well as directly to jagirdars, patels and the raiyati.<sup>115</sup> One such financier, Mohanram Mahajan, requested the assistance of the state to recover Rs. 10,000 that he had loaned to the "Rajputs, mahajans and raiyati" of pargana Amarsar.<sup>116</sup> Similar pleas from other large financiers for help in the recovery of loans were generally acted upon by the state on the condition that a quarter of the sum recovered was deposited in the state treasury.<sup>117</sup> Some requests were rejected on the ground that the loans were more than ten years old or when it was felt that their recovery would adversely affect peasant production.<sup>118</sup>

Rural moneylending was not restricted to the traditional commercial castes such as the banyas, sarrafs and mahajans but also included rich agriculturists and the



hereditary elite such as chaudhuris and qanungos. Some bohras and mahajans were also gharuhala cultivators.<sup>119</sup>, and traders<sup>120</sup>, while substantial agriculturists also derived part of their income from moneylending and trading.<sup>121</sup> While it is clear that such 'rural commercial magnates' who combined agriculture, trading, moneylending and, in some cases, administrative office existed in the eighteenth century in the region studied, the paucity of data does not permit an estimate of their number or scale of activities.<sup>122</sup> In the majority of documents relating to conflicts arising from the mortgage of land in the latter half of the eighteenth century, it was this category of rural magnate that was involved.

In addition to lending money, the rural rich also hired out assets such as wells, ploughs and bullocks.<sup>123</sup> The rent on wells was termed "nalvat" and some estimation of its incidence can be obtained from the official rates of nalvat levied on the lease of state-owned wells. Such wells appear to have been acquired by the state through sequestration of the property of defaulting asamis - as in the case of the patel who absconded on being charged with the theft of cattle<sup>124</sup> - and in the process of forcible eviction of recalcitrant clans. When the Chauhan zamindars of pargana Lewali were ousted along with their supporters in 1723-24, their property was declared khalisa and nalvat demanded by the revenue authorities on the use of the wells by the raiyati in a later year.<sup>125</sup> Nalvat was a levy in addition to the land revenue and could be realised in cash at a fixed rate per bigha or in kind as a proportion of the produce. In qasba Sawai Jaipur, the rate of nalvat paid to the state was fixed at either one rupee per bigha or, when paid in kind, a sixth of the taxpayers share of the produce after the payment of revenue and other dues.<sup>126</sup> In qasba Chatsu the rate was only four annas per bigha in 1763 while in qasba Sanganer, it was calculated at a sixth of the estimated value of the produce in

cash.<sup>127</sup> There is no evidence of the rate of nalvat demanded by private owners although one document indicates that the amount demanded was substantially increased by calculating the levy as a proportion of the gross output of the peasant rather than on the peasants share after the payment of revenue.<sup>128</sup>

The state imposed several restrictions on the operations of the rural moneylenders. The measures taken were aimed at restricting the demands of the bohras as well as to ensure uninterrupted cultivation. In a few instances we find that the raiyati desert the village due to the excessive demands made on them by the bohra.<sup>129</sup> In one such case, the Ahir patel of the village was instructed to induce the paltis who had fled to resettle in the village by offering revenue concessions and a guarantee that their debts to the bohra would be deferred for three years and afterwards repaid in instalments fixed in accordance with the harvest output.<sup>130</sup> It was precisely this sort of peasant resistance to excessive demands that the state attempted to prevent through a policy controlling the sphere of moneylending. The diwan's instructions to the amils repeatedly emphasise that the bohras must not harass the raiyati to meet repayments on loans that were older than a year.<sup>131</sup> The general principle in regard to all loans - tagai as well as loans advanced by the bohras - was that debts incurred in the current harvest period should be recovered immediately after the harvest or within the fiscal year.<sup>132</sup> Arrears on older loans could only be demanded if the output of the current harvest was considered adequate.<sup>133</sup> In one case the state recommended that the indebted paltis repay their creditors, the Rajawats of Sirsa, by selling their milch cattle.<sup>134</sup> In order to limit the compounding of interest arising from defaults on payments, the amil was to ensure that the total debt did not exceed twice the principal.<sup>135</sup> In situations of acute distress or poverty of the raiyati, a moratorium on all

repayments on loans was imposed till such time as they were able to clear the debt in easy instalments.<sup>136</sup>

The fact that the state actively discouraged the recovery of old loans by the bohras suggests that such loans were generally unrecoverable and therefore written off. The bohras often attempted to circumvent the stringent restrictions imposed by the state and connived with the amil in attempting to recover old debts. The diwan strongly reprimanded the amil of pargana Gazi-ka-Thana for conniving with the moneylender, Harlal Mahajan, and despatching a task-force (talab) to Bijay Singh Rajawat's jagir village in order to collect debts outstanding for over ten years owed by the village mahajan, raiyati, and the jagirdar's retainers.<sup>137</sup> In another instance, Gordhan sarraf imprisoned a patel who owed him Rs. 1,350.<sup>138</sup> The amil negotiated the release of the patel on condition that the patel repay the sarraf and appoint a guarantor. Following this settlement, the diwan was informed that the patel was harassing the raiyati to increase their contributions to the common financial fund ("malba") of the village in order to clear his debt. Rather than reprimand the patel for the misuse of the common village funds, the diwan remonstrated with the amil criticising his role in the settlement on the grounds that it was prohibited to demand the repayment of old debts and that the amils responsibility lay in ensuring that the raiyati were not harassed on this account.

Our discussion of the system of agricultural credit in operation shows that severe institutional constraints dictated by the state were applied to the terms of repayment that could be imposed on borrowers. This must not, however, be taken to imply an antagonistic relationship between the state and the bohra. In an agricultural economy in which a large and dispersed number of small borrowers was

serviced by a corresponding multiplicity of petty moneylenders, the state clearly recognised the important role played by the latter in rural production and in marketing thereby ensuring the flow of revenue to the state.<sup>139</sup> The rationale for the limits imposed by the state on the moneylenders must lie in the objective of the state to subordinate the claims of the bohras to its own revenue demands. An integral component of the policy to regulate and limit the profits of the bohras was the ability of the state to provide an alternative source of credit when the bohras refused to extend this facility.

In situations where the bohras were unwilling to provide credit, the state advanced tagai loans to meet the subsistence requirements of cultivators. In a number of documents the amils report that the prevailing drought or the preceding poor harvest had meant that the bohras were unwilling to extend bij khaj loans to the agriculturists and therefore provision for tagai loans had to be made to ensure cultivation.<sup>140</sup> In 1743, the amil of pargana Malpura complained that despite a fortnight of uninterrupted rains in the month before the sowing of the kharif crops, the bohras were not coming forward to provide seed-loans to the cultivators as the previous year had been one of drought.<sup>141</sup> The state therefore allocated Rs. 2,000 as tagai to the pargana. In situations of an acute subsistence crisis, such as the famine of 1731, the state not only provided tagai loans but also took additional measures to induce the bohras to lend to the peasants. The reported widespread refusal by the moneylenders to provide loans in every pargana in 1731 led the diwan to issue instructions compelling the bohras to advance half the grain that they had recovered in the previous rabi harvest as seed-corn to the peasants so that the rabi cultivation in the current year could commence.<sup>142</sup> The bohras returns were to be assured by issuing them with parwanas or state orders empowering them

to collect their advances in three instalments. Such official assurances were crucial in allaying the private moneylenders' fears of default in conditions of uncertain production either because of insufficient yields or because of desertion by the peasantry.<sup>143</sup> In the same year, the state advanced tagai loans in five parganas and specified that in the distribution of these sums, priority was to be given to those cultivators producing cash crops such as cotton and sugarcane and those whose fields were irrigated.<sup>144</sup> The state also had to intervene when the total volume of debt had risen to a level at which the bohra could not continue operating in the village.<sup>145</sup>

In the period after the death of Sawai Jai Singh (d.1743), our evidence indicates that the credit policy of the state becomes inoperative due to the inability of the state to provide an alternative source of credit. In this period, the increasing financial demands placed on the state to meet the payment of a war-indemnity to the Marathas led to a severe financial crisis. This situation was further exacerbated by the devastating annual raids by the Marathas and the years of successive droughts in the mid-1750s. The impact of these factors on agricultural production was an initial sharp contraction in overall production and subsequently the inability of production to revive till the end of our period.<sup>146</sup> Earlier famines, such as those in 1717 and 1731, had not had a similar long-term effect on production. While several interconnected factors accounted for the recession in the second half of the eighteenth century, the contraction in the provision of credit by the state had important consequences for agricultural production and the changed relationship between the state and the commercial and rural elite.

As we had seen earlier, the sources of commercial credit contracted during droughts or periods of political instability when the provision of tagai loans by the state was crucial to the recovery of production in the region. The inability of the state to provide adequate resources for agricultural recovery during or after the series of drought years from 1754 to 1756 appears to have had two interrelated consequences. On the one hand there is evidence that rich agriculturists began acquiring the land of palti-proprietors through the mechanism of mortgage, and on the other, that in order to make funds available to the impoverished peasantry the state was forced to give the bohras first claim to the agricultural product and finally, to resort to revenue farming.

Mortgage of land was not a new feature of the second half of the eighteenth century as is apparent from the instances of land mortgage that are referred to in the documents from the earlier period.<sup>147</sup> As mortgage and sale of land were not mediated through the state machinery, the state records provide little evidence of the nature and effects of such transactions within the village. However, in the second half of the eighteenth century the increasing incidence of conflicts between the privileged gharuhala cultivators and the paltis consequent to mortgage and sale transactions began to involve arbitration by the state as there was no adequate mechanism for their resolution in the village.<sup>148</sup> The distinguishing feature of the mortgage of land in the second half of the eighteenth century was that a substantial number of paltis lost their status as independent cultivators. Collective representations made by the paltis of qasbas Phagi, Ajabgarh, Tonk, Chatsu and Pahari uniformly allege that their land had been acquired by the gharuhala cultivators through mortgage and that they (the paltis) were impoverished as a consequence.<sup>149</sup> The extent of decline in the number of independent peasants was

significant - in qasba Phagi the number of paltis had been reduced from 700 in 1753 to 28 in 1764, in qasba Pahari from 300 to 50 in 1760, while in qasba Chatsu, 175 of the 300 fields belonging to the paltis had been acquired by a mahajan.<sup>150</sup> The decline in their number may in part have been due to increased mortality and migration during the famine years, but as they themselves claim in their petitions to the diwan, a significant number had been forced to pledge their land as collateral for loans taken out during this period.

An analysis of the documents relating to mortgage reveal that the land mortgaged was invariably located in the qasba or else comprised well-irrigated land in the villages.<sup>151</sup> Such land was of obvious value owing to capital improvements made or to its favourable location with respect to the local market. The terms of the mortgage varied. In some cases, the mortgage was usufructory and the mortgagee cultivated the land till such time as the loan was paid off by the mortgagor. Such an arrangement between Fateh Khan, the mortgagee, and Budhsa Ahir, was referred to the diwan for arbitration when the latter refused to allow Fateh Khan to continue cultivating the land although he had not yet repaid the loan.<sup>152</sup> The instructions of the diwan were that Fateh Khan should be allowed to cultivate the land according to the terms of the mortgage deed or alternatively, Budhsa should repay the principal with interest to Fateh Khan. In another case, Kiratram held the mortgage on Chittarmal Kayastha's land and the terms of the agreement were that each of them would cultivate the land for a successive period of four years in rotation.<sup>153</sup> When the kayastha continued to till the land for the fifth year running and also refused to clear his debt, the diwan recommended that Kiratram be given possession of the land with the proviso that if the facts of the matter were different then the village council or "panchayat" should arbitrate.

Evidence from the second half of the eighteenth century, on the other hand, indicates that the mortgagor continued to till the land and paid "bhara" on unirrigated land or nalvat on irrigated land. These terms appear to have been used interchangeably to denote rent paid by the tenant, who in the majority of instances was the original proprietor, as well as interest payments to the mortgagee on loans secured against the land of the owner-cultivator. As we had seen earlier, a levy termed nalvat was paid to the state in addition to the revenue payments for the use of state-owned wells. The term nalvat has been used in a similar sense of rent on irrigated land in a document recording the dispute between a Brahman lessor and Sah Ramdas mahajan of mauza Kikrod in pargana Antela Pragpur.<sup>154</sup> The use of the term nalvat in the sense of interest payments is evident in the complaint made by the paltis of qasba Phagi.<sup>155</sup> The dispute arose because the bohra-mortgagee demanded that the paltis pay him the agreed proportion of the produce in respect of nalvat before the appropriation of the revenue in kind by the state.<sup>156</sup> The paltis complained that this mode of levy left them with a smaller fraction of the produce and the diwan confirmed that the bohra's payment was to be deducted from the peasants' share after the division of the grain between the state and the paltis.<sup>157</sup> The fact that the paltis were liable for revenue payments to the state with respect to the land mortgaged indicates that they continued to be regarded as the owners of the land.<sup>158</sup>

As discussed, our evidence on the latter half of the eighteenth century indicates that the paltis were losing title to land through the mechanism of mortgage. This is reflected in their frequent references to the reductions in raiyati-held land and official concern at the simultaneous extension of land held under privileged gharuhala tenure.<sup>159</sup> Such a trend implied a reduction in state revenue as the



gharuhalas were entitled to concessionary rates of taxation. The quantitative indices of the extent of cotton acreage under privileged and standard rates of taxation in gasbas Phagi and Sanganer support the evidence of the chittis that there was a relative increase in the proportion of land assessed at the concessionary rates.<sup>160</sup> The Jaipur administration however forbade the conversion of raiyati land into gharuhala land.<sup>161</sup> However, this did not imply that the state considered the acquisition of palti land through the mechanism of mortgage an illegitimate activity requiring the restitution of proprietary rights to the paltis through its intervention. On the contrary, the ruling of the amil in the cases of default on interest repayments recommended foreclosure and the transfer of land ownership to the mortgagee.<sup>162</sup> What the state insisted upon was that the tax code on such land remained unaltered so that its revenues were not affected. The problem with such a position was that it was difficult to implement. The impoverished tenants, probably dependent upon the gharuhala for agricultural implements or seed, would be indistinguishable from wage labourers or majurs specially when the latter also received a share of the produce for their labour or cultivated small plots of their own. The employment of wage labourers to cultivate gharuhala land was an accepted practice which did not lead to the withdrawal of rights to concessionary revenue payments. The ambiguity in the official directives forced the state to accept the expansion in gharuhala holdings provided such a transgression had the sanction of time. The date for such ratification was, however, arbitrarily fixed varying from 2 to 10 years prior to the receipt of the complaint.<sup>163</sup>

On the basis of the partial and fragmentary view that we obtain from our evidence, it is difficult to conclude that land was being concentrated to an appreciable degree in the region as a whole especially in a situation of land

abundance. On the other hand, the type of land that was being mortgaged indicates that in a period of recession and poor harvests, the rural elite added to their assets through the accumulation of land which had been improved by capital investment. Our evidence, however, does suggest that the depletion in the resources of the paltis following the mid-1750s famine resulted in an increase in the numbers of dependent peasants.

In a period of a prolonged crisis in production and famine, only those peasants who could secure loans against productive or advantageously located land were able to obtain credit. The contraction in credit in such periods meant that the state had to provide for rural relief and recovery through tagai loans and absorb the risks of default on these loans in return for the longer-term objective of ensuring a stable flow of revenue to the state. The documents of the mid-1750s and early 1760s which relate to the provision of tagai loans reflect the inability of the state to provide adequate resources in this period. In practically every instance, the state was compelled to guarantee the money lent by the bohras to the peasants by debiting these as tagai loans and empowering the bohras to recover them with interest at the time of the harvest.<sup>164</sup> This reflects the inability of the state to provide adequate resources which forced it to secure loans with an official parwana guaranteeing the recovery of the loan with interest. While evidently the need for state intervention in the provision of rural credit was most acute in the decade from 1754 to 1764, there are indications that the state had initiated the practice of borrowing tagai loans soon after the death of Sawai Jai Singh and the Maratha involvement in the succession dispute between Ishwari Singh and Madho Singh.<sup>165</sup> As early as 1748 the diwan recommended that money be borrowed from the bohra in order to grant tagai loans for the rehabilitation of a village in pargana Sawai

Jaipur that had been looted by the Maratha army and whose peasants had fled.<sup>166</sup> With the adoption of the practice of securing the moneylenders' loans, the state was effectively placed in the situation of bearing all the risks of production shortfalls while guaranteeing the bohras return on capital. While more evidence would be required to assess the change in the relationship between the state and the bohras it is clear that the ability of the state to exercise control over private moneylending was effectively constrained in this period.

In the foregoing discussion, we have seen that the inability of the state to intervene effectively, and thereby control, an intrinsic component of the system of agrarian production, namely, the supply of credit led to an increase in its dependence upon rural moneylenders as well as an increase in the control exercised by the rural elites over production. These developments had the effect of reducing the state's share of the agricultural output and thereby exacerbating the financial crisis originating in the substantial war-indemnity demanded by the Marathas. The state's response to the changed context of the latter half of the eighteenth century was to adopt revenue farming or the system of ijaradari.

Revenue farming in the form that was prevalent in the second half of the eighteenth century had the advantage of providing the state a stable income to buy protection from the Marathas while at the same time devolving upon the ijaradar the risks of production shortfalls. The change in state policy with regard to the mechanism of surplus extraction that the adoption of ijaradari implied, reflects upon its ability to command its resources in a period of prolonged financial crisis. Our evidence of falling foodgrain prices from the mid-1760s in a period of agricultural recession and a decline in population corroborates the suggestion that

there was a shortage of specie and a trade recession in the north during this period.<sup>167</sup> The adoption of revenue farming by the successor states in this context can be seen as an institutional means to tap the resources of men with capital and transfer the claims of the state's creditors to the revenue farmers.

In eastern Rajasthan, the majority of the ijaradars were rural elites, zamindars and local officials, who had a clear knowledge of the productive capacity of the area and who, as agrarian managers, effectively controlled local agricultural production. The immediate advantage of long-term contracts for such ijaradars lay primarily in the absence of detailed state supervision and the consequent operational freedom that such a lack of control provided. The question that arises however is why the rural elites, and the bankers and traders who stood surety for them, bid for ijaras in a period of agricultural recession and price decline. David Washbrook has argued that the expansion in revenue farming in late eighteenth century India provided the emergent 'great households' "increased security to invest capital in production, especially for commercial purposes, and increased command over producers and methods of production".<sup>168</sup> This hypothesis appears untenable in the specific context of eastern Rajasthan because if, as Washbrook suggests, the aim of acquiring ijaradaris was to enhance the commercial profitability of the enterprise, it would appear paradoxical that the expansion in revenue farming coincided with a period of general agrarian crisis and trade recession. In the context of eastern Rajasthan, Dilbagh Singh has suggested that in the late eighteenth century revenue farming presented a viable alternative form of capital investment in a period when opportunities for investment in trade were shrinking due to the climate of instability generated by the Maratha raids.<sup>169</sup> However, the available evidence for our region indicates that it was not urban traders and bankers who speculated on

revenue farms but local landholders who had a long term interest in the maintenance of the revenue paying capacity of the land.<sup>170</sup>

Our evidence indicates that both within and outside the system of state taxation, a considerable proportion of the peasants produce was appropriated at the local level through sanctioned and irregular levies of various kinds.<sup>171</sup> An awareness of the magnitude of the margin between the 'official' taxation and what was or could be actually collected from the peasants, combined with the local power to realise this marginal amount probably provided the immediate economic incentive for the majority of the small ijaradars, such as the patels, chaudhuris and occasionally the raiyati of the village, to bid for ijaras. For them it was the possibility of a substantial gain based upon a close personal knowledge of the productive potential of the area that made the farming of revenue an acceptable risk. In the long term, it was only those ijaradars who could outbid competitors and retain control over their territories, such as some thikanedars, who consolidated their position and later claimed political control on the basis of long-established, hereditary rights.

In this chapter we have attempted to go beyond the legal form of land tenures and to examine the substance of peasant social and economic stratification. Our sources allow us only fleeting glimpses of peasant life which are not in themselves sufficient to enable a micro-analysis of the peasant economy. But the official documentation recording the minutiae of agrarian taxation makes it possible to examine the role of the state in regulating the activities of its principal economic subjects and the impact of such policies on the rural economy. Our preceding discussion has dealt with one aspect of the regulatory role played by the state, namely in the provision of rural credit. Equally vital to the annual cycle of peasant

production were state policies which governed the distribution of the agricultural product and which constrained the economic decisions of the primary producers in critical matters such as the choice of crop, the level of capital investment, and the organisation of labour. It is to these policies and the principles, level and form of agricultural taxation in eighteenth century eastern Rajasthan that we now turn.

Notes to Chapter III: Agrarian Relations.

1. F.Perlin, "Of White Whale and Countrymen", pp.189-190.
2. For a discussion of Fox's theory and the alternative basis of traditional power in Rajasthan, see Henri Stern, "Realm and Region in Traditional India: Territory, Caste and Kinship in Rajasthan", in R.J.Fox ed., Realm and Region in Traditional India, pp.52-77.
3. Bardic tradition provides conflicting versions of the origins of the early Kachhwahas. Jadunath Sarkar traces the early history of the Kachhwahas mainly from bardic literature compiled in the seventeenth and eighteenth centuries and contests Tod's 'highly imaginative' writing on the subject. The conflicting evidence of these sources and Jadunath Sarkar's interpretation has been commented upon by Raghuvir Singh. See Jadunath Sarkar, A History of Jaipur c.1503-1938, revised and edited by Raghubir Singh, pp.20-41. Also V S Bhargava, Rise of the Kachhawas in Dhundhar (Jaipur): From the earliest times to the death of Sawai Jai Singh (1743), pp.1-24. It is claimed that Dulha Rai, the founder of Dhundhar, migrated to Rajasthan in the late tenth century. Dhula Rai and his successors had limited success in subjugating the Minas and Bargujar tribes of the region and, by the early sixteenth century, had carved out a small principality.
4. S.P.Gupta, The Agrarian System of Eastern Rajasthan, p.2.
5. R.P.Rana, "A dominant class in upheaval: the zamindars of a North Indian region in the late seventeenth and early eighteenth centuries", IESHR, 24,4 (1987), pp.401-406.
6. According to Jadunath Sarkar, Shah Jahan assigned the area to Jai Singh's younger son Kirat Singh as a watan jagir in 1650. Idem, A History of Jaipur, p.109. R.P.Rana's evidence suggests that the assignment was a service tenure made in 1643 to Mirza Raja. Idem, "A dominant class in upheaval", pp.405-406. Edward Haynes, "Imperial Impact on Rajputana: The Case of Alwar, 1775-1850", Modern Asian Studies, 12, 3 (1978), pp.419-53.
7. S.Nurul Hasan, "Further light on Zamindars under the Mughals - A case study of Mirza Raja Jai Singh under Shah Jahan", PIHC, Hyderabad (1978), pp.497-502.
8. For example, the displacement of the Qaim Khanis from fifty one parganas in Shekhawati in the 1730s and the usurpation of the bhom rights of Jats, Gujars, Chauhans and Tanwars in the second half of the eighteenth century. Jadunath Sarkar, History of Jaipur, pp. 221-222; Dilbagh Singh, "Revenue Administration", p.75.
9. R.P.Rana, "A dominant class in upheaval", pp.407-408.
10. R.P.Rana, "Agrarian Revolts in Northern India during the late 17th. and early 18th Century", IESHR, vol.17, nos 3&4 (1981), pp.287-326.
11. *ibid.*, p.305.

12. *ibid.*, p.313.
13. S.P.Gupta and Shireen Moosvi, "Bhomi in the territories of Amber", PIHC, 1970, pp.353-360; Dilbagh Singh, "Revenue Administration", pp. 76-77; R.P.Rana, "A dominant class in upheaval", pp.396, 400.
14. Norman Zeigler's analysis of the political development of the Rajput states has shown that a transformation in the basis of social organisation in these states was effected through a closer control of the primary system of honours and rewards in the local hierarchical system. While Zeigler has primarily focussed on Marwar, the pattern of development in the Jaipur state appears to have been broadly similar from the evidence available so far. See Norman Ziegler, "Some notes on Rajput loyalties during the Mughal period", in J.F.Richards ed., Kingship and Authority in South Asia, pp.215-251.
15. S.P.Gupta, Agrarian System of Eastern Rajasthan, p.211 and Dilbagh Singh, "Revenue Administration", p.304.
16. The tan can be compared to the Mughal jama estimates on the basis of which the Mughal jagirdars were assigned jagirs. The tan system was operative at least from the mid-seventeenth century in the territories of the Kachhawa state.
17. Compare the list of dominant Rajput clans in various parganas based on the records of the period 1650-1750 with the distribution of jagir assignments in the same parganas in the period 1750-1800. In the earlier period the dominant Rajput clans are identified as Narukas in parganas Malpura, Phagi and Bahatri; Chauhans in Udai, Hindaun and Lalsot; Shaikhawats in Khandela, Khetri and Jhunjhunu; and Solankis in Tonk and Niwai. By the second half of the century these areas had largely passed into the control of Kachhwaha jagirdars. See S.P.Gupta, Agrarian System of Eastern Rajasthan, p.135 and Dilbagh Singh, "Revenue Administration", Table II, pp.354-360.
18. S.P.Gupta, Agrarian System of Eastern Rajasthan, p.220.
19. Norman Zeigler, *op.cit.*, pp.225-226.
20. Dilbagh Singh, "Revenue Administration", p.346 and S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.220, 230-232.
21. For a similar development in the adjoining state of Marwar see G.D.Sharma, Rajput Polity, p.122.
22. Dilbagh Singh, "Revenue Administration", pp.272-274.
23. Dilbagh Singh, "Revenue Administration", pp.273-274, 345-347.
24. C.U.Wills report entitled, The Land Tenures and Special Powers of the Thikanedars of Jaipur State, 1933 and the reply to this report by the thikanedars. Although I had read this report in 1981, the copy available in the RSAB appears to have been misplaced subsequently. Wills had argued that the majority of the thikanedars were originally ijaradars of the Jaipur raj and therefore cannot be regarded as independent chiefs. For a brief reference to



- the report and the reply to its findings see S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.230-232.
25. Dilbagh Singh, "Revenue Administration", pp.315-318; S.P.Gupta, Agrarian System of Eastern Rajasthan, p.219.
  26. Dilbagh Singh, "Revenue Administration", p.332.
  27. M.Bajekal, "Rural Disputes", pp.42-48.
  28. *ibid.*, pp.37-105.
  29. Dilbagh Singh, "Revenue Administration", pp.321-323.
  30. An analysis of disputes in the period 1710 to 1770 shows that conflicts involving the jagirdars appear to have increased. These conflicts involved jagirdars and agriculturists over the quantum of revenue demand as well as over the share of the revenue to be paid to the hereditary village officials. See M.Bajekal, "Rural Disputes", pp.66-77, 80-81, 112, 117 and Table II, p.121.
  31. Dilbagh Singh, "Revenue Administration", p.342.
  32. *ibid.*, p.344.
  33. Andre Wink, "Maratha Revenue Farming", Modern Asian Studies, vol.XVII (4), 1983, pp.591-628.
  34. S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.227-229; Dilbagh Singh, "Revenue Administration", pp.267-269. The evidence for increased farming of the revenue from the 1730s leads Gupta to suggest that the financial crisis of the Jaipur raj predated the Maratha tribute demands and that the farming of revenue adversely affected the prosperity of the cultivator. There is little evidence, however, to support this contention.
  35. Dilbagh Singh, "Revenue Administration", pp.304, 258.
  36. The proportion of revenue distributed through grants or charitable endowments to religious institutions and individuals (mostly Brahmans) was generally below 5%. See the table showing the distribution of khalisa, jagir and punya udik or inam villages for six parganas in Dilbagh Singh, "Revenue Administration", pp.65-73.
  37. S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.212-213.
  38. S.P.Gupta, "Ijara System in Eastern Rajasthan (c.1650-1750)", Medieval India - A Miscellany, vol.II, 1972, pp.263-275.
  39. Table 1 has been compiled from figures given in S P Gupta's and Dilbagh Singh's studies on eastern Rajasthan for the periods 1700 to 1750 and 1750 to 1785 respectively. See S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.212-213 and "Ijara System", pp.263-275 for the period 1700-1750; and Dilbagh Singh, "Revenue Administration", pp.288-292, 349-353 for the years 1750-c.1785. The figures for the pre-1750 period are relatively incomplete as

compared to the later figures. In both studies, the authors have shown the distribution between khalisa and jagir areas in terms of the number of villages in each category, while the proportion of revenue derived from ijara has been expressed in terms of a percentage of total khalisa collections in rupees. In order to make the two sets of figures comparable, we have assumed that the villages assigned in jagir were, on average, as productive as those in khalisa and therefore the proportional distribution of villages can be taken to approximate the distribution of revenues between them.

40. Dilbagh Singh, "Revenue Administration", pp.269-274.
41. *ibid.*, pp.280-281,266.
42. S.P.Gupta, Agrarian System of Eastern Rajasthan, p.229 and Irfan Habib, Agrarian System, pp.284-285. A number of recent studies on ijaradari in the eighteenth century challenge the view that the institution was uniformly deleterious in its effects on the agrarian economy and the peasantry. While large-scale farming was symptomatic of crisis, farming contracts were normally resorted to as an organisational means for agrarian restoration. See Barnett, North India Between Empires [California: 1980], pp.171-172, Dilbagh Singh, "Revenue Administration", pp.286-287, Bayly, Rulers, Townsmen and Bazaars, pp.164-168 Wink, Land and Sovereignty, pp.339-375.
43. Dilbagh Singh, "Revenue Administration", pp.284-286.
44. *ibid.*, p.262.
45. Numerous reports of peasant flight from land in response to excessive tax demands or harassment on this account by the jagirdars, moneylenders, ijaradars, and bhomias can be found in our sources. Such localised resistance to excesses can be clearly differentiated from instances of widespread peasant migration in response to famine or warfare. Chitti dt.Kartik sudi 15 VS 1803/AD 1746, pargana Phagi, [No.83]; Chitti dt.Jesth vadi 11 VS 1800/AD 1743, pargana Malpura, [No.255]; Chitti dt.Baisakh sudi 6 VS 1801/AD 1744, pargana Malpura, [No.256]; Nakal Chitti dt.Asad sudi 8 VS 1783/AD 1723, pargana Ajabgarh, [No.363]; Chitti dt.Mah vadi 6 VS 1826/AD 1769, pargana Phagi, [No.406]; Hasil Kifayat Arhsatta Malarna VS 1784/AD 1727 and VS 1785/AD 1728, [No.562].
46. Chitti dt.Baisakh sudi 9 VS 1783/AD 1726, pargana Amber, [No.362]; Chitti dt.Jesht sudi 7 VS 1826/AD 1769, Shri Lalram and Sah Shri Saligram, [No.555]; also Dilbagh Singh, "Revenue Administration", p.270.
47. Dilbagh Singh, "Revenue Administration", p.286.
48. The various categories and terms used in our records have been discussed by Dilbagh Singh in his thesis and in a number of articles. As my evidence supports most of his discussion, I shall only elaborate upon those aspects where I have fresh evidence or where I disagree with his interpretation. See Dilbagh Singh, "Caste and the Structure of Village Society in Eastern Rajasthan during the Eighteenth Century", Indian Historical Review, vol.II No.2 (1976), pp.299-311; *idem*, "Tenants, Sharecroppers and Agricultural Labourers in Eighteenth

- Century Eastern Rajasthan", Studies in History, vol.I, No.1 (1979), pp.31-43; idem, "Revenue Administration", pp.1-73.
49. In the fifteen documents in which the patels' castes have been mentioned, they were members of the agriculturist castes such as Jat, Ahir, Gujar, Mali or Meena. Occasionally, Brahmans are also mentioned as patels - in qasba Chatsu, for example. Yaddashti Hal Bail, pargana Chatsu, 1723.
  50. A discussion of the rates of taxation and other fiscal concessions made to the privileged tenure holders has been included in Chapter IV on Revenue Policy.
  51. Dilbagh Singh, "Caste and Structure of Village Society", p.303.
  52. *ibid.*
  53. Proprietor or malik has been used to denote the specific form of land right that could be inherited, sold or mortgaged conditional to the regular payment of land revenue.
  54. Chitti dt.Pos sudi 7 VS 1835/AD 1778, pargana Sawai Jaipur [No.266]; Chitti dt.Sawan sudi 1 VS 1808/AD 1751, pargana Tonk, [No. 461]. In these documents the zamindars employed halis to till their gharuhala land.
  55. Dilbagh Singh, "Revenue Administration", pp.22-23.
  56. Chitti dt.Chait sudi 7 VS 1815/AD 1758, Chakravati Shri Harhariji and Sah Shri Gulanchandji [No.264]; Chitti dt.sudi 2 VS 1835/AD 1778, Sah Shri Raichandji, [No.265].
  57. R.P.Rana, "Agrarian Revolts in Northern India ", pp.287-326.
  58. Chitti dt.Asad sudi 14 VS 1809/AD 1752, pargana Pinayan [No.211]; Chitti dt.Pos vadi 2 VS 1784/AD 1728, pargana Dausa [No.312].
  59. A discussion of the mechanism whereby the gharuhalas acquired the land of the paltis through mortgage and purchase and the attempts of the state to protect its revenue base have been included in Chapter IV on Revenue Policy.
  60. Dilbagh Singh, "Revenue Administration", p.14.
  61. Arhsattas qasba Sanganer, VS 1752/AD 1695, VS 1818-1827/AD 1761-1770.
  62. Hazari Asami wa Bail Dehai Khalisa, pargana Mauzabad, fasl Kharif, VS 1723/AD 1666. Specially pp.16, 20-22, 93.
  63. Habib, Agrarian System, pp.121-122.
  64. Dilbagh Singh, "Revenue Administration", pp.55-56.
  65. *ibid.*

66. Chitti dt.Maghshri sudi 1 VS 1784/AD 1727, pargana Bahatri [No..420]. The division of the grain heap has been discussed in greater detail in Chapter IV on Revenue Policy.
67. The relevant section of the tax schedule or Dastur Amal, pargana Udehi, VS 1772/AD 1715 states:"Kamin kisan the bhag le ti ko vata tisara" which translates: the portion of the grain received by the kamins from the kisans (cultivators) was to be taxed at the rate of one-third. Similarly the schedule of pargana Chatsu states: "Kamin khati wa luhar wa balahi wa nai, kumhar vago pargana ki raiyati kana su chungi kamini ki bhag le chhe ti ko vata panchduve" or the kamins, that is carpenters, smiths, chamars, barbers, potters and others who receive a share from the raiyati of the pargana are to be taxed at the rate of two fifths. See Dastur Amal, pargana Chatsu AD 1712 and AD 1710.
68. See Appendix 7 on the Khasra of village Naelo. In the village, of the six barbers, four were taxed on fifteen seers of grain each, one on thirty seers and the last on three seers. The grain tax recorded for the carpenter and ironsmith was nine seers each while the potter and chamar were taxed on thirty seers of grain. The balahis were collectively taxed on 150 seers or 3.75 maunds of grain received by them.
69. W.H.Sykes, Statistics of the Dukhan, p.318 quoted in Sumit Guha,"The Agrarian Economy of the Bombay Deccan 1818-1941" (Ph.D. thesis, Cambridge University,1981), p.20.
70. Jamabandhi qasba Sanganer, VS 1752/AD 1695. The references read "Tarf Kumbha patel palti Kumhar khetihara haljota tya no ghar 7 ka taka 149.50 "; "Tarf Sudardalu Mali patel paltiyan no ghar dharti pari salina sudamadi kholri lage".
71. Chitti dt. Chait vadi 15 VS 1769/AD 1711, qasba Sanganer.
72. Chitti dt.Kartik vadi 4 VS 1809/AD 1752, pargana Phagi [No.314].
73. Harbans Mukhia,"Illegal Extortions from Peasants, Artisans and Menials in Eighteenth Century Eastern Rajasthan", IESHR, vol.XIV, no.2 (1977), p.238.
74. Chitti dt.Kartik sudi 1 VS 1822/AD 1765, pargana Phagi, [No.93]; Chitti dt.Chait sudi 15 VS 1818/AD 1761, pargana Phagi, [No.94]; Chitti dt.Kartik vadi 11 VS 1794/AD 1737, pargana Phagi, [No.95]; Chitti dt.Sawan vadi 2 VS 1800/AD 1743, Sah Mansaram wa Sah Maujiram [No.96]; Chitti dt.Phagun sudi 12 VS 1828/AD 1771, pargana Sawai Jaipur, [No.97]; Chitti dt.Asad sudi 13 VS 1818/AD 1761, pargana Tonk, [No.102]; Chitti dt.Chait vadi 10 VS 1798/AD 1741, Sah Mansaram and Sah Maujiram [No.103]; Chitti dt.Maghshri vadi 10 VS 1821/AD 1769, Sanghi Shri lalram and Sah Saligram [No.193]; Chitti dt.Kartik vadi 4 VS 1809/AD 1752, pargana Phagi [No.314]; Chitti dt.Kartik vadi 11 VS 1794/AD 1737, pargana Phagi [No.392].Also Harbans Mukhia, "Illegal Extortions", pp.231-245.
75. On this point also see Dilbagh Singh, "Revenue Administration", p.55.

76. Yaddashti Haqiqati Hal, pargana Chala Kalyan, VS 1722/AD 1665; Hazari Asami wa Bail, pargana Mauzabad, VS 1723/AD 1666; Yaddashti Haqiqati Hal Bail, pargana Chatsu, VS 1723/ AD 1666; Haqiqati Asami wa Bail, pargana Malarna VS 1723/AD 1666.
77. See Yaddashti Hal Bail Jubani Patel Patwari, pargana Chatsu, VS 1723/AD 1666.
78. Yaddashti Hakikati Hal, pargana Chala Kalyan, VS 1722/AD 1665. The format of this census differs from that of other parganas such as Chatsu, Mauzabad and Malarna as the numbers of ploughs or "hals" rather than the number of bullocks have been enumerated for each asami. Satish Chandra has suggested that a plough can be reckoned as equivalent to two bullocks as these together formed one unit. See Satish Chandra, "Some Institutional Factors in Providing Capital Inputs for the Improvement and Extension of Cultivation in Medieval India", Indian Historical Review, vol.III, no.1 (1976), p.87.
79. Hazari Assami wa Bail, pargana Mauzabad, VS 1723/AD 1766, pp.50, 52, 67.
80. Sanad dt.Sawan Sudi 7 VS 1823/AD 1766, to amil pargana Phagi.[No.376] A sanad was an order issued by the diwan to the administrative staff in the parganas.
81. One of the arguments advanced to indicate that the peasant's title to land amounted to a permanent and hereditary occupancy right to the land he tilled is that if the peasant was unable to cultivate his land due to personal hardship or natural calamity and temporarily abandoned his fields, he could reclaim the land for cultivation on his return. See Habib, Agrarian System, p.114; B.R.Grover, "Nature of Land-Rights in Mughal India", IESHR, vol.I, no.1 (1963), pp.4-6.
82. Satish Chandra, "Institutional Factors", pp.83-98.
83. An examination of the yaddashti documents reveals that the majority of villages in the region had a multi-caste composition - a feature observable in the villages of contemporary Jaipur district as well. cf. K.L.Sharma, The Changing Rural Stratification System: A comparative study of six villages in Rajasthan, pp.41-44. In view of this pattern of settlement, we have selected villages where different castes were numerically dominant in order to make our analysis of economic differentiation comparable for each caste group.
84. S.P.Gupta comes to a similar conclusion based on data from pargana Mauzabad. See, idem, Agrarian System of Eastern Rajasthan, pp.131-133.
85. idem, "Was There Feudalism in Indian History ?", Journal of Peasant Studies, vol.8, no.3 (1981); idem, "Peasant Production and Medieval Indian Society", Journal of Peasant Studies Special Issue on "Feudalism and Non-European Societies", eds. T.Byres and Harbans Mukhia, vol.12, nos.2 & 3 (1985), pp.242-247.
86. Frank Perlin, "Of White Whale and Countrymen", Journal of Peasant Studies, Vol.5, No.2 (1978), pp.172-237.

87. Bayly, Rulers, Townsmen and Bazaars, pp.38-48; Dilbagh Singh, "Tenants, Sharecroppers and Agricultural Labourers", Studies in History, Vol.1, No.1 (1979), pp.30-43.
88. Hazari Assami wa Bail, pargana Mauzabad, VS 1723/AD 1666, pp. 16,21,22, 32,37,93.
89. Chitti dt.Chait vadi 7 VS 1822/AD 1765, pargana Niwaii [No.410]; Chitti dt.Phagun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384].
90. Bayly, Rulers, Townsmen and Bazaars, pp.38-48.
91. Chitti dt.Baisakh vadi 4 VS 1816/AD 1759, Sah Gulabchandji and Chakravarti Shri Harhariji [No.252]; Chitti dt.Phagun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384]. In the chittis cited, the peasants describe themselves as dependants (shikmi) and indigent (nadar) owing to the Maratha depredations and the fall in production. The period of intensified local conflict in the last quarter of the seventeenth century also coincided with a phase of prolonged subsistence crises. Arzdasht dt.Pos vadi 9 VS 1755/AD 1688 [No.155]. Also see R.P.Rana, "Agrarian Revolts", pp.298-303.
92. Dilbagh Singh, "Tenants, Sharecroppers and Agricultural Labourers", p.39; S.P.Gupta, Agrarian System of Eastern Rajasthan, p.130.
93. P.M.Blaikie, "Spatial Organisation of Agriculture: Part I", Transactions of the Institute of British Geographers, No.52 (1971), p.2.
94. Chitti dt.Maghshri sudi 1 VS 1784/AD 1727, pargana Bahatri, [No.420].
95. Dilbagh Singh, "Tenants, Sharecroppers and Agricultural Labourers", p.38.
96. Chitti dt.Phagun sudi 13 VS 1790/AD 1733, pargana Malpura, [No.222]. A similar practice in 17th-century Gujarat has been noted by Irfan Habib in "Usury in Medieval India", Comparative Studies in Society and History, Vol.VI (1964), p.395.
97. *ibid.*; also see H.W.van Santen, "De Verenigde Oost-Indische Compagnie in Gujarat en Hindustan, 1620-1660" [Ph.D.thesis, University of Leiden, 1982], pp.211-212.
98. C.J.Baker, An Indian Rural Economy 1880-1955: The Tamilnad Countryside, pp.135-144, 329-333.
99. Irfan Habib, "Usury in Medieval India", pp.394-395.
100. Chitti dt.Chait sudi 6 VS 1794/AD 1737, pargana Malarna, [No.164]; Arzdasht dt.Pos vadi 9 VS 1755/AD 1688 [No.155]. Also see Dilbagh Singh, "The Role of the Mahajans in the Rural Economy in Eastern Rajasthan during the 18th Century", Social Scientist, Vol.2, No.10 (1974), pp.20-31.
101. Chitti dt.Sawan vadi 3 VS 1803/AD 1746, pargana Phagi, [No.163].

102. Chitti dt.Pos sudi 7 VS 1826/AD 1760, pargana Sawai Jaipur, [No.127]; Chitti dt.Kartik sudi 14 VS 1788/AD 1731, pargana Amber [No.393]; Chitti dt.Asarh vadi 12 VS 1789/AD 1732, pargana Ajabgarh [No.464].
103. Irfan Habib, Agrarian System, p.251.
104. Yaddashti Qasba Sanganer, VS 1771/AD 1714.
105. Chitti dt.Pos sudi 15 VS 1785/AD 1728, pargana Bhusawar, [No.422].
106. Chitti dt.Sawan sudi 2 VS 1785/AD 1728, pargana Hindaun, [No.385].
107. Arhsatta Sanganer, VS 1828/AD 1761.
108. Chitti dt.Jesht vadi 4 VS 1803/AD 1746, Shri Murlidhar and Sah Harbandsdas [No..481]. Also see Chapter on the Foodgrain Market.
109. Chitti dt.Jesth vadi 5 VS 1784/AD 1726, pargana Chatsu [No.371].
110. Chitti dt.Jesht vadi 1 VS 1784/AD 1727, Sah Shri Sahibramji [No.300]; Likhtang dt.Pos sudi 15 VS 1782/AD 1725, Sah Shri Sahibramji [No.422]; Chitti dt.Jesht vadi 10 VS 1803/AD 1744, pargana Malpura [No.489]; Chitti dt.Jesht sudi 4 VS 1784/AD 1727, Sah Dodrajji regarding pargana Phagi, [No.412].
111. See the section on transportation in Chapter V on the Foodgrain Market.
112. Chitti dt.Jesth vadi 5 VS 1784/AD 1726, pargana Chatsu [No.371].
113. Dilbagh Singh, "Role of Mahajans", p.23.
114. B.L.Bhadani, "Money-Lending and Exchange in 17th and 18th Century Marwar", PIHC, Bhubaneshwar: 1977, pp.266-270.
115. Chitti dt.Pos sudi 6 VS 1784/AD 1728, pargana Chatsu [No.557]; Chitti dt.Chait sudi 2 VS 1771/AD 1714, pargana Malpura [No.121]; Chitti dt.Asad vadi 5 VS 1801/AD 1744, Diwan Vidyadhar [No.275]; Chitti dt.Sawan sudi 13 VS 1790/AD 1733, pargana Malarna [No.447]; Nakal Chitti dt.Asad sudi 8 VS 1783/AD 1726, pargana Ajabgarh, [No.363]; Nakal Chitti dt.Asad vadi amavasya VS 1784/AD 1727, Diwan Vidyadhar, [No.377].
116. Nakal Chitti dt.Asad vadi amavasya VS 1784/AD 1727, Diwan Vidyadhar, [No.377].
117. Nakal Chitti dt.Asad vadi amavasya VS 1784/AD 1727, Diwan Vidyadhar, [No.377]; Chitti dt.Asad vadi 5 VS 1801/AD 1744, Diwan Vidyadhar [No.275].
118. Chitti dt.Chait sudi 2 VS 1801/AD 1744, pargana Gazi ka Thana [No.271]; Chitti dt.Pos sudi 6 VS 1784/AD 1728, pargana Chatsu [No.557].
119. Chitti dt.Asad sudi 3 VS 1798/AD 1741, pargana Gazi ka Thana [No.157]; Chitti dt.Kartik sudi 7 VS 1788/AD 1731, pargana Amber [No.383].

120. Chitti dt.Asoj sudi 5 VS 1814/AD 1757, qasba Phagi [No.402].
121. Chitti dt.Mah vadi 8 VS 1789/AD 1732, pargana Khohri [No.460]; Chitti dt.Asoj sudi 11 VS 1796/AD 1739, Diwans Rai Narayandas and Vidyadhar [No.483]; Chitti dt.Jesht vadi 4 VS 1803/AD 1746, Sah Harbandsdas and Shri Murlidhar [No.434]; Chitti dt.Mah sudi 6 VS 1789/AD 1733, pargana Malarna [No.448]. Also Dilbagh Singh, "Nature and Incidence of Taxes levied on Inland trade in Eastern Rajasthan during the 17th and 18th Centuries", PIHC (Bhubuneshwar: 1977), p.312.
122. Evidence of similar rural commercial magnates is also available for other regions such as Benaras and north Bengal. See Bayly, Rulers, Townsmen and Bazaars, pp.104-106 and Ratnalekha and Rajat Ray, "Zamindars and Jotedars: A study of rural politics in Bengal", Modern Asian Studies, 9, 1 (1973), pp.81-102.
123. Dilbagh Singh, "Role of Mahajan", pp.22-23.
124. Chitti dt.Phagun sudi 13 VS 1799/AD 1742, pargana Tonk [No.554].
125. Chitti dt.Phagun vadi 2 VS 1784/AD 1727, pargana Sawai Jaipur [No.559]; Chitti dt.Jesht vadi 1 VS 1780/AD 1723, pargana Sawai Jaipur [No.560].
126. Arhsattas Qasba Sawai Jaipur, Hasil Nalvat, VS 1800/AD 1743 and VS 1790/AD 1733.
127. Arhsatta Sanganer, VS1787/AD 1730; Dilbagh Singh, "Tenants, Sharecroppers and Agricultural Labourers", p.36.
128. Chitti dt.Jesth sudi 2 VS 1821/AD 1764, pargana Phagi.[No.53].
129. Nakal Chitti dt.Asad sudi 8 VS 1783/AD 1726, pargana Ajabgarh [No.363]; Chitti dt.Mah vadi 6 VS 1826/AD 1769, pargana Phagi [No.406].
130. Chitti dt.Mah vadi 6 VS 1826/AD 1769, pargana Phagi [No.406].
131. Chitti dt.Sawan vadi 3 VS 1803/AD 1746, pargana Phagi [No.163]; Chitti dt.Chait sudi 3 VS 1771/AD 1714, pargana Malpura [No. 121]; Chitti dt.Jesht vadi 10 VS 1803/AD 1744, pargana Malpura [No.489]; Chitti dt.Baisakh vadi 11 VS 1803/AD 1746, to Purohit Jaichand and Sah Shri Narayan.
132. Chitti dt.Chait sudi 3 VS 1771/AD 1714, pargana Malpura [No.121]; Chitti dt.Jesht sudi 4 VS 1784/AD 1727, pargana Phagi [No.412]; Chitti dt.Jesht vadi 10 VS 1803/AD 1744, pargana Malpura [No.489]; Chitti dt.Baisakh vadi 11, VS 1803/AD 1746, to Purohit Jaichand and Sah Shri Narayan.
133. Chitti dt.Phagun vadi 3 VS 1818/AD 1766, pargana Hindaun [No.384]; Chitti dt.Jesht vadi 10 VS 1803/AD 1744, pargana Malpura [No.489]; Arhasatta Hindaun VS 1780/AD 1723, Chitti dt.Bhadon sudi 2 VS 1780/AD 1723, pargana Hindaun [No.552].
134. Chitti dt.Pos vadi Amavasya VS 1801/AD 1744, pargana Phagi [No.388].



135. Chitti dt.Bhadon sudi 9 VS 1783/AD 1726, pargana Chatsu [No.366]; Chitti dt.Phagun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384]; Chitti dt.Pos vadi Amavasya VS 1801/AD 1744, pargana Phagi [No.388]. Neeladri Bhattacharya also notes that in pre-British Punjab there were similar customary limits to the total interest charged and that the compounding became generalised only under British rule. Idem, "Agrarian Change in Punjab: 1880-1940" (Phd. thesis, JNU, Delhi, 1985), p.491.
136. Chitti dt.Phagun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384]; Chitti dt.Mah vadi 6 VS 1826/AD 1769, pargana Phagi [No.406]; Arhasatta Hindaun VS 1780/AD 1723, Chitti dt.Bhadon sudi 2 VS 1780/AD 1723, pargana Hindaun [No.552].
137. Chitti dt.Chait sudi 2 VS 1801/AD 1744, pargana Gazi ka Thana [No.271].
138. Chitti dt.Pos sudi 6 VS 1784/AD 1728, pargana Chatsu [No.557].
139. Barbara E. Ward, "Cash or Credit Crops? An Examination of Some Implications of Peasant Commercial Production with special reference to the Multiplicity of Traders and Middlemen", Economic Development and Cultural Change, Vol.VIII, No.2 (1960), pp.148-163.
140. Chitti dt.Asoj vadi Amavasya VS 1817/AD 1760, qasba Phagi [No.403]; Chitti dt.Sawan sudi 2 VS 1800/AD 1743, pargana Malpura [No.293]; Chitti dt.Phagun vadi 12 VS 1783/AD 1726, Bhayya Shyamram and Sah Sheoramdas [No.70].
141. Chitti dt.Sawan sudi 2 VS 1800/AD 1743, pargana Malpura [No.293].
142. Chitti dt.Kartik vadi 1 VS 1788/AD 1731, to amils of all parganas [No.394]; Chitti dt.Maghshri vadi 2 VS 1788/AD 1731, to Diwans Vidyadhar and Sahibram [No.395].
143. Chitti dt.Pos sudi 9 VS 1789/AD 1741, pargana Tonk [No.466].
144. Amber Records dt.Sawan vadi 13 VS 1788/AD 1731 [No.156].
145. Chitti dt.Phagun vadi 12 VS 1783/AD 1726, Bhayya Shyamram and Sah Sheodas [No.70]; Chitti dt.Phagun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384].
146. See Chapter VIII on Cropping Patterns.
147. Chitti dt.Kartik vadi 14 VS 1789/AD 1732, pargana Niwai [No.441]; Chitti dt.Mah sudi 2 VS 1789/AD 1732, pargana Chatsu [No.373]; Chitti dt.Phagun vadi 7 VS 1789/AD 1741, pargana Gazi ka Thana [No.270]; etc., Also cf. Jadunath Sarkar, "The Revenue Regulations of Aurangzib", Journal and Proceedings of the Asiatic Society of Bengal, N.S., Vol.II, 1906, p230.
148. See Chapter IV on Revenue Policy for an analysis of the conflicts.
149. Chitti dt.Jesht sudi 2 VS 1821/AD 1764, pargana Phagi [No.53]; Chitti dt.Chait vadi 7 VS 1826/AD 1769, pargana Gazi ka Thana [No.56]; Chitti

- dt.Kartik sudi 14 VS 1808/AD 1751, pargana Tonk [No.57]; Chitti dt.Maghshri vadi 14 VS 1808/AD 1751, pargana Tonk [No.58]. Also see Dilbagh Singh, "Tenants and Sharecroppers", pp.42-43.
150. *ibid.*
  151. This was true for each of the thirty documents related to the mortgage or sale of land that we examined.
  152. Chitti dt.Phalgun vadi 7 VS 1798/AD 1741, pargana Gazi ka thana [No.270].
  153. Chitti dt.Kartik vadi 14 VS 1789/AD 1732, pargana Niwai [No.441].
  154. Chitti dt.Baisakh vadi 14 VS 1792/AD 1745, pargana Antela Pragpur [No.457].
  155. Chitti dt.Jesht sudi 2 VS 1821/AD 1764, pargana Phagi [No.316]; Chitti dt.Kartik sudi 11 VS 1811/AD 1754, pargana Niwai [No.454].
  156. Chitti dt.Jesht sudi 2 VS 1821/AD 1764, pargana Phagi [No.316].
  157. *ibid.*
  158. See Jadunath Sarkar, "Revenue Regulations of Aurangzib", (trans.) Aurengzeb's Farman to Muhammad Hashim (1669), p.230.
  159. Chitti dt.Kartik sudi 14 VS 1808/AD 1751, pargana Tonk [No.57]; Chitti dt.Maghshri vadi 14 VS 1808/AD 1751, pargana Tonk [No.58]. Also see Dilbagh Singh, "Caste and Structure", pp.309-310 for similar evidence from the late 1750s and 1760s.
  160. See Chapter VI on Trends in Revenue Rates.
  161. The Mughal revenue manuals of the seventeenth century similarly prohibit the conversion of raiyati land into the khud kasht category. Irfan Habib, Agrarian System, p.114.
  162. Chitti dt.Kartik vadi 14 VS 1789/AD 1732, pargana Niwai [No.441]; Chitti dt.Baisakh sudi 5 VS 1796/AD 1739, pargana Tonk [No.273]; Chitti dt.Chait sudi 4 VS 1784/AD 1727, pargana Jaitpura [No. 339].
  163. The number of years specified in different cases were 2 to 4, 7, 9 and 10. See Chapter IV on Revenue Policy.
  164. Dilbagh Singh cites the evidence of 13 documents from this period of which in 11 instances the state borrowed money from the bohra. See Dilbagh Singh, "Role of Mahajans", pp.21-22, 26.
  165. Chitti dt.Asad sudi 9 VS 1804/AD 1747, tappa Sahipura; Sanad dt.Sawan sudi 1 VS 1806/AD 1749; Chitti dt.Kartik vadi 9 VS 1805/AD 1748, to Shri Nanigram from Diwan Rai Narayandas Hargovind (all unindexed).

166. Chitti dt.Kartik vadi 9 VS 1805/AD 1748, to Shri Nanigram from Diwan Rai Narayandas Hargovind.
167. See Chapter VII on Foodgrain Prices. Also C.A.Bayly, Indian Society and the Making of the British Empire, New Cambridge History of India, vol.II.1 (1988), pp.34-36.
168. D.A.Washbrook, "Progress and Problems: South Asian Economic and Social History c.1720-1860", Modern Asian Studies, 22, 1 (1988),p.71.
169. Dilbagh Singh, "Revenue Administration", pp.280-281.
170. *ibid.*, pp.285, 266-7. Also Satish Chandra, The 18th Century in India, p.33.
171. See discussion in Chapter IV on Revenue Policy.

## Chapter IV

### **REVENUE POLICY AND THE SYSTEM OF AGRARIAN TAXATION**

Many of the studies that have dealt with the relations between the state and village society in pre-colonial India have tended to focus on the magnitude of agrarian taxation and the administrative arrangements for its assessment and collection. While an understanding of the complexities surrounding revenue collection and the functional and geographical responsibilities of various administrative officials provide useful information, the institutional emphasis in these studies has generally kept them from examining the interaction between the state, its taxation policy and agricultural productivity. In this chapter, we shall attempt to relate the logic and principles of taxation adopted by the Jaipur state to its objectives and role in agricultural production.

#### The Nature of Land Revenue.

The question, as posed by the British administrators, of whether the land revenue in the pre-colonial period could be regarded as rent or a tax on land hinges on the identification of the real owner of the land. Modern research on the agrarian economy of Mughal India has, however, laid emphasis on the point that the concept of absolute private ownership did not exist in the pre-colonial era. The peasant in Mughal India can be said to have been the proprietor of land in the sense that his land was inheritable, and could be sold or mortgaged. However, this right was conditional on the regular payment of land revenue to the state. In order to

prevent the loss of revenue due to it, the state asserted its right to ensure uninterrupted cultivation of land, or to demand that the revenue be paid even if the cultivator chose not to till the land, or else to have the land cultivated by another in case the owner had deserted.<sup>1</sup> This meant that there was no exclusive right to property and, hence, the question of the nature of land revenue could not be viewed in terms of rent or tax on land.<sup>2</sup> Walter Neale, on the other hand, stressed that implicit in the use of concepts such as 'rent' or 'tax' was the assumption that a market system was in operation.<sup>3</sup> He argued that in the context of the pre-colonial India, the land revenue was part of the redistributive system whereby the state received a share in the gross produce of the peasant.<sup>4</sup> It has, therefore, been argued that pre-colonial land revenue "was not properly speaking rent or even a land tax. It was a tax on the crop."<sup>5</sup>

In principle, revenue was calculated as a proportion of the produce of each crop, whether collected in kind or commuted into cash. Irrespective of the form of payment, revenue demand would vary annually for each primary fiscal unit - a village or qasba - on the basis of diverse factors such as variations in productivity, prices, the value of the crops grown and the extent of cultivation in each harvest period. The uncertainty in estimating the revenue proceeds of the state was to some degree sought to be minimised by the Mughals through the imposition of fixed cash rates per bigha for each crop after making allowances for regional disparity in productivity and prices. While this system eliminated variations arising from seasonal fluctuations in the harvest and prices, the aggregate demand for each fiscal unit would nevertheless continue to vary in accordance with the types of crop grown and the annual fluctuations in their respective acreages. This feature of Mughal revenue policy necessitated a detailed survey of each village for each

harvest as well as the formulation of a schedule of locally applicable rates of taxation. While there is evidence to show that this was done for the territories under close Mughal administration, unfortunately these records have not survived. It is in this context that the annual series of records for the parganas under the administration of the Jaipur rajas in the eighteenth century acquire great significance. The system of taxation in these parganas was derived from and closely modelled on Mughal practices. Thus the detailed records and the variety of sources of data available for this region from the mid-seventeenth century onwards make it possible to attempt a comprehensive analysis of the state's revenue policy and its application and consequences.

There were two modes of revenue assessment prevalent in the region from at least the mid-seventeenth century. These were firstly, the crop-sharing method or "batai" based on a physical division of the crop in an agreed proportion between the peasant and the state; and, secondly, a cash assessment per unit area of land or the "zabti" system. These two methods coexisted for each qasba and village and for each harvest. Before we discuss the working of these two distinct forms of revenue realisation, it is necessary to examine the rationale for their adoption.

It was the type of crop grown, rather than the quality of the soil or the nature of land tenure, which determined whether the crop was assessed by the zabti or batai method or, sometimes interchangeably, by both. The crops invariably assessed by the zabti system were the 'cash' crops in both kharif and rabi harvests. These included cotton, the dye plants, sugarcane, tobacco, spices, vegetables, poppy, maize and sunn-hemp. These constituted the "pukki" zabti crops or crops that were never assessed by the crop-sharing method.<sup>6</sup> The crops generally assessed by the batai

method included all the major foodgrains – millets, pulses, oilseeds, barley, wheat and the rabi mixed grains. In accordance with the policy of Mughal taxation, each of the latter foodcrops could be assessed by the crop-sharing method or by the zabti method, the choice theoretically being left to the peasant.<sup>7</sup> Such crops were classified as "kutchi" zabti perhaps to indicate the flexibility in the form of assessment possible with respect to these crops.

The choice of the peasant to opt for either of these two types of assessment with respect to the food crops was closely regulated by the Jaipur state to ensure that it did not involve a loss of revenue. In pargana Gijgarh, for instance, the revenue obtained by applying the zabti rates per bigha for irrigated wheat and barley was estimated to be considerably lower than the revenue that would have been obtained by collecting the revenue in kind and selling the grain in the market. The diwan therefore instructed the amil to consult with the raiyati and revise the cash rate by levying an additional amount per bigha under "afzud", or additional levy, so that the state did not suffer a loss. If, however, the peasants found an upward revision in revenue rates unacceptable then they would have to pay the revenue on these crops in kind at the proportions customary for the parganas that were traditionally part of the Jaipur patrimony or "panch mahals".<sup>8</sup>

In an area of dry farming that was prone to indifferent harvests, crop-sharing was clearly of advantage to the cultivator as the preferred mode of discharging his revenue obligations. Crop-sharing ensured that while the risk of harvest shortfalls was shared between the state and the peasant in proportion to their respective shares in the output, that of local price variations was borne by the state alone. However, the 'transaction' or 'supervision' costs involved in tasks such as policing to

prevent pilferage prior to the harvest, the actual weighing and division of the crops and the arrangements to ensure the sale of the produce were undoubtedly higher in the batai method. In this respect, cash assessment had the clear advantage of making the assessment and collection of revenue administratively easier from the point of view of the state. Why then did crop-sharing persist, or, why did the state accept the peasants' right to the choice of the mode of appropriation? The reasons perhaps lie in the relations between the state and the peasant and the agricultural practices that prevailed in the region.

Agricultural production in pre-colonial north India was characterised by a high land to man ratio coupled with a high degree of peasant mobility.<sup>9</sup> The ability of the peasant to migrate in search of better terms - an option often resorted to - and the dependence of the state on the continued production of surplus by the peasants placed the latter in a better bargaining position vis-a-vis the state. In this context, it has been argued that considerations of 'supervision' costs by the surplus appropriator are unimportant.<sup>10</sup> The peasant would adopt the mode of revenue payment that would allow him to retain the maximum part of his output within the limits prescribed by 'custom'. In conditions of uncertain production, the preference for crop-sharing, especially for rain-fed crops, is consistent with the risk averse strategy of the peasant. On the other hand, for crops requiring special skills or higher labour and capital inputs - in particular irrigation which reduces the degree of uncertainty associated with agricultural production - the adoption of fixed cash rates which were markedly stable provided the peasant with the opportunity to retain any additional gains through increased productivity or favourable price movements.



In addition, there may be specific agronomic reasons why certain crops were exclusively assessed by the zabti system and others predominantly by the batai system. A crop specific cash rate per bigha presupposes that sole cropping was the norm. However, in the dry lands of the semi- arid zones, intercropping of one or more types of crops continues to be the dominant cropping pattern.<sup>11</sup> Unlike the mixed crops - such as the barley, wheat and gram admixtures- which are sown, harvested and sold as such, intercropped plants, whether or not sown together are invariably harvested separately. Depending upon the types of crops that were grown in the same field it may or may not have been possible to arrive at a single, uniform cash rate of assessment. We find that combinations of the types listed below were invariably assessed by the zabti method: 1) minor millets - varti, kagani and ralo - in combinations of two, 2) guwar and chola, both pulse crops consumed as vegetables and fodder, and 3) makka combined with juwar or mandwa. A comparison of the rates of taxation of each crop separately and in the combined form reveals that the rates were identical.<sup>12</sup> Hence, in instances where the zabti rate of taxation on each crop within the combination was identical, it was immaterial whether the crops were intercropped or grown separately from the point of view of the rate per unit of land at which the revenue was assessed. However, the most common examples of intercropping in low rainfall regions of north India include the millets, primarily bajra, and pulses. The disparity in the productivity and in the prices of these crops made it difficult, if not impossible, to formulate a uniform cash rate of levy for fields intercropped with legumes and cereals in varying proportions. In the case of such crop combinations, once each crop had been separately harvested, the physical division of the crops in the proportions specified by the batai schedule was perhaps the more appropriate and simpler

method of revenue collection in the context of the principles of taxation in the pre-colonial period.

Crops exclusively assessed by the zabti method, on the other hand, were primarily crops that were either harvested over a long period of time like cotton, or were perishables like vegetables, or required primary processing before they could be marketed like the dye plants and sugarcane. Either one or a combination of all these factors made the method of crop-sharing, with its concomitant aspect of marketing of the produce by the state, an impracticable proposition with regard to the 'cash' crops.<sup>13</sup>

It is perhaps a combination of factors relating to the nature of land revenue and the conditions and techniques of agricultural production that account for the coexistence of two disparate methods of revenue assessment. The persistence of crop-sharing as a mode of revenue realisation in eastern Rajasthan cannot therefore be seen to be indicative of either a poorly monetised economy, or an imperfect adoption of the more 'sophisticated' Mughal system, or else explained away as a reversion to an antiquated and inefficient system of taxation as a result of the political flux in the eighteenth century.<sup>14</sup> The continuity in the modes of taxation at the local level throughout a large part of the seventeenth century and the whole of the eighteenth is evident in the comparative schedule of taxation cited in a document for a period spanning roughly three-quarters of a century during which the pargana had been successively under the administration of Mirza Raja Jai Singh (from 1637), followed by the Mughals (c.1667-1710) and was then granted to Sawai Jai Singh in 1710.<sup>15</sup>

The document records the diwans response to a representation made by the peasants of pargana Chatsu in 1710 requesting a reduction in the current rates of taxation.<sup>16</sup> In their appeal the raiyati claimed that for the past thirty years of "Turki" or Mughal administration, they had been taxed at the rate of twenty annas per bigha for cotton and that the revenue in kind levied on irrigated rabi cereals had been two-fifths of the produce. These rates were considerably higher than those levied in the previous period of Mirza Jai Singh's administration which had been sixteen annas per bigha and a third of the grain, respectively. In order to repopulate a pargana that was claimed to have been devastated by famine and excessive taxation during the interim period of Mughal administration, the diwan agreed to a reversion to the lower rates on the condition that the raiyati undertake to increase the annual revenue collection of the pargana to equal that in Mirza Jai Singh's reign in the following three years. The document clearly shows that despite variations in the level of taxation, the structure of taxation remained unchanged over successive administrative regimes notably in the coexistence of dual modes of revenue appropriation.

#### The Structure of Agricultural Taxation.

A detailed analysis of the formulation of the zabti rates and the proportions of produce levied in batai reveal their close relationship with productivity. As stated in the *Ain-i-Akbari*, the cash rates per bigha for crops assessed by the zabti system were fixed in accordance with the prices and average productivity of the crop in each dastur circle or mahal.<sup>17</sup> However, the arhsattas and the dastur amals for our region indicate that there was no uniform cash rate for each crop in the areas within a single dastur circle as identified in the *Ain-i-Akbari*.<sup>18</sup> In practice,

differences in the quality of the soil, location of the field, duration of fallowing of the field sown and the degree of capital and labour investment were incorporated to formulate a complex schedule of graded tax rates for each crop. Far from there being a uniform crop rate for a whole pargana, the rates even varied as between fields within individual villages.

The interplay of the diverse factors that affected the cash rate can best be shown by examples of the variation in the crop-specific zabti rates on sugarcane and cotton cultivation in qasba Sanganer. In examining the rationale behind the differential in tax codes, it is important to stress that these could only have been workable and acceptable to the primary producers if the level of demand took into account production costs and outturn and rewarded investment while at the same time fulfilled the long-term objectives of the state to expand and stabilise its revenue base.

The area under sugarcane was first subdivided into "gundgari", "machil" and "pedi". Gundgari was differentiated from the other two categories by the attribute that gundgari soil abounded in moisture and therefore may have been naturally productive or required less irrigation than ordinary soil.<sup>19</sup> The rate per bigha for gundgari was the highest at Rs. 7.00. Although machil and peri were both irrigated, peri sugarcane was the ratoon crop requiring less labour and capital but producing a poorer quality crop.<sup>20</sup> As considerations of outturn of the peri crop were counterbalanced by the relatively cheaper production costs, peri sugarcane was taxed at a marginally lower rate (Rs.4.50 per bigha) than the machil category. Machil land was differentially taxed on the basis of first, the source of irrigation; and second, the duration of the fallow preceding the sowing of sugarcane. With

respect to irrigation, cane watered by river water was more heavily taxed per bigha (Rs.5) than that irrigated by wells (Rs.3). The differential in taxation was perhaps meant to compensate for the larger capital outlay required for well irrigation as opposed to canal irrigation.<sup>21</sup> Another factor that has been noted in the cultivation of cane is the deterioration in the output and the sucrose content with the shortening of the length of fallow prior to planting.<sup>22</sup> Sugarcane grown on "bhadvadh" land - that is, land allowed to lie fallow for the kharif season during which period it was repeatedly ploughed - was taxed at Rs.5 per bigha when irrigated by river water. On the other hand, similarly irrigated land on which a kharif crop preceded the rabi sowing of sugarcane, termed "dofasli" land, was taxed at Rs. 4.50. Clearly, where production costs were estimated to be equivalent, the better quality of harvest on bhadvadh land was taxed at an appropriately higher rate. From the viewpoint of the state, it was also good management to provide economic incentives to encourage agricultural practices such as the double cropping of land and the sinking of wells by taxing such cultivation at lower rates.

Cotton cultivation in Sanganer was also taxed according to a sliding scale of revenue rates per bigha depending upon the quality of the soil and irrigation method. There were six basic categories into which cotton acreage was divided. The highest rates were levied on "piwal paheli" or good quality soil that was irrigated by wells having an abundant supply of water. These lands were manured and often lay adjacent to the inhabited sites.<sup>23</sup> The next category was "piwal pacheli" which comprised ordinary soils irrigated by wells and located at a reasonable distance from the inhabited area.<sup>24</sup> In descending order of tax burden, the categories that followed were "sawanu", "dhandha", "lih" and "rama". Sawanu or sawani cotton was, as the name implies, the late variety of cotton sown after the

monsoons and largely rainfed.<sup>25</sup> While we do not know what type of land the category termed dhandha referred to, lih was land that was annually flooded and rama denoted land irrigated by river water.<sup>26</sup> This pattern of graded taxation was the norm in all the parganas and each grade was either referenced by explicit categories, or, as in some parganas, only a series of graded rates were recorded without any indication of their specific applicability.

Rates of taxation per bigha also varied across parganas. In Tables 3 and 4 we have attempted to compare the zabti rates in different parganas. As a direct comparison is not possible given the different dates at which the revenue schedules were compiled as well as differences in the size of the bigha in each pargana, we have indexed the rates to that of cotton in every case.<sup>27</sup> Table 3 shows that there was no direct correspondence in the actual or the indexed zabti rates as between parganas. Only parganas Phagi and Jhak reveal a basic similarity in the structuring of the rates which was perhaps due to their proximity and their inclusion in the same pargana till the second half of the eighteenth century.<sup>28</sup> Differences in agricultural productivity, and variations in the units of area measurements and price levels meant that no standardised rate could be uniformly applied. In general terms, the indexed values for all the parganas reveal a basic pattern of high rates on cash crops and lower rates on foodcrops, relative to cotton. Comparison with the indexed rates for the dastur circle of Chatsu recorded in the *Ain-i-Akbari* (c.1595) and the rates given for pargana Chatsu for 1712 show that the rates for all crops except indigo, sunn-hemp, cumin and onions were higher in the early eighteenth century taken relative to cotton. From the ranking of the crops in both schedules it is clear that sugarcane, poppy and indigo continued to be taxed at a rate higher

Table 3: Rates of Taxation in Cash (Zabti) in Selected Parganas (Rs./Bigha)

Crop	<u>Sanganer</u>		<u>Chatsu</u>		<u>Sonkher</u>		<u>Phagi</u>		<u>Jhak</u>		<u>Udehi</u>	
	A	B	A	B	A	B	A	B	A	B	A	B
Cotton	2.25	100	1.13	100	2.00	100	1.00	100	1.00	100	2.00	100
Indigo	4.50	200	1.75	155	-	-	1.25	125	1.00	100	2.60	133
Tobacco	4.50	200	2.00	177	2.81	141	3.50	350	3.50	350	4.00	200
Sunnhemp	1.50	67	0.50	44	2.00	100	1.00	100	0.75	75	2.38	119
Sugarcane	7.00	311	2.00	177	2.50	125	-	-	-	-	-	-
Poppy	-	-	2.00	177	2.50	125	2.50	250	2.50	250	4.00	200
Kodon	-	-	0.75	66	-	-	1.00	100	0.75	75	1.00	50
Makka/Juwar	1.75	78	1.00	89	1.00	50	1.50	150	1.50	150	-	-
Chola	-	-	0.50	44	1.00	50	1.00	100	1.00	100	-	-
Kaguni	-	-	0.75	66	-	-	0.75	75	0.50	50	1.00	50
Varti	-	-	0.50	44	1.00	50	0.75	75	0.50	50	0.75	38
Veg. kharif	1.25	89	1.00	89	1.00	50	1.00	75	0.50	50	2.00	100
Veg. rabi			1.00	89	1.09	55	1.50	150	1.50	150	2.50	125

Sources:

1. Dastur Amal Qasba Sanganer dt.14 Jamadi II 1114 Hijra/A.D.1707 as translated by V.S.Bhatnagar, Life and Times of Sawai Jai Singh 1688-1743, p.291.
2. Dastur Amal Maljihah wa Sairjihah Pargana Chatsu, Sarkar Ranthambhor dt. Mah Sudi 9 V.S.1769/A.D.1712
3. Dastur Amal Pargana Sonkher Sonkhari dt.V.S. 1773/A.D.1716
4. Dastur Amal wa Amal Dastur Pargana Phagi dt. A.D.1691
5. Dastur Amal Pargana Jhak (compiled post-1712 A.D. from internal evidence)
6. Dastur Amal Pargana Udehi (compiled post-1714 A.D. from internal evidence)

Notes to Table 3:

Under subdivision A are listed the standard rates mentioned for each crop in Rupees per bigha. Subdivision B gives the index values of the rates for each crop with cotton=100 in each pargana.

Table 4: Comparison of Zabti Rates in pargana Chatsu in 1595 & 1712

Crop	Ain (1595)		Dastur (1712)	
	Index	Rank	Index	Rank
Cotton	100.00	7	100.00	6
Indigo	171.48	1	155.00	4
Sunnhemp	114.29	4	44.25	13
Henna	85.74	8	132.74	5
Sugarcane	171.48	1	176.99	1
Poppy	147.70	3	176.99	1
Safflower	74.45	9	176.99	1
Cumin	102.71	5	88.50	7
Onions	102.71	5	88.50	7
Veg.kharif	71.03	10	88.50	7
Melons	16.96	14	88.50	7
Juwar	41.62	12	88.50	7
Kodon	42.65	11	66.37	12
Chino (Arzan)	22.44	13	44.25	14

Sources: Ain-i-Akbari of Abul Fazl-i-Allami, vol. II, trans. H S Jarret, pp. 110-111.

Dastur Amal Maljihah wa Sairjihah, pargana Chatsu, Sarkar Ranthambhor, VS 1769/AD 1712.

than that applicable to cotton in both time periods while the foodcrops were taxed less heavily (see Table 4).

The batai system was less complex as a method of appropriation primarily because it did not take into account variations in the type of soil, location of field, local price levels or type of crop. The highest proportion of the produce taken was a half share for both the kharif and for the rabi crops. However, a few of the crops in the kharif harvest that were invariably irrigated - like a coarse rice called sali and water-chestnut or singhara - were taxed at two fifths of the gross produce. In the rabi harvest, on the other hand, all the batai crops were differentially assessed depending upon whether or not they were irrigated. The irrigated rabi crops were liable to a lower assessment in terms of the proportion of the produce. In the majority of the parganas for which we have data, the standard assessment on



irrigated crops was two fifths of the produce. In Chatsu, however it was as little as a third. In the parganas of Chatsu and Phagi, wheat was taxed at a level that was lower than the other rabi crops in both the irrigated and unirrigated categories.

Given that the productivity of irrigated rabi land was much higher and more stable, a concessionary demand on irrigated crops appears at first sight to invert the logic of taxation which would point to a higher rate as being more logical. While it was the policy of the state to encourage the extension of irrigation, it is improbable that the state would be willing to pursue a policy that would be detrimental to its revenue returns. This anomaly is further reinforced when we compare the cash rates levied on irrigated and unirrigated wheat and barley. A sample survey of the zabti rates applicable in a few villages of pargana Toda Bhim for the rabi harvest of 1693 shows that among the eight categories into which the revenue rates for barley are graded, the highest rates are for crops irrigated by permanent wells and the lowest for the unirrigated crop. While there was no unirrigated category for wheat, the gradation in the rate follows the same pattern as for barley (see Table 5).

The apparent discrepancy in the formulation of cash and kind rates can be explained only by the yield factor. The higher gross produce from irrigated land meant that although the state claimed a smaller proportion of the produce, it actually acquired a larger absolute amount of crop than it would have had if the crop had been unirrigated and subject to a higher tax rate. The lower tax rate on the produce of irrigated land would also have left the taxpayer a larger proportion and quantity of crop thereby serving as an incentive for increased labour and capital investment. It is likely that the estimated differentials in the average yield of irrigated and unirrigated crop were taken into account to determine the

Table 5: Revenue Rates for Winter Cereals in Toda Bhim (Rs./Bigha).

Category	Status	Barley	Wheat	Village
1. Pukka well	Gaveti	3.78	4.44	Halilpur & Hasil
	Pahi	-	4.31	-do-
2. Kutchha well	Gaveti	3.66	4.31	-do-
	Pahi	-	4.19	-do-
3. Old well	Gaveti	3.25	3.75	Rajpur
	Pahi	3.13	3.63	-do-
4. New well	Pahi	3.00	3.50	-do-
5. Seko	Gaveti	2.88	-	-do-
	Pahi	2.75	-	-do-
6. Khatli	Gaveti	1.81	1.88	-do- & Habibpur Saet
	Pahi	1.69	-	-do-
7. Bor	Gaveti	1.25	-	-do-

Source: Arhsatta, pargana Toda Bhim fasl Rabi VS 1750/AD 1693.

Notes to Table 5:

Gaveti denotes resident cultivators while pahi's were non-resident cultivators who were generally assessed at concessional rates. In all cases above, irrespective of category or crop, the difference between the gaveti and pahi rates for the same category was two annas or Rs.0.13 per bigha.

The time period for categorising a well as 'old' has not been specified. While pukka wells last for a century, kutchha wells are stated to last from 2 to 20 years (Fortescue, Report on the Revenue System of Delhi Territories 1820, p. 106). Therefore, depending upon the time period, it is possible that a kutchha or pukka well may be classified as an old or established well.

Evidence from other parganas indicates that seko was equivalent to kyari or irrigated land and both terms were used interchangeably. However, while seko was used only for irrigated barley and wheat, kyari could also include other crops. Although our sources do not tell us the basis on which seko is classified and taxed separately from the other irrigated categories 1-4 above, it is possible that land irrigated by devices other than wells, such as dhenkalis or river channels, was put in the seko category.

Khatli was the dried up bed of a seasonal river or the sandy bank of a river which was manured prior to growing rabi crops. (Rajputana Gazetteer vol.III : Alwar, p.280).

Bor was invariably used as a category contraposed to kyari. It probably denoted unirrigated land which had a degree of natural water retentivity to allow rabi crops to be grown. The productivity of such land compared to kyari or irrigated land was estimated at 100 : 225 (Taqmina, pargana Phagi, fasl unhalu, VS 1770/AD 1713).

appropriate tax rates. The official estimation of the yield of irrigated and unirrigated barley and wheat land in pargana Phagi was 6.75 maunds per bigha and 3.00 maunds per bigha respectively.<sup>29</sup> These estimates imply a yield ratio of approximately 225 : 100 which is not inconsistent with the ratio calculated for the irrigated and unirrigated rabi staples in an agro-climatically similar region of Punjab, though for a later period.<sup>30</sup> The doubling of output that resulted from irrigating the field implied that a tax fixed at two fifths or a third was higher in absolute terms than the customary maximum of a half share taken in tax from unirrigated land.<sup>31</sup> Although the state extracted a higher absolute quantity of grain from irrigated land this still meant that the cultivator retained a larger proportion of the total produce of such land. Hence the structuring of the batai shares in the case of rabi crops was consistent with the gradation in zabti or cash rates and incorporated the state's dual objectives of enhancing revenue as well as providing an incentive to the peasant for the increased labour and capital investment required for irrigation.

Batai proportions were also reduced to allow for bringing fallow land into cultivation, constructing new wells, and for double cropping. All these activities required additional capital and labour and also augmented and stabilised the flow of revenue in the long term. Thus in pargana Antela, while the irrigated land sown with rabi crops that had been fallowed in the preceding kharif harvest was taxed at two fifths of the gross produce, the dofasli land was taxed at the rate of a third.<sup>32</sup> Further, land irrigated by a new well was taxed at the rate of a quarter in the first year, a third in the second and third year and as normal for the succeeding years.<sup>33</sup> However in a letter to the amil of Antela, the Diwan instructed him to levy tax at

the rate of a quarter of the produce on reclaimed banjar land irrigated by a pukka well for the first five to twelve years. If, however, there were no wells in the village or the water table was too deep making the construction of the permanent well both difficult and expensive, the concessionary rate of a quarter was to be levied in perpetuity.<sup>34</sup>

Till this point we have basically been concerned with the logic of the system of revenue taxation and we have examined its correspondence to the conditions of agricultural production in our region. A vital element of the taxation policy that derived from social and political considerations rather than the specificities of crop production was the preferential rates granted to certain privileged sections of the village inhabitants.

In the formulation of the produce proportions, the dastur amals make an explicit distinction between the "raiayati" dasturs and the "riyayati" dasturs. While the former constituted the highest proportion of the produce that could be levied on the resident cultivator in the village, the riyayati schedule was lower and was further differentiated. Table 6 shows that the riyayati or concessionary rates were applied on revenue paid in kind by the hereditary village officials -the patels, patwaris, chaudhuris and qanungos - as well as distinct caste groups like the Rajputs, Brahmans, Kayasthas and Mahajans. The granting of advantageous terms of revenue payment to the local administrative functionaries was a method of remuneration that has a parallel in the allocation of revenue-free or inam lands in eighteenth century Maharashtra.<sup>35</sup> The inclusion of the pahis in the riyayati schedule was similarly part of the state policy of offering fiscal inducements to migratory cultivators who were generally given the waste land or the poorer quality

Table 6: State's Share of Crop (Batai) in Selected Parganas

Pargana	Raiyati	Patel	Chaudhri Sainungo	Brahman	Malajani	Bhonia	Other Rajput	Kanins	Pathis	Miscellaneous
<u>Chatsu</u>										
Kharif	1/2	-	1/4	-	2/5	1/4	1/3	2/5	-	Qasba brahmans:9/20 Qasba raiyati :9/20 Qasba patels[6]:2/5 Patwari :1/4
Sali (rice)	2/5									
Rabi unirr	1/2	2/5	1/4	-	2/5	1/4	1/3	2/5	-	Patwari :1/4
Wheat unirr	2/5									
Rabi irr.	1/3	-	1/4	-	-	-	-	-	-	
<u>Phagi</u>										
Kharif	1/2	2/5	-	1/3	9/20	1/4	1/3	2/5	-	Sali & Singhara:2/5
<u>Jhak</u>										
Kharif	1/2	2/5	1/4	1/3	2/5	1/4	1/4	-	2/5	
Sali	2/5	1/3	1/4	-	-	-	-	-	-	
Rabi unirr.	1/2	1/3	1/4	1/3	1/3	1/4	1/4	-	1/3	Patwari :1/3
Rabi irr.	1/3	-	1/4	-	-	-	-	-	-	
<u>Amarsar</u>										
Unirrigated	1/2	2/5	1/4	2/5	2/5	1/4	1/3	-	-	
Irrigated	2/5	1/3	1/4	1/3	1/3	1/4	1/3	-	1/3	
<u>Udehi</u>										
Kharif	1/2	2/5	1/4	-	2/5	1/4	1/3	1/3	2/5	Banjar land : 2/5 Brahman/qasba: 1/2 4 Patels/qasba:1/3 Miscl.brahmans:2/5
Rabi unirr.	1/2	2/5	1/4	2/5	2/5	1/4	1/3	1/3	2/5	-do above-
Rabi irr.	2/5	-	-	-	-	-	-	-	-	Dofasli/banjar:2/5
<u>Antela</u>										
Kharif	1/2	2/5	1/4	-	1/3	1/4	1/3	2/5	1/3	Singhara : 2/5
Rabi unirr.	1/2	2/5	1/4	-	2/5	1/4	1/3	-	-	Polach : 2/5
Rabi irr.	2/5	1/3	1/4	-	1/3	-	-	-	-	Dofasli :1/3

Sources:

1. Dastur Amal Maljihat wa Sairjihat Pargana Chatsu Sarkar Ranthambhor 1712
2. Dastur Amal wa Amal Dastur Pargana Phagi 1691
3. Dastur Amal Pargana Jhak Suba Ajmer (n.d.- post 1712 from internal evidence)
4. Dastur Amal Pargana Amarsar dt.Chait Vadi 3 V.S.1783/A.D.1726
5. Dastur Amal Pargana Udehi (n.d.- post 1714 from internal evidence)
6. Dastur Amal Pargana Antela Sarkar Alwar Suba Akbarabad, n.d.

land of the village to cultivate.<sup>36</sup> The pahis therefore, irrespective of their caste, were assessed at concessional rates and thus the rationale for their inclusion in the riyayati schedule was quite different from that of the other groups. The grant of preferential rates of taxation to the members of the upper castes not traditionally associated with agriculture has usually been explained on the grounds of the additional expenses incurred by them on the wages of hired labour to perform tasks deemed socially polluting and their lower productivity in comparison with castes specialising in agriculture.<sup>37</sup>

The preferential rates accorded to the village officials and the higher castes varied between parganas. However, in each pargana the chaudhuris, qanungos and the zamindar-bhomias paid the lowest rate of a quarter and the patels the highest at two fifths. These formed the upper and lower limits of the range of preferential rates. There is no systematic pattern in the ordering or level of the rates for the other categories which lay within the range mentioned above. However, there was a basic uniformity in that the same principle of preferential rates for the revenue functionaries as well as the upper castes applied in all parganas.

Unlike the batai schedule of taxation in which concessional rates were invariably recorded, the schedules of cash rates generally do not specify whether preferential rates were accorded to each of the privileged groups mentioned in the batai rates. In the dastur amals, concessional rates for cash assessed crops are occasionally mentioned, though limited to selected crops or a specific individual or social group. Thus in parganas Chatsu, Jhak, and Udehi the chaudhuri and qanungo were granted concessional cash rates for crops like cotton, sugarcane, millets and makka. While concessional rates in respect of chaudhuris and

qanungos were generally mentioned for a few crops grown in the pargana, it is unusual to find references to the patels or the higher castes being assessed at the concessional rate. In fact, of the dastur amals examined, a caste based distinction in the rates for ordinary cultivators and the cultivating Rajputs is only specified in the case of pargana Antela.<sup>38</sup> The rate differential varied for different crops being Rs.1.00 per bigha for cotton, Rs.0.75 for poppy, Rs. 0.50 for makka, kaguni and varti, and as little as 10 copper takas for vegetables. Unlike the tax schedules, the arhsattas record a variety of rates per bigha for each crop. The arhsattas do not uniformly record whether these variations are in response to varying productivity or if they are an expression of preferential taxation of certain categories of cultivators. It is clear that both these criteria for gradation in tax rates were operative for all the qasbas under examination with the exception of qasba Malarna.

The best example of the inverse gradation in zabti rates with the status of the tax payer is provided by a comparison of the dastur amal of Phagi for 1691, listing the standard rates of revenue realisation, with the arhsatta of the same year.<sup>39</sup> Although the dastur amal only differentiated between soils of varying productivity in its list of the cash rates applicable on each crop, in the arhsattas the soil categories so differentiated included a further range of gradation (see Table 7). Thus for each crop, in each of the sub-categories based on varying productivity the highest rate equalled that given in the dastur amal and which was paid by the raiyati. The concessionary rates which followed were levied on land cultivated by named individuals who were invariably members of the higher castes. It is this level of gradation in the tax codes which that has not been specified in the dastur amals although it appears to have been operative at the ground-level. Unlike the arhsattas of the other qasbas, those of qasba Malarna record a single zabti rate

allowing no variation for productivity or the status of the cultivator although the revenue obtained in kind was levied at two different rates.<sup>40</sup> It is possible that these two rates were applied to irrigated and unirrigated crops and did not represent preferential taxation.<sup>41</sup>

Table 7. Gradation in Zabti Rates per Bigha: Qasba Phagi, 1691 A.D.

<u>Cotton:</u>	Area.Sown (Bighas)	Tax.Rate (Rs./bigha)
A: Goriwa land.		
(i) Raiyati	215.90	1.00*
(ii) Bhavsas Kasliwal & Sukhdev Gujarati	19.40	0.75
(iii) Sheoramdas Naruka	8.35	0.50
B: Mangro land.		
(i) Raiyati	1964.45	0.75*
(ii) Bhavsas Kasliwal, Ram Singh Banbirpota & Gujaratis	94.00	0.50
(iii) Sheoramdas & Chatrabhuj Naruka	10.80	0.38
<u>Kodon:</u>		
A: Mangro land.		
(i) Raiyati	157.15	0.75*
(ii) Bhavsas Kasliwal & misc. Gujaratis	11.40	0.50
(iii) Sheoramdas & Chatrabhuj Naruka	6.25	0.38

Sources: Jamabandhi, pargana Phagi VS 1748/AD 1691 and  
Dastur Amal wa Amal Dastur, pargana Phagi VS 1748/AD 1691.

Note: \* These are the standard rates for each category that have been specified in the official tax schedule or dastur amal.

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Preferential taxation on the basis of caste or official status of the cultivator does not appear to have formed a part of the Mughal system of revenue taxation.<sup>42</sup> However its prevalence in parts of northern India has been variously attested to.<sup>43</sup>



Until comparable data for our period for other regions is located it is not possible to say whether preferential taxation was a localised phenomenon reflecting the customary privileges accorded to the socially dominant castes or that the level of detail in our sources accurately reflects the actual distribution of the 'average' rate formulated by the Mughal state.

The questions that arise next are whether all the members of the non-agricultural castes were accorded concessionary rates, and if so, whether there were any restrictions imposed on the extent of their privileged holdings and the degree to which these were effective. It has been argued by Dilbagh Singh that all members of the privileged sections or castes were granted concessionary rates of revenue on their entire holding.<sup>44</sup> This inference is supported by the manner in which the dastur amals specify caste as the condition for the award of preferential rates as seen in Table 6. Further, in a number of documents the identification of the rural elite granted concessionary rates has been made in general caste terms, for example, "vata tisara raiyati wa chautha aur kom ka" i.e., the raiyati pay at the standard rate of a third of the produce while the other castes pay at the concessional rate of a quarter. Here the term raiyati has been used in its restrictive sense to apply to the cultivators of peasant castes also called the paltis.<sup>45</sup> In other documents all members of the rural elite eligible for preferential revenue taxation are collectively termed "himayati log" (literally, patrons). In one such document the himayati log have been identified as the Purohit, Vyas, Sanghi, Sah, and Kayastha.<sup>46</sup> The use of general caste categories suggests that the concessionary rates were caste-linked and were therefore extended to all members.

However, the record of revenue paid by each cultivator entered in the khasras does not conform with the view of general applicability of favourable revenue rates for all members of the non-agricultural castes. The evidence of the khasra of village Naelo indicates that the majority of the higher caste cultivators were assessed preferentially on only a part of their total grain production and that a significant number of them were not entitled to concessional assessment at all.<sup>47</sup> Only thirteen of the thirty three Brahmans and one of the seven Kayasthas in village Naelo were accorded concessionary tax rates. The Rajputs on the other hand, were assessed at favourable rates either for their entire grain output or at least the major portion of it. That the findings of this khasra are not exceptional is corroborated by the khasra of village Madsudanpura, pargana Chatsu, examined by S.P.Gupta. He concludes that no favourable rates were granted to the patel or to the larger producers. Unfortunately, the castes of all the cultivators have not been recorded against their names in the Madsudanpura khasra. However, among those paying concessionary rates who have been identified were a Rajput, a patel and a pahi or non-resident cultivator.<sup>48</sup> The evidence of the khasras indicates that there may have been other conditions in addition to caste membership that determined the applicability or otherwise of the favourable schedule of revenue rates.

It has been suggested that only those Rajputs who were armed and offered military service to the state or Brahmans who recited the "Sandhya Gayatri Mantra" were entitled to revenue concessions.<sup>49</sup> While there are documents that state precisely these reasons to lend support to the claimants right to preferential taxation, the vast majority of similar claimants do not justify their claim in these terms.<sup>50</sup> The general nature of the above conditions is perhaps indicative of the ideological justification for preferential taxation of the rural elites rather than a set

of rigorously applied criteria for exclusion of some members. Generally, whenever a claim to preferential tax was made it was advanced on the ground that the cultivated land was the claimants gharuhala or personal land.<sup>51</sup> The state recognised the economic implications of privileged tenure and attempted to limit the extent of gharuhala cultivation. The mechanism for containing a secular increase in the size of the gharuhala holding was that the state insisted that revenue be paid on all land declared as personal land whether it had been cultivated or not and secondly, that all land cultivated in excess of the gharuhala land was to be taxed at standard rates.

There are a number of documents which refer to the village headman or the patel being accused of intentionally leaving land uncultivated in the village, whereupon the state instructed the revenue authority that the revenue on such land was nevertheless to be assessed. Although the magnitude of the levy is not mentioned the tax was to be realised at a fixed rate per bigha or "bighori".<sup>52</sup> The obligation to render tax on all proprietary land served as a form of check on the unlimited expansion of the privileged tenure, as the ability to provide and control labour - both human and animal - had to be assured over a reasonably long duration to validate the claim on the basis of customary usage. This obligation of the taxpayer was an oft repeated condition for the retention of the peasant's occupancy right in the administrative literature of the seventeenth and eighteenth centuries.<sup>53</sup> The extension of cultivation by the holders of privileged tenure to what was designated as the khalisa or raiyati land meant that they had to pay revenue on the additional cultivation at the normal rates.<sup>54</sup> This would perhaps explain the simultaneous levy of concessional as well as standard rates on different

portions of the grain produced by the rural elites in the khasra of village Naelo cited above.<sup>55</sup>

The conflicting evidence regarding the basis for concessionary taxation – that is, whether it was caste-based or limited to individuals performing specific 'services' for the state – arises due to the diverse methods by which the state redistributed resources to the rural elites. For example, in qasba Sanganer, about three percent of the land revenue in 1731 has been recorded as being obtained from the revocation of inam lands. These inam grants had been to mahajans, Rajputs, Kayasthas, various traders, Cheepas, Jogis and faqirs, and others.<sup>56</sup> In another document, the amils were instructed to remunerate the patels and other hereditary elites either through a commission computed on the entire revenue proceeds of the village or, alternatively, through concessionary rates of taxation on their gharuhala land and exemption from contributions to the malba fund.<sup>57</sup> In general we can say that caste was an important, if not the only, determinant of preferential taxation. However, although the level of concessionary taxation and the form it took may have been defined by custom and state policy, it was invariably restricted to a certain type of property right encapsulated in the term gharuhala. The formulation of the basic revenue demand was, therefore, extremely complex and varied, incorporating within its structure differentials in the productivity of land, labour, and capital as well as recognising the superior rights of the socially and politically dominant sections of rural society.

The payment of the basic revenue demand was undoubtedly the chief financial burden on the peasantry. However, the revenue records do not reveal the entire range of additional payments made by the peasants under numerous heads which

can broadly be categorised as protection and transaction charges. All of these charges which accrued to the state were generally recorded under the category of "sair jihat" taxes and, where the Jaipur raja also held zamindari or bhomi rights, under the specific account of bhomi dues.<sup>58</sup> Those levies that formed part of the perquisites of the local revenue officials while discharging their revenue functions – such as measuring fields, division of the crop, watching over the ripe grain and preparation of records and statements – were paid to them in proportion to their duration of stay in the village in the form of money and provisions. As we shall discuss below, these payments could be made directly at the level of the village or through the state. Although both were recognised methods of remunerating the officials involved, in the case of payments made by the villagers directly such expenses were not accounted for as income by the state and were therefore not included in the annual revenue statement. Both the above types of additional levies, that is, those recorded in the arhsattas and those that were not recorded, appear to have been paid out of a common financial pool or the "malba" fund of the village. Expenses from this pool, termed "malba kharch", also included money spent communally on entertainment, charity and religious ceremonies.

Detailed accounts of these expenses for qasba Lalsot in 1737 are available, thus providing important information regarding the fiscal organisation of the village and its relationship with the revenue authorities. Prior to a discussion of the malba fund it is necessary to examine the context within which the account came to be recorded as part of the state revenue documentation. In 1723, a parwana was issued by the Jaipur darbar to the amils of all parganas.<sup>59</sup> It began with the statement that the expenses from the common fund had become so high that cultivation was falling off to the detriment of the state's revenue. The amils were therefore

instructed to make a concerted effort to encourage the patels and raiyati of the parganas to extend cultivation by offering them a reduction of a fourth of the stipulated revenue on new land brought under the plough along with an offer of state loans, or tagai, to enable them to do so. Further as a mark of royal favour, the patels of large villages were to be honoured with presents of good quality cloth (thirma), while the others were to receive turbans. In order to control the expenditure of the village, and specifically to control payments to the "sehna" or village watchman and to the subordinate of the amil, the "tappadar", it was decided that all the expenses normally met out of the fund were to be paid out by the pargana treasurer ("tehvil potadar"). At the time of the harvest, an additional amount was to be levied from each village and entered in the revenue accounts under the heads of "malba", "sehnagi" and "tappadari" to make up the deficit. It was impressed upon the amils that on no account should they allow any further impositions, fines, or presents to be taken from the village. Further, if the villagers had previously taken a loan from the moneylender, either collectively or individually, in order to meet their malba obligations, they were not to be coerced into repaying the outstanding amounts until permitted by the state.

It was perhaps a similar directive that resulted in amounts being entered under hasil malba in the additional revenues or "sawai jamabandhi" accounts of pargana Lalsot. This amount varied every year, as it consisted of the difference between the annual collections and the sanctioned expenditure from the fund, the remainder being deposited in the state treasury.<sup>60</sup> The complete malba account giving details of both collection and expenditure has been recorded only for 1737.

In parallel to the basic revenue demand in qasba Lalsot which comprised taxes on crop production, on service and artisanal production via a hearth tax, and lastly, a levy on sheep and goats as a pastoral cess, contributions to the malba fund were also calculated under these three categories. The totals of the basic revenue demand are given in column 1 of Table 8. Contribution to the malba fund in respect of crop production was calculated on the cash amounts of zabti assessed crops as well as on the sale value of the grain revenue paid. The majority of the peasants contributed 7 annas or Rs.0.44 for each rupee of the tax on crop production paid by them. The patel, patwari and certain Brahmans contributed at lower rates ranging from 3 to 6 annas per rupee of their revenue obligation to the state. The average rate of malba levy per rupee of land revenue has been calculated in col.5 of Table 8. Certain privileged farmers, such as the six chaudhuris, three Kayasthas, a Purohit and five others were totally exempt from payment to the fund. The land revenue paid by these privileged sections on which malba taxation was exempted is given in col.2 of Table 8. The exemption amounted to their paying only the basic revenue on their holdings with all additional taxes, cesses and common expenses being borne by the rest of the contributors to the common fund. Such exemptions, as well as the preferential rates at which some cultivators contributed to the common fund, were a source of continual tension between the privileged and non-privileged cultivators. In addition to the levy on crop production, smaller amounts were realised per household from the artisanal and menial population and on each sheep or goat. These contributions were in addition to similar levies which were included in the basic revenue demand. Lastly, the udik, or recipient of a charitable grant by the state, also contributed to the fund in proportion to the assessed revenues of the land grant.

The expenses incurred from the malba fund were as follows :

i) various cesses and taxes paid into the state treasury (category II.1, Table 8). The major items in these were the discount on the payment of revenue in old coin ("kasur batta" or "sarf-i-sicca"), offerings of respect ("sadar"), payment to the "waqai-nawis" or news-writer, and the cesses included in the sair jihat category in the arhsatta accounts with the exception of the hearth and livestock taxes.

ii) Payments to the officials appointed by the state to assess and collect the revenues (category II.2, Table 8). The latter included the village watchmen or sehnas, who guarded against pilferage and theft from the time the crop ripened till the division of the threshed grain; the tappadar, and his team of land measurers ("doriya" and "teniya"); and the "bhakho" or grain measurer.<sup>61</sup> In the malba account being analysed, it is difficult to work out the rates at which the appointed officials were paid as only the total cash emoluments for each sort of functionary and the number of days spent in the qasba were entered in the account. We are not told how many of each category of officials were involved, except the six sehnas mentioned.

It is likely that the revenue officials also received provisions during their stay in the qasba although such payments would not be entered in the cash-book of the malba accounts. Another document sets out in detail the payments to each of the revenue functionaries in pargana Malpura listing daily rates of cash emoluments as well as provisions of grain, pulses, flour, gur and ghi to which each official was entitled.<sup>62</sup> The highest rates were paid to the tappadar which amounted to a "bhent" or present of Rs.2.00, a daily cash income of Rs.0.38 for each day spent in the village of revenue, and "khurak" or daily rations of grain (3 seers), flour (1½ seers) and a quarter seer each of pulses, gur and ghi.<sup>63</sup> The other functionaries got



**Table 8: Summary of the Collection and Expenditure from the Malba Fund of Qasba Lalsot in 1737. [All Figures in Rupees].**

<b>I : Collection</b>	Basic Rev. (1)	Exempted (2)	Raiyati (3)	Malba (4)	Rate/Rs. (4/3)
1. Crop production					
i) Kharif	4259.81	373.75	3886.06	1629.97	0.42
ii) Rabi	4957.06	215.04	4742.02	1082.00	0.23 <sup>a</sup>
2. Sheep/Goats	34.60		34.60	12.22	0.35
3. Menials/Artisans	260.92		260.92	22.28	0.09
4. Ijara (singhara)	91.00	91.00			
5. Udik grant					
i) Cultivation			(36.28) <sup>b</sup>	15.88	0.44
ii) Arrears(1735-6)				8.75	
<b>Totals</b>	<b>9603.39</b>	<b>679.79</b>	<b>8959.88</b>	<b>2771.10</b>	<b>0.31</b>
<b>II : Outgoings</b>		<b>Kharif</b>	<b>Rabi</b>	<b>Total</b>	
1. Additional Cesses to State					
i) Sair-jihat		49.50	40.75	90.25	
ii) Sadar Vakanawis		89.50	57.50	147.00	
iii) Bhents/Presents		4.12		4.12	
iv) Batta for old coin		258.00	195.00	453.00	
v) Money bags & Stamp		1.12	1.00	2.12	
Total:		<u>402.24</u>	<u>294.25</u>	<u>696.49</u>	
2. Charges for supervision/collection					
i) Watchman (sehna)		96.50	85.00	138.00	
ii) Administrator(tappadar)		61.38	27.75	89.13	
iii) Coin examiner		8.00	8.00	16.00	
Total:		<u>165.88</u>	<u>120.75</u>	<u>286.63</u>	
3. Bhomi/zamindari dues to Raja		<u>238.88</u>	<u>187.06</u>	<u>425.94</u>	
4. Dasturs to hereditary officials					
i) Chaudhuri		85.00	53.00	138.00	
ii) Patwari		131.00	80.00	211.00	
iii) Patel		39.00		39.00	
Total:		<u>255.00</u>	<u>133.00</u>	<u>388.00</u>	
5. Communal Expenses					
i) Rituals, donations, etc.		25.75	8.13	33.88	
ii) Paper/Ink		5.00	5.00	10.00	
iii) Entertainment/Misc.		25.50	16.25	41.75	
Total:		<u>56.25</u>	<u>29.38</u>	<u>85.63</u>	
<b>III : Remainder of fund paid into treasury under hasil malba.</b>		<u>570.84</u>	<u>317.56</u>	<u>888.41</u>	
<b>Totals (II + III)</b>		<u>1689.10</u>	<u>1082.00</u>	<u>2771.10</u>	

**Source:** Arhsatta Pargana Lalsot V.S.1794/A.D.1737.

**Notes to Table 8:** <sup>a</sup>: The lower average rate per rupee of basic revenue demand for the rabi harvest is due to the exemption from malba taxation on the additional revenue collected under afzud on winter cereals. <sup>b</sup>: The revenues assigned in udik or charitable grant appear to be liable to malba payment at the same rate as the ordinary raiyati.

smaller sums of cash and provisions per day, although the total emoluments recorded as paid to the sehna were considerable due to the longer time spent by him in the village. It is also likely that more than one sehna was generally appointed in each revenue unit, as for instance in qasba Lalsot.<sup>64</sup> Smaller amounts, calculated in copper coins or "takas", were paid to the chaudhuri for providing the wooden rod against which the hempen rope or dori was measured and the qazi for certifying that the dori was of the correct length.<sup>65</sup>

iii) Of the dasturs or perquisites paid to the hereditary rural elite in the qasba (categories II.3 & II.4, Table 8), the bhomi or zamindari cess was the largest. This was paid into the state treasury as the Jaipur maharaja claimed zamindari rights in the qasba. We find that in areas where the raja was the zamindar, the distinction between bhomi income and government revenues was not always maintained.<sup>66</sup> Dasturs were also paid to the three chaudhuris and the patwari while the two patels, a Mali and a Brahman, received "nankar" or an allowance for their services in remitting the revenue to the treasury.<sup>67</sup> The allowances paid to the hereditary rural elites were in addition to their privileged entitlement to concessionary rates of taxation and exemptions from certain payments.

iv) Lastly, there were the relatively trifling amounts spent on celebrating festivals like Holi and Dewali, on offerings to temples and Brahmans and communal prayers and recitations (poojas and kathas), paying the wages of servants called upon to serve visiting dignitaries in the area, expenditure on ink, paper, and the hemp rope or dori for measuring fields, and condolence offering at funerals. These have been broadly classified as the common expenses of the qasba (category II.5, Table 8).

For reasons discussed earlier, the remainder of the cash after expenses was deposited in the treasury under the head of hasil malba (category II.6, Table 8). The amount thus entered in the arhsatta records of pargana Lalsot was not, strictly speaking, the proceeds of a regular levy but rather the remainder or baqi of a separate account. Given the nature of this account it is not surprising that the amounts deposited under hasil malba fluctuated every season – in 1733 it was noted that there was no remainder, the collection being equal to the expenses in that year, while in 1737 the considerable sum of Rs.888.47 was deposited in the treasury.<sup>68</sup>

It is clear from the malba account that although the land revenue was collected both in cash and in kind, additional payments for administrative and collection charges were made through a common fund to which the taxpayers contributed in cash. The combination of a cash and kind system of revenue assessment meant that parity between the two could only be approximated by assuming that the proceeds from the sale of the revenue in kind represented the same proportion of the output as the revenue in cash obtained from zabti crops. The contribution to the common fund therefore was calculated at a specific rate for each rupee of the total revenue demand paid by each cultivator. Given the array of miscellaneous expenses that were met from the fund, some of which were levied on the revenue unit as a whole and were impossible to apportion to individuals with any degree of 'equity', the malba fund was obviously a matter of financial expediency.

Although the revenue records of parganas other than Lalsot do not offer similar information on malba payments, the numerous complaints and disputes arising from the operation of the fund attest to its widespread prevalence. Contributions to the fund would have varied for each revenue unit both temporally in accordance with

the estimates of the total additional expenses, as well as spatially, with the differences in the number and the rates at which various customary exactions were made. As a rule the state had no direct role to play in determining the total amount to be paid into the fund or its allocation among the taxpayers. Indirectly, however, the minimum amount to be collected was predetermined by official regulation that prescribed the rates at which the cesses, revenue functionaries and hereditary elites were to be paid. We shall return to the question of fiscal control over the malba fund and its implications for the distribution of power in the village later in this chapter.

By combining the information of the land revenue collection in qasba Lalsot with that of the malba account for the same year, it becomes possible to comment on the total collection and expenditure in the qasba. Summarising the available information for the year 1737 we obtain the following breakdown:

Total collection from qasba	Rupees.	
i) Basic revenue demand	9603.39	77.61%
ii) Malba Payments	2771.10	22.39%
Total:	<u>12374.49</u>	100.00%
Outgoings		
i) Land Revenue (maljihah)	9307.87	75.22%
ii) Additional Taxation to State	1880.42	15.19%
iii) Supervision/Collection charges	286.63	2.32%
iv) Bhomi/zamindari dues	425.94	3.44%
v) Dasturs to rural elite in qasba	388.00	3.14%
vi) Common expenses of qasba	85.63	0.69%
Total:	<u>12374.49</u>	100.00%

Taking the figures for collection and expenditure for the qasba as a whole, we find that the taxation on crop production (maljihah) amounted to 75 per cent of the total amount collected in the qasba, the additional cesses accruing to the treasury to approximately 15 per cent. Payments to the rural elite and collection agents of the state claimed a further 9 per cent and the communal expenses of the qasba

comprised less than 1 per cent of the total outgoings. On average then, the qasba taxpayers parted with an additional 33 per cent of the land revenue to fulfil all their financial obligations.<sup>69</sup>

Although the ratios of the various types of fiscal exactions to the total collection can be worked out precisely, it is more difficult to deduce what proportion of the gross produce they represented. We had earlier shown that the maximum proportion specified as the state's share of the grain in respect of land revenue was 50 per cent for the raiyati in the qasba.<sup>70</sup> It has generally been assumed that this meant that half of the gross produce of the peasant was appropriated in the form of land revenue.<sup>71</sup> However, as we have seen above, in addition to the land revenue, the majority, or the non-privileged raiyati, contributed at the rate of 44 per cent of the land revenue to the financial pool from which the cesses and taxes were met. If the assumption that the land revenue was 50 per cent of the gross produce is maintained, it would imply that the peasants in qasba Lalsot had to part with 72 per cent of their gross grain produce in 1737 – a rate of surplus appropriation that appears unsustainable for a semi-arid region of low agricultural productivity.

The complexities of the division of the grain heap described by Walter Neale for a village in north India and by David Ludden for one in the south, show that the sharing between the state and the cultivator took place after various deductions in specified proportions had been made to the village menials and artisans, agricultural labourers, watchman, and the cultivator himself.<sup>72</sup> In the dry farming region of Punjab, it has been argued that in the late eighteenth century, the division of the grain heap between the government and the cultivator in the specified proportion was done after a certain proportion of the gross produce had

been deducted in respect of the additional cesses ("abwabs").<sup>73</sup> Although we do not have similar evidence for our region, it appears likely that the state's share of the produce revenue was net of the deductions.

In view of the discussion above, it would be hazardous to estimate an approximation of the proportional relationship between the land revenue, communal expenses, cultivator's share and the gross produce as all these elements were constantly changing. Assuming however, that the nominal cash rates actually equalled a third of the gross produce which in principle they were supposed to, an additional charge of Rs. 0.44 on each rupee would mean that the non-privileged cultivator was left with about 52 per cent of the gross produce.<sup>74</sup> In the case of produce revenue, if we were to assume that the customary deductions made prior to the sharing between the state and the cultivator equalled the contribution to the malba fund we would obtain the following ratios : the non-privileged cultivator, contributing to the common fund at Rs.0.44 for every rupee worth of produce revenue and assessed at half of the net produce after deductions, would have to part with about 59 per cent of his gross produce in all.<sup>75</sup> Of the estimated outgoings of 59 per cent, 90 per cent would have been deposited in the state treasury and the remaining 10 per cent spent on meeting the collection charges, levies paid to the rural elites and common expenses. In other words, the basic land revenue for the majority of the tax payers in the qasba would have amounted to a maximum of about 44 per cent of the gross produce and the total amount deposited in the state treasury a little over half the total grain production.

The proportions worked out above on the basis of a single account cannot be taken to be fixed or uniformly applicable. They are at best tentative approximations

of the level of total demand based on evidence which remains incomplete. For one, we have no indication of the amounts paid in grain to the service castes and artisans. Such customary payments appear to be unconnected to the malba fund and were probably deducted from the gross produce prior to the other fiscal demands.<sup>76</sup> Secondly, our assumption that the contribution to the common fund equalled the customary deductions is purely hypothetical. While the deductions from the gross produce may have been fixed in accordance with local custom, we cannot postulate that the contribution to the malba fund bore a direct proportional relationship to the customary deductions from the gross produce.

Given the difficulty in ascertaining the magnitude of revenue demand and the lack of data on related aspects such as average yields, size of holdings and population size and structure, an index of the ability of the peasants to meet their revenue obligations tells us more about the relationship between taxation and agricultural production. An indirect though sensitive measure of the peasants' ability to meet the revenue demand can be formed by an examination of revenue arrears. Revenue arrears were recorded annually for each pargana under the head of "baqaya" in the arhsatta records. However, the baqaya sum comprised arrears due from a variety of defaulters such as ijaradars who had contracted for the taxes on trade and transit ("mapa rahdari"), traders owing money on the contracted sale of state grain, outstanding rents on state owned shops in the qasba as well as actual arrears of land revenue. As a rule the baqaya figures are not sufficiently disaggregated in the arhsattas to enable us to assess the proportion of the land revenue that remained unpaid over the years. An older, mid-seventeenth century yaddashti of qasba Mauzabad however, records the amounts outstanding against each taxpayer.<sup>77</sup> The arrears of land revenue for 73 of the qasbas taxpayers

totalled Rs. 153.44. The majority of defaulters owed small amounts ranging from a few annas to five rupees with the largest single sum due from a leather-worker who had migrated from the qasba owing the treasury Rs. 20.00 on an ijara taken by him. The total arrears were just over 3 per cent of the land revenue of the qasba in the same year which was Rs. 4,817.65. The low ratio of arrears to revenue collected appears reasonable if we consider that over 80 per cent of the revenue in that year was collected in kind where the notion of arrears did not arise. It is clear from the document that the list of taxpayers in default included both agriculturists and non-agriculturist kamins resident in the qasba. Although we have no data on the total number of taxpayers in the qasba, a census carried out in the following year put the number of bullock-owning peasants resident in the qasba at 270 persons. The available evidence thus suggests that, at the outside limit, one in four agriculturists were unable to meet their revenue obligation in full although the amounts owed individually were small in relation to the aggregate revenue demand.

#### The Payment of Revenue: Fiscal Control and Village Conflict

It has generally been argued that the unit of assessment in the Mughal period was in fact the village as a whole and not the individual peasant.<sup>78</sup> The system of "asamiwar" or individual assessment was the preferred and ideal type specified in the Mughal revenue manuals but in practice a lump sum assessment was made on the basis of overall production in the village. The revenue demand was then apportioned among the cultivators by the headman or by a small group of 'dominant elements'. "This dominant group then collected the tax at rates fixed by themselves from every peasant, putting the collection in a pool...(from which)..the land revenue would be paid, so also the fees and perquisites of certain officials and



certain common expenses of the village."<sup>79</sup> Thus, the argument goes, the practicalities of revenue collection meant that in north India the socially 'dominant' caste-group in the village also held economic power through their control over revenue management and the official recognition of their role as revenue intermediaries. Ethnographically, such 'dominant elements' are difficult to identify except in regions such as Awadh where there appears to be a clear correspondence between the regional dominance of a stratified Rajput lineage and the management of resources and land control at the village level.<sup>80</sup> Generalising from the evidence that the high-caste cultivators were accorded preferential tax treatment, it has been suggested that in eastern Rajasthan the gharuhala cultivators comprised the 'dominant' elements who also wielded power at the level of the village and controlled the village fund.

The argument above contains two fundamental propositions regarding power in the countryside that need to be qualified in the context of eighteenth century eastern Rajasthan. First it questions the ability or willingness of the pre-colonial state to penetrate below the level of the village and second, attributes of social status such as caste are seen to be symmetrically related to village dominance and resource control. The evidence for our region suggests that at least in the eighteenth century, the land revenue was assessed on individual taxpayers and that power in the village, measured through the control of village finances and revenue management, rested with the village patel who was almost invariably a member of the numerically predominant agricultural caste resident in the village. The disjunction between the economic and political dominance of the Rajput clans at the regional level and the power of the patel at the level of the village resulted in frequent village conflicts over issues central to its fiscal organisation and control.

Such conflicts between the socio-economically privileged high caste cultivators or gharuhalas and the paltis represented by the patel were referred to the higher administrative officials for adjudication as there was no mechanism for their resolution within the social organisation of the village. Thus our sources provide us an abundance of documentation on village conflict which, as we shall examine in greater depth later in the chapter, can clearly be located within the context of the wider changes in the agrarian economy.

The argument that the land revenue was collectively assessed on the village is largely based on the evidence of specimen village accounts reproduced in the accountancy manuals of the seventeenth century that both the land revenue and other communal expenses were met from the village fund. However, the khasra records strongly indicate that the assessment of the basic revenue demand (or maljihah) was individual rather than collective. Against the name of each cultivator the khasras record the dimensions and area of the fields sown with each crop assessed by the zabti method, or the quantity of grain produced and its division in a specified proportion between the state and the peasant where crop-sharing was the mode of tax collection.<sup>81</sup> It has been argued by Habib that while crop-sharing involved direct collection from the grain heaps of individual peasants it is possible that the asamiwar entries on official assessment papers for cash revenues were "...either completely fictitious or simply copied or adapted from the papers of the village accountants or headmen."<sup>82</sup> However, the level of detail in the annual statement of revenue accounts (arhsatta records) would have been impossible without the aid of a detailed annual survey and assessment as they record diverse variables that were taken into account in the formulation of the total revenue demand on the village or qasba. That the khasra papers played a regular part in the

system of revenue assessment is attested to by the number of these records that have survived for different villages of our region. The khasras formed the basis for the compilation of the aggregate revenue returns for each crop grown in the revenue unit as presented in the arhsattas. Occasionally, the arhsattas duplicated the format of the khasras in recording by name each tax payer who paid revenue at lower than standard rates for each cash assessed crop cultivated. There appears to have been no reason to undertake such a detailed exercise of recording individual tax liability if in fact the village formed the basic unit of assessment.<sup>83</sup>

The view that the assessment and tax liability was individual rather than collective is reinforced by the manner in which the revenue arrears were meant to be discharged. As we have seen arrears were recorded in the patwaris accounts against the individual defaulter and that this was the accepted practice can be deduced from complaints regarding deviations from the norm. When a complaint was lodged by the patel and raiyati of qasba Phagi that some cultivators had connived with the patwari to transfer their arrears of the previous harvest onto the account of the raiyati, the amil was instructed by the diwan to ensure that the arrears of each cultivator were correctly recorded against their names.<sup>84</sup> Similarly, when the state had directed that outstanding arrears were to be paid in annual instalments of 6 per cent of the assessed revenue till the debt was discharged, the raiyati protested that the levy was being indiscriminately imposed on all cultivators. The response of the diwan was that the levy should be realised only from those who were in arrears implying the existence of, and the recognition by the state of the individual tax liabilities of each cultivator.<sup>85</sup>

The basic unit of assessment was therefore the individual cultivator discharging his revenue obligations not at arbitrary rates determined by the headman or the dominant members of the 'village community' but at rates specified by the local revenue authorities and conforming to the general principles of the state's taxation policy and local customary practices.

The cash revenue thus assessed was collected and deposited with the treasury of the pargana by the patel.<sup>86</sup> Revenue paid in cash appears to have been paid in three instalments or "qists" for the kharif harvest and in two instalments for the rabi harvest.<sup>87</sup> The dates for the kharif qists were mid-November, mid-December and early February. The last instalment fell due a month before the official termination of the six month kharif period in early March. The rabi instalments were to be paid by mid-June and early July. The dates of these instalments are broadly similar to those recorded in late eighteenth century Punjab.<sup>88</sup> The timing of the qists indicates that allowances were made for the harvesting and sale of produce and there is no evidence to show that revenue payments were demanded before the crops could be harvested.<sup>89</sup> Revenue collected in kind, on the other hand, was sold by the state to the grain traders at agreed prices soon after the physical division of the crop on the threshing floor and the revenues recovered directly from the traders according to the terms of the contract between them and the state. We shall examine the mechanism for the disposal of the revenue in kind in the next chapter.

As we have shown in the analysis of the malba kharch, the cesses and taxes in addition to the basic revenue demand were collectively paid from the common fund. The questions that arise next are : i) how was this fund controlled, that is,

who determined the rate at which the taxpayers contributed to it, and ii) which sections of the rural community contributed to the fund and which were exempt and on what conditions? These questions can best be elaborated upon by analysing the nature of conflicts arising from the operation of the malba fund.

Disputes over the payments to the common fund were of three types:

i) where the patel was accused of demanding an excessive levy on this account, or misappropriating the proceeds, or using the fund for improper and extravagant expenses. Such complaints were generally made by the revenue assignees, that is, by the jagirdars of the Jaipur Maharaja.

ii) the privileged cultivators accused the patel of imposing the levy on them despite the customary exemption granted to them in recognition of their status as gharuhala tenure-holders.

iii) where the patel and raiyati submitted a joint petition stating their inability to meet the common expenses paid from the malba fund due to the non-payment by the privileged sections. Such complaints were linked to the declining resources of the raiyati owing to the acquisition of their land by the members of the privileged section of the rural community.

The patel occupied a central role in all disputes relating to the malba fund. Complaints by the jagirdars against a patel accused of demanding an excessive amount in respect of malba kharch from the paltis were generally followed by the lamentation that due to these exactions the village was unable to prosper.<sup>90</sup> In each case the amil was instructed to ensure that the patel did not impose a demand in excess of the customary amount, and that the levy as well as all legitimate expenses be collected with the consent of and in the presence of the revenue assignee. The

fact that these complaints were initiated by the principal appropriators of revenue on behalf of the paltis, shows that the magnitude of the malba exactions was such that it affected the overall production of the village and, consequently, the income of the jagirdar. The recognition by the state of the patels control over the malba fund is evident in the ruling made by the diwan on the complaint made by the Ahir patel of village Chandpura, pargana Khohri.<sup>91</sup> In this case the jagirdar, Raj Singh Naruka, was accused of abrogating the patel's zamindari right and forcibly appropriating the malba dues from the village. The diwan's instruction to the amil and the amin of the pargana clearly state that the primary right to the management of the malba fund was the patels, and if, on investigation, the patel's zamindari right too was found to be long-standing, they were to ensure that the jagirdar did not harass the patel.

That the patel, and on occasion, the patel and patwari, were regarded as the persons in control of the malba fund emerges unmistakably from the documents. It may however be argued that in view of their official position as the representatives of the village, the documents ascribe to them a degree of control that was in fact inconsistent with the actual pattern of dominance and control within the village. It has been suggested that the control of the common pool was in the hands of the 'dominant elements' in the village who " usually evaded paying their due share of revenue. Lower rates were also levied upon some favoured elements, the *khwud-kasht* peasants in northern India, *gharuhalas* in Rajasthan and *mirasdars* in Maharashtra."<sup>92</sup> As we shall attempt to show in the following discussion on the conflict between the gharuhala cultivators on the one hand, and the patel and raiyati on the other, the control over the malba fund could not have been exercised

by the former notwithstanding their privileged position with regard to their fiscal obligations to the state or the malba fund.

The section of the rural community generally exempt from payment to the malba fund, or contributing at concessional rates, were the cultivators claiming gharuhala tenure on their land holding. In complaints made by these privileged sections to the diwan, they invariably assert the customary gharuhala status to justify their claim to a complete or partial exemption from the payment of malba dues. In a number of documents, the individual gharuhala cultivators claimed that although they had never paid these dues previously, the patel was now demanding that they should.<sup>93</sup> In certain instances where the gharuhalas were required to contribute to the malba fund at half the rate applicable on the paltis or unprivileged cultivators, they complained that the patel had arbitrarily increased the demand.<sup>94</sup> Three kayastha taxpayers of qasba Tonk cited the privileged terms on which they paid land revenue to assert their right to exemption from malba payments that had been illegally imposed upon them by the patel during the occupation by the Marathas.<sup>95</sup> In a few cases even the hereditary rural elite - the chaudhuris and qanungos - registered their protest against the patel for demanding that they pay the malba dues despite their gharuhala status.<sup>96</sup> The fact that the right to the payment of land revenue at concessionary rates was quoted to justify the claim to exemption from malba contributions indicates that the two were recognised as inseparable characteristics of gharuhala status.

The complaints lodged jointly by the patel and raiyati against the high caste cultivators, referred to in specific caste terms such as Rajputs, Brahmans, Baniyas or simply as the privileged sections ("himayati log"), do not ask for the customary

concessions extended to the privileged sections to be revoked, but rather that these rights be limited to the holdings designated as gharuhala lands. As we have discussed in chapter III, the transfer of irrigated land, particularly in the qasbas, from the raiyati to the gharuhala agriculturists coincided with the decade of agricultural decline following the famine of 1755. The petitioners therefore emphasise that the refusal by the gharuhalas to contribute to the village fund despite their having acquired the more productive raiyati land meant that the few remaining palti holdings had to meet the entire village expenses thereby impoverishing them further. The conflict that emerged therefore arose from the attempted extension of privileged rights, in the form of exemption from malba contributions, by the gharuhalas to the raiyati land acquired by them. The paltis strongly resisted this on the grounds that they were unable to shoulder the increased fiscal burden on their own.

A typical example of such conflict can be seen in the complaint lodged by the patel and raiyati of qasba Ajabgarh.<sup>97</sup> They claimed that the qasba had largely been under raiyati cultivation but that recently the superior sections had acquired raiyati land through mortgage. Despite the considerable expansion in their holdings, the superior sections refused to contribute to the common fund and expected the few remaining raiyati to bear all the malba expenses. The diwan's response was that the Purohits, Vyas', Sanghis, Sahs, and Kayasthas were customarily exempt from payment of malba dues on their long-standing gharuhala land and ought not to be harassed to contribute to the malba fund. However, on the raiyati land acquired by them through mortgage or purchase, they were expected to pay their share of the village expenses at the same rate as the raiyati. The amil was instructed to despatch a task force if the gharuhala cultivators refused



or delayed payment. Complaints of this nature were not isolated and there are numerous documents where similar grievances are expressed by the patel and raiyati.<sup>98</sup> In each case it was stressed that the malba payments were to be realised from all those who cultivated raiyati land.

It is apparent from the official response to the complaints received that the state was fully aware of the tendency towards the extension of gharuhala privileges to raiyati land. Generally, the diwan instructed the amil that the land cultivated by the privileged tenure-holders in excess of their established gharuhala land would be liable to the same fiscal obligations as applicable to the raiyati.<sup>99</sup> In certain cases, the diwan specified a year - usually 7 to 10 years prior to the receipt of the complaint - and directed that if the raiyati land had been acquired after the specified date then the accused would have to pay the dues but would be exempt if the land had been acquired earlier.<sup>100</sup> The specified year was taken to indicate the duration of continuous land usage that was necessary to claim privileged tenure on the basis of customary rights on long-standing holdings. The date was, however, arbitrarily fixed as we find that when the raiyati of qasba Phagi made their complaint in 1752, the deciding year stipulated was 1743; but when the raiyati of the same qasba repeated their complaint in 1764, the year 1753 was deemed the deciding year.<sup>101</sup> Another measure recommended by the state to resolve these conflicts was to suggest that separate accounts be maintained for the cesses paid by the privileged sections (Rajput, Brahman and Baniya taxpayers) and the raiyati.<sup>102</sup> In pargana Lalsot, where the state was directly involved in the levy of the malba fund, the amils were instructed in 1742 to ensure that the pahis or non-resident cultivators, Brahmans and Kayasthas contributed to the common fund at the same rate as the raiyati.<sup>103</sup>

The ineffectual attempts made by the state at the resolution of these disputes is reflected in the large number of repeated counter-representations made by protagonists from the same village. Two successive representations by the patel and raiyati of qasba Tonk in 1741 were followed by a counter-petition by the gharuhalas of the qasba in 1756 alleging that the patel had illegally imposed malba payments on them due to the chaos resulting from the Maratha occupation.<sup>104</sup> However, in 1761 the patel and raiyati again repeated their complaint of tax evasion by the superior sections despite an extension in their holdings.<sup>105</sup> Similarly, there are a series of documents on village Chakvada, pargana Phagi, dating from 1754 to 1761 involving the Naruka Rajputs of the village alleging victimisation by the patel, and the patel and raiyati accusing the Narukas of evading the payment of their due share to the common fund.<sup>106</sup> Similar sets of documents were found for qasba Phagi, pargana Phagi;<sup>107</sup> village Jhak, pargana Phagi;<sup>108</sup> village Choru, pargana Phagi;<sup>109</sup> and qasba Ajabgarh, pargana Gazi-ka-Thana.<sup>110</sup> In the latter two instances, although the gap between the two petitions is relatively longer than the others, it goes to show that tension between the parties persisted on this issue.

What emerges from the above analysis is that the obligation to contribute to the malba fund was based on two principles. First, customary law entitled the gharuhala taxpayers to a complete or partial exemption from malba contributions, and second, state regulation prohibited the conversion of raiyati land to the gharuhala category. Raiyati land in the village included that cultivated by the raiyati as well as the arable waste in the village. The regulation prohibiting the extension of privileged rights to raiyati land did not imply that the gharuhala cultivators could not enlarge their holdings but that they were expected to pay the

standard revenue charges on such land. While the state, the patel and the raiyati emphasised the latter principle to assert that the malba payments were linked to the category of land rather than the status of the cultivator, the gharuhala plaintiffs claimed customary exemption on the basis of the first principle. Compounding the problem was the difficulty in enforcing the distinction between the assessable and non-assessable land due to the fact that the 'long-term' occupancy of land - established by the regular payment of revenue on it - was the sole criterion for judging whether the privileged cultivator could claim established gharuhala rights on the land. Thus while the state was aware of the adverse long term effects to the prosperity of the raiyati that the extension of gharuhala privileges entailed, it was unable to provide an alternative mechanism for its containment. Further, once the raiyati land had been transferred to the gharuhala peasants, through means other than by force, the state did not attempt to restore it to the original cultivator, but merely sought to implement its revenue policy with regard to land thus acquired.

The privileged position of the gharuhala cultivators regarding their fiscal obligations was guaranteed and defined by state regulation. Regarding the control of the malba fund and village finances, it is clear that if it were managed by the gharuhalas by virtue of their 'dominant' position with respect to privileged terms of fiscal payments, then the amil would not have to be called upon to intercede on their behalf in disputes with the patel. The patel, although accorded gharuhala status and privileges, identified with and acted as the spokesman for the raiyati of the village.<sup>111</sup> While the outlays on cesses, collection charges and perquisites were largely predetermined, some form of collective decision making may have operated in respect of common expenditure related to social and religious affairs of the community. This was perhaps done by the village panchayat. The references in

our sources to village panchayats clearly indicate that they had a decisive role in regulating the social life in the village.<sup>112</sup>

#### Methods of Relief and Agricultural Development

Intrinsic to the taxation policy of the eighteenth century Jaipur state were measures to promote agricultural expansion and investment. As we have seen, taxation schedules were structured to distinguish between the natural fertility of soil and the higher yields brought about by individual effort and investment so that cultivators who improved their fields retained a larger share of the output. In order to expand production, taxes were scaled down to facilitate the cultivation of "banjar" or cultivable waste and tax rebates were granted for the restoration of depopulated lands and the construction of wells.<sup>115</sup> Peasants were persuaded to cultivate high value crops through loans to finance the purchase of seed and through tax incentives.<sup>116</sup> Official policy with regard to agricultural development was primarily composed of fiscal measures such as these which aimed to encourage productive investment by the rural elite. The peasants response to these measures and the spread of rural specialisation however was dependent to a large degree on the ability of the state to sustain an environment that boosted internal demand and fostered trade

While a rise in rural productivity was an important consideration of state policy, its overriding concern was with maintaining continuity in production. The incorporation of the batai mode of taxation for foodgrain production shows how deeply this concern was built into the system of taxation. In addition, the system had to be flexible in order to respond to local as well as general failures in

production. While in the batai mode of taxation the revenue demand adjusted automatically to the quality of the harvest, specific allowances had to be made to adjust output to tax demand in the case of the cash assessed crops. Allowances were made for a partial failure of the harvest or the destruction caused by a marching army ("paimali") through a deduction in the revenue demand in proportion to the extent of damage ("nabud").<sup>117</sup> In years of exceptionally poor harvests there was a general reduction in the cash revenue rates and much of the assessed revenues were written-off, if only because they were irrecoverable.<sup>118</sup> In a region where revenue in kind comprised a large part of total tax revenue, land revenue arrears were small. The attitude of the state to revenue arrears was similar to that adopted in the case of tagai loans. The amils were repeatedly instructed to collect the revenue demand in full within the current year, but if arrears were carried forward to the next year they were to be collected in annual instalments not exceeding five or six per cent of the current revenue demand.<sup>121</sup>

The provision of state loans or tagai loans went some way in providing rural entrepreneurs badly needed capital to rehabilitate villages, to construct dams, dig wells and purchase seed and cattle. However, as we had seen in an earlier chapter, tagai loans were generally distributed in response to a production crisis rather than as a part of a long-term policy that sought to stabilise or expand production through effective state intervention and control. Considering the importance of tagai loans during periods of crises, they should be seen primarily as part of the states relief measures to enable the rural population to tide over situations of exceptional distress. The restricted supply of credit in conditions of drought or political conflict meant that the state had to provide a form of social subsidy in order to prevent large-scale migration from the region.

An evaluation of the impact of the system of revenue taxation on agricultural productivity in the pre-colonial period by modern historians has yielded conflicting viewpoints. The historians of the colonial period emphasise the flexibility and the responsiveness of the pre-colonial tax structures to the welfare of agriculturists and contrast this to the rigidity of the tax system imposed by the British.<sup>113</sup> The leading historian of the Mughal economy, on the other hand, has emphasised the inherently regressive nature of Mughal taxation and its tendency to "subvert superior cultivation" through excessive exploitation.<sup>114</sup> These assessments appear contradictory only because they draw attention to a single aspect of state policy rather than see them as inextricably linked to each other and reflecting the conditions of rural production.

On the one hand, the fact that taxes were levied at a standard rate and were not linked to individual resources certainly highlights the regressive nature of the structure of taxation. In eastern Rajasthan this feature was further accentuated by the granting of tax rebates and concessions to the privileged sections of rural society. Furthermore, to the extent that taxation drew out scarce capital from the countryside, the system of taxation inhibited the diffusion of superior cultivating practices to all levels of rural society. The objective of the state to maximise its revenues, on the other hand, could not be achieved through a system of taxation that did not allow the producers sufficient resources to meet their needs for continued production. The state's need to attract and retain labour imposed further limits to any policy aimed at short term revenue maximisation. In a dry farming area where production conditions were unstable and variable, the system of taxation had to incorporate measures to promote productive investment in order to stabilise

and expand production in the long-term as well as to provide relief to overcome seasonal shortfalls in production.

In conclusion it needs to be emphasised that the system of revenue taxation in the eighteenth century Jaipur state was modelled on the Mughal system and retained its principal aims and objectives. Yet it is clear from the evidence cited that the system of taxation in the eighteenth century state of Jaipur was more systematised and adapted to local production conditions; more efficient in drawing revenue through taxing individual producers and by defining, and thereby setting limits to, the privileges of social dominance; more vigorous in the pursuit of a policy of agrarian expansion through fiscal incentives to aid investment and through its role in the provision and regulation of rural credit. It was symptomatic of a taxation system geared towards the efficient extraction of surplus that the state also sought to control the conditions under which grain received as tax in kind was marketed. It is to this aspect of the agrarian policy that we now turn.

Notes to Chapter IV: Revenue Policy and the System of Agrarian Taxation

1. Harbans Mukhia, "Was There Feudalism in Indian History?", T.Byres and Harbans Mukhia eds., Feudalism in Non-European Societies, p.272
2. Habib, Agrarian System, pp.112-118.
3. Walter C.Neale, "Reciprocity and Redistribution in the Indian Village: Sequel to Some Notable Discussions" in Karl Polanyi, Conrad M.Arensberg, and Hary W.Pearson eds., Trade and Market in the Early Empires, pp.229-235
4. *ibid.*, p.234.
5. Irfan Habib, "Agrarian Relations and Land Revenue: North India", CEHII, p.235.
6. Chitti dt. Sawan sudi 16 VS 1784/AD 1737, pargana Phagi [No.117]; Chitti dt. Pos sudi 7 VS 1835/AD 1778, pargana Sawai Jaipur [No.226].
7. Habib, Agrarian System, p.223.
8. Parwana dt. Mah vadi 8 VS 1782/AD 1726, pargana Gijgarh [No.311]; Chitti dt. Baisakh sudi 8 VS 1783/AD 1726, pargana Gijgarh [No.415].
9. See discussion on rural migration in Chapter II : The Setting.
10. R.Pearce, "Sharecropping: Towards a Marxist View", in T.J.Byres ed., Sharecropping and Sharecroppers, pp.61-64.
11. Kanitkar et.al., Dry Farming, pp.25-26; T.Watabe et.al., "Intercropping", pp.69-82.
12. For instance, the tax code of pargana Phagi gives a single rate of assessment per bigha for varti and kaguni and for makka and juwar. These rates were applicable to these crops whether sown together or separately. Compare Dastur amal wa Amal dastur, pargana Phagi VS 1748/AD 1691 and Arhsatta, pargana Phagi, VS 1785/AD 1723.
13. Habib, Agrarian System, pp. 58-59 for similar views on the need for certain manufacturing processes to be carried out before such cash crops could be marketed.
14. *ibid.*, p.223 for the implied view that crop-sharing in Punjab, Bihar and Delhi resulted from the administrative anarchy of the 18th. century.
15. Pargana Chatsu was granted to Mirza Raja in 1637 and the pargana was held by him till at least 1650 when it was included in the list of parganas that formed the Raja's watan jagir. In 1692 it was granted to Raja Bishan Singh in jagir and in 1700 Jai Singh took the pargana in ijara from the Mughals till it was granted to him in jagir in 1712. The dastur amal of Chatsu written in 1712 confirms the reduction in rates sanctioned in 1710 ascribing the revision to the need to repopulate the pargana after the en masse migration during the



famine of 1695-96 and the extreme poverty of the raiyats. See Jadunath Sarkar, A History of Jaipur, p.103 and V.S.Bhargava, The Rise of the Kachhawas of Dhundhar, pp.47,62,87,187,194.

16. Chitti dt. Asoj vadi 12 VS 1767/AD 1710, pargana Chatsu [No.358].
17. Abul Fazl Allami, Ain-i-Akbari, vol.II, pp.68-122; Habib, Agrarian System, pp.200-212.
18. Satish Chandra and S.P.Gupta suggest that the *Ain's* dasturs were merely rough figures for computing income, generally for the purpose of assignment of jagirs. Idem, "The Jaipur Pargana Records", IESHR, vol.III, No.3 [1966], pp.303-312.
19. Gundgari was probably the local term for gandgara land defined as "Ground full of holes, hollows,..a soil abounding in moisture." in Platt, Dictionary of Urdu, p.899.
20. Watt, Dictionary of Economic Products, p.947.
21. The discussion is based on the arhsatta records for qasba Sanganer, especially records for the years 1690, 1715, 1728, and 1730.
22. A similar pattern of revenue rates has been observed for sugarcane cultivation in Gorakhpur in the nineteenth century. Shahid Amin, Sugarcane and Sugar in Gorakhpur, pp.44-46.
23. Rajasthan District Gazetteer : Jhalawar, p.84.
24. *ibid.*
25. The sawani cotton appears to be the early variety of unirrigated cotton grown in Rajasthan as opposed to the late variety that had to be irrigated. See note reference 48 in Chapter II: The Setting.
26. Lih or lia denoted land that was annually flooded. Platt, Dictionary, p. 973. Rama is a synonym of river and it is likely that rama denoted land irrigated by river-water or land reclaimed from the water-course of the river after it receded.
27. The local unit of land measurement in our region was a "hath". A bigha in parganas Phagi, Lalsot, Amarsar and Antela was recorded as being equal to a square measured by a hempen rope (or "dori") of 75 haths. However the bighas of parganas Sonkhar-Sonkheri and Maujpur were 95 haths square. A report on the Ajmer-Mewara region dated 1878 notes that a "hath" was approximately 21 inches. Applying this measure to estimate the size of the bigha in our region in terms of an acre and the Mughal land units, a bigha of 75 hath square is equal to 0.395 acres and equal to the Shahjahani bigha-i-daftari which was approximately 0.4 of an acre. On the other hand, the local bigha of 95 hath is equal to 0.635 acres which is slightly larger than the bigha-i-ilahi estimated to be 0.6 of an acre. See Irfan Habib, Agrarian System, pp. 354-366, Dastur Amal, pargana Amarsar, VS 1783/ AD 1726; Dastur Amal, pargana Sonkhar-Sonkheri, VS 1773/ AD 1716; Dastur Amalwa Amal Dastur,

pargana Phagi, VS 1748/ AD 1691; Dastur Amal, pargana Antela VS 1784/ AD 1727; Dastur Amal, pargana Udehi, VS 1771/ AD 1714; Dastur Amal, pargana Maujpur, undated.

28. Qasbas Jhak and Phagi became the administrative headquarters of parganas Jhak and Phagi respectively but were included within pargana Maujabad in 1666. See Hazari Asami wa Bail, pargana Maujabad, VS 1723 / AD 1666.
29. Taqmina pargana Phagi Unhalu VS 1770/AD 1713.
30. M.M. Islam, "Irrigation and Punjab Agriculture 1906-1945: Some Preliminary Notes", South Asia, n.s. vol.1, no.1 [1978], pp.32-33.
31. Farman to Rasikdas Article 6 "...and for no reason exceed half [the crop], even though the land may be capable of paying more." trans. by Jadunath Sarkar in Mughal Administration, p. 203.
32. Dastur Amal, pargana Antela VS 1784/AD 1727.
33. *ibid.*
34. Chitti dt. Kartik vadi 4 VS 1784/AD 1727, pargana Antela Pragpur.
35. Hiroshi Fukazawa, "Land and Peasant in Eighteenth Century Maratha Kingdom", Hitotsubashi Journal of Economics, vol.6, No.1 [1965], pp.40-42.
36. T. Fortescue, "Report of the Revenue System of the Delhi Territory [1820]", pp.87-91.
37. B. Cohn "Structural Change in Rural Society", in R.E.Frykenberg ed., Land Control and Social Structure, p.61.
38. Dastur Amal, pargana Antela VS 1784/AD 1727.
39. Dastur Amal wa Amal Dastur, pargana Phagi, VS 1748/AD 1691; Jamabandhi, pargana Phagi, VS1748/AD 1691.
40. Jamabandhi fasl syalu (kharif), pargana Malarna, VS 1777/AD 1720.
41. It is not as yet possible to verify this suggestion as the dastur amal for pargana Malarna is unavailable.
42. The Ain-i-Akbari and the Mughal revenue and accountancy manuals make no reference to a system of preferential taxation based on social status. See N.A.Siddiqui, Land Revenue Administration under the Mughals, 1700-1750, pp.42-48; Habib, Agrarian System, pp.192-196.
43. For eighteenth century Banaras see B.Cohn, "Structural Change ", p.61; also Asiya Siddiqi, Agrarian Change in a North Indian State: Uttar Pradesh, 1819-1833, pp.32-33 and Imtiaz Husain, Land Revenue Policy in North India, p.164 for Uttar Pradesh based on reports of the early nineteenth century; and Muhnot Nainsi, Marwar-ra-pargana ri Vigat, edited by Narain Singh Bhati, vol.II, p.93 for late seventeenth century Marwar.

44. *Idem*, "Caste and the Structure", Indian Historical Review, vol.II, No.2 [1976], pp.299-311.
45. Parwana dt. Mah vadi 8 VS 1782/AD 1726, pargana Gijgarh [No.311].
46. Chitti dt. Chait vadi 7 VS 1826/AD 1759, pargana Gazi-ka-Thana [No.56].
47. For a discussion on the khasra of village Naelo refer Appendix 7.
48. S.P.Gupta, "Khasra Document in Rajasthan", Medieval India -A Miscellany, vol.IV [1977], pp.168-176.
49. R.P. Rana, "Agrarian Revolts", IESHR, 1981, p.291.
50. Chitti dt.Sawan vadi 6 VS 1808/AD 1751, pargana Phagi[No.18]; Chitti dt.Kartik sudi 3 VS 1790/AD 1733, pargana Sawai Jaipur [No.169].
51. Chittis recording disputes between gharuhala cultivators and the jagirdars, ijaradars and udikis over revenue payments are numerous. See M.Bajekal, "Rural Disputes", pp.67-70.
52. Chitti dt.Phagun sudi 13 VS 1834/AD 1777, pargana Sawai Jaipur[No.109]; Chitti dt.Jesth sudi 10 VS 1800/AD 1743, pargana Sawai Jaipur [No.110].
53. Aurangzeb's farman to Muhammad Hashim (1668-69), Article 2, trans. by J.Sarkar, Mughal Administration, p.198. H.Fukazawa cites similar restrictions on the appropriation of uncultivated land in the village by the patel in "Land and Peasant", p.45.
54. Chitti dt.Chait vadi 7 VS 1826/AD 1764, pargana Gazi-ka-Thana [No.56]; Chitti dt.Kartik sudi 14 VS 1808/AD 1751, pargana Tonk [No.57]; Chitti dt.Chait vadi 11 VS 1817/AD 1760, pargana Phagi [No. 67].
55. See Appendix 7.
56. Arhsatta qasba Sanganer, VS 1788/AD 1731.
57. Chitti dt.Baisakh vadi 11 VS 1799/AD 1742, to all parganas [No.553].
58. A detailed analysis of the nature, types and rates of levy of each such cess for three qasbas is contained in Chapter VI on Trends in Revenue Rates.
59. Parwana dt.Jesht Vadi 14 VS 1780/AD 1723 included in Arhsatta Pargana Hindaun of the same year (Bundle no. 9, pp.1014-1018) [No. 552].
60. Arhsattas pargana Lalsot for the years VS 1770-1805/AD 1713-1748.
61. Bhakho or bhakhno literally means a person who kept count. In the context of crop sharing the bhakho was probably the functionary who counted the number of wooden or earthen measures of grain in each heap. It was essential that such a person was employed in the division of the grain heap to avoid conflict. His impartiality was reckoned to ensure a proper division of the grain heap in the presence of the state's agents and the cultivator. A similar

method was seen to operate in Punjab. See Neeladri Bhattacharya, "The Logic of Tenancy Cultivation", IESHR, 20, 2 (1983), p.158.

62. Yaddashti Hakikati pargana Malpura, pp.19-44, which forms part of another document, Dastur Amal Rahdari pargana Phagi VS 1772/AD 1715. The Malpura Yaddashti has been added on to the latter dastur amal as a few villages, formerly under pargana Malpura, had been transferred to pargana Phagi.
63. *ibid.*
64. References to more than one sehna and the hardship caused to the peasantry to meet their emoluments are numerous. The unhalu or rabi malba account of 1737 mentions that there were six sehnas in the qasba Lalsot.
65. Yaddashti Hakikati, pargana Malpura VS 1772/AD 1715.
66. For instance, in qasba Sanganer, the proceeds of the bhomi tax accruing to the Jaipur raja in his capacity of zamindar was included in the annual statement of government accounts or arhsatta.
67. Habib, Agrarian System, p.146.
68. Arhsatta pargana Lalsot VS 1790/AD 1733 and VS 1794/AD 1737.
69. This ratio of additional payments as a proportion of the land revenue is considerably higher than the figure of 25 per cent suggested for seventeenth century Mughal India in Habib and Raychaudhuri, CEHI, vol.I, p.238.
70. Jamabandhi pargana Lalsot VS 1772/AD 1715.
71. Habib, Agrarian System, pp.190-196; S.N.Hasan, K.N.Hasan and S.P.Gupta, "Pattern of Agricultural Production in the Territories of Amber (c.1650-1750)", PIHC, 1966, pp.244-264; R.P.Rana, "Agrarian Revolts" , IESHR, 18, 3&4 [1981], p.298.
72. Walter Neale, "Reciprocity and Redistribution", p.224-225 and David Ludden, Peasant History in South India [Princeton: Princeton University Press,1985], pp.77-78
73. Indu Banga, Agrarian System of the Sikhs, p.109. A nineteenth century report on Jaipur also states that a number of deductions were made from the gross produce prior to the the levy of revenue in kind. See Major C.A.Baylay, "Report on Jaipur", in Rajputana Gazetteer, vol.II, p.142 and Fortescue, "Revenue System of the Delhi Territory", p.82.
74. If gross produce = 100, then the zabti rate assumed to be equivalent to a third of the gross is = 33.3. Of the cultivator's share of 66.7, the malba contributions as estimated from the account of qasba Lalsot analysed by us would be = 14.7 (or 44% of 33.3%). The cultivator was left with approximately 52% of the gross produce (100 - (33.3 + 14.7)).

75. The argument is based on the following calculations :

Let gross produce	= x
Deductions prior to grain sharing	= y
Net produce	= z (z = x-y)
State's share = cultivator's share	= $\frac{1}{2}z$
Malba payments = deductions	= y (assumed)

$$y = 44\% \text{ of state share } (\frac{1}{2}z * 44/100)$$

$$x = y + z$$

$$x = (\frac{1}{2}z * 44/100) + z$$

$$= 1.22z \text{ or } z = x/1.22$$

Thus if

$$x = 100 \text{ then}$$

$$y = 18 \text{ and}$$

$$z = 82$$

Hence the outgoings of the cultivator =  $\frac{1}{2}z + y = 82/2 + 18 = 59$ .

If these outgoings were broken down in the same proportions as observed in qasba Lalsot the distribution would be as below :

Outgoings	% of gross produce
Land revenue	= 75% of 59% = 44% (1)
Cesses	= 15% of 59% = 9% (2)
Other expenses	= 10% of 59% = 6% (3)
Total revenue (1 + 2)	= 53%
Cultivator's share (100 - 59)	= 41%.

76. Chitti dt.Magshri sudi 1 VS 1784/AD 1727, pargana Bahatri [No.420].
77. Yaddashti Hakikati Qasba Mauzabad Baqi Tagai wa Baqaya, VS 1722/AD 1665; Arhsatta, pargana Mauzabad fasl kharif and fasl rabi, VS 1722/AD 1665; and Hazari Asami wa Bail, pargana Mauzabad, VS 1723/AD 1666.
78. Habib and Raychaudhuri, CEHI, vol.I, pp.239-40.
79. Ibid, p.248.
80. Joseph E Schwartzberg, "Caste Regions of the North Indian Plain", in M Singer and B.Cohn eds., Structure and Change in Indian Society, pp.81-113. K.L.Sharma, The Changing Rural Stratification System, pp. 41-44, 189-191 relating to the multi-caste structure and village dominance in a village in Jaipur tehsil.
81. See Appendix 7 and S.P.Gupta, "Khasra Documents", pp.168-176.
82. Habib, Agrarian System, p.232.
83. This form of disaggregated entry is most common in the arhsattas of pargana Phagi and Sanganer.

84. Chitti dt.Phagun sudi 8 VS 1825/AD 1768, pargana Sawai Jaipur, [No.39].
85. Chitti dt.Baisakh sudi 6 VS 1809/AD 1752, pargana Hindaun [No.71]. In another instance the repayment was fixed at 5% of the revenue demand. This levy has been termed 'panchotreh' - or 5% - which refers not to a specific tax but indicates the rate of levy. Chitti dt.Sawan sudi 14VS 1809/AD 1752, pargana Pindayan [No.206]. Panchotreh has also been used interchangeably with dehnimi which again meant 5%. The insistence by the state that the liability for unpaid taxes rested with the individual taxpayer was also stressed in Aurangzeb's directives to his revenue administrators. Habib, Agrarian System, p 250.
86. Dilbagh Singh, "Position of the Patel" PIHC, No.32, 1970, pp.360-366.
87. Chitti dt.Baisakh sudi 9 VS 1783/AD 1726, pargana Amber [No.362].
88. Indu Banga, Agrarian System of the Sikhs, p 95.
89. Habib, Agrarian System, p 241.
90. Chitti dt.Kartik vadi 3 VS 1799/AD 1732, pargana Sawai Jaipur [No.105], Chitti dt.Asoj vadi 14 VS 1800/AD 1743, pargana Tonk [No.285]; Chitti dt.Bhadon vadi 15 VS 1788/AD 1731, pargana Phagi [No.286].
91. Chitti dt.Baisakh Sudi 14 V.S.1789/A.D.1741.
92. Raychaudhuri and Habib, CEHII, pp.248-249.
93. Chitti dt.Sawan sudi 6 VS 1801/AD 1744, pargana Phagi [No.195]; Chitti dt.Baisakh vadi 10 VS 1820/AD 1763, pargana Malpura [No.63]; Chitti dt.Pos sudi 8 VS 1817/AD 1760, pargana Phagi [No 64]; Chitti dt.Chait vadi 10 VS 1818/AD 1761, pargana Phagi [No.65].
94. Chitti dt.Baisakh sudi 3 VS 1798/AD 1741, pargana Phagi [No.196]; Chitti dt.Bhadon vadi 8 VS 1823/AD 1766, pargana Sawai Jaipur [No.187]; Chitti dt.Asad vadi 12 VS 1827/AD 1770, pargana Phagi [No.289].
95. Chitti dt.Phalgun vadi 5 VS 1813/AD 1757, pargana Tonk [No.60].
96. Chitti dt.Phalgun sudi 5 VS 1818/AD 1762, pargana Tonk [No.59]; Chitti dt.Bhadon vadi 7 VS 1801/AD 1744, pargana Gazi-ka Thana [No.61]; Chitti dt.Phalgun vadi 4 VS 1813/AD 1757, pargana Phagi [No.287].
97. Chitti dt.Chaitra Vadi 7 VS 1826/AD 1769, pargana Gazi-ka-Thana.
98. Chitti dt.Jesht sudi 2 VS 1821/AD 1764, pargana Phagi [No.53]; Chitti dt.Kartik sudi 14 VS 1808/AD 1751, pargana Tonk [No.57]; Chitti dt.Chait vadi 11 VS 1817/AD 1760, pargana Phagi [No.67]; Chitti dt.Asad sudi 14 VS 1819/AD 1752, pargana Hindaun [No.211]; Chitti dt.Asad vadi 11 VS 1808/AD 1751, pargana Phagi [No.288]; Chitti dt.Chait sudi 2 VS 1817/AD 1760, pargana Phagi [No. 315]; Chitti dt.Chait sudi 12 VS 1822/AD 1765, pargana Lalsot [No. 374]; Chitti dt.Sawan sudi 8 VS 1818/AD 1761, pargana Malpura [No. 482].

99. Chitti dt.Phalgun vadi 11 VS 1818/AD 1762, pargana Tonk [No.55]; Chitti dt.Chait vadi 7 VS 1826/AD 1759, pargana Gazi-ka-Thana [No.56]; Chitti dt.Kartik sudi 14 VS 1808/AD 1751, pargana Tonk [No.57]; Chitti dt.Maghshri vadi 14 VS 1808/AD 1751, pargana Tonk [No.58]; Chitti dt.Sawan vadi 7 VS 1802/AD 1745, pargana Phagi [No.62].
100. In the Chitti dt.Asad vadi 11 V.S.1808/1751, pargana Phagi, the year stipulated was V.S. 1801/A.D.1744. On the other hand, in the Chitti dt.Phalgun Vadi 11 V.S.1818/A.D.1761, pargana Tonk, the previous 2-4 years were specified.
101. Chitti dt.Asad Sudi 4 VS 1809/AD 1752; Chitti dt.Jesht Sudi 2 VS 1821/AD 1764 both pertaining to qasba Phagi.
102. Chitti dt.Sawan Sudi 9 VS 1779/AD 1722, pargana Phagi [No.194].
103. Chitti dt.Chait sudi 12 VS 1822/AD 1765, pargana Lalsot [No.374].
104. Chitti dt.Kartik Sudi 14 VS 1808/AD 1741; Chitti dt.Maghshri Vadi 14 VS 1808/1741; Chitti dt.Falgun Vadi 5 VS 1813/ 1756.
105. Chitti dt.Phalgun vadi 11 VS 1818/1761.
106. Chittis dt.Maghshri Sudi 6 VS 1811/AD 1754; dt.Posh Sudi 8 VS 1817/ AD 1761; dt.Kartik Sudi 15 VS 1818/AD 1761 all pertaining to village Chakvada, pargana Phagi.
107. Chittis dt.Asad Sudi 4 VS 1809/AD 1742; dt.Jesht Sudi 2 VS 1821/AD 1764; dt.Asad Vadi 12 VS 1827/ AD 1770 all pertaining to qasba Phagi.
108. Chittis dt.Asad Vadi 11 VS 1808/Ad 1751 and dt.Phalgun Vadi 4 VS 1813/ AD 1756 both pertaining to village Jhak.
109. Chittis dt.Sawan Sudi 6 VS 1801/AD 1744 and dt.Chaitra Sudi 2 VS 1817/AD 1760 both pertaining to village Choru.
110. Chittis dt.Bhadon vadi 7 VS 1801/AD 1744 and dt.Chaitra Vadi 7 VS 1826/AD 1769.
111. Harbans Mukhia, "Illegal Extortions", IESHR, 20, 2 [1977], p.240 has also noted that the patel always supported his village in disputes of illegal extortions.
112. M.Bajekal, "Rural Disputes", pp.151-157
113. Asiya Siddiqi, Agrarian Change in a North Indian State: Uttar Pradesh 1819-1833. Elizabeth Whitcombe, Agrarian Conditions in North India. Vol.One: The United Provinces under British Rule, 1860-1900.
114. Irfan Habib, "Agrarian Relations and Land Revenue: North India", CEHII, p.240. But also see recent attempts at a reassessment of this viewpoint by Satish Chandra, "Some Institutional Factors in providing Capital Inputs for the Improvement and Expansion of Cultivation in Medieval India", Indian Historical Review, vol.III, No.1 [1976], pp.83-98.

115. Chitti dt.Mah vadi 6 VS 1826/AD 1769, pargana Phagi [No.406]; Chitti dt.Maghshri sudi 11 VS 1785/AD 1728, to Sah Mansaram [No.417]; Chitti dt.Pos vadi 8 VS 1782/AD 1725, to Sah Sahibram [No.418]; Chitti dt.Kartik vadi 4 VS 1784/AD 1727, pargana Pragpur Antela [No.456]; Chitti dt.Baisakh sudi 1 VS 1791/AD 1734, pargana Malarna [No. 450b]; Chitti dt.Bhadon sudi 2 VS 1780/AD 1723, pargana Hindaun [No.552]; Chitti dt.Asoj vadi 12 VS 1767/AD 1710, pargana Chatsu [No.358].
116. Chitti dt.Pos sudi 15 VS 1785/AD 1728, pargana Bhusawar [No.422].
117. Khasra zabti mauza Mohanpura sakh syalu, VS 1795/AD 1738.
118. Chitti dt.Phalgun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384].
119. Chitti dt.Sawan sudi 14 VS 1809/AD 1752, pargana Pindayan [No.206]; Chitti dt.Baisakh sudi 4 VS 1809/AD 1752, pargana Hindaun [No.71]; Chitti dt.Phalgun vadi 3 VS 1818/AD 1766, pargana Hindaun [No.384]. Also see Habib, Agrarian System, pp. 249-250 for similar directives issued by the Mughals to the revenue administrators..



## Chapter V

### **THE STATE AND THE RURAL FOODGRAIN MARKET**

Studies of the structure and organisation of local markets have increasingly come to attract scholarly attention since the seminal work of B R Grover on rural commercial life in seventeenth and eighteenth century north India.<sup>1</sup> The general pattern of local rural trade that emerges from these studies is the essentially vertical thrust of commodities moving out of the locality through a hierarchy of markets linked by chains of intermediaries and the flow of commodities and credit.<sup>2</sup> Although detailed information on the system of rural marketing in eastern Rajasthan in the eighteenth century is fragmentary and incomplete, given the preoccupation of the state - and hence our sources - with taxation, the available evidence indicates that the structure and organisation of local trade conformed to the general pattern.<sup>3</sup> However, a significant feature of late pre-colonial rural commerce in north India, that had been touched upon in Grover's study but has received little attention so far, was the extent and nature of state intervention in and control over the market. This aspect of local trade forms the principal subject of this chapter.

It has generally been understood that with the formulation of the schedule of cash revenue rates or dastur amals in the reign of Akbar, the classical zabti or system of cash assessment was the norm in the core Mughal territories stretching from the Indus to the Ghagara.<sup>4</sup> It has been further suggested that in regions such as Rajasthan where the late seventeenth and eighteenth century records reveal that

crop-sharing persisted as the dominant mode of revenue assessment for foodgrains in particular, the peasant was obliged to remit the revenue in cash after commutation of the state's share of grain at current local prices.<sup>5</sup> Thus whether the revenue was assessed in cash or by the division of the grain heap, its ultimate payment in cash necessitated the marketing of agricultural produce by the peasant.<sup>6</sup> The role of the Mughal state in commerce is thus seen to be limited to taxing traders through various sales and transit tolls or monopolising the sale of certain commodities.<sup>7</sup> Instances of the direct intervention by the state in the regulation of the grain trade have been noted in situations of scarcity and famine. Such intervention was by its nature sporadic - limited to times of crisis in foodgrain availability - and in keeping with the popular expectations of a paternalistic ruler.<sup>8</sup>

The Jaipur records however, assign to the local government administration a more direct and routine involvement in local trade. This involvement was articulated through the collection of revenue in kind which constituted more than half of the total annual revenue proceeds.<sup>9</sup> The revenue collected in kind was marketed by the local revenue officials and not by the peasant as will be clear from the evidence cited later in the chapter.<sup>10</sup> The collection of revenue in kind necessitated the conversion of the major portion, if not the whole of the grain, into disposable income. The bulk of the grain was sold by the state to the grain dealers. The price at which the state sold the grain, the amount sold and the total value were recorded in the annual abstract of the state revenue, the arhsattas. The systematic recording of the prices of the major foodcrops has stimulated considerable statistical analysis and tabulation.<sup>11</sup> However, important as these studies are in their analysis of price trends, certain crucial issues related to the processes of storage, transport and marketing of grain by the state need to be

emphasised for a more complete understanding of the nature of the price data that the revenue documents provide. In order to elaborate on this aspect of the state's interest in the grain market, it would be pertinent to trace the processes involved in the disposal of the grain revenues appropriated by the state.

#### Storage of the State's Grain Share

After the division of the threshed grain heap, the share of the state was generally stored in subterranean grain pits or "khasas" in the village. Khasa seems to be the term specific to the state's grain pits in the village while other similar pits of the patels and grain dealers in the village, for instance, were termed "khatas" or "khaees".<sup>12</sup> Storage of grain in pits is regarded as the most important and efficient method of long term storage in dry lands and continues to be in use today.<sup>13</sup> Tod's description of a grain pit in the adjoining state of Kota in eastern Rajasthan indicates that these were simple unlined structures in which grain was generally stored loose or unbagged. The pits or trenches were dug on elevated high ground, their sides were lined with wheat or barley stubble before the grain was deposited. The grain was covered with a layer of straw and the mouth of the pit sealed by a terrace of earth coated with clay and cowdung which made it impervious even to the monsoonal torrents and which could be easily renewed if damaged.<sup>14</sup> In these grain pits the carbon dioxide emitted from the grain served to kill any insects or larvae. Tod's suggestion that the patel normally used the ruse of rats getting into the pits to cover up for embezzlement indicates that this was perhaps a plausible and common occurrence.<sup>15</sup> It appears that virtually all villages had such grain stores, except those where the soil was unsuitable for their construction.<sup>16</sup> The soil of villages unsuitable for grain pits is referred to as "chothi" (clayey or non-porous

soils?) which caused the stored grain to rot. The recommended practice in such cases was for the amil to arrange for its transportation to the state granaries or "kotha ambar" in the qasba.<sup>17</sup>

In view of the fact that the efficient storage of grain pending its disposal was as important as the collection of the revenue, the revenue officials of the state were required to inspect village pits regularly. Samples of grain were taken to determine the condition of the stored grain.<sup>18</sup> Generally, the bulk of the grain revenue was disposed off within the fiscal year but sometimes unsold grain was stored for longer periods. Two years appears to have been the maximum length of time that was considered safe to store grain before it deteriorated.<sup>19</sup> In 1729, for instance, of the total grain collected in pargana Malarna, a little over ten per cent remained unsold in the fiscal year. These were all rabi cereals. In the same year, grain stored from the previous two years was also sold. Of the total receipts from the sale of grain in the year, the percentage value of the grain of 1727 and 1728 that was sold was 1.31 and 12 per cent, respectively.<sup>20</sup> If there were signs of deterioration in the stored grain, the amil was instructed to make immediate arrangements for its disposal, either through the grain dealers at prices lower than those current in the bazar<sup>21</sup>, or through distribution to needy peasants as taccavi loans to be recovered in kind at the time of the next harvest.<sup>22</sup>

The patel of the village was responsible for safeguarding the grain in the khasa and was debited for the amount of grain stored.<sup>23</sup> Thus when the mahajans of qasba Malarna complained that they did not receive the entire amount of grain from the villages which they had contracted to sell and then to remit the proceeds to the state treasury, the amils were instructed to ensure that the patels and

patwaris did not embezzle the state's grain.<sup>24</sup> If there was a shortfall in the amount of grain taken in revenue and the amount later handed over to the trader who had contracted for its sale, the patel and raiyati of the village were obliged to make up the difference in cash.<sup>25</sup>

Storage of grain was, however, just an interim process to its ultimate disposal. The state's need to convert its grain revenues into disposable income in cash as well as the fact that long term storage of grain was infeasible and inadvisable due to the risk of deterioration, meant that the bulk of the grain was sold to the local grain dealers during the current harvest. Some of the grain, however, was transported by the state to forts for the provisioning of garrisons.<sup>26</sup>

In order to place our subsequent discussion on the mechanism of grain sale in perspective, it is necessary to estimate what proportion of the gross grain produce of a pargana was marketed by the state. Given the incomplete nature of our data and the number of variables to be considered we can at best form only a rough approximation of this proportion.

Within the 'regulation' area, or the territories administered by the Jaipur darbar, the quantity of grain marketed by the state varied as between each pargana due to various factors. First, the variation in the extent of revenues alienated or assigned by the state in revenue-free grants, in jagirs, or in ijara as the revenue collection in these tracts was outside the direct administration of the state. Of these, grants of revenue-free land constituted below five per cent of the resources of the state and probably remained fairly stable over the period.<sup>27</sup> The proportion of revenues of the state within the other three categories, viz. directly administered lands, ijara

and jagir, fluctuated in size and distribution over space from year to year in response to various political and economic factors.<sup>28</sup>

Within the khalisa or the areas directly administered by the raja's revenue officials, a second factor that affected the quantity of grain acquired by the state in different parganas was variations in the cropping pattern and the mode of assessment, in particular for the irrigated rabi cereals. Thus in parganas such as Phagi, Malarna, and Tonk, where revenue in kind constituted more than three-quarters of the revenue proceeds, the amount of grain marketed by the state would be higher than for pargana Lalsot or Chatsu where irrigated wheat and barley were assessed in cash.<sup>29</sup>

Finally, the state's share of the grain produce would depend upon the proportion of the gross product appropriated in revenue. The commonly held view is that the batai proportions stated in revenue schedules or dastur amals specify the state's share of the gross produce.<sup>30</sup> However, as we had argued in an earlier chapter, our evidence relating to the collections and expenses from the common village fund or malba made in addition to the primary land tax suggest that the division of the grain heap between the state and the revenue payer was probably done after various customary deductions from the gross produce had been made.<sup>31</sup> While there appears to be no method of accurately estimating the gross produce, the state's share in the grain heap net of the deductions is well documented. This proportion varied according to the caste, official and residential status of the cultivator and the type of concessions extended by the state in its effort to extend cultivation into previously untilled banjar land or increase and stabilise it through lower taxation on irrigated lands.<sup>32</sup> The available evidence so far suggests that the

average share of the taxable grain produce of a village that was appropriated by the state in kind was about 45 per cent in kharif and 35 per cent in rabi.<sup>33</sup> In view of this, and keeping in mind the deductions from the grain heap prior to the sharing between the state and the peasant, the percentage that the grain revenue formed of the gross produce of a village could not have been far in excess of thirty per cent on average.

Taking all the above factors into consideration, the upper and lower limits to the proportion of the grain produce appropriated, and marketed, by the state in any pargana would have been about three to twelve per cent of the gross grain production with the collections in the period 1730-1750 falling within the upper end of the range and that in the second half of the eighteenth century being considerably lower.<sup>34</sup> Control over a sizable grain stock meant that the involvement of the state in the grain trade and the market was significant. The state participation in the grain market as the major seller in conjunction with the political power that it wielded ensured its domination of the local grain market.

#### The Regulation of Foodgrain Prices

Records of the sale contracts negotiated between the pargana administration and the traders (syaha satti records) were maintained by the revenue authorities. These were organised chronologically with the sales on each day being further disaggregated by the village, the grain revenue of which had been sold, the identity of the purchaser, the quantity of each crop sold and its sale price. Fragments of such records which have survived show that the price of each food grain sold on a particular day was the same for each transaction irrespective of either the location

of the village with respect to the main grain market or the value of the individual sale.<sup>35</sup> Further, the sale price was different on successive days although the range of variation within the short time span for which we have data was small. The contract price for the sale of barley, for example, showed the following variations:<sup>36</sup>

Date of Sale	Seers per Rupee
10th. Shawwal (April 5th.)	: 85.5
13th. <u>do</u>	: 85.0
17th. <u>do</u>	: 89.5
18th. <u>do</u>	: 91.0
3rd. Zilqad (April 28th.)	: 93.0
4th. <u>do</u>	: 93.0
11th. <u>do</u>	: 94.0
13th. <u>do</u>	: 93.0
17th. <u>do</u>	: 93.0
18th. <u>do</u>	: 93.0
19th. <u>do</u>	: 90.5
21st. <u>do</u>	: 89.0

On the basis of the information provided by the syaha satti records pertaining to the sale of the state's grain it is clear that transactions involving the sale of the grain revenue of several villages within the pargana on a single day were concluded at a uniform price and that this price was not an official harvest price but varied over time. What was the price at which the state's grain was sold and how was it determined?

The state routinely recorded the daily prices of foodgrains at the qasba of each pargana. The qasba, in addition to being the administrative headquarters of the pargana, was also the main commercial centre of the pargana where the wholesale market or "mandi" was located. The daily prices recorded at the qasba were termed the "nirakh bazar" or the list of bazar prices. It should be pointed out that the recording of daily prices at the principal market of the pargana was not unique to eastern Rajasthan but formed part of the regular duties of the Mughal revenue



administrator in the seventeenth century and the practice survived till the early nineteenth century in Uttar Pradesh.<sup>37</sup>

In his analysis of pre-modern markets and traders, K.N. Chaudhuri has identified the determinants of price formation in each of the three analytically distinct categories of markets to be found in every spatially and functionally defined central place.<sup>38</sup> The determination of prices at each market varied; in the bazar, the level of prices was fixed by supply and demand factors; the prices in the wholesale spot market adjusted according to the normal interaction between supply and demand current at the time of the transaction, the information available to the buyers and sellers and the merchants' experience of the past behaviour of the market; and at the latter's offshoot, the wholesale forward market, forward dealings were conducted through advance payments for future supplies at agreed prices, a form of trading that combined "expected" values and current transactions.

In examining the process of price formation at the bazar level, B.R. Grover noted that the state exercised formal control over the rural market through a policy of 'fixing' prices on a regional scale.<sup>39</sup> The state's need to 'fix' prices has broadly been ascribed to its desire to ensure cheap food. The fundamental value implicit in this policy was the "virtue claimed by and attributed to Mughal rulers during whose reigns low grain prices prevailed or who actively kept prices low in their central cities."<sup>40</sup> Bayly, on the other hand, has argued that the 'fixing' of bazar prices by the state was more a process of bargaining between the local merchants and the political authorities.<sup>41</sup> In his discussion of the urban grain market he suggests that price formation took place at two levels, "first through the wholesalers and then by the retail sellers who established a fixed daily rate in consultation with the political

authorities." <sup>42</sup> Hence, the intervention of the state in negotiating retail prices with reference to the wholesale price has been seen by Bayly as a mechanism to ensure the smooth flow of grain into the city.<sup>43</sup> Such a process of a negotiated price conforms with the apparently contradictory statement that in the seventeenth and eighteenth centuries the "Provincial or local administration fixed prices of foodstuffs on a regional scale. The fixation of prices was governed by the principle of supply and demand." <sup>44</sup>

We have no direct evidence which puts into question the general process of price formation as described above. The foregoing analysis of the nature of pre-modern trade and markets shows that prices at local market were determined by factors of supply and demand and that the 'fixing' of prices by the state consisted of no more than the recording of retail prices, using the information and cooperation of the grain traders, at the largest wholesale and retail market of the pargana, the qasba.<sup>45</sup> But the analysis does not adequately explain why the state so meticulously recorded the bazar prices at the administrative centre of every pargana. Our evidence suggests that state intervention in price setting was closely related to its role as the major seller of grain in the market with its annual revenues being dependent upon the value of the produce appropriated in grain. The bazar prices, recorded in the nirakh bazar documents for each qasba, provided a benchmark for the state to determine the price at which it would sell its produce revenue to the grain dealers. The involvement of the state in the process of price setting can thus be seen as a reflection of official social policy as well as stemming from its revenue considerations.

Was the official bazar price the same as the price at which the state sold its grain? According to S.P.Gupta, the prices recorded in the arhsattas, are thought to be 'harvest prices' and lower than the bazar prices.<sup>46</sup> In the table compiled by him to show the range of variation between the arhsatta and nirakh bazar prices, it is not made clear whether the figures given under the two heads are comparisons of the prices in the two records on the same day or a comparison of the computed average price as derived from the arhsatta and a 'harvest price' derived from averaging the nirakh bazar prices for an unspecified period corresponding to the harvest months.<sup>47</sup> The tabulated prices again show inconsistencies which are not explained - for instance, while a majority of the crop prices under the nirakh bazar column are higher than those in the arhsatta column, a few are lower than the arhsatta price by 2 to 17 per cent.

However, our evidence from the records of Phagi indicates that the state's grain was sold at the prevailing nirakh bazar price on the day of sale. Generally, the sale details recorded in the arhsattas only state that the grain was sold 'as per the rate' (*muafiq nirakh*) on a specified date. Occasionally, however, the details are more precise and specify that the 'rate' was the bazar rate in the qasba (*muafiq nirakh bazar*). Thus, the rabi foodgrains of qasba Phagi were purchased by the mahajans, miscellaneous asamis (*futkar asami*), and menials (*paunis*) on Chait Sudi 11 according to the nirakh bazar prices in qasba Phagi (*muafiq nirakh bazar qasba Phagi*).<sup>48</sup> Similar references to sales on the basis of the nirakh bazar prices at the qasba are explicitly mentioned in arhsattas of other years.<sup>49</sup> A comparison of the sale prices as given in the annual arhsatta with the daily price list for the year (*roznamcha nirakh bazar*) confirms that the two were identical.<sup>50</sup> The contract price for the sale of grain was therefore the same as the nirakh bazar price of the

day. The rationale for meticulously recording the daily prices of foodgrains at the administrative headquarter or qasba of each pargana now becomes clearer.

The daily variation in the nirakh bazar and thereby the contract price of grain made it possible for the amil in his capacity as the local revenue administrator to collude with the local grain dealers to the financial detriment of the state. It should be emphasised, however, that the amil was a local revenue official of the state administration who was expected to implement state policy and abide by the directives of the diwan. In order to facilitate the functioning of the system, it was essential to allow the local administrator discretionary authority within the bounds of the overall regulations concerning the disposal of government grain. Although the formulation of the nirakh bazar prices appears to be outside the official purview of the amil, his authority extended to the distribution of the grain contracts and a degree of flexibility in price bargaining for the sale of grain that was old or had deteriorated, either in storage or by rain.<sup>51</sup> Given the fact that the amil was invariably a member of the commercial community and was allowed a limited discretionary authority the disposal of the in kind revenue provided an inherent scope for manipulation.<sup>52</sup>

For instance, the amil of pargana Chatsu was reprimanded by the diwan for issuing satta contracts at five day old prices which were about 4 to 5 per cent lower than that prevailing on the day of the contract.<sup>53</sup> In another instance, it is implied that the amil, aware that there was going to be a substantial rise in prices the next day, used his information to issue satta contracts to two traders late at night at the lower price.<sup>54</sup> In the accusation, the diwan appears to have very precise details about the the day the fraudulent contract was made, the exact variation in the

actual and contractual price, and the identity of the purchaser. It is difficult to see how the state detected such fraud and maintained a check on the amil and the available evidence provides few clues as to how this was achieved. A catalogue of relatively minor administrative malpractices committed by the amil of pargana Hindaun was reported to the diwan by the "hakikat nawis", or official newswriter of the pargana.<sup>55</sup> The effectiveness of such a method of surveillance to prevent or detect fraud, however, remains questionable. This may perhaps account for the observation that "the amils were frequently dismissed on the grounds of inefficiency and dishonesty. An amil, it seems, did not hold office for more than three years."<sup>56</sup>

#### Grain Purchasers and the Mechanism of Sale

While all the arhsattas record the price at which each type of foodgrain was sold as well as the variation in the price if sales were made at different dates, they do not always provide details regarding the identity of the purchaser or the method of sale. There is however one fortunate exception: the arhsattas of pargana Phagi consistently record these details and our subsequent discussion will be based primarily upon the information gleaned from these records supplemented by the fragmentary references in other records.

There appears to have been two methods of grain sale. Grain was sold either through contractual agreements ("sattas") or through what was termed "khush kharid".<sup>57</sup> Khush kharid sales were clearly differentiated from satta sales in the arhsattas of pargana Phagi and appear to have become common from about 1750.<sup>58</sup> Unlike the satta sales however, there are no references to khush kharid sales in the

letters of the administrative officials thus making it difficult to interpret in what way these sales differed from the satta sales on which we have more information. No clear distinction between the two forms of sales with respect to either the price or the type of purchaser can be established from the records. Like satta sales, khush kharid grain sales were made at the price as specified in the nirakh bazar for that day.<sup>59</sup> Similarly the purchasers for both types of sale comprised commercial grain dealers, mahajans and vyaparis, as well as miscellaneous individuals (*asamis, raiyati, pauni*).<sup>60</sup> This leads us to infer that khush kharid, as the term implies, differed from satta or contract sales in that they were spot purchases or where the money was paid at the time of the transaction. It is possible that the increasing importance of khush kharid sales after 1750, as our evidence from qasba Phagi suggests, was linked to the crisis of the state's finances during this period and its diminished involvement in grain marketing with the marked increase in revenue farming.

In satta or contract sales, the purchaser paid the money due to the treasury in specified instalments spread over a number of months as agreed in the terms of the contract. The period for full repayment of the agreed sum was generally four months from the date of sale.<sup>61</sup> If the entire sum due had not been deposited within this time, the outstanding balance was liable to interest at the rate of three-quarter per cent per month.<sup>62</sup> As the bulk of the states revenue in kind was sold in the period immediately after the harvest when prices were normally at their lowest, this mechanism of deferred payment was an effective method of ensuring the sale of grain by providing the dealers with the margin of profit and cash flows accruing from the seasonal variation in prices and timed transactions.

The question of interest payments, however, appears to have provoked recurring conflict between the revenue authorities and the grain dealers. These arose basically due to the incompatibility of two contradictory fiscal policies of the state. On the one hand, all revenue payments outstanding after the commencement of the new fiscal year in Bhadon Sudi 2, or early September, were regarded as arrears and were liable to interest payments. The stated time limit for recovery of money from satta contracts, on the other hand, was four months from the date of sale. The sale of the grains of the rabi or winter harvest was spread over three months from mid-May to mid-August with the peak marketing period being June/July or the month of Asad in the Indian calendar.<sup>63</sup> As an illustrative example, in 1729, the rabi batai revenues of eight villages in pargana Sanganer were sold in the following period:<sup>64</sup>

Jesht (mid-May to mid-June)	: 1638.28 maunds	24%
Asad (mid-June to mid-July)	: 4056.60 maunds	60%
Sawan (mid-July to mid-Aug.)	: 1053.50 maunds	16%
Total Grain (wheat+barley+gram+baijhari)	: 6748.38 maunds	100%

Thus the time-limit for payment on satta sales made from early June onwards would have ended only at the end of the four month contract period at the earliest in October. As the October date was in the next fiscal year, the pargana amil was instructed to levy interest on the satta sales that were, in accounting terms, deemed to be arrears of the previous fiscal year.

The confusion created by this contradiction resulted in the amils of parganas Tonk and Amber pleading with the diwan on behalf of the grain dealers. Traders in Tonk were reluctant to purchase grain in late May of 1726 and in Amber in July-August as these dates fell within the fiscal year 1725.<sup>65</sup> The amils of Tonk in particular appeared very concerned as the revenue was almost entirely collected in

kind in their jurisdiction and further they had part of the previous year's stock to dispose off as well. They had tried their best to find dealers willing to purchase the grain but had failed. The reason given was that the traders feared that the regulation regarding interest payable on arrears would override their satta terms as was the situation in pargana Amber. In reply to a similar letter by the amil of Amber, the diwan took the decision that despite the commencement of the fiscal year 1726 in a months time, interest on arrears would not be charged on contracted sales if the sum due was deposited within the four-month period as was the norm.<sup>66</sup>

However, three days after the commencement of the new fiscal year, the diwan wrote back to the amil instructing him to ignore the earlier ruling and to charge interest as per the rule for arrears on all outstanding satta payments as the prices had increased greatly over the intervening period.<sup>67</sup> The justification for the arbitrary reversal of the earlier decision seems to imply that the state thought that the dealers could well afford to pay the interest from the higher profits made by them as a result of the above-average rise in prices in the month following the signing of the contracts.<sup>68</sup> The reversal of the earlier assurance produced its own consequences. When the time came for the sale of grain in the subsequent rabi harvest, i.e. in 1727, the vyaparis refused to purchase 700,000 maunds of state grain. The diwan again assured them that no interest would be charged if the terms of the contract were met irrespective of whether the time limit for repayment lay after the new fiscal year began.<sup>69</sup> Yet in the very next year we find the same complaint repeated by the traders of pargana Phagi.<sup>70</sup>



The recurrent friction between the state and the traders regarding the payment of interest and the manipulation of the terms of the contract to the advantage of the state emphasises the element of coercion, and therefore uncertainty in exchange, inherent in the unequal relationship between them. However, there were limits to the extent to which the merchants could be coerced. The services provided by the merchant - namely, the conversion of commodities into disposable income - were indispensable to the functioning of a centralised administrative system. The most potent weapon of the trading community against a rapacious state was the collective refusal to trade. It seems unlikely that the situation described above of an annual conflict between the revenue authorities and the traders was allowed to continue for any length of time. Lack of evidence, however, does not allow us to examine if, and in what way, the policies of the state were modified.

In the arhsattas, as well as in the records of sale contracts (*syaha sattis*), the bulk of the grain was recorded as being sold on a single day to the "panch mahajans" of the principal qasba in the pargana.<sup>71</sup> In addition to the panch mahajans, grain also was sold to individual merchants who were either resident within the pargana (*sahthani*) or were from outside the pargana (*vichhayati*). On the selling side of the grain market it has already been argued that the market was concentrated with the state as the largest single grain seller with control over large stocks, upheld by political power. A list of the buyers of state grain in pargana Malarna in the fiscal year 1725 shows that the purchase of state grain also appears to have been dominated by a few substantial dealers (Table 9). Four large buyers, including the panch mahajan of the qasba, together bought more than 70 per cent by value of the total grain sold.<sup>72</sup> Of these, a single trader, Pemraj Natani, purchased grain valued at over 35 per cent of the total sales in the year. On the

Table 9: List of Purchasers of State Grain in Pargana Malarna 1725.

Name of Purchaser	Value of sale in rupees		
	Total	Kharif	Rabi
1. Pemraj Natani	25230.41	21891.47	3338.94
2. Panch Mahajan of qasba Malarna	12680.97	7861.34	4819.63
3. Pragdas Ramrikh Sarraf	9357.13	6375.00	2982.13
4. Amarsingh Bhusavadi	3172.54	154.88	3017.66
5. Khewsi Sethi of pargana Lewali	2730.72	1689.66	1041.06
6. Kheta Ramrikh Mahajan of q. Malarna	2474.47	2474.47	-
7. Dalaram Mahajan of qasba Malarna	2381.59	-	2381.59
8. Teko Mahajan of qasba Malarna	1350.28	-	1350.28
9. Pohkar Modi	1227.94	1227.94	-
10. Idraj & Isar Mahajans of Garh	1084.50	1084.50	-
11. Jodho Patel of Marijandi	1055.03	272.28	782.75
12. Kheto Chaudhuri of qasba Malarna	1053.84	1053.84	-
13. Askaran Mahajan of Serpur	796.44	796.44	-
14. Sah Nanig Mahajan of qasba Malarna	503.81	-	503.81
15. Patel of village Sahijihapur	481.00	457.50	23.50
16. Rikhabdas Mahajan of Serpur	426.84	-	426.84
17. Sah Koju of pargana Lalsot	401.00	401.00	-
18. Patel of village Malarna Chhota	386.41	-	386.41
19. Bisna Thagaech	385.34	385.34	-
20. Takursi Mahajan of pargana Dausa	332.34	332.34	-
21. Nathu Mahajan of pargana Lewali	297.00	297.00	-
22. Teli of qasba Malarna	254.81	254.81	-
23. Khushalchand Kasiram Mahajan	248.28	248.28	-
24. Govindas Srimal of qasba Malarna	233.16	-	233.16
25. Gangraj Mahajan	200.56	200.56	-
26. Bhayachand Devdas Modi of p. Amber	200.00	200.00	-
27. Nanduram Sethi of pargana Lewali	200.00	200.00	-
28. Patel of village Karel	200.00	-	200.00
29. Rudha & Suratram Qanungo of q.Malarna	186.00	-	186.00
30. Jadu Qanungo	165.03	165.03	-
31. Dularam Qanungo of qasba Malarna	160.16	-	160.16
32. Hatti Mahajan of qasba Malarna	126.44	126.44	-
33. Raiyati of village Khurahara	62.13	62.13	-
34. Hirdeyram Patel	59.81	-	59.81
35. Rupa Chaudhuri of bazar Raisobdas	56.66	56.66	-
36. Raiyati of villge Aabra	44.13	44.13	-
37. Raiyati of village Tikari Meena	38.97	38.97	-
38. Dalel Patel of vilage Jeenaech	37.13	-	37.13
39. Sah Chudamani Mahajan	36.47	36.47	-
40. Patel of village Gohad	33.66	33.66	-
41. Chhaju Bakhta Mahajan	25.88	25.88	-
42. Patel of village Niwohada	20.59	-	20.59
43. Teli of village Malarna Chhota	15.47	-	15.47
44. Shobha Mahajan of qasba Malarna	4.78	4.78	-
Totals (in Rupees):	70419.72	48452.80	21966.92

Source: Hasil Kifayat, Arhsatta Pargana Malarna, VS 1782/AD 1725.

other hand, out of the total of 44 buyers, the individual share of 31 purchasers was less than one per cent. Between the substantial merchants and the very small purchasers who were generally village elites like the patel and chaudhuris, were the small traders or mahajans. The individual transactions of these traders ranged from Rs. 200 to Rs. 3000. Most of the dealers from neighbouring parganas such as Lewali, Lalsot, Serpur, Dausa and Amber, who also purchased state grain in Malarna belonged to this middle-ranking group.

The distinction drawn in the documents between the panch mahajan and individual traders poses a number of questions which however remain unanswered due to the lack of relevant data. For example, was there a corporate organisation of traders, resident in the qasba, that was recognised by the state and which contracted as a group for the purchase of the state grain revenues? Or was the term panch mahajan used as an administrative shorthand for an unspecified number of individual transactions conducted with resident traders from the local qasba? Why then are some traders, also identified as belonging to the local qasba, individually named even when purchasing grain on similar terms as the panch mahajans? On what criteria were traders included, or conversely excluded, from such a collective?

The references in the chittis to the panch mahajans in the qasba are generally concerned with the distribution of "parna". Parna has been defined by Dilbagh Singh as a coercive tax demanded from grain traders who did not buy the state share of grain realised in land revenue.<sup>73</sup> Documents relating to parna, however, appear to indicate that it was not a cess, properly speaking, but a mechanism for the forced sale of the state's grain to the panchayat of the qasba grain dealers.

The mahajans of qasba Malarna, for example, in a joint complaint to the diwan allege that the amil was forcing them to purchase grain from the villages in the pargana through parna (*gaon ka naj maha ne jorawari kari parna de*).<sup>74</sup> To this the response of the state was that traders be given grain only if they are willing to purchase it and not through parna (*apni rajabandi so naj le ta ne de jo aur parna do mati*)<sup>75</sup>. The traders of qasba Manoharpur had left the qasba for an unspecified reason but were willing to return on certain conditions. In the list of complaints that they presented to the diwan was included a demand to stop parna being imposed on them.<sup>76</sup> Although the exact mechanism of grain sale through parna remains unclear, it is possible to infer that the grain traders in the local qasba were obliged to purchase the state's grain revenue and that this mechanism of forced sale was operating through the local corporate organisation or the panchayat of the resident grain dealers in the qasba.

The chittis documenting the disputes between the rival panch mahajans of the Vaishnav (Maheshwari) and Jain (Saraogi) caste in qasbas Lalsot, Chatsu and Dausa over parna shares to be allocated to each show that parna was imposed collectively on the grain traders. Parna had been distributed to the Vaishnav and Jain panch mahajans in qasba Lalsot in the ratio of 5 :-1, respectively, till 1722. In 1723, the panch mahajan of the Vaishnav traders petitioned the diwan who issued a order (sanad) altering the ratio in favour of the Vaishnavs to 3 : 4 respectively.<sup>77</sup> The Jain panch mahajan then complained that the revision of their respective liabilities was unfair as the Vaishnav traders had 118 shops in the qasba while they (i.e. the Jains) only owned 30. The diwan appeared not to have been impressed with this statistic and agreed to only a marginal revision to the parna shares in the proportions of 3.5 to the Vaishnav Maheshwari traders and 4 to the Jain Saraogi

traders.<sup>78</sup> In a similar dispute between these two groups of traders in qasba Dausa, the diwans response to the Vaishnav mahajans' complaint that the amil was favouring the Saraogi traders was that all traders were exempt from parna.<sup>79</sup> However, it is not clear whether the practice of selling grain through parna had ended or if this was a short term or local concession to the Dausa traders.<sup>80</sup>

There are a number of references to individual grain traders being exempt from parna, often as an incentive to induce traders to settle in new markets.<sup>81</sup> Further, hereditary rural elites like the patel, patwari, chaudhuri and qanungo who traded in grain were also exempt from parna.<sup>82</sup> Such exemptions were on occasion the cause of disputes between the privileged grain trader and the panch mahajans. The latter point is significant in that it suggests that it was the responsibility of the panch mahajan to distribute the burden of parna among the individual members of the community. Thus, a sweetmeat trader in qasba Niwai argued that he did not and never had traded in grain yet the panch mahajans were forcing him to take on parna grain.<sup>83</sup> Similarly, the qanungo of pargana Gazi-ka-Thana, who was also a grain trader but had been granted exemption from parna, was allegedly being harassed by the panch mahajan of the qasba.<sup>84</sup>

From the nature of the complaints regarding parna, it seems clear that the practice of forcible sale of grain was regarded as an onerous form of indirect taxation by the grain traders through which they were obliged to purchase grain at prices and quantities decided by the state. On the other hand, it appears that the obligation to purchase the state grain on the part of the panch mahajans entitled them to supply the state karkhanas with provisions. Hence, the Saraogi panch mahajans of qasba Dausa complained that although their share of parna was larger

than the Maheshwaris at 4 : 3 respectively, the amil was provisioning the karkhanas through equal purchases from both. The diwan's instructions in response to this complaint was that the requirements of the state be obtained from the merchants in proportion to their commitment to buy state grain, a decision that satisfied the dictates of equity and the Saraogi panch mahajans!<sup>85</sup>

Besides the allocation of grain through parna, state policy to facilitate the sale of its produce revenue included additional coercive elements. In 1728, the amils of parganas Dausa and Phagi reported that the traders were reluctant to purchase grain. To this the diwan responded that the grain should be transported to the vyaparis and sahu-kars at the qasba and big villages and satti contracts signed at the nirakh bazar prices.<sup>86</sup> To these directives was added the rider that unless the government grain revenues were sold, there should be no private transaction of grain between traders.<sup>87</sup> In order to enforce the latter condition, all movement of grain outside the pargana was banned till such time as the state's share of revenue in grain from the pargana was sold.<sup>88</sup> The latter policy is most clearly stated in the diwan's response to the complaint by the revenue farmers of the sale and transit duties of pargana Amber that their collections had fallen off due to the restrictions on inter-pargana trade in grain imposed by the amil.<sup>89</sup> The diwan replied that the state's grain was to be sold before any other vyapari could sell his grain in the pargana and that no grain could be transported outside the pargana till the state's supplies had been exhausted. However, once it had been disposed of, the ban on the trading and movement of grain was to be lifted.<sup>90</sup> This is a clear illustration of the essentially coercive core underlying the apparently cooperative relationship between the state and the trading community.

What emerges from the above discussion on the sale of grain by the Jaipur state in normal years is that as the largest single owner of grain stocks in the area, it used its political authority to intervene in the local market to maximise its revenue flows. This was affected through monitoring and negotiating the price and the conditions for the sale of grain, coercing the merchants to purchase state grain either directly through forced sales or indirectly by restricting commercial transactions and the intra-regional movement of grain until its stocks were sold.

That this level of state control over the local trade in grain was not an unusual feature of the pre-modern state is attested to by similar policies being pursued by the Ottomans in the late fifteenth century. To quote Halil Inalcik on the sale of state owned rice in the Ottoman empire, viz:

"According to the regulation, only state owned rice could be sold in the markets or shops for a period of eight months (in a later period six months) after the harvest. If individuals attempted to contravene this order, their rice was confiscated and their persons subject to punishment. For example, in the Filibe region rice stocks belonging to the...merchants were put under seal in warehouses on a certain date till such time as the state owned rice was completely sold...The reason given for the strict order was that by tendering their rice to the market at an early stage, and at prices lower than that set down by the government, individual sellers caused the market price to drop, and brought substantial loss to the treasury." <sup>91</sup>

The eighteenth century Nayaka state of Madurai also collected part of its revenues in kind which the local revenue officials sold in the paddy market.<sup>92</sup> Despite the similarity in the mechanism whereby grain collections were transformed into cash revenues, the system in operation differed significantly from that in eastern Rajasthan in the level of state control. The Nayaka state does not appear to have had a defined policy with regard to the sale of grain or played any role in the regulation of the grain market but left the process of grain disposal entirely to the

discretion of local officials. Having secured the authority to collect the revenue through payment in advance, and hence becoming the sole agent for the disposal of state grain, the latter speculated in the market to augment their own and government income. The amil in our region on the other hand was a salaried functionary operating within the directives of the state with the local traders becoming, in effect, the agents of the state for the disposal of its grain stocks.

In years of famine, a number of measures were taken by the state to alleviate grain shortage. These included actions to prevent speculative hoarding of grain and the adoption of measures such as the remission of transit duties to encourage grain imports from outside the region and an embargo on grain exports. Thus in 1731, a year of severe famine, when it was reported that the traders in the parganas of the raja's jurisdiction (13 in all) were not selling grain despite having previously bought the state grain revenue as well as grain imported from other regions, a series of measures were taken to regulate the grain trade and ensure that grain was sold by the traders.<sup>93</sup> The strategy adopted by the state to enforce the sale of grain was first, to bring forward the date by which the money from the sale of state grain through satta was to be deposited with the treasury by a month (i.e. to early August rather than early September); if the traders could not comply with these terms, the grain given to them was to be handed back to the amil and their contracts cancelled; if, at the appointed date, the traders had sold the grain and yet not deposited the money, they were to surrender the entire proceeds from the sales made, presumably, at higher prices than the original contract price.<sup>94</sup> In the period subsequent to the last date set for the grain contracts and the commencement of the kharif harvest of the following year, that is between August and the Diwali festival in October–November, the local officials were to estimate the size of the trading



stocks remaining in the possession of each local trader and then set a fixed amount to be sold daily by the trader. For each day that the trader did not sell the stipulated amount despite there being purchasers willing to buy, or if he sold less, a tax of six copper dams per rupee (*chhadami*) of the value of the grain, presumably calculated at the bazar price on the day, was to be levied. Further, speculative hoarding was punishable by confiscation of grain stores.<sup>95</sup> In addition to these measures, a ban was imposed on the export of grain from the region while imports were encouraged through the cancellation of all transit and sales taxes for all grain except wheat and sesame.<sup>96</sup> There is, however, no evidence to indicate that a 'fair' price or an official ceiling on prices was imposed.<sup>97</sup>

In its effort to provide relief to the urban poor too weak to earn a wage (*majuri kariwa ke takat nahi*) owing to the severe drought and grain scarcity in 1738, food canteens (*langars*) were opened towards which Rs. 4 per day was sanctioned.<sup>98</sup> However, the state does not appear to have had the resources to provide adequately for rural famine relief resulting in mass emigration and depopulation and there is evidence to suggest that in scarcity conditions, the state's grain pits in the villages were looted.<sup>99</sup>

#### Transport of grain

As we have discussed above, the price at which grain was sold remained uniform within the pargana for all transactions on the same day. There are no indications of any form of variation in the sale price to take account of the varying distances of the villages from the point of sale at the qasba or local wholesale mandi. This raises the question of determining which of the three agencies

involved in the transaction - the peasant, the state or the grain dealer - bore the cost of moving grain and paid the various imposts and transit dues normally levied on the transport and sale of grain.

The revenue authorities levied a cess called "bhara" under a variety of different accounting heads in different parganas that was collected in cash or kind equivalent from the peasants as part of their revenue payments. The revenue regulations of pargana Jhak clearly state that bhara payments were specifically for the transport of the revenue in kind to the ganj in the qasba.<sup>100</sup> However, the document does not mention the rate at which the cess was levied. Another dastur amal, of pargana Amarsar, records that bhara payments were to be levied in kind at the rate of one seer per maund of revenue in kind from the raiyati and at half that amount from the privileged sections.<sup>101</sup> In Sanganer the levy was calculated in takas per maund but was then reconverted into an equivalent amount of grain at varying conversion rates.<sup>102</sup> In pargana Amber, tax on fodder and bhara was a combined levy termed "nirni bhara" in kharif and "khaklo bhara" in the rabi accounts.<sup>103</sup> In some parganas, for example in Dausa, the batai revenue realised from the qasba was exempt from bhara, but from the available evidence it appears that the charge for the transport of grain was a uniform levy on all villages varying only in its rate and mode of levy between parganas.

Taxation to recover the costs of transport from the primary producers, however, still leaves the question of the actual organisation of grain transport unanswered. On this point our evidence is fragmentary and inconclusive. B.R. Grover states that the transport of the official grain to the mandi for sale was arranged by the local

revenue officials.<sup>104</sup> On occasion we do find instances when the state did arrange for large quantities of grain from the region to be sold in distant markets.

For instance, in 1726 the amils of parganas Phagi, Bahatri, Chatsu and Amber were instructed by the diwan to arrange for professional haulage to transport the rabi grains, wheat, barley and gram, for sale at Delhi.<sup>105</sup> The prices in Delhi in that year were about three times those prevailing in the Jaipur region which accounts for the diwans confidence that the state would profit from the enterprise even after meeting the transport costs.<sup>107</sup> However, there was cause for some conflict between the "gariwans" hired by the amil of pargana Phagi in response to the earlier directive of the diwan. The diwan then advised the amil that the 27 carts carrying gram had not yet reached Delhi and so for the cartage of the remaining wheat and barley he should make a deal with the banjaras.<sup>107</sup> The terms of the deal were that for all grain except wheat, the banjaras would receive half the total amount of grain transported but would have to pay all the transit duties en route. While not stating the terms for the transport of wheat, its exclusion from the above arrangement was due to its relatively higher price which would make the deal unprofitable for the state. This is a clear instance of the state taking on the role of a grain trader, effectively utilising its command over an enormous grain supply to enhance its revenues.

There is similar evidence of the state organising the transport of salt worth two hundred thousand rupees from Sambhar Lake to the newly established salt wholesale market or "katla" in Sawai Jaipur to be distributed to the salt dealers there.<sup>108</sup> Five thousand rupees were spent by the state for the transport of salt over the thirty-six mile journey between the lake and Jaipur which was later

recovered from the salt dealers. Besides the estimated two million rupees worth of salt sales per annum, the salt trade also yielded considerable revenues in sale and transit duties.<sup>109</sup> The establishment of a major wholesale salt market in Jaipur was perhaps an attempt to encourage the banjaras to make all their salt purchases at Jaipur rather than go to Sambhar through alternative routes, frequently a cause for official concern and recurring conflict with the local zamindars.<sup>110</sup>

The evidence cited above indicates that it was feasible for the state to organise large scale movement of bulk commodities like grain and salt. Although not explicitly stated, there are a few documents on the forced sale of grain to the local dealers or complaints by dealers that the amil had not given them the entire amount of grain entered in the satta contract, in which the transport of grain from the village by the revenue officials is implied.<sup>111</sup> Two other documents, however, indicate that traders who had contracted to purchase grain from the state also transported the grain from the villages to the qasba for which they were compensated by the state. In 1727, the amil of pargana Amber reported that the vyaparis were not purchasing grain as the bhara or transport costs paid to them were for twelve kos (c. 27 miles) whereas due to the recent redefinition of pargana boundaries, the pargana included villages located outside this twelve kos radius.<sup>112</sup> A complaint by Bhayachand Patni stated that traders buying the grain revenue of village Newta had always received bhara for seven kos, as this was the distance between qasba Sawai Jaipur and Newta, but that the amil was giving him bhara for only five kos.<sup>113</sup> The conflicting evidence regarding the agency for grain transportation may in fact mean that the state resorted to both the practices - i.e. organising carriage through hired transporters as well as paying the grain traders the sanctioned charges when they transported the grain.

Our study clearly shows that the state and administration had a substantial stake in the marketing of foodgrains. Although the state did not monopolise the sale of grain, the appropriation of revenue in kind for grain must have restricted the flow of goods and services through private marketing channels in an economy where grain production predominated. It is only with respect to the local grain trade that we find evidence of the direct control exercised by the state in the market. However, rural commerce as a whole was also subject to indirect controls and regulation through taxing markets, establishing tolls and controlling the location and periodicity of markets.

The question for the historian is why and how this came about. If there was already a well established rural market in foodgrains it would have been possible for the state to collect its revenue in cash. As we have argued earlier, the adoption of crop-sharing as the dominant mode of revenue appropriation derived from a combination of factors relating to the relationship between the state and the peasant, production techniques and the principles of revenue taxation. A batai system establishes a direct linkage between physical quantities in production and revenue collection leaving the distortions caused by price or value changes to follow at a subsequent time. The commutation of the grain into cash would not be possible without entering into elaborate discussion on the level of the price changes from year to year. Clearly it was not feasible to enter into such negotiations with the peasant producers, while on the other hand, the alliance of interest between the state and the trader was better understood.

By enforcing upon the local traders a collective responsibility to purchase state grain at fixed prices, the traders became in effect the agents of the state for the

disposal of its grain stocks. The restrictions on private trading and the movement of grain till such time as the grain stocks were sold must have also restricted the stocks available for trading in the period of state trading. In so far as these measures succeeded in raising post-harvest prices, then the purchase price paid by the trader included a large element of taxation. Traders, on the other hand, would adjust the supplies that they were prepared to release to the market once state trading was over, in order to profit from the expected seasonal fluctuation in prices. The four-month period allowed between the delivery of the grain or the signing of contracts and the deferred payment was in effect a form of interest-free loan incentive. The disposal of the grain revenue by the state therefore involved three policy variables, viz., controlling the price of sale, forcing the merchants to purchase grain stocks and, lastly, allowing for a margin of profit to the traders through the mechanism of deferred payment.

Notes to Chapter V: Role of the State in the Grain Market

1. B.R.Grover, "An Integrated Pattern of Commercial Life in the Rural Society of North India during the 17th and 18th Centuries", PIHRC, XXXVII (1966), pp.121-153; K.N.Chaudhuri, "Markets and Traders in India during the Seventeenth and Eighteenth centuries" in K N Chaudhuri and Clive Dewey (eds.), Economy and Society, pp.143-162; C.A.Bayly, Rulers, Townsmen and Bazaars; Kum Kum Banerjee, "Grain Traders and the East India Company: Patna and its hinterland in the late eighteenth and early nineteenth centuries", IESHR, 24, 4, 1986; Rajat Datta, "Merchants and Peasants: A study of the structure of local trade in grain in late eighteenth century Bengal", IESHR, 23, 4, 1986.
2. Tapan Raychaudhuri, "Inland Trade", CEHII, pp.339-349.
3. Dilbagh Singh, "Nature and Incidence of Taxes Levied on Inland Trade in Eastern Rajasthan during the 17th and 18th centuries", PIHC, Bhubuneshwar, 1977, pp.311-326; S.P.Gupta, "Prices and Rural Commerce in 17th century Eastern Rajasthan", PIHC, Kurukshetra, 1982, pp.270-282.
4. Irfan Habib, "Agrarian Relations and Land Revenue: North India", CEHII, p.237.
5. *ibid.*, p.239.
6. *ibid.*, pp.239-240.
7. Tapan Raychaudhuri, "The State and the Economy: The Mughal Empire", CEHII, pp.182-192.
8. Bayly, Rulers, Townsmen and Bazaars, pp.330-331; D L Curley, "Fair Grain Markets and Mughal Famine Policy in Late Eighteenth-century Bengal", Calcutta Historical Journal, vol.II (1977), pp.1-27.
9. The percentage distribution of annual revenue proceeds between zabti and jinsi assessment in the period c.1650-1780 for four and six parganas, respectively are given in S.Nurul Hasan, K.N.Hasan and S.P.Gupta, "The Pattern of Agricultural Production in the Territories of Amber (c.1650-1750)", PIHC, 1966, pp.259-264 and Dilbagh Singh, "Revenue Administration", pp.120-129.
10. The assertion that in Rajasthan "quantities of grain claimed as revenue were invariably converted into cash, in which form the revenue was actually collected" (CEHII, p. 239), is perhaps based on an earlier view expressed in S.P.Gupta, "New Evidence on Agrarian and Rural Taxation in Eastern Rajasthan" (PIHC, 1975, p. 238) later revised in "Prices and Rural Commerce in 17th Century Eastern Rajasthan", PIHC, 1982, pp. 274-276
11. S.Nurul Hasan and S.P.Gupta, "Price of Food Grains in the Territories of Amber", PIHC, 1967, pp. 350-371; S.P.Gupta and Shireen Moosvi, "Weighted Price and Revenue Rate Indices of Eastern Rajasthan (c.1650-1750)", IESHR, vol.XII, No.2, 1975, pp. 183-193; Dilbagh Singh, "Revenue Administration"

- pp.151-163; S.P.Gupta, "Prices and Rural Commerce in 17th. Century Eastern Rajasthan", PIHC, 1982, pp.270-282; S.P.Gupta, "Prices in the Trans-Yamuna Tract from the close of the 17th. to the latter half of the 18th. Century", PIHC, 1983, pp.263-279
12. Chitti dt.Kartik sudi 7 VS 1788/AD 1731, pargana Amber, (No.383); Chitti dt.Mah vadi 4 VS 1798/AD 1742, pargana Phagi, (No.283).
  13. J.Needham, gen. ed., Science and civilization in China, 6 vols., Vol.6 Part II : Agriculture, by Francesca Bray, pp.381-394; R.S.Srivastava, Agricultural Marketing in India and Abroad, p.120.
  14. James Tod, Annals and Antiquity of Rajasthan, vol.2, p.438
  15. *ibid.*, p.431
  16. Chitti dt.Bhadon sudi 7 VS 1793/AD 1736, pargana Chatsu, (No.320); Chitti dt.Jesht vadi 8 VS 1803/AD 1746, to Murlidhar and Harbandsasji, (No.400).
  17. Chitti dt.Jesht vadi 8 VS 1803/AD 1746, to Murlidhar and Harbandsasji, (No.400). Kotha or kothar according to Wilson's Glossary refer to a brick building in which grain was stored. H H Wilson, Glossary, p.295.
  18. Chitti dt.Bhadon sudi 10 VS 1783/AD 1726, pargana Chatsu, (No.367).
  19. Chitti dt.Sawan sudi 2 VS 1795/AD 1738, pargana Chatsu, (No.398).
  20. Arhsatta pargana Malarna, VS 1786/AD 1729.
  21. Chitti dt.Jesht sudi 4 VS 1785/AD 1728, pargana Phagi, (No.412); Chitti dt.Jesht vadi 1 VS 1784/AD 1727, pargana Amber, (No.300).
  22. Chitti dt.Asad sudi 2 VS 1784/AD 1727, to Sah Dodraj and Bhaiya Narayan Chand, (No.372); Chitti dt.Jesht vadi 4 VS 1784/AD 1727, Sah Sahibramji, (No.371); Chitti dt.Jesht vadi 1 VS 1784/AD 1727, pargana Amber, (No.300).
  23. Tod, Annals and Antiquity, p.434
  24. Chitti dt.Bhadon sudi 9 VS 1793/AD 1736, pargana Malarna, (No.452).
  25. Chitti dt.Jesht vadi 2 VS 1787/AD 1730, pargana Udehi, (No.505); Chitti dt.Pos vadi 11 VS 1784/AD 1728, pargana Chatsu, (No.411).
  26. Chitti dt.Baisakh vadi 6 VS 1812/AD 1755, pargana Bahatri, (No.487).
  27. Dilbagh Singh, "Revenue Administration", pp.65-7.
  28. See Table 1 in Chapter III on Agrarian Relations.
  29. In the arhsatta records of pargana Chatsu, the area cultivated with irrigated wheat and barley has not been distinguished, their aggregate areas and cash assessed revenues being entered under the head of chomli. See Arhsatta pargana Chatsu, VS 1767/AD 1710.



30. Tapan Raychaudhuri, "Non-Agricultural Production: Mughal India", CEHII, p.283, R.P.Rana, "Agrarian revolts", IESHR 1981, pp.294-298 and S.Nurul Hasan, K.N.Hasan and S.P.Gupta, "Pattern of Agricultural Production ", pp.244-246.
31. See Chapter IV on Revenue Policy for a discussion of the share of the state in the grain heap.
32. Dilbagh Singh, "Caste and the Structure ", IHR, No.2 (1976), pp.299-311.
33. S.Nurul Hasan, K.N.Hasan and S.P.Gupta, "Pattern of Agricultural Production", pp.246-247.
34. In the latter period, the Jaipur state was faced with an agrarian crisis in production exacerbated by regular and heavy demands for tribute by the Marathas. In response to a financial crisis, the state was increasingly forced to farm its revenues on long-term, virtually unregulated tenures to ijaradars. The diminished involvement of the state in grain marketing and its increased dependence upon the commercial community probably affected its ability, as well as the need, to regulate and control the local market in this period. Although evidence on this aspect is scanty, the increasing importance of spot purchases or khush kharid sales after 1750, as our evidence from pargana Phagi suggests, as compared to contract or satta sales is perhaps indicative of this change.
35. Syaha Satti, pargana Dausa wa Saner, dt.8th. day of Shawwal to 21st. Zilqad, San 1077 VS 1723/AD 1666 - i.e. 43 days in all corresponding to the month of April and early May, 1666.
36. *ibid.*
37. Jadunath Sarkar trans., "Farman of the Emperor Auranzib-Alamgir to Rasik Das Krori", in "The Revenue Regulations of Aurangzib", Journal of the Asiatic Society of Bengal, N.S. vol.II, 1906. Asiya Siddiqi, Agrarian Change in a Northern Indian State, Appendix A, p.187.
38. K.N.Chaudhuri, "Markets and Traders in India", in K.N.Chaudhuri and Clive Dewey eds., Economy and Society, pp.143-162. The discussion which follows on markets is based on this article.
39. B.R.Grover, "Commercial Life in Rural North India", p.137.
40. D.L.Curley, "Famine Policy", p.24.
41. Bayly, Rulers, Townsmen and Bazaars, p.170.
42. *ibid.*, p.410.
43. *ibid.*, p.332.
44. B.R.Grover, "Commercial Life in Rural North India", p.137.

45. As our subsequent discussion will show, the rural grain market and trade in eighteenth century eastern Rajasthan was regulated both formally and informally by the state. Despite this, however, the nature of the market does not correspond to the analytical category of administered trade as defined by Polanyi. Unlike administered trade where price ratios are officially set and are unchanging, nirakh bazar prices did fluctuate with demand and supply and corresponded to the retail price at the qasba. See Karl Polanyi, "The Economy as Instituted Process", in Karl Polanyi et.al. (eds.), Trade and Market in the Early Empires, op.cit., pp.243-270. Trade in eighteenth century eastern Rajasthan combined elements of an administered market with market trading and hence was very different from the administered trade that existed in early medieval south India discussed by K.R.Hall, "Price Making and Market Hierarchy in Early Medieval South India", IESHR, vol.XIV, no 2, pp.207-230.
46. idem, "Prices and rural commerce in 17th. century eastern Rajasthan", PIHC, Kurukshetra 1982, p.271.
47. *ibid.*, pp. 271, 276. The computed average price derived from the arhsatta would mean dividing the total cash value of the crop sold with the total quantity of grain revenue for each crop thereby averaging the variation in prices of multiple transactions conducted on different days at different prices.
48. Arhsatta pargana Phagi, Qasba Phagi Fasl Rabi, VS 1803/AD 1746.
49. Arhsattas pargana Phagi, VS 1798/ AD 1741, VS 1799/1742, VS 1801/1744, VS 1812/AD 1755.
50. We compared 58 separate transactions involving the sale of 16 foodgrains of the kharif and rabi harvests obtained from three villages and the qasba in pargana Phagi in the fiscal year 1725-26. In each case the price of sale recorded in the arhsatta was identical to the price stated for that day in the daily price list for the year. Arhsatta pargana Phagi, VS 1782/AD 1725-26 and Roznama Nirakh Bazar, pargana Phagi, VS 1782/AD 1725-26.
51. Chitti dt.Jesht vadi 1 VS 1784/AD 1727, pargana Amber, (No.300); Chitti dt.Jesht sudi 4 VS 1785/AD 1728, pargana Phagi, (No.412).
52. In the records, the amils were generally Sahs (generic title for traders) or Sanghis (Oswal traders). Refer the list of amils and amins in pargana Amber (Sawai Jaipur) from 1650-1750 and in six parganas under the jurisdiction of the Jaipur raja from 1750-1800 in S.P.Gupta, Agrarian System, pp.188-205 and Dilbagh Singh, "Revenue Administration", pp.464-469. On the basis of records of the neighbouring state of Jodhpur, G.D.Sharma concludes that the appointees to the posts of amil and amin (land revenue officers), potadar (treasurer), and modi (supplier of provisions to the army) were merchants known as mahajans, shahs/ sahuks, vohora, and sarrafs. idem, "The Marwaris: Economic foundations of an Indian Capitalist Class", in Dwijendra Tripathi ed., Business Communities of India. A historical perspective, pp.185-207.
53. Chitti dt. Jesht vadi 14 VS 1785/AD 1728, pargana Chatsu, (No. 408).
54. *ibid.*

55. Chitti dt.Sawan sudi 2 VS 1795/AD 1728, pargana Hindaun, (No.385).
56. Dilbagh Singh, "Revenue Administration", p. 416.
57. Arhsatta Phagi VS 1808/AD 1751.
58. For example, in 1754, the revenue in kind obtained from barley and wheat was sold partly through satta sales and partly by khush kharid sales. Arhsatta pargana Phagi VS 1811/AD 1754.
59. Arhsatta Phagi VS 1817/AD 1760, sale of juwar in qasba Phagi made according to the bazar price on Maghshri Vadi 10.
60. See below for a discussion on the purchasers of state grain. For specific references to khush kharid sales see details of qasba Phagi in the arhsattas of pargana Phagi, 1751-1760.
61. Chitti dt.Sawan sudi 8 VS 1783/AD 1726, pargana Amber, (No.364); Chitti dt.Bhadon sudi 5 VS 1783/AD 1726, pargana Amber, (No.365).
62. Chitti dt.Jesht vadi 4 VS 1803/AD 1746, to Murlidhar, (No.481).
63. This is borne out by the evidence of dates of sale from arhsattas of qasba Phagi and the other qasbas and conforms to the marketing period as set out for Rajasthan in the Indian Crop Calendar, pp.45-51.
64. Arhsatta pargana Sanganer, VS 1786/AD 1729
65. Chitti dt.Baisakh Vadi 9 VS 1783/AD 1725, from Shyamram and Kishan Chand, amils of Tonk, to Diwan Narayandas Kirparam, (No.420); and Chitti dt.Sawan Sudi 8 VS 1783/AD 1726 from Sah Sahibram to Diwan Narayandas Kirparam, (No.364).
66. Chitti dt.Sawan Sudi 8 VS 1783/AD 1726 from Sah Sahibram to Diwan Narayandas Kirparam, (No.364).
67. Chitti dt.Bhadon Sudi 5 VS 1783/AD 1726, to Sah Sahibram, (No.365).
68. The unusual rise in prices after the rabi harvest of the fiscal year 1726 is attested to in other letters one of which informs us of the distress caused to peasants due to the severe drought in the year. cf. Chitti dt.Jesht vadi 5 VS 1784/AD 1727, to Sah Sahibramji, (No.371); Chitti dt.Asad sudi 2 VS 1784/AD 1727, to Sah Dodraj and Bhayya Narainchand, (No.372). Also see the general price index in Chapter VII on Trends in Prices which shows that there was a price rise of approximately 26% between 1725 and 1726.
69. Chitti dt.Jeth Vadi 1 VS 1784/AD 1727, from Diwan Narayandas Kirparam to Sah Sahibram, (No.300).
70. Chitti dt.Jesht sudi 4 VS 1785/AD 1728, pargana Phagi, (No.412).
71. The references to panch mahajan purchasing state grain are to be found for each season in the arhsatta records of Phagi as well as of other parganas where

the purchasers are specified. In Sanganer, however, the term used was panch hat baniya. Similarly in the Syaha Satti of pargana Dausa cited above, more than 63% of the sales during the 43 day period were made on a single day with the panch mahajans of qasba Dausa.

72. It is interesting to note that the distribution by value of the total annual transactions between the various purchasers of grain and the state presented in Table I is very similar in its profile to that showing the percentage share of each seller in the coffee market of Mocha in K.N.Chaudhuri, The Trading World of Asia and the English East India Company 1660-1760, p. 380. In the latter case, the selling side of the market exhibits two extreme contrasts between the few substantial oligopolists and the large number of small suppliers.
73. Dilbagh Singh, "Nature and Incidence of Taxes Levied on Inland Trade", PIHC, Bhubuneshwar, 1977, p. 322.
74. Chitti dt.Bhadon sudi 9 VS 1793/AD 1736, pargana Malarna, (No.452).
75. *ibid.*
76. The original document reads "maha se parna dewa ke khechal kare chhe ...(diwans reply) muafik nirakh khush kharid vichoti kara jyo parna kanhe ne dyo mati" in Chitti dt.Kartik vadi 3 VS 1796/AD 1739, pargana, (No.486).
77. Chitti dt.Baisakh vadi amavas VS 1780/1723AD , pargana Lalsot, (No.361).
78. Chitti dt.Asoj vadi 2 VS 1780/AD 1723, pargana Lalsot, (No.360).
79. Chitti dt.Pos sudi 7 VS 1799/AD 1742, faujdar and amil pargana Dausa, (No.345).
80. The earliest reference in our documents to a general exemption from parna is for 1728. Chitti dt.Chaitra vadi 10 VS 1785/AD 1728, to Sahibramji, (No.309) The lack of adequate documentation on the question of parna, however, makes it impossible at present to indicate when or if the practice was discontinued.
81. Parwana dt.Kartik sudi 6 VS 1771/AD 1714, of Maharaja Sawai Jai Singh to the Lalani traders of Qasba Sanganer, (No.470) ; Chitti dt.Mah sudi 10 VS 1766/AD 1710, pargana Dausa, (No.357); Chitti dt.Kartik vadi 3 VS 1792/AD 1735, pargana Gazi-ka-Thana, (No.437); Chitti dt.Pos vadi 14 VS 1798/AD 1741, pargana Tonk, (No.465).
82. Chitti dt.Kartik vadi 3 VS 1792/AD 1735, pargana Gazi-ka-Thana, (No.437).
83. "..panch mahajan maha so naj ka parna ki khechal kare chhe." Chitti dt.Asoj sudi 6 VS 1797/AD 1737, pargana Niwai, (No.442)
84. Chitti dt.Kartik vadi 3 VS 1792/AD 1735, pargana Gazi-ka-Thana, (No.437).
85. Chitti dt.Chaitra vadi 4 VS 1813/AD 1757, pargana Chatsu, (No.401).
86. Chitti dt.Jesht sudi 4 VS 1795/AD 1728, pargana Phagi, (No.412).

87. ".sarkar ko naj vichoti hua pachhe aur vyopari ko tulo." Chitti dt.Baisakh vadi 11 VS 1785/AD 1738, pargana Dausa, (No.301).
88. Chitti dt.Phalgun sudi 4 VS 1784/AD 1728, pargana Gijgarh, (No.440); Chitti dt.Pos vadi 14 VS 1783/AD 1726, to the amils of all parganas, (No.369).
89. Chitti dt.Pos vadi 14 VS 1783/AD 1726, to the amils of all parganas, (No.369).
90. ibid.
91. idem, "Rice Cultivation and the Celtukci-Reaya System in the Ottoman Empire", in H.Inalcik, Studies in Ottoman Social and Economic History, pp.114-115.
92. David Ludden, Peasant History in South India, op.cit., pp.78-81.)
93. Chitti dt.Kartik sudi 4 VS 1788/AD 1731, amils of all parganas, (No.382); Parwana dt.Kartik vadi 5 VS 1788/AD 1731, of Maharaja Sawaii Jai Singh to the amils of all parganas, (No.583).
94. Parwana dt.Kartik vadi 5 VS 1788/AD 1731, of Maharaja Sawaii Jai Singh to the amils of all parganas, (No.583).
95. Chitti dt.Maghshri sudi 9 VS 1784/AD 1727, to Narayandas Kirparam, (No.419).
96. Parwana dt.Kartik vadi 5 VS 1788/AD 1731, of Maharaja Sawaii Jai Singh to the amils of all parganas, (No.583); Chitti dt.Kartik vadi 1 VS 1788/AD 1731, amils of all parganas, (No.423); Amber Records dt.Phagun sudi 1 VS 1769/AD 1713, likhtang from Anup Chand Ram Singh to diwans Bhikaridas, Fatehchand and Sarvopama, (No.430). In these documents, import of grain from Kama, Mathura and Agra lying to the east of Jaipur, Kota and Mewar to the south and Shekawati to the north are specifically mentioned.
97. Evidence from late eighteenth century Bengal and Bihar also suggests that while the local administration made similar efforts to facilitate the availability and distribution of grain in conditions of scarcity, a fair price schedule was not specified or imposed. cf. D L Curley, "Mughal Famine Policy", pp. 1-27.
98. Chitti dt.Pos sadi 7 VS 1799/AD 1742, pargana Phagi, (No.389).
99. Chitti dt.Jesht vadi 14 VS 1785/AD 1728, pargana Chatsu, (No.408).
100. Dastur Amal, pargana Jhak. An undated document which, from internal evidence, was compiled later than 1712.
101. Dastur Amal, pargana Amarsar, VS 1783/AD 1727.
102. Arhsatta qasba Sanganer, VS 1827/AD 1770 )
103. Nirni has been defined as animal fodder and khaklo as chaff of wheat and barley used as feed in Badrinath Sakaria and Bhupatiram Sakaria, Rajasthani

Hindi Sabad Kosh, pp. 2202, 607 resp. Also see Arhsatta pargana Amber, qasba Amber, VS 1783/AD 1726.

104. B.R.Grover, "Commercial Life in Rural North India", pp. 124, 135.
105. Chitti dt.Baisakh sudi 6 VS 1783/AD 1726, pargana Phagi, (No.413); Chitti Baisakh sudi 6 VS 1783/AD 1726, pargana Bahatri, (No.414); Chitti dt.Jesht sudi 13 VS 1783/AD 1726, pargana Phagi, (No.416); Chitti dt.Kartik sudi 7 VS 1782/AD 1725, pargana Amber, (No.302); Chitti dt.Bhadon sudi 9 VS 1783/AD 1726, pargana Chatsu, (No.477); Chitti dt.Baisakh sudi 8 VS 1783/AD 1726,, pargana Amber, (No.477).
106. In September 1726 the price of wheat in Delhi was 12 seers to a rupee after conversion of the difference in the weights of the Delhi and Chatsu maund of 40 seers. After a similar adjustment for the difference in the Chatsu and Phagi maunds, the post-harvest price of wheat in Phagi in the the fiscal year 1725, corresponding to May-June 1726, was 34.5 seers to a rupee. cf. Chitti dt.Bhadon Sudi 2 VS 1783/AD 1726 to the amils of pargana Chatsu, (No.366); and Arhsatta pargana Phagi, qasba Phagi fasl unhalu, VS 1782/AD 1725.
107. Chitti dt.Jesht sudi 13 VS 1783/AD 1726, pargana Phagi, (No.416)
108. Chitti dt.Sawan sudi 6 VS 1785/AD 1728, from Vidyadhar to Narayandas, (No.303) Katla was probably a local term for katra, defined as a small square bazar that was often a wholesale market where stocks are kept. S Nurul Hasan, "The Morphology of a Medieval Indian City - A case study of Shahjahanabad in the 18th. and early 19th. centuries", PIHC, 1982.
109. The estimate for the total salt sales is for 1728. See Parwana dt.Kartik sudi 7 VS 1785/AD 1728, (No.305)
110. Chitti dt.Maghshri vadi 14 VS 1789/AD 1732, pargana Niwai, (No.446); Chitti dt.Kartik vadi 8 VS 1814/AD 1837, pargana Chatsu, (No.328); Chitti dt.Kartik sudi 3 VS 1789/AD 1732, pargana Malarna, (No.450(a)); Chitti dt.Phagun vadi 3 VS 1781/AD 1725, pargana Niwai, (No.426); Chitti dt.Maghshri sudi 11 VS 1785/AD 1728, to Sah Mansaram and Sanghi Ajab Singh, (No.417).
111. Chitti dt.Jesht sudi 4 VS 1785/AD 1728, pargana Phagi, (No.412); Chitti dt.Maghshri sudi 11 VS 1789/AD 1732, pargana Malarna, (No.449); Chitti dt.Pos vadi 5 VS 1785/AD 1728, pargana Dausa, (No.306).
112. Chitti dt.Jesht vadi 1 VS 1784/AD 1727, pargana Amber, (No.300).
113. Chitti dt.Bhadon vadi 7 VS 1791/AD 1734, pargana Sawaii Jaipur, (No.304).

## Chapter VI

### **TRENDS IN REVENUE RATES.**

In this chapter, we will analyse the movements in the cash rates of revenue per unit of land as well as the incidence of additional taxes. The exclusion of crops taxed as a proportion of the produce is justified on the grounds that the proportions were defined by custom and regulation and remained unaltered in response to variations in yields or prices. The formulation of the cash rates, on the other hand, was in principle responsive to both these factors. An examination of trends in the nominal revenue rates per unit of land, in conjunction with the later analysis of price movements, would make it possible to hypothesise about the change in the real rates of revenue demand during the course of the eighteenth century for our region.

Using aggregated data at the level of the pargana, S.P.Gupta and Dilbagh Singh have analysed trends in the revenue rates per bigha for the major crops for the periods 1665-1750 and 1750-1800 respectively.<sup>1</sup> Although their methods differ, both studies have analysed the movements of the average crop-specific revenue rates computed as a ratio of the revenue received to the acreage cultivated for each zabti crop. As we have discussed earlier, the rate of tax levied on a unit of land depended on its productivity as well as on the tax status of the individual agriculturist. As an average crop-rate does not discriminate between variations in these two components of the tax, it becomes impossible to specify whether the fluctuations in the annual average rate arise due to shifts in the proportions of

highly taxed to lower taxed land, in terms of either of the factors specified above, or if there was an actual change in the rate of taxation.

Fortunately, the level of disaggregation in the revenue records of some of the qasbas under study makes it possible to analyse this question in greater detail. In the following analysis therefore we will trace the movements of rates applicable to the raiyati for the major crops of the kharif and rabi harvests. The rates applicable to the raiyati were the highest in terms of their incidence per bigha and the major proportion of the zabti revenue was assessed at these rates. A discussion of the additional cesses and taxes has also been included for each qasba to detect whether there were any additional taxes introduced or changes in the rate of levy. This was thought to be an important and essential complement to an analysis of trends in the incidence of the primary tax as cesses could provide an avenue for increased taxation without a change in the basic revenue rate.

The cesses levied in addition to the basic revenue demand are entered under the heads of "mal-o-jihat" or "jihhat" and "sair jihat" in the arhsattas. Although the distinction between the two is not always clearly maintained in the arhsattas, the jihat taxes were levied to defray the charges of assessment and collection of land revenue while sair jihat taxes included a variety of imposts. In view of the lack of uniformity in the nature, rates and numbers of such additional cesses, we have broadly classified them three types viz., i) those levied specifically on the cash assessed crops, ii) those levied on the batai crops, and iii) miscellaneous cesses and imposts. We have categorised all the additional cesses for each qasba into these three groups irrespective of whether the cesses had been originally entered under jihat or sair jihat in the respective arhsattas. While these cesses were regular levies



collected annually at the level of the primary fiscal unit, there were also imposts demanded on certain occasions such as marriages, on the sale of trees, on reeds used for thatching, and various bhents or presents which find mention in the sawai jamabandhi account. Such levies were not directly linked to productive activity in rural society and have been excluded from the analysis.

### Qasba Phagi

The revenue records of qasba Phagi are unique in the consistent level of detail they provide for each year examined. All the sub-categories linked to varying productivity were specified for each crop and within each such category, the land area and the rate of taxation on raiyati land was recorded separately from land assessed at concessional rates. The preferentially assessed individuals were named, with particulars of the area of land they cultivated, the rate of taxation and the revenue obtained. This form of precise referencing of each category of land and cultivator makes it possible to tabulate the revenue rates applicable to raiyati land for the major kharif crops - cotton, kodon (millet), indigo and maize - and the rabi crops - poppy, tobacco and vegetables - for the period 1691 to 1778 as seen in Table 10

In general, the cash rates per bigha were lower in qasba Phagi than in the other regions and especially so in the case of cotton (see Table 3, Chapter IV.). The official schedule of taxation or dastur amal for pargana Phagi recorded in 1691 forms our benchmark for an examination of the trends in zabti rates actually levied between 1691 and 1778 on the major cash crops grown in the qasba. Over this period of eight decades, we see from Table 10 that the cash rates were remarkably

constant and further that in no year was the rate levied higher than the prescribed rate of taxation. On the other hand, there were a number of years where there was a downward revision of the rates of levy. Such revisions were only occasional till 1742, after which we perceive a systematic decrease in the zabti rates for all the major crops. In the years where a reduction in rates has been observed, it appears that the reductions were not uniform for all crops or for each harvest. The range of the downward revision varied from one anna (Rs.0.06) to four annas (Rs.0.25) and exceptionally, to eight annas (Rs.0.50) per bigha in the case of tobacco in the year 1743. In qasba Phagi therefore, it is reasonable to conclude that there was a slight decrease in the nominal rate of taxation during the course of the eighteenth century.

Using the data for cotton as a case study, we have also attempted to determine the distribution of cotton acreage between the high-tax category of goriwa land and the less productive or mangro land. The quality of the arhsatta records for qasba Phagi also enable us to compare the proportion of land within each of these two categories that was assessed concessionally with land subjected to the standard rate of assessment or raiyati land. Table 11 shows that there was both an absolute and a relative fall in the area of cotton in the qasba from 1715 to 1760. This was more marked in terms of the bighas cultivated than in the relative proportion of cotton acreage in the total cash assessed or zabti area of the kharif harvest. With reference to the quality of land, there was a greater fall in the less productive or mangro land than in the highly taxed goriwa land devoted to cotton. Therefore, within the context of an overall decline in the production of cotton in the latter half of the eighteenth century, poorer quality land was being withdrawn from cotton cultivation in qasba Phagi. It is interesting to note, however, that the fall in either

Table 10: Zabti Rates of Taxation on Selected Crops : Qasba Phagi, 1691-1778

Year	Cotton		Kodon		Indigo		Makka	Poppy	Tbcco	Veg.
	1	2	3	4	5	6				
1691	1.00	0.75	1.00	0.75	1.25	1.00	1.50	2.50	3.00	1.25
1697	0.81	0.56	0.81	0.56	1.06	-	-	-	-	1.25
1715	1.00	0.75	1.00	0.75	1.25	1.00	1.50	NA	NA	NA
1716	1.00	0.75	-	0.75	1.25	1.00	1.50	2.50	3.50	1.50
1717	1.00	0.75	-	0.75	-	-	1.50	2.38	3.38	1.38
1718	0.94	0.69	0.94	0.69	1.13	0.94	1.38	NA	NA	NA
1721	NA	NA	NA	NA	NA	NA	NA	2.38	3.38	1.38
1727	1.00	0.75	1.00	0.75	1.25	0.88	1.50	2.50	3.50	1.50
1728	1.00	0.75	1.00	0.75	1.25	0.88	1.50	NA	NA	NA
1729	1.00	0.75	0.94	0.75	1.25	1.00	1.50	-	3.50	1.50
1730	1.00	0.75	1.00	0.75	1.25	1.00	1.25	2.50	3.50	1.50
1731	1.00	0.75	-	0.75	1.25	1.00	1.50	2.50	3.50	1.50
1732	1.00	0.75	0.94	0.75	1.25	1.00	1.44	2.50	3.50	1.50
1733	1.00	0.75	1.00	0.75	1.25	0.94	1.50	2.50	3.50	1.50
1734	1.00	0.75	1.00	0.75	1.25	0.88	1.50	-	3.50	1.50
1741	1.00	0.75	-	0.75	1.25	0.88	1.50	-	-	1.50
1742	1.00	0.75	-	0.75	1.25	0.88	1.50	-	3.50	1.50
1743	0.88	0.63	0.88	0.63	1.13	0.88	1.25	-	3.00	1.25
1744	0.94	0.69	-	0.69	1.19	0.94	1.44	-	3.50	1.50
1745	1.00	0.75	1.00	0.75	1.25	0.81	1.50	NA	NA	NA
1746	0.94	0.69	0.94	0.69	1.19	0.94	1.25	-	-	1.25
1749	0.91	0.66	0.75	0.63	1.16	0.91	1.38	-	3.44	1.44
1751	0.91	0.66	-	0.66	1.16	0.91	1.25	2.00	3.47	1.50
1753	0.94	0.69	0.94	0.69	1.19	0.94	1.44	-	3.50	1.44
1754	0.94	0.69	-	0.69	1.19	0.94	1.44	1.25	3.00	1.50
1755	0.75	0.66	-	-	-	-	1.38	-	-	1.41
1757	0.94	0.69	0.94	0.69	1.25	-	1.38	-	-	1.38
1759	0.94	0.69	-	0.69	1.19	0.94	1.44	NA	NA	NA
1760	0.94	0.69	0.94	0.69	1.16	0.94	1.44	-	1.38	3.25
1778	0.88	0.69	0.88	0.69	1.16	0.88	1.25	-	3.25	1.13

Source: Arhsattas, pargana Phagi for the relevant years.

Notes to Table 10:

NA indicates data not available due to gaps in the series. - (blank) indicates that the crop was not sown in the qasba in that particular year. The rates for better quality land sown with cotton and kodon are given in cols 1 and 3 while the less productive mangro land rates are given in cols.2 and 4, respectively. Indigo crop of the second year (or jari.col.5) was taxed at a rate higher than the first cutting (or nyoti.col.6)

**Table 11: Percentage Distribution of Cotton Land by Tax Codes: Qasba Phagi**

Period	% Area Cropped	Av. Area (Bighas)	Year	Area (Bighas)	Goriwa			Mangro		
					%A	%R	%P	%A	%R	%P
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1690 - 1714	-	-	1691	2318.15	11	89	11	89	95	5
1715 - 1719	64.14	1344.69	1718	1375.70	24	66	34	76	71	29
1725 - 1729	64.54	1597.26	1728	2223.35	27	73	27	73	77	23
1730 - 1734	50.55	1608.03	1733	1504.75	21	75	25	79	78	22
1740 - 1744	43.77	773.70	1744	778.00	25	68	32	75	56	44
1745 - 1749	31.82	206.98	1745	195.85	42	63	37	58	73	27
1750 - 1754	51.62	519.89	1754	612.00	32	34	66	68	60	40
1755 - 1760	35.68	281.96	1760	309.45	42	44	56	58	47	53
1760 - 1780	-	-	1778	174.45	47	43	57	53	53	47

Source : Arhsattas pargana Phagi for the relevant years.

**Notes to Table 11:**

Cols.1 and 2 are averages derived for the respective time periods. For each period an average was derived only where we had data for at least three years of the five. This accounts for the exclusion of the periods 1725-1729 and 1735-1739 from the table due to gaps in the series. Col.1 shows the average percentage of the cash assessed area of the kharif harvest devoted to cotton. The average area under cotton for each period has been entered in Col.2. Cols.1 and 2 therefore indicate the relative and absolute shifts in cotton cultivation between the time periods.

The year chosen in Col.3 corresponds to that year within each period in which the area under cotton was closest in value to the average derived in Col.2. Given the gaps in the data, this was the only method of avoiding extreme values and selecting a year that was relatively unexceptional. The years 1691 and 1778 have been included as they indicate the range of the series.

Col.4 gives the cotton acreage for the years in Col.3. In the revenue records the total cotton area assessed, was subdivided into two sets of rates on the basis of the productivity of the land cultivated. Goriwa and Mangro refer to the more productive and the less productive land on which cotton was grown. Each category was further differentiated on the basis of those cultivators entitled to concessional rates and the raiyati who paid the maximum rates applicable. Cols.5 and 8 show the percentage distribution of the cotton acreage in the categories of goriwa and mangro (%A). Cols.6 and 9 indicate the percentage of land assessed under the maximum or raiyati rates in each category (%R). Cols.7 and 10 give the proportion cultivated by the privileged sections granted concessionary rates in each category of land (%P).

category of cotton land was not proportionately reflected in the percentages of land cultivated by those accorded revenue concessions and those who were taxed at the raiyati or standard rates. Until about 1750, the percentage of land assessed at the standard rate was approximately 70 per cent of the land in each productivity linked category. From 1750 onwards there was a disproportionate fall in the percentage of raiyati land growing cotton amounting to a drop of slightly more than 50 per cent in each category. Thus, despite the reduction in the standard rate of levy after 1743, cotton production in qasba Phagi in the latter half of the eighteenth century appears to have been increasingly restricted to the most productive land held by those members of the rural elite entitled to concessionary rates of taxation.

The revenue assessed in cash included the land revenue on zabti crops, which formed the largest component of the cash revenues, as well as a tax on farm animals and a hearth tax on the artisanal and menial castes residing in the qasba (see below). These cash revenues were subject to a surtax at the rate of one taka per 100 rupees and this fee was paid to the chaudhuri and qanungo. The patel received a two per cent levy called "virotra". A letter from the diwan to the amils of all the parganas administered by the Jaipur durbar, indicates that the patel was either paid the customary five per cent levy termed "bison dh" or the lower virotra amount if he paid land revenue at a concessionary rate.<sup>2</sup> Until 1733, virotra was calculated on the entire revenue obtained from the village comprising the sale value of the revenues collected in kind plus all the cash assessed revenues listed above. From the next year onwards, however, the levy was revised to exclude the sum obtained from the sale of grain.<sup>3</sup> It is possible that the patel's share of the grain produced in the village began to be collected in kind at the time of division.

The cesses on revenue collections in kind were levied as a proportion of the state's share of the produce. The collective term for the three cesses collected in the category of jihat tax was "farah" and this generally amounted to just under twelve per cent of the grain revenue or ten per cent of the total land tax in qasba Phagi. Farah included three types of levy. Principal among these was "seri" which was levied at the rate of three seers per maund of the state's share of revenue. This cess was only applicable to the raiyati and the village officials, the zamindars, Rajputs, Brahmans, mahajans and kamins being exempted from payment.<sup>4</sup> The etymology of the word seri is difficult to trace, the closest term being "serina" which was an allowance paid in acknowledgement of the proprietary right.<sup>5</sup> A second cess, dastur chaudhuri/qanungo, was fixed at one seer per maund levied on the entire grain revenues with no concessions or exemptions to privileged revenue assesseees. This levy parallels the dastur payable to the chaudhuri and qanungo on the zabti revenues mentioned above. Lastly, a cess called "izafa ganj wa vichoti" was levied on all batai crops in kharif and rabi. In the absence of a levy under the head of bhara in qasba Phagi, it is likely that the collection under izafa ganj wa vichoti was, as the name implies, a tax to cover the cost of grain carriage to the market. Unlike in pargana Dausa where a similarly named levy was uniformly two or three per cent of the quantity of grain revenue,<sup>6</sup> the amounts entered under izafa in qasba Phagi were not a fixed ratio of the grain collected although the cess was of a roughly similar magnitude. This may possibly be because certain sections were exempt from payment and hence the proportion of cess to basic tax in kind varied from year to year. In addition to these three general levies, a special tax called "nirni" was imposed at the rate of one and a half takas per maund on the grain revenues of the pulses moth, mung, urad and chola.<sup>7</sup> The rural elites were exempted from the payment of nirni. In colloquial usage, the term nirni is taken to

denote fodder and the tax may have been levied on the valuable fodder of the pulse crops retained by the peasant.<sup>8</sup>

In addition to the cesses linked to crop production, there was an annual tax, termed "gau shumari", on all farm animals except those owned by the higher castes. The livestock equivalent of a tax amount of one rupee was expressed as : five buffaloes, or seven camels, or ten cows, or fourteen bullocks, or twenty-seven sheep and goats.<sup>9</sup> The levy of a cess on farm animals was a method of taxing those who derived a part of their income from pastoralism. Further, a grazing tax on the draught animals were collected at two annas per animal. However, by 1715 the grazing tax was no longer levied while the gau shumari had become restricted to a cess on sheep and goats only and renamed "chaili rasi".<sup>10</sup> Another annual levy, termed "habubati", included a number of miscellaneous items some of which were previously of a non-monetary nature but had been commuted into a fixed cash amount. These were a hide or "aghor" tax (lit., half-hide) and a blanket or "kamli" tax.<sup>11</sup> The annual charge for qasba Phagi under this head was Rs.26.00.<sup>12</sup>

Finally, certain sections of the non-agricultural population of the qasba, including workers in leather, base and precious metals, glass, lac, various processes in cotton cloth production and a variety of occupational castes such as distillers, potters and parched grain sellers, were subject to a hearth tax termed "kholri". A similar hearth tax, either called kholri or jhupri, was levied in all six qasbas studied although the rates of taxation differed. In qasba Phagi, generally two rates prevailed for each caste group - twelve annas constituted the full rate while half of that was levied on apprentices or servants for the first year.<sup>13</sup> From the jamabandhi accounts it appears that some individuals were taxed at still lower rates

although the reason for such concessions has not been mentioned.<sup>14</sup> The exclusion of some of the key members of the traditional service castes of the village such as the barber, washerman and blacksmith from the list of taxpayers as well as the fact that the tax was only levied on the artisanal and professional castes resident in the qasba, suggests that the cess was some sort of income tax on those urban producers producing solely for the market.

Our review of the additional cesses levied in qasba Phagi indicates that all those under the category of sair jihat remained unchanged in their rate of levy during the period 1715 to 1778. Further, there were no increase in the number of additional cesses imposed on the qasba under the head of sair jihat in the same period. Unfortunately, a significant element of additional taxation that was included within farah or jihat taxes was itemised only in the jamabandhis and not in the more continuous arhsatta records. Hence the constancy or otherwise of the rates of taxation for cesses such as seri and izafa cannot be verified.

#### Qasba Sanganer

The records of qasba Sanganer are as detailed as those of qasba Phagi. A similar level of disaggregation of revenue rates on account of differentials in productivity and preferential status of named cultivators enables us to identify the trends in the nominal rates of the major crops applicable to the raiyati. Unlike the other qasbas, the fiscal records of qasba Sanganer were separated off from the pargana records and entered in a separate arhsatta Qasba Sanganer along with eight surrounding villages that were considered within its administrative ambit. For a short span between 1736 to 1746, the revenue records of qasbas Sawai Jaipur,



Amber and Sanganer along with 64 surrounding villages were consolidated under arhsatta Qasba Sawai Jaipur. This administrative reorganisation affected the manner in which the revenue records were maintained and the level of detail generally recorded in the arhsatta Qasba Sanganer was lost during the interim decade.

In general, the revenue rates on the cash assessed crops were significantly higher in Sanganer than for the other parganas (see Table 3, Chapter IV.). The movement in the rates of the major kharif crops – cotton, sugarcane and makka – and the rabi crops – vegetables irrigated by wells and melons – have been tabulated in Table 12. The significant point that emerges from the table is that there was no increase in revenue rates from 1688 to 1773 and that the standard rate of levy on each productivity-based category was identical to the official revenue schedule of the qasba.<sup>15</sup> In a number of years the cash rates for some crops were lowered by one to four annas per bigha.<sup>16</sup> The only year when there was a general downward revision in rates was 1712 and was most probably in response to the severe drought of 1712-13 leading to widespread famine in the region.<sup>17</sup> After 1773, there is a large gap in the documentation till the arhsatta of the rabi harvest of 1786. In 1786, as a result of the depredations of the Maratha armies the outlying land of the qasba remained uncultivated and the harvest of three of the seven other villages included within the boundaries of the qasba was completely destroyed.<sup>18</sup> Further, while the nominal rates per bigha in 1786 were the same as in 1772, the number of bighas assessed under methi and sarson have been artificially inflated by 1.5 and 1.25 times respectively. This unique form of enhanced taxation has been recorded only for this particular year. The gaps in the documentation after 1773 makes it

Table 12: Zabti Rates of Taxation on Selected Crops: Qasba Sanganer, 1688-1773

Year	Kharif										Rabi		
	Cotton						Sugarcane				Makka	Veg.	Melon
	1	2	3	4	5	6	7	8	9	10	11	12	13
1688	2.25	2.00	1.75	-	1.25	1.00	-	5.00	3.00	4.50	1.75	-	1.50
1690	2.25	2.00	1.75	-	1.25	1.00	-	5.00	3.00	4.50	1.75	-	-
1708	2.25	2.00	1.75	-	1.25	1.00	-	5.00	3.00	4.50	1.75	-	-
1712	2.19	1.94	1.69	1.44	1.19	0.94	-	4.50	-	4.00	1.69	1.00	1.50
1713	-	-	1.69	1.44	1.19	0.94	6.75	4.75	-	4.25	1.69	0.94	1.25
1715	2.19	-	1.69	1.44	1.19	0.88	7.00	4.81	3.00	4.25	1.69	0.81	1.50
1716	2.25	2.00	1.75	-	1.25	0.88	7.00	4.75	2.81	-	1.75	1.00	1.50
1724	-	-	-	-	1.25	-	7.00	-	3.00	-	-	NA	NA
1728	2.19	1.94	1.69	1.44	1.19	0.94	7.00	5.00	3.00	4.50	1.69	1.00	1.50
1730	2.19	-	1.69	1.44	1.19	0.94	7.00	5.00	3.00	4.50	1.69	1.00	1.50
1731	2.25	2.00	1.75	1.50	1.25	1.00	7.00	5.00	3.00	4.50	1.75	1.00	1.50
1732	2.25	2.00	1.75	1.50	1.25	1.00	7.00	5.00	3.00	-	1.75	1.00	1.50
1733	2.25	-	1.75	1.50	1.25	1.00	-	4.50	2.81	-	1.75	NA	NA
1747	2.25	2.00	1.75	1.50	1.25	1.00	-	-	-	-	1.75	1.00	1.50
1748	2.25	2.00	1.75	1.50	1.25	1.00	-	-	-	-	1.75	1.00	1.50
1755	2.25	2.00	1.75	1.50	1.25	-	7.00	5.00	3.00	-	1.75	1.00	1.50
1756	2.25	2.00	1.75	-	-	-	-	5.00	3.00	4.50	1.75	NA	NA
1760	-	-	1.75	1.50	1.25	1.00	7.00	4.25	2.25	-	1.75	1.00	1.56
1761	2.19	1.94	1.69	1.44	1.19	0.94	6.94	4.94	-	-	1.75	NA	NA
1763	2.19	1.94	1.69	1.44	1.19	0.94	6.94	4.94	-	-	1.69	0.94	1.44
1766	2.25	-	1.75	1.50	1.25	1.00	7.00	5.00	3.00	4.50	1.75	NA	NA
1767	2.25	2.00	1.75	1.50	1.25	-	7.00	4.25	2.63	-	1.75	NA	NA
1768	2.25	2.00	1.75	1.50	1.25	-	7.00	5.00	3.00	4.00	1.75	NA	NA
1770	2.25	2.00	1.75	1.50	1.25	?	7.00	5.00	3.00	?	1.75	1.00	1.50
1771	2.25	2.00	1.75	1.50	1.25	1.00	-	5.00	3.00	?	1.75	1.00	1.50
1772	-	-	1.75	1.50	1.25	?	-	5.00	3.00	?	1.75	NA	NA
1773	2.25	2.00	1.75	1.50	1.25	?	5.63	5.00	3.00	4.50	1.75	1.00	1.50

Source: Arhsattas Qasba Sanganer of the relevant years.

Notes to Table 12: - (dash) indicates that there were no revenue returns for that particular category or crop. NA denotes data not available. ? indicates that the category can not be identified.

Cols. 1-6 denote the six tax categories under which cotton acreage was assessed, namely piwal paheli, piwal pacheli, sawanu, dhandha, lih and rama respectively. Cols. 7-10 give the tax rates on the four productive categories of sugarcane land, viz. gundgari, river-watered, well-irrigated and the ratoon or peri crop respectively.

impossible to say whether there was a general increase in revenue demand or if 1786 had been an unusual year.

As in the case of qasba Phagi, the statistics of cotton production have been used in Table 13 to observe the trends in the distribution of acreage between the six revenue categories of cotton as well as the distribution within each such category of land assessed at a concessionary rate and that assessed at the standard rate. As observed in qasba Phagi, in Sanganer too there was a fall in the absolute and relative area cultivated with cotton between the period of extensive cotton

**Table 13 : Percentage Distribution of Cotton Area Cropped by Tax Codes: Qasba Sanganer**

Year	%Area Crop'd	Total Bighas	Piwal I			Piwal II			Sawanu			Lih			Dhandha			Rama		
			%A	%R	%P	%A	%R	%P	%A	%R	%P	%A	%R	%P	%A	%R	%P	%A	%R	%P
1711	33.33	1050.55	5	100	0	2	100	0	33	84	16	30	97	3	25	97	3	2	52	48
1715	38.55	911.65	1	100	0	-	-	-	47	92	8	21	100	0	30	90	10	1	100	0
1728	51.72	1256.80	16	98	2	1	100	0	40	97	3	23	99	1	18	100	0	3	100	0
1733	22.56	461.95	1	100	0	-	-	-	37	91	9	17	100	0	39	100	0	6	100	0
1748	29.02	538.00	7	97	3	1	100	0	55	88	12	19	88	12	16	95	5	2	26	74
1755	14.26	227.80	10	100	0	13	97	3	45	95	5	11	89	11	21	79	21	-	-	-
1760	22.98	236.05	-	-	-	-	-	-	65	73	27	13	56	44	21	80	20	1	100	0
1763	44.65	506.05	21	96	4	5	63	37	55	89	11	9	79	21	8	45	55	2	74	26
1766	17.90	266.70	3	100	0	-	-	-	66	84	16	3	100	0	27	93	7	2	100	0
1773	23.78	307.80	5	100	0	29	79	21	34	89	11	30	79	21	2	100	0	-	-	-

Source: Arhsatta Qasba Sanganer for the relevant years.

Notes to Table 13:

% Area Cropped gives the cotton acreage relative to the total cash assessed or zabti area of the kharif harvest.

Total Bighas gives the annual area in bighas cultivated with cotton.

The six tax categories applicable to cotton were, firstly, the most productive piwals of the first and second quality, the monsoonal cotton crop or sawanu, cotton grown on annually inundated land and the lower taxed dhandha and river irrigated or rama land. Each of these tax categories was further subdivided into land assessed at the standard and that assessed at privileged rates. Thus in each of the six cotton categories the first column sets out the percentage of land under that category in the year (%A), followed by proportion liable to standard or raiyati rate of taxation (%R) and that under privileged cultivation (%P). All the figures in %A, %R, and %P are expressed to the nearest whole number.

cultivation in the 1720s and 1730s and the period after 1755 during which cotton production remained consistently low until the end of our series in 1773. Most of the cotton was grown on land taxed in the range of Rs.1.75 to Rs.1.25 per bigha corresponding to the categories of sawani, dhandha and lih, and this distribution was maintained throughout. The cultivation of the highly taxed productive lands (piwals) and the lowest taxable category of river irrigated (rama) land fluctuated but even together did not generally amount to more than ten per cent of the total cotton acreage. With regard to the percentage distribution of cotton acreage between land assessed at the standard raiyati rate and land liable to revenue concessions, the latter category appears to have increased although this trend is not as clearly discernible in qasba Sanganer as in qasba Phagi due to considerable annual variation in the categories of land devoted to cotton in Sanganer.

The additional taxes in qasba Sanganer entered under sair jihat included cesses levied on agricultural production as well as on the trading and commercial activity in the qasba till about 1733. In the arhsattas of the other parganas, a basic distinction was maintained between, on the one hand, taxes to be levied on agricultural production and on the population of a fiscal unit or the sair jihat cesses; and, on the other, taxes on the trading, commercial and manufacturing operations in the pargana as a whole. The latter type of taxes did not bear a strict ratio to the land revenue of the primary fiscal units and were generally put under the head of sawai jamabandhi in the arhsatta records. With the amalgamation of the revenue records of the qasbas Sanganer, Jaipur and Amber in 1736, the latter type of taxes were separated from the sair jihat list of taxes. It is possible therefore, to identify the imposts specifically on agricultural production in the qasba, as distinct from general levies on the pargana as a whole, and compare the rates of these in the period prior to 1736 with those from 1747 onwards.<sup>19</sup>

An examination of the cesses in the two periods appears to indicate an increase in taxation in the post-1746 phase. For example, on all the cesses collected in copper takas an additional charge of one taka on every five collected was made under the head of "vata" or "panchtaki", thereby incrementing the total levy by 20 per cent over the previous level. However, this was due to a change in the system of maintaining accounts rather than an actual enhancement in the rate. Previously the same charge had been made but rather than being entered piecemeal for each cess, it was registered under a distinct head in the sair jihat taxes.<sup>20</sup> The 20 per cent increment was imposed to cover the discount on the conversion of the old 'black' copper coins current in the city to the new 'red' coins acceptable to the treasury.<sup>21</sup> Similarly, the cesses levied in lieu of the bhom or zamindari right of the Jaipur maharaja had earlier been separately recorded but under identical sub-heads in each account.<sup>22</sup> From 1747 onwards, the bhom dues were included in the sair jihat taxes and entered along with the basic levy. A similar reorganisation in the record-keeping occurred in the case of the patwari and qanungoi cess. According to the arhsatta account of 1712, the cash amount on which patwaro was levied as a specific proportion included the basic revenue collection as well as the cash amounts of miscellaneous dues like on the sale of trees, fines for misdemeanours ("farohi") and irregular marriages ("dherecha"). After 1746, the collection under patwaro was limited to a tax on the basic revenue amount, while the other cesses previously included in the calculation now had new sub-entries recording the amounts collected in lieu of patwaro and qanungoi.<sup>23</sup> A series of such changes aimed at simplifying and rationalising the recording of tax receipts account for the apparent enhancement in the rate of levy of some sair jihat cesses between the period prior to 1736 and the years after 1747.

The additional taxes levied specifically on the cash assessed or zabti revenue were "taki" and "incch tarkari" collected in both the harvests. Hasil taki was calculated at 1 taka per rupee of the zabti revenue. The patel was granted an exemption on his share of the zabti revenue, which varied with every harvest, and he also received a fixed amount of Rs. 7.50 per month from the taki collection.<sup>24</sup> After deducting the patwari's remuneration, a twenty per cent increment for the reasons discussed above was added to make up the final levy. In addition to taki, the cultivation of field crops in the qasba attracted a further substantial levy of five annas per bigha under the head of incch tarkari.<sup>25</sup>

The cesses on the produce revenue under farah were: i) seri levied at a rate of little over one and a half maunds per 100 maunds of grain revenue in kharif and two and a half maunds per 100 maunds in rabi on all crops with the exception of bajra. Bajra production was taxed at the considerably higher rate of six and a quarter maunds per 100 maunds. The high levy on bajra probably incorporates the fodder charge which was not separately assessed for bajra unlike the other batai crops. ii) Fodder cesses or nirni on the kharif pulses at one and a quarter takas per maund and "khari khaklo" on the rabi grains at one taka per maund<sup>26</sup>; and, iii) bhara or transport charges at a half taka per maund for all batai crops in both the harvests.<sup>27</sup> Privileged taxpayers who paid land revenue at the lowest proportion of a quarter of the produce were granted an exemption from the payment of the more onerous of the farah taxes such as seri and fodder charges. The patel also paid only half the standard rate on his share of the revenue in kind.<sup>28</sup> Bhara was levied even when a part of the state's share of the grain remained unsold thus indicating it was a fixed levy irrespective of the actual transport or sale of the grain.<sup>29</sup> The fodder and transport levies which were calculated in cash were then converted into kind quantities at exchange rates which were graded according to the assumed value of

the crop but did not bear a direct relationship with the price differentials as reflected in the current sale prices. For instance, in 1770 the conversion rate was four seers per taka for gram, kharif pulses and bajra although their market prices varied from Rs.1.00 to Rs.1.72 per maund. In the case of high valued crops such as lentils and wheat, the fixed exchange ratio of takas to seers meant that because the tax was ultimately paid in kind, the producers had to part with a larger share of their produce than the nominal proportions specified for fodder and transport charges. For example, in 1770 the average harvest price of wheat was Rs.1.52 per maund and the market rate of exchange was 14.5 takas to a rupee.<sup>30</sup> The fixed ratio adopted by the revenue authorities for the conversion of takas to seers in the case of wheat was fixed at 3 seers per taka. If the calculation had been based on the market price and the current exchange rate, then one taka of tax would have been equivalent to just 1.8 seers of wheat - or forty per cent lower than the amount actually demanded. Scattered evidence in the arhsattas indicates that this practice of converting a cash levy into grain was a post-1747 innovation because prior to the administrative reorganisation, the levy on fodder was collected in cash rather than grain.<sup>31</sup> In addition to the cesses under farah, a tax on weighing the grain, calculated at a rate of ten annas per 100 rupees of sales revenue was paid by the trader purchasing the state's revenue in kind.<sup>32</sup>

Collections termed dasturs, or customary payments, were made to the patwari and the qanungo. The patwari's dastur was calculated at 31 takas per 100 rupees of the zabti revenue, after certain deductions, and 1.25 maunds per 100 maunds on the grain revenue.<sup>33</sup> The dastur qanungo, on the other hand, was calculated at a half taka per asami or cultivator for the preparation of the "daul".<sup>34</sup> Daul was the general term for the document prepared by the qanungo with the particulars of the estimated revenue in the coming harvest on the basis of which the final revenue

settlement was made for each revenue payer.<sup>35</sup> While these heads were specifically termed patwara and qanungo, collections on their account also formed a component of other cesses such as "kholri", "siljuta", and "khali ghana" discussed below.

In conformity with the general categories of additional levies in the other parganas, the agriculturists were taxed on their sheep, goats, sale of trees, reeds used for construction of huts and on each gumlac and jujube tree. Thus the system of rural taxation was comprehensive in the sense that all forms of productive activity besides the purely horticultural were liable to taxation. The non-agricultural artisanal and menial castes (kamins) residing in the qasba paid kholri. After the reorganisation of the form of entries in the accounts, hasil kholri included the basic tax as well as the dues of the patwari, qanungo and the bhomi. The basic levy was graded into four categories - the full rate was 12 takas per house and the lesser amounts 9, 6 and 3 takas - but the principle underlying the scaled taxation has not been specified.<sup>36</sup> In addition to this there were imposts of one taka per house for bhomi, a half taka each for patwara and qanungoi and, lastly, the 20 per cent increment on the takas thus calculated under panchtaki discussed above.<sup>37</sup> It is interesting to note that those identified as paltis and haljotas or agriculturists among the kamins were exempt from the payment of kholri dues from about 1728.<sup>38</sup> The castes mentioned as paltis or agriculturists in the list of kholri taxpayers were the Malis, Mewatis and Kumhars each of which category included the patel and paltis of the caste group.<sup>39</sup>

The leather workers in the qasba had to pay additional cesses called aghori and siljuta. Aghori refers to hides and was probably imposed on the tanners. Normally the tax was given on ijara to one or more of the leather workers or to the entire caste panchayat of the Chamars.<sup>40</sup> Siljuta, on the other hand was a cess fixed at



nine takas per 'patti' with an additional amount of one and a half takas per patti for patwara and bhom from 1746 onwards. The pattis appear to be linked to agricultural caste groups - the Chamars of each patti are identified as associated or attached to the pattis of the Kumhars, Malis, Mewatis, Gujars, Jats, Guwars and Ahirs.<sup>41</sup>

The oil-pressers or telis were required to pay a cess termed khali ghana on each press worked by them charged at the same rate as the kholri tax levied on the kamins.<sup>42</sup> There was a steady decline in the number of oil-presses in the qasba from around the 1730s partly due to the migration of telis to the newly established qasba Jaipur and partly due to the high tax level in qasba Sanganer. In order to avoid paying the high taxes levied on them in Sanganer, the telis of the qasba had moved to the nearby village of Vavla in pargana Amber where the levy was just five per cent of that in Sanganer.<sup>43</sup>

These then formed the major heads under which taxes in addition to the basic revenue demand were levied. The complexity of the system of taxation in addition to the changes in the method of record-keeping in this qasba makes it difficult to perceive changes in the rates of levy. On the whole, however, it appears that there was no substantial change in the level of tax demand in the qasba.

#### Qasba Lalsot

The revenues in qasba Lalsot were almost entirely assessed in cash, generally constituting more than three quarters of the total annual collection. Judging from the revenue returns, the major crops were cotton and sugarcane in the kharif and wheat and barley in the rabi harvest. Unlike the preceding two qasbas studied, the

detailed referencing of cash rates by the two criteria of type of soil or productivity and the status of the cultivator have only occasionally been recorded in the arhsattas of Lalsot.

The highest rate applicable on cotton land in the qasba was Rs.1.38 or 22 annas per bigha in the period 1713 to 1777. However, most of the land allocated to cotton was not assessed at this rate. There was a gradual gradation in rates from 22 annas to 5 annas, generally in steps of one anna, though not all the rates within this range were levied each year.<sup>44</sup> In terms of varying productivity, five categories have been identified.<sup>45</sup> In descending order of cash rates these were: i) "asli" or lands irrigated by an established permanent well situated close to the village site,<sup>46</sup> ii) "dangro" or land situated on the steep bank of a river or hillside,<sup>47</sup> iii) "kuee" and iv) "kua". The terms used to describe categories (iii) and (iv) suggest irrigation by well but the distinction between them is not clear. It is possible that kuee, a diminutive of kua, indicated a shallow pit-well or dhenkali and kua was the term applied to a regular well which was either a relatively new pukka well or else a kutchra well v) Lastly, the lowest rates of assessment were levied on the rama land or that irrigated by river water. The latter was the category under which most of the land producing cotton was assessed each year. Within each of the five classifications, there were further gradations. Although these sub-categories have not been referenced, we have assumed that the pattern was similar to that described for qasbas Phagi and Sanganer - that is, the highest rate within each group was the standard rate applicable on raiyati land while the other rates lower than that were concessionary rates granted to specific individuals belonging to the rural elite. In Table 14 we have set out the standard rate for each category for each of the years in which the categories have been specifically identified in the arhsattas.

The identification of the productivity-linked categories in the records is limited to a few years while in the majority of the arhsattas the different rates of taxation are simply set out in descending order without the accompanying code reference. Except for the highest rate on asli land, it becomes impossible to verify the movements in the rates on the other categories accurately. Given this difficulty, we have used the movements in the computed average rates per bigha for each year to identify the trends. These were derived by dividing the totals under revenue received by the acreage of cotton in each year (see Table 15). We note that until 1722 the average rate of taxation was consistently below Rs.1.00 per bigha and ranged from Rs. 0.82 to Rs. 0.97. However, from the next available year in the records, that is 1730, and until 1753 there was an increase in the average tax rate to between Rs.1.00 and Rs. 1.06 per bigha . This was because in the period till 1722 a larger proportion of the annually cropped cotton land was assessed at rates of Rs.1.00 and below, specially significant being Rs.1.00 and Rs.0.75 per bigha.<sup>48</sup> Cotton land assessed at the latter rate in the post-1730 period was either minimal or nonexistent while that taxed at Rs.1.00 alone accounted for more than 70 per cent

Table 14: Zabti Rates of Taxation on Selected Crops : Qasba Lalsot

Crop	Year	Asli	Dangro	Kuee	Kua	Rama
Cotton	1730	1.38	1.25	1.19	1.13	1.00
Cotton	1731	1.38	1.25	1.19	1.13	1.00
Cotton	1762	1.38	1.25	1.19	1.13	1.00
Wheat	1731	2.69	2.32	2.32	2.19	1.94
Wheat	1767	2.69	2.32	2.32	2.19	1.94
Barley	1731	2.56	2.19	2.19	2.06	1.81
Barley	1767	2.56	2.19	2.19	2.06	1.81

Source: Arhsattas pargana Lalsot for the relevant years.

of the total in 1730.<sup>49</sup> It is probable that there had been an upward revision of rates on land earlier taxed at Rs.0.75 to Rs.1.00 per bigha between 1722 and 1729. There are no significant shifts in the level of cotton acreage assessed under the higher tax rate.<sup>50</sup> The revised rates continued to be enforced until the last year of our series, 1777, with the exception of 1767 and 1770 when there was a decrease in the entire range of cotton rates by 1 anna and 2 annas per bigha respectively.<sup>51</sup> Between 1753 and 1756 the average rate declined slightly but this was due to the shift towards the proportion of land taxed at Rs.1.00 and under, from that taxed at the higher range of Rs.1.13 - 1.38 per bigha. It is possible that concessionary rates were granted to more cultivators due to the severe drought in 1755 and the locust attack in the qasba in 1756.<sup>52</sup>

Although the revenue rates remained stable from 1730 onwards, there was a steady increase in the proportion of cotton land assessed at concessionary rates as can be seen from Table 16. This is consistent with the trends in qasbas Phagi and Sanganer discussed earlier. Thus although there was no general revision in the cotton cash rates per bigha after 1730, there was a disproportionate fall in the total revenues from 1753 onwards owing to a larger proportion of cotton being concessionally assessed. The revenues received in 1762, for example, were 7 per cent lower per unit than those of 1730 despite the fact that the total acreage and its distribution within the five productive categories were roughly comparable in the two years (cf. figures under %A). However, in 1762 although 43.4 per cent of the cotton cropped area was preferentially assessed, the shortfall in total revenue due to this was only 7.5 per cent, implying that the concessionary rates were only marginally lower than the standard rates and did not result in a substantial loss to the state.<sup>53</sup>

The other important cash crop grown in the qasba was sugarcane. Although grown on a far smaller scale than cotton, its revenue yield was twice that of cotton per bigha. The cash rates for sugarcane ranged between the highest applicable on raiyati land equal to Rs.2.00 per bigha to the lowest rate of Rs.1.50, the intermediate rates being graded by two anna increments per bigha.<sup>54</sup> There was no upward revision in the raiyati rate for the entire period. The average rate also remained fairly stable indicating that shifts in the proportions of concessionally assessed to raiyati cropped area were insignificant, the proportion being generally 30:70 respectively. The exceptional years were 1748 and 1753 when the percentage of land assessed at raiyati rates fell drastically to 43 per cent and 15 per cent, respectively, which had the effect of lowering the computed average rate without there having been a real reduction in the actual rates of taxation.<sup>55</sup> However, in 1770 there was a substantial reduction in the sugarcane rates – those on raiyati land being reduced by a third of their standard level.<sup>56</sup> In fact, in 1770 there was a general reduction in the rates for all kharif and rabi crops by varying amounts, probably in response to a local crisis in that year.<sup>57</sup> Thereafter the rates resumed their normal levels.<sup>58</sup>

The only instance of revenue rates being reformulated has been recorded for the production of irrigated wheat and barley in qasba Lalsot. Until 1722, the areas cultivated with wheat and barley were not differentiated into their respective acreages in the records. Their combined acreage was, however, disaggregated into the irrigated or "seko" land and the unirrigated or "bor" land.<sup>59</sup> The standard zabti rate on irrigated cereal land (seko) was Rs. 1.75 and dry cereal acreage (bor) was Rs. 1.50.<sup>60</sup> There are two points that can be made with respect to this structure of taxation. First, the margin between the tax rates on irrigated and unirrigated cereal production was unusually small considering the almost two-fold difference in the

Table 15: Average Rates of Zabti Taxation on Selected Crops: Qasba Lalsot, 1712-1777

YEAR	COTTON	SUGAR CANE	GARDEN PRODUCE, KHARIF	MAKKA	POPPY	GARDEN PRODUCE RABI	WHEAT	BARLEY
1712	0.82	1.89	1.09	1.22	1.19	1.05	1.01	1.01
1713	0.93	1.94	1.06	1.26	1.38	1.06	1.04	1.04
1714	0.89	1.92	1.10	1.50	1.37	1.04	1.04	1.04
1715	0.87	1.85	1.05	.	.	.	.	.
1716	0.98	1.95	1.12	1.50	1.40	1.01	1.07	1.07
1717	0.96	1.89	1.06	.	1.50	1.13	1.06	1.06
1718	0.90	1.92	1.12	1.25	1.47	1.09	1.08	1.08
1719	0.89	1.93	1.11	1.50	1.41	1.08	1.09	1.09
1720	0.92	1.87	1.11	1.50	1.48	1.12	1.05	1.05
1721	0.95	1.90	1.13	.	1.44	1.13	1.01	1.01
1722	0.87	1.71	1.12	.	1.50	1.10	1.00	1.00
1730	1.07	1.88	1.07	1.19	.	.	.	.
1731	1.05	1.89	1.12	1.25	1.48	1.12	2.01	1.85
1733	1.04	1.94	1.12	1.37	1.31	1.11	2.08	1.74
1734	1.04	1.88	1.12	1.12	.	1.13	2.06	1.81
1737	1.03	1.96	1.13	1.27	1.38	1.16	2.19	1.83
1739	1.00	1.88	1.12	1.30	1.50	1.12	2.07	1.76
1740	1.05	1.93	1.13	1.45	1.39	1.13	2.06	1.82
1741	1.04	1.92	1.11	1.50	1.50	1.12	2.08	1.82
1742	1.04	1.97	1.12	1.25	.	.	.	.
1745	1.04	1.95	1.10	1.43	1.49	1.12	2.04	1.79
1746	1.05	1.90	1.11	.	.	.	.	.
1747	1.01	1.85	1.09	1.13	1.25	1.13	1.93	1.73
1748	1.04	1.08	1.05	0.96	1.27	1.12	1.92	1.74
1753	0.95	1.66	1.10	1.02	1.32	1.07	1.93	1.67
1754	0.96	1.75	1.13	1.10	1.50	1.10	1.99	1.80
1756	0.98	1.92	1.10	1.33	1.37	1.13	1.99	1.83
1757	1.02	1.87	1.09	1.23	1.52	1.11	2.04	1.83
1758	1.00	1.81	1.10	1.23	1.32	1.12	2.02	1.84
1759	1.00	1.89	1.10	1.22	.	.	.	.
1761	1.00	1.90	1.11	1.25	1.51	1.12	1.99	1.74
1762	1.00	1.87	1.09	1.24	1.49	1.13	2.03	1.86
1763	1.03	1.87	1.11	1.21	.	.	.	.
1764	1.00	1.88	1.10	1.43	.	.	.	.
1765	1.01	1.91	1.09	1.13	1.37	1.11	2.01	1.79
1767	0.97	1.79	1.11	.	1.29	1.12	2.01	1.74
1768	1.03	1.89	1.11	1.13	1.31	1.12	2.00	1.73
1770	0.89	1.27	0.93	1.00	.	1.08	1.95	1.69
1775	.	.	.	.	.	1.12	2.01	1.76
1777	0.96	1.70	1.09	1.18	1.25	1.11	2.17	1.77

Source: Arhsattas Qasba Lalsot for the relevant years.

Note: From 1712 to 1730 the revenue rates per bigha for wheat and barley are identical as they were assessed together under the head of kyari.

productivity of wet and dry farming. Second, that despite a differential of 100:135 in the price of wheat and barley, respectively, the rate of taxation per bigha was the same for both crops within the two basic productivity-linked categories of wet and dry lands.<sup>61</sup> These two features suggest that in general, the rate of taxation on irrigated cereal land was relatively low compared to unirrigated land and that this built-in tax bias appears particularly marked in the case of irrigated land producing the high-value wheat crop. We can only speculate that these tax codes were formulated with the aim of encouraging an expansion in wet farming and in particular the cultivation of wheat.

Between 1722 and 1730, the tax codes for cereal production in qasba Lalsot were revised and the new codes were aimed specifically at correcting the biases noted above. A revision in the zabti rates levied on the rabi cereals appears to have been implemented in other parganas as well at the same time and prompted by the recognition of the considerable loss in revenue suffered by the state when the revenue on rabi cereals was collected in cash as compared to the potential revenue if the crop obtained by the division of the grain-heap in the customary proportions was sold in the market.<sup>62</sup> Essentially, two basic changes in the structure of taxation were introduced sometime between 1722 and 1730 in Lalsot. Five productive categories linked to the source of irrigation were identified on a basis similar to that adopted for cotton and the irrigated barley and wheat land was separately recorded in each of these categories. The stated rate of taxation for the two crops was again identical in each of the five categories of irrigated cropped land. But unlike previous practice, an additional levy of 15 annas per bigha for wheat and 13 annas per bigha for barley began to be imposed under "afzud" bigha.<sup>63</sup> Thus, the effective rates for the two crops now differed by 2 annas per bigha on irrigated land (see Table 14). More importantly, the imposition of an

additional levy signalled a substantial upward revision in rates on irrigated cereal production.. The rate of taxation per bigha on unirrigated or bor land, however, remained unchanged and no attempt was made to distinguish between the constituent acreages of wheat and barley.<sup>64</sup>

The revision in tax rates applicable to irrigated cereal land could have been prompted by long-term changes in the price level or the productivity of land. It would appear reasonable to argue that given that production technology remained unchanged, the level of the increase suggests that the primary basis for the tax revision was an increase in the price level rather than productivity. However, by incorporating a finer differentiation in the tax schedules and a higher levy on wheat rather than barley, the revenue authorities were clearly seeking to correct the obvious biases in the old tax structure while at the same time striking a balance between enhanced revenue receipts, on the one hand, and rewarding the investment of labour and capital on the other. The fact that these sudden and significant tax revisions did not lead to an immediate decline in the cultivation of wheat and barley in the qasba testifies to their general acceptability by the primary producers.

After the restructuring of the rates on the irrigated rabi cereals noted above, they remained constant from 1730 to 1777 with the exception of 1770 when the state granted a general reduction similar to that allowed in the case of cotton (see Table 14).<sup>65</sup> The fluctuations in the average rate, more specifically the decline in irrigated wheat rates in the years 1747, 1748 and 1753-1756, was due to the increase in the proportion of land assessed at the lower productive categories taxed at Rs.1.94 and below (see Table 15). It is possible that a concession in rates on some lands was granted in response to the drought in 1747 and the famine and locust damage that were suffered in 1755 and 1756.<sup>66</sup> Despite the upward revision



in the taxes on irrigated cereals, there was a marked stability in the annual cropped area from 1712 to 1757.<sup>67</sup> The distribution of wheat and barley acreage between the percentage of land assessed at concessional and standard rates for each productivity-linked sub-category appears to indicate that there was an overall increase in the area concessionally assessed in 1767 as compared with 1731 (see Table 16.). Unfortunately, the detailed break-up into sub-categories for cereal acreage has been recorded only for the two years, 1731 and 1767, and it is not possible to verify this observation using data from other years in the series.

The additional taxes in qasba Lalsot under the head of sair jihat were made up of i) fixed annual charges of Rs.41.50 distributed over the kharif and rabi harvests in respect of various types of bhents or presents, ii) a tax of one and a quarter takas per sheep or goat in the qasba, iii) jhupri, or a hearth tax equivalent to the kholri in other qasbas, levied on the service and artisanal castes of the qasba, and lastly, iv) "rozina tappadari", or the dues collected at the rate of Rs.1.63 per day in respect of the remuneration due to the tappadar for the measurement of fields and the assessment of revenue. There were two types of tappadars or revenue administrators subordinate to the amil. Permanent or "muqarari" tappadars assisted the amil in the overall work of revenue administration and were paid a monthly salary, while rozina tappadars were appointed for a short duration at the time of the harvest and paid a daily wage for the number of days in each harvest spent on the assessment and collection of the revenue.<sup>68</sup> It seems likely then that the dues collected under rozina tappadari in qasba Lalsot were for the short term appointee. Between 1715 and 1737 the number of days in each harvest that the tappadar was paid by the agriculturists of the qasba varied between eight and ten. From 1737 onwards however, this number increased to be almost double that during the previous period especially for the rabi harvest. On the basis of the estimate that

Table 16

Percentage Distribution of Cotton, and Cereal Land by Tax Code :Qasba Lalsot.

	Year	Total Bighas	Asli			Dangro			Kuee			Kua			Rama		
			%A	%R	%P	%A	%R	%P	%A	%R	%P	%A	%R	%P	%A	%R	%P
<u>Cotton</u>	1730	1434,80	14	100	0	4	100	0	2	100	0	4	100	0	76	94	6
	1731	1780,70	13	86	14	3	88	12	1	90	10	4	65	35	78	83	17
	1762	1163,95	15	65	35	4	17	83	2	14	86	3	59	41	77	54	43
<u>Wheat</u>																	
	1731	483,00	14	100	0	1	100	0	1	100	0	2	54	46	81	58	42
	1767	710,85	20	61	39	4	5	95	1	100	0	2	100	0	74	65	35
<u>Barley</u>																	
	1731	1623,95	8	89	11	3	81	19	3	93	7	2	59	41	84	66	34
	1767	721,75	8	47	53	1	54	46	5	63	37	6	65	35	81	32	68

Source: Arhsattas pargana Lalsot for the relevant years.

Notes to Table.16:

The column headed Total bighas gives the area in bighas devoted to the crop in each year.

The five tax categories have been arranged in decending order of productivity, the category taxed at the highest rate per bigha being asli. An explanation of the five tax categories is given in the text.

The three columns under each tax category show first, the percentage of land assessed within the category (%A), and then the proportion of that which was liable to the standard or raiyati rate (%R) and that assessed at concessional or privileged rates of taxation (%P). All percentages have been expressed to the nearest whole number.

the tappadar was required to measure about 200 bighas a day,<sup>69</sup> the collections made on account of rozina tappadari appear to be fairly consistent with the acreage cultivated until about 1753. Thereafter, despite the decline in the gross cultivated area, the number of days for which the raiyati were charged tappadari rose to between twenty and twenty-five for each harvest. Thus, although there was no increase in the daily emoluments of the tappadar, there was a disproportionate increase in the number of days for which the cess was levied. The tappadari cess, along with the other cesses included under sair jihat, was paid from the malba fund of the village and hence an increase in the collections under tappadari meant an increased tax burden on the unprivileged raiyati of the qasba.

Our examination of the cash rates of revenue demand on zabti crops and the additional cesses and taxes in three of the qasbas for which the data is sufficiently detailed has significant implications for an evaluation of the trend in the real level of taxation with respect to crops assessed in cash. The rate at which revenue in kind was appropriated was expressed as a proportion of the output and thus the real level of taxation with respect to jinsi crops remained unchanged for all the qasbas over the period under study. Given this, it is important to enquire as to what proportion of the total revenue in each of the three qasbas studied comprised revenues in-cash in order to assess the relevance of the changes in the nominal zabti rates in an analysis of the changes in level of taxation. Of the three qasbas examined in this chapter, the distribution of annual revenues between assessment in cash (or zabti) and in kind (or jinsi) was most evenly balanced in the case of qasba Sanganer with an average ratio of 2 : 3 respectively. In qasba Phagi the proportion of revenue collected in kind was four times that in cash while in qasba Lalsot land revenue was almost entirely assessed in cash, the ratio being twelve to one, respectively.<sup>70</sup>

The analysis of the cash rates of revenue on the zabti crops in the three qasbas shows that in general the cash rates were exceptionally stable. In qasbas Phagi and Sanganer, in particular, there was no significant revisions in the zabti rates over a period of nearly ninety years for which data is available. In all instances of a change in the nominal rates in these two parganas, there was a decrease in the tax rate per bigha and these shifts were generally very small. While the variations in revenue rates in qasba Sanganer appear to have no regular pattern, in qasba Phagi there was a distinct reduction in the zabti rates from 1743 onwards. The scale of the decrease was marginal, amounting to about six to eight per cent for each crop, and appears to be uncorrelated to the price changes during the period (see Chapter VII on Trends in Foodgrain Prices). Further, an analysis of additional taxes in these qasbas also does not reveal any enhancement in either the rate of levy or the number of such imposts. The evidence of qasbas Sanganer and Phagi therefore suggests a long-term stability in the rates of taxation despite changes in the secular trend of prices during the period.

On the other hand, our examination of the evidence of qasba Lalsot shows that the zabti rates on the cultivation of the winter cereals - wheat and barley - were increased substantially in the third decade of the eighteenth century. Unlike qasbas Sanganer and Phagi, the winter cereals were almost entirely assessed in cash in qasba Lalsot and contributed over half the annual revenue of the qasba. Of the six qasbas under study, the qasba with a distribution of revenue comparable with qasba Lalsot was qasba Chatsu. An examination of the rates of taxation on winter cereals in qasba Chatsu reveals that in pargana Chatsu also there was an increase in the standard rate of taxation on "chomli" or irrigated cereals in 1726 to over twice the rates prevailing in the previous period.<sup>71</sup> The rationale for the enhancement in the rates of taxation that were levied on winter cereals is specified in the diwan's letter

to the amil of pargana Gijgarh which clearly indicates that the increase was in response to the rise in prices.<sup>72</sup> The evidence suggests that there was a general enhancement in the cash rates of taxation on rabi cereals for all parganas in the mid-1730s.

Thus, the increase in the rates of zabti assessment on wheat and barley shows that the state found it possible to adjust revenue demand to the rise in price levels in the long-run. The question that remains is why the cash rates for the other zabti crops were not similarly revised. One reason could be the importance of the revenue obtained from winter cereals which made it necessary for the state to monitor the zabti rates in parganas where assessment in cash was the predominant form of revenue realisation and adjust these to long-term changes in prices. Another explanation is that in the case of foodgrains, it was feasible for the state to collect its revenues through crop-sharing, as was the practice in other parganas of the region, in the proportions defined by custom. Hence, it was possible for the state to enhance the cash rates on foodgrains and yet prevent widespread protest by offering the taxpayers the choice of either paying revenue in kind at customary rates or accepting the revised cash rates.

The discussion above indicates that there was a long-term stability in the cash rates for the majority of the zabti crops and that, in instances when a revision in revenue demand was implemented, the duration of the lag in the adjustment of the demand to price changes was significant. The fact that the revenue rates remained virtually static from the end of the seventeenth century to the eighteenth century in a period that saw a doubling of the general level of prices, indicates that at least for those cultivators growing non-foodgrain crops there had been a reduction in the real burden of taxation.<sup>73</sup> The percentage of the annual revenue derived from

non-foodgrain zabti crop cultivation provides an estimate of the scale of 'cash' cropping and the relative significance of a fall in the level of taxation with respect to these crops. Excluding wheat and barley, the cash assessed crops contributed about a fifth of the regions annual revenue although this proportion varied considerably from pargana to pargana and over time.<sup>74</sup> With the exception of qasba Malarna, the proportion of the cash crops - principally cotton, sugarcane and vegetables - grown in the qasbas was considerably higher than the regional average and amounted to about two-fifths of the annual revenue in qasbas Sanganer and Jaipur and between a third to a sixth in the other qasbas if we exclude the revenue obtained from the rabi cereals (see Section III, Table 23, Chapter VIII). As we shall see, the cropping choices of the rich peasants, such as the village patels and some gharuhala cultivators, and the specialist agriculturists like the Malis, were geared towards the production of high value zabti crops (see Chapter VIII). Thus in addition to the differential structure of taxation that gave an advantage to the gharuhala cultivators, a reduction in the real level of taxation on crops assessed in cash must have further accentuated peasant differentiation over the long-term.

Notes to Chapter VI: Trends in Revenue Rates

1. Dilbagh Singh, "Revenue Administration", pp.146-151 and S.P.Gupta and Shireen Moosvi, "Weighted Price and Revenue Rate Indices of Eastern Rajasthan (c.1650-1750)", IESHR, vol.XII, No.3 [1975], pp.184-193.
2. Chitti dt.Baisakh vadi 11 VS 1799/AD 1742, pargana Hindaun [No.552]; also Dilbagh Singh, "Revenue Administration", p. 454 for rate of bison dh.
3. Arhsatta pargana Phagi VS 1780/AD 1733 and VS 1781/AD 1734.
4. Dastur Amal wa Amal Dastur pargana Phagi VS 1748/AD 1691 and Jamabandhis pargana Phagi, VS 1748/AD 1691, VS 1754/AD 1697, VS 1772/AD 1715, VS 1775/AD 1718, VS 1778/AD 1721.
5. Wilson, Glossary, pp.474, 485.
6. Syaha Satti pargana Dausa and Saneri, VS 1723/AD 1666.
7. Dastur Amal wa Amal Dastur pargana Phagi VS 1748/AD 1691 and Arhsattas, pargana Phagi.
8. Lalas, Rajasthani Shabd Kosh, p.2202 defines nirni as animal fodder. The tax was levied only on the pulses (moth, mung and urad) in a number of parganas such as Phagi, Sanganer, Dausa, and Jhak. We have therefore interpreted nirni to denote a cash levy in lieu of the valuable fodder of these pulses that was retained by the peasant. G.C.Sharma mentions a similar cess called korad in Marwar that was levied on moth leaves which prior to its commutation into cash had been collected as fodder for the royal horses. (idem, Administrative System of the Rajputs) While nirni was a tax in lieu of the fodder of the pulse crops, other imposts such as khari khaklo, bhusa, kardo or khardo were also taxes on the fodder of cereals and millets that had been commuted into cash. Thus although land revenue for food crops was generally levied in kind, the division of the grain heap was done after the threshing of the grain and these cesses represented the state's share of the fodder retained by the taxpayer. S.P.Gupta had defined nirni as a charge made on the taxpayer for the carriage of the grain to the place where it was sold. (idem, "New Evidence on Agrarian and Rural Taxation in Eastern Rajasthan", PIHC 1975, p.236) He appears to have revised his interpretation regarding the cesses imposed on the transport of grain in his later work, but offers no re-definition of nirni. (idem, Agrarian System of Eastern Rajasthan, p.146.) The imposition of taxes on fodder appears to have been a common practice and similar cesses have been noted for eighteenth century Punjab and Maharashtra and other states of Rajasthan. See Indu Banga, Agrarian System of the Sikhs, p.109; H.Fukazawa, "Land and Peasant", Hitotsubashi Journal of Economics, vol.6, no.1 [1965], p.52. and Tod's Papers on Rajasthan, Mackenzie Collection: Private, No.81, IOL, p.97.
9. Dastur Amal wa Amal Dastur pargana Phagi VS 1748/AD 1691.
10. Jamabandhi pargana Phagi VS 1772/AD 1715 and Arhsattas pargana Phagi, VS 1784/AD 1727 onwards.

11. Chhatar Mal, Diwan Pasand, pp. 16-17 for similar non-monetary payments that were sometimes commuted into cash and included under the general term of habubati.
12. Dastur Amal wa Amal Dastur pargana Phagi VS 1748/AD 1691 for the various heads included within this tax and Arhsattas pargana Phagi for the amounts levied per year.
13. Jamabandhi pargana Phagi VS 1773/AD 1716.
14. Jamabandhis pargana Phagi, VS 1772/AD 1715 and VS 1773/AD 1716.
15. Compare the rates in Table 12 with those obtained from the official schedule of taxes of 1703 presented in Table.3. It is worth noting that the official rate cited in the dastur amal of 1703 were the same as the actual rate demanded in 1688.
16. There was a reduction in cotton rates, for example, from 1712 to 1715, and in 1728,1730,1761,1763. An exceptionally large reduction in rates for gundgari sugarcane is noted for 1773.
17. Amber Records dt.Phalgun sudi 1 VS 1769/AD 1713 [No.430].
18. Arhsatta qasba Sanganer, VS 1843/AD 1786.
19. The reorganisation of records in the period 1736-1746 mentioned above and hence the lack of detailed data for this decade makes it necessary to exclude this period.
20. See hasil vato in the sair jihat account of Arhsatta, qasba Sanganer V.S.1787/A.D.1730 and compare with the account of the year 1747 in Arhsatta, qasba Sanganer VS 1804/AD 1747 where hasil vato has been excluded from the accounts but an increment of 20 per cent is recorded for each cess that was collected in takas or copper coins.
21. Arhsatta qasba Sanganer, VS 1787/AD 1730.
22. Arhsatta qasba Sanganer, VS 1745/AD 1688.
23. Arhsattas qasba Sanganer VS 1769/AD 1712 and VS 1804/AD 1747.
24. Arhsatta qasba Sanganer VS 1805/AD 1748 for the kharif and rabi harvests.
25. The tax in respect of incho-tarkari was given in ijara for the sum of Rs 250.00 per annum in the years 1747,1748,1755 and 1756. From 1760 onwards, the tax was collected by the state at the rate mentioned. See the relevant arhsattas of qasba Sanganer.
26. See Lalas, Rajasthani Shabd Kosh, p.607 for the definition of khari khaklo as chaff and fodder.
27. Arhsatta qasba Sanganer, VS 1827/AD 1770 and VS 1828/AD 1771.



28. Arhsatta qasba Sanganer, VS 1827/AD 1770.
29. Arhsatta qasba Sanganer VS 1828/AD 1771 of the unhalu or rabi harvest where 411.55 maunds or about 10 per cent of the grain was unsold yet the bhara tax was levied. Contrast this with the tulai or tax on the weighing of the revenue in kind that was payable by the grain trader and was charged only on the value of grain actually sold in that fasli year.
30. Arhsatta qasba Sanganer VS 1827/AD 1770.
31. Compare Arhsattas qasba Sanganer, 1690-1733 and 1747-48 with Arhsatta qasba Sawai Jaipur for the interim period.
32. The rate of tulai or weighing tax was the same in all the parganas. In the Dastur Amal Maljihati wa Sairjihati pargana Chatsu, VS 1769/AD 1712 it is stated that the vyoparis were to pay this on the purchase of grain.
33. Arhsatta qasba Sanganer VS 1805/AD 1748.
34. Arhsattas qasba Sanganer VS 1827/AD 1760, VS 1828/AD 1761, and VS 1830/AD 1763. The original text reads "asami tund 1 ki daul 1" Tund means face or head [Lalas, Shabd Kosh, p.1536.].
35. Chattar Mal, Diwan Pasand, pp17-18, Wilson, Glossary, p.130. The inference that separate dauls were made for each asami indicates that these were daul khazanas or 'a memorandum given to the ryot by the native revenue officer specifying the sum due by him for the current instalments.' Wilson, Glossary, p.130.
36. Arhsatta qasba Sanganer VS 1845/AD 1788.
37. Arhsatta qasba Sanganer VS 1805/AD 1748.
38. See evidence cited in the discussion on agriculturist kamins in Chapter III.
39. Jamabandhi qasba Sanganer VS 1752/AD 1695. Unfortunately, only a small section of this document has survived providing details of taxation on about 50 per cent of the houses on which the tax was levied.
40. Arhsatta qasba Sanganer VS 1821/AD 1764.
41. Jamabandhi qasba Sanganer VS 1752/AD 1695.
42. Arhsatta qasba Sanganer VS 1805/AD 1748 and VS 1812/AD 1755.
43. The migration of the telis to Jaipur has been referred to in Arhsatta qasba Sanganer VS 1787/AD 1730 when 4 of the 14 telis left. The telis were ultimately reduced to two in number and then to only one between 1747 and 1756 after which there are no entries under khali ghana. High taxation rates are cited as the cause for migration to the adjoining pargana in a Nakal Chitti dt.Pos sudi 12 VS 1784/AD 1728, to Sah Sahibram.

44. See Arhsatta pargana Lalsot VS 1791/AD 1734 where seven rates are recorded between the highest rate of twenty two annas per bigha and the lowest at fourteen annas per bigha.
45. Arhsatta pargana Lalsot VS 1787/AD 1730.
46. In Arhsatta Lalsot VS 1743/AD 1686 the rate normally applicable to asli land has been called goriwa or situated close to the village and in the Arhsatta of VS 1767/AD 1710 the asli rate has been defined as applicable to cultivation with an old well.
47. The term dangro was probably derived from dang meaning the high bank of a river, a hill or precipice [Platt, Dictionary, p.503].
48. For example in 1713 and 1722 land assessed at these two rates comprised approximately 80 per cent of the total cropped area that year. Arhsatta pargana Lalsot VS 1770/AD 1713 and VS 1778/AD 1722.
49. Arhsatta pargana Lalsot VS 1787/AD 1730.
50. See Arhsattas pargana Lalsot VS 1778/AD 1722 and VS 1787/AD 1730.to compare the different rates for cotton in 1722 and 1730.
51. Arhsattas pargana Lalsot VS 1824/AD 1767 and VS 1827/AD 1770.
52. Chitti dt.Sawan vadi 10 VS 1819/AD 1762, pargana Phagi [No.404]; Sanad dt.Sawan sudi 7 VS 1823 /AD 1766 [No.376]; and the locust attack has been mentioned in the rabi Arhsatta of pargana Lalsot dated VS 1813/AD 1756.
53. The figures for potential revenue, i.e., if concessionary rates had not been granted for any part of the cotton acreage in the year 1762, have been derived by calculating the revenues that would have been collected on the total area within each tax category at the standard rate of taxation. See Arhsatta pargana Lalsot VS 1819/AD 1762.
54. Arhsatta pargana Lalsot VS 1788/AD 1731.
55. Arhsatta pargana Lalsot VS 1805/AD 1748 and VS 1810/AD 1753.
56. Arhsatta pargana Lalsot VS 1827/AD 1770.
57. *ibid.*
58. Arhsatta pargana Lalsot VS 1832/AD 1775 and VS 1834/AD 1778.
59. Arhsatta pargana Lalsot VS 1770/AD 1713.
60. *ibid.*
61. Arhsatta pargana Lalsot VS 1778/AD 1721.
62. Arhsatta pargana Lalsot VS 1787/AD 1730.

63. Parwana dt.Mah vadi 8 VS 1782/AD 1726, pargana Gijgarh [No.311]; Chitti dt.Baisakh sudi 8 VS 1783/AD 1726, pargana Gijgarh [No.415].
64. Arhsattas pargana Lalsot VS 1805/AD 1748 and VS 1811/AD 1754.
65. Arhsatta pargana Lalsot VS 1827/AD 1770.
66. Jadunath Sarkar, History of Jaipur 1503-1938, revised and edited by Raghbir Singh (Delhi,1984), p.231 for reference to the 1747 drought in Rajputana and Gujarat, and note 52 above for references of drought in 1755 and the locust attack.
67. See Chapter VIII on Cropping Patterns.
68. Dilbagh Singh, "Revenue Administration", p.439.
69. Chitti dt.Sawan sudi 8 VS 1818/AD 1761, pargana Malpura [No.482].
70. These ratios of zabti and jinsi revenues in the total revenue demand have been calculated from the averages obtained in Table.23.
71. For a discussion of chomli and the trends in the revenue returns of qasba Chatsu see Chapter VIII on Cropping Patterns. Also compare the rates of taxation on chomli in Arhsattas pargana Chatsu, VS 1774/AD 1717 and VS 1783/AD 1726.
72. Parwana dt.Mah vadi 8 VS 1782/AD 1726, pargana Gijgarh [No.311]; Chitti dt.Baisakh sudi 8 VS 1783/AD 1726, pargana Gijgarh [No.415].
73. Moosvi and Gupta estimate that the increase in prices between the latter half of the seventeenth century and the first half of the next century was nearly 100 per cent. idem, "Weighted Price and Revenue Rate Indices of Eastern Rajasthan (c.1650-1750)", p.192. Also see S. Bhattacharya, "Towards an Interpretation of the Pre-Colonial Economy", Economic and Political Weekly, vol.18, No.40 [Oct.1st.,1983], p.1709.
74. S.P.Gupta, Agrarian System of Eastern Rajasthan, pp.94-99 and Dilbagh Singh, "Revenue Administration", pp.120-129.

## Chapter VII

### **TRENDS IN FOODGRAIN PRICES**

For the economic historian, the analysis of the movement in foodgrain prices remains a particularly important and complex problem. Owing to the inelastic nature of its demand, fluctuations in the price of foodgrains provide a sensitive indicator of variations in the supply of and the demand for food in the economy. In the context of a dry farming region such as eastern Rajasthan with a comparatively low yield ratio, even a partial failure of the harvest had a particularly damaging effect on available food supply which was translated into a disproportionate increase in seasonal prices. The variations in price trends in the short term thus provide a fairly accurate proxy for the quality of the harvest and enable us to identify years of dearth and plenty. Trends in prices over the longer term and critical turning points in the series are also generally readily identifiable. In this chapter we shall identify the broad secular trends as well as the annual fluctuations in the prices of major foodgrains in the eighteenth century in our region. The nature of the price data and the problems associated with its interpretation, however, necessitate a detailed discussion of the method used to reconstruct the agricultural price series in this study and a critical assessment of previous efforts at analysing similar price data.

The price series have been derived from the annual revenue records of the six gasbas studied. The average price of each crop was obtained from the annual figures of the quantity of grain sold and the revenue obtained from the sale of each

batai crop. The weight of the unit of measurement - the "man" (maund)- varied widely in the region. A maund uniformly comprised 40 "sers" (seers) but the weight of the seer in terms of "tolas" varied from qasba to qasba. Thus while in Phagi and Lalsot the seer weighed 30 tolas, that in qasba Chatsu was 40 tolas while the qasba Jaipur and qasba Malarna seer was only 28 tolas.<sup>1</sup> Assuming that the tola did not vary in weight in the region as a whole, the differential in the local maund weights can be easily standardised by recalculating the quantity of grain in terms of a standard maund of 40 seers each weighing 40 tolas.<sup>2</sup> Therefore to compare prices across the qasbas, all maunds were first converted into a standard unit and the prices quoted in the arhsattas adjusted accordingly. Prices thus obtained were expressed in terms of rupees per maund.

The major problem in determining price trends lies in the numerous gaps in the series. These arise either because of missing arhsatta records, or due to shifts in cropping patterns whereby certain crops stop being cultivated or are only sown intermittently; or changes in the mode of revenue realisation from collection in kind to assessment in cash per unit of land (zabti) which meant that the price of sale was no longer recorded. The gaps in each price series are therefore irregularly distributed over the period 1710-80. The difficulties involved in the use of these series for statistical analysis can best be emphasised by the fact that there is not a single year in the seventy year period where data are available for all of the six qasbas under study. This limitation is further compounded by the considerable annual fluctuation in prices which vary in magnitude for each foodgrain produced in the qasba thereby making it impossible to rely on point comparisons of prices to estimate the general trend. In order to overcome this limitation of the data, the

studies conducted so far on similar data from the region have used three major statistical techniques.

First, in two of the early pioneering studies, the price of each crop was annually indexed to that of wheat.<sup>3</sup> While this method was useful in indicating the comparative changes in the prices of foodgrains relative to wheat, its drawback was that it told us little about the general price trend as the initial problems of a discontinuous series remained. On the basis of the annual price ratios, the general inferences drawn in these studies were that the variation in the price of kharif crops was greater than that of the rabi foodgrains, that the comparative value of different foodgrains in any one pargana did not follow a uniform pattern over time, and that their relative ratios differed from pargana to pargana. However, it was noted that there was a similar trend in price changes in years of abnormally high or low prices.

In order to assess the overall trend in the price level for the region between 1650 to 1750, a later work used weighted indices.<sup>4</sup> The method employed was a current-year weighted price index which used the revenues derived from each crop assessed in kind as weights. Thus for each year for which the arhsatta records were available for a particular pargana, an index number was derived. This was done by deflating the revenue derived from each batai crop by the price ratio of the current and base year (1715), summing the deflated values thus obtained for all batai crops, and dividing this with the total current revenue received by the batai mode of assessment:

$$\sum_i \frac{P_{ia} Q_{ia} (P_{ia} / P_{i0})}{P_{ia} Q_{ia}}$$

where  $PQ$  is equal to the revenue,  $P_{ia}$  is the current price, and  $P_{i0}$  is the price in the base year

Hence, the two factors identified earlier as causing gaps in the price quotations of any one crop, namely a shift in the crop-mix or changes in the mode of assessment, were circumvented by calculating a composite price index for each year. After the compilation of the price index for each pargana in this way, the third factor for the discontinuity in the series, namely missing records in each pargana series, was eliminated by computing an arithmetic mean of all the non-missing indices for the six parganas in a particular year.<sup>5</sup> The trends that emerged using this method confirmed the general observations of the earlier study by Hasan et.al. that there had been a substantial rise in prices between the second half of the seventeenth century and the second decade of the eighteenth. Moosvi and Gupta estimated that over this period, the rise amounted to the doubling of prices which was followed in the second quarter of the eighteenth century by a gradual increase in the index of about ten per cent. In terms of the overall trend in the period 1708-50, however, they concluded that there was no distinct upward or downward trend in general.<sup>6</sup>

While these conclusions are important for an understanding of the trends in overall prices, the method used had its limitations. In particular, the weighted price index gave no indication of the price trends of individual crops or possible variations in the general price levels between the six parganas. Besides, the method was biased towards exaggerating the price trend of the crop yielding the highest revenue in any year which caused certain distortions in the index. For example, the weighted index shows an enormous rise in prices in 1712, the index value being

only slightly lower than that of a major famine year, 1731. A comparison with our price index will show that the increase in prices in 1712 was much lower than in 1731 (see Appendix 3: Table 3.1). This discrepancy arises from the fact that it was only the rabi foodgrains, especially barley, whose prices rose dramatically in 1712 while those of the kharif grains rose in the succeeding harvest which fell within the next accounting year of 1713. Of the total revenue received from the sale of batai crops, the proportion obtained from the sale of rabi foodgrains was generally higher than that of the kharif foodgrains.<sup>7</sup> Thus in a fiscal year when only the prices of rabi grains rose, such as in 1712, the annual weighted price index tended to overstate the general price rise and conversely, when only the kharif grain prices rose, such as in the following kharif season of 1713, the increase is understated in the price index. The lack of disaggregation of the price trends of individual crops or areas in the study made it difficult to determine the extent to which shifts in cropping patterns were related to the movements in prices during the period.

The price data for the second half of the eighteenth century (1750-c.1780) was analysed by Dilbagh Singh using linear regression to estimate the line of best fit for each foodcrop cultivated in six selected parganas.<sup>8</sup> The analysis indicated that there had been an overall decline in prices during this period of varying magnitude for each crop within and across parganas. This method of estimation, however, provided results of dubious value as generally more than half the observations in any one series were missing and it also precluded the identification of turning points in the short term. While each of the above studies have been pioneering in their analysis of a rich and complex data source, our attempt in the following pages will be to further systematise the price data and integrate the analysis of the pre-1750 period to that of the following half century.



An initial plotting of the prices of all the major foodcrops in the six qasbas indicated that despite the difference in the price of any one crop between different qasbas, the short term trends appeared to be generally similar. This supposition was tested by a gross correlation of the prices of the major and commonly cultivated crops of the kharif harvest - bajra and moth - and of the rabi harvest - barley, wheat and gram - for the six qasbas.(Table 17) The correlation coefficients showed a high positive relationship between the prices of the selected crops. Thus although price levels varied between qasbas, the similarity in their trends suggested that the price differentials were symmetrically linked in the form of a hierarchy.

Table.17 Gross Correlation of Prices.

	Bajra	Moth	Barley	Wheat	Gram
1. Phagi - Sanganer	0.80	0.85	0.91	0.95	-
2. Phagi - Jaipur	0.91	0.63	0.93	0.76	-
3. Phagi - Chatsu	0.90	0.94	0.93	-	0.85
4. Phagi - Lalsot	0.90	0.93	-	-	0.99
5. Phagi - Malarna	0.77	0.90	0.87	0.89	0.79
6. Sanganer - Jaipur	0.93	0.82	0.87	0.77	-
7. Sanganer - Chatsu	0.88	0.85	0.79	-	0.88
8. Sanganer - Lalsot	0.89	0.92	-	-	-
9. Sanganer -Malarna	0.85	0.83	0.78	0.72	-
10.Jaipur - Chatsu	0.87	0.72	0.97	-	-
11.Jaipur - Lalsot	0.99	0.74	-	-	-
12.Jaipur - Malarna	0.78	0.55	0.84	0.65	-
13.Chatsu - Lalsot	0.92	0.95	-	-	-
14.Chatsu - Malarna	0.91	0.91	0.90	-	0.85
15.Lalsot - Malarna	0.97	0.93	-	-	-

The correlation coefficients have not been calculated in instances where there were less than 10 paired observations.

Source: Arhsatta records for the six parganas, c.1700-80. See Appendix 2: Tables 2.1-2.4, Col.A.

In order to investigate the observed relationship further, five major crops were selected and a matrix of relative prices in the six qasbas drawn up for each crop. Given the yearly fluctuation in prices and the randomly dispersed distribution of the missing values in each series, a simple average of the non-missing prices in each series was rejected as possessing limited value and a more accurate method for constructing a relative price matrix was devised. This was done in two stages.

First, from the six parallel series of prices for any one crop, the common years for which price figures were available for any two qasbas was extracted and the mean obtained for each set of common observations. This was done for each qasba in turn to give a total of fifteen pairs of mean values for each crop (Appendix 1). As the years and the number of observations common to any one set of mean values differed from any other, each set was unique and specific to the relationship being compared. In the second stage, therefore, a uniform index of relative price ratios was obtained. This was done by converting the mean ratios into relative ratios with the mean values of each qasba in turn being notionally set to 100. The matrices so obtained are given in Appendix 1. The mean of the six values in the matrix for each qasba was obtained to give the average price differential for each crop in the six qasbas for the period and these are given below indexed to the relative ratio for prices in qasba Malarna. Table 18 shows that although the magnitude of variation in the relative prices for each crop across the six qasbas was not identical, there was, in general, a uniform ranking order. The prices of qasbas Jaipur and Sanganer were the highest followed by Chatsu and Lalsot and those of Malarna and Phagi the lowest for each crop.<sup>9</sup> Table 18 confirms our initial hypothesis that there was a systematic hierarchy in the prices of food crops between qasbas which was broadly of a similar magnitude.

Table 18: Relative Prices of Foodgrains in Six Qasbas

Crop	Malarna	Chatsu	Sanganer	Jaipur	Phagi	Lalsot
Bajra	100	110	125	141	101	123
Moth	100	108	170 <sup>1</sup>	151	100	105
Barley	100	109	119	138	76	-
Wheat	100	-	119	136	98	-
Gram	100	112	-	-	101	-

Source: See Appendix 1.

Notes to Table 17:

<sup>1</sup> The ratio for Sanganer is unusually high as the proceeds from the sale of moth in this qasba included an additional tax element realised in cash ("nirni") which is generally inseparable from the actual sale value. Ratios were not calculated where the paired observations were less than 10.

A symmetrical hierarchy in crop prices has a number of implications. First, it indicates that the price differentials between different crops in each qasba were broadly similar. This observation appears inconsistent with earlier studies which emphasised that the comparative value of crops in each area was dissimilar. As we have discussed earlier this inference was made on the basis of an annual price ratio indexed to the yearly wheat price. The nature of the demand for a luxury crop such as wheat, in addition to the fact that wheat was invariably irrigated and so its outturn was more stable than that of other foodcrops meant that the variability in its price was of a different magnitude and not as closely linked to that of the more widely cultivated foodcrops of mass consumption. This is most clearly seen in years of scarcity when the prices of the 'poorer' crops rose dramatically compared to wheat. Given these factors, the choice of a wheat-based index tends to mask the essential uniformity in the price trends of the basic foodgrains and the resulting distortions accentuate the apparent randomness of annual price variations. We have

therefore chosen to index the annual price ratios to bajra prices rather than wheat for all qasbas except Lalsot. In qasba Lalsot bajra was sown only infrequently and hence we have had to use moth prices as our annual index variable. Although we cannot expect the ratios in an annual index to be identical over time and space given the number of factors affecting seasonal prices differentially for each crop, there does appear to have been an essentially similar ranking order of crop prices common to all areas (cf. Appendix 4 :Tables on Price Relatives).

Prices were highest for the oilseeds, sesame and rapeseed, followed by the pulses, mung and urad, and then wheat. Next in order were the two most widely cultivated kharif foodcrops bajra and moth. The average relative prices of these two crops was almost equal although their ranking was different in each area owing to the marginal differences in their prices. Next in the ranking order were the three mixed crops of the rabi harvest (gochani, gojai and baijhari) and juwar cultivated in the autumn season. The price of barley was the lowest in all the six qasbas. Gram prices, however, do not exhibit a uniform ranking order in the qasbas, being higher than bajra in qasbas Chatsu and Malarna and lower than bajra in Phagi, Lalsot and Sanganer.

The high correlation in the price trends of food crops in different qasbas as well as their systematic linkage also suggests that the factors influencing prices in the region as a whole were broadly similar to the extent that in the long run, agricultural prices tended to move in the same direction. Given that the maximum distance between the two furthest qasbas selected in our study was about 64 miles, the overall climatic conditions affecting agricultural production can be assumed to have been uniform, notwithstanding micro level variations.<sup>10</sup> Further, as discussed

earlier, prices were arrived at through negotiation between the state, which was the single largest seller of grain in the market, and the caste association of the major grain purchasers resident in the qasbas. The latter had their agents trading in other qasbas as well. This could perhaps have served to integrate the regional market as price information was accessible to both parties. S.P. Gupta has recently shown that the regional price integration extended beyond the political boundary of the emerging Jaipur state to include the Trans-Yamuna tract comprising the adjoining district (sarkar) of Agra.<sup>11</sup>

Having quantified the observed variation in the price levels of the qasbas in the manner described above, it became possible to estimate the missing prices in each series by reference to those available in parallel series for any one crop. This was done for four major foodcrops for which we had adequate data for at least four of the six qasbas, namely bajra, moth, barley and wheat (see Appendix 2 for estimation method). In order to assess the validity of the estimation method, actual prices for each crop and qasba were plotted alongside estimated prices derived from the available observations in the price series of the other qasbas (Appendix 2: Figures 2.M.1 to 2.L.4). The close fit of the two curves indicated that the average price differential between qasbas that we had calculated was fairly constant over the period 1710-80, or in other words, there did not appear to be a marked trend towards convergence or divergence of prices in the period. Further, it showed that it was feasible to interpolate the estimated prices for the missing years to construct a complete price series for each crop (Appendix 2: Tables 2.1 to 2.4) From these qasba price series, an average regional price series was derived for each of the four selected crops. The latter were indexed to the base year 1716 and a geometric

mean of the indexed values computed to form the regional price index (Appendix 3, Table 3.1 and Fig.3.2).

Before moving on to a closer examination of the secular trends, it would be pertinent to examine the nature of the cyclical and short term price movements. Seasonal price movements in general present a distinct pattern of low prices after harvest and high prices in the inter-harvest period. The cyclical nature of the seasonal price rhythms was a function of the periodicity in production and the marketing of produce.<sup>12</sup> As we had discussed in an earlier chapter, the needs of local revenue administration made it necessary for the state to record daily prices of foodgrains in all qasbas. An examination of two such price lists by S.P.Gupta to study seasonal price trends however produced some anomalous observations.<sup>13</sup> In the study, the average monthly prices of a number of foodgrains were presented in terms of their relative value with respect to the average wheat price in that month for qasba Mauzabad (1664) and Sawai Jaipur (1735). For both these sets of figures, the prices of all the crops relative to wheat remain exceptionally stable throughout the year. S.P.Gupta concludes by suggesting that market conditions were more stable in the seventeenth-eighteenth centuries than one would have supposed.

'Stability' in market conditions, however, cannot account for the lack of seasonality in agricultural prices. Contrary to the conclusions drawn by S.P.Gupta, it could be inferred that his results confirm the non-market character of the economy where prices were of little importance and that they were merely symbols of a fixed system of values bearing no relationship to exchange values determined by the factors of supply and demand. This view would also conform with K.R.Hall's study of prices in early medieval south India where the stability in

prices was attributed to the persistence of customary ratios in the relative values of various commodities measured in terms of baskets of rice.<sup>14</sup> This argument, therefore, reduces the nirakh bazar records to an annual price schedule for grain disposal which had little relation to market prices. All the available evidence however indicates the converse, and the fact that both the daily price lists analysed by S.P.Gupta were incomplete in terms of their coverage for the year may have vitiated the results.

In order to further verify our contention that the prices recorded in the nirakh bazaar were negotiated retail prices current in the qasba we have set out in Table.19 the average monthly prices of selected kharif and rabi foodgrains obtained from the daily price list of qasba Phagi for the fiscal year 1725/26. The major limitations of the series is that the price records are based on the fiscal year which does not correspond with the marketing year thus making it difficult to isolate seasonality on the basis of a single series.<sup>15</sup> At a general level, the monthly prices do exhibit a pattern of seasonal variation with lower prices after harvest and higher prices in the subsequent period. Prices are lowest during the peak marketing period after the harvest, in December-January for the kharif crops and June-July for the rabi grains. Subsequent price movements, however, do not conform entirely to the seasonal rhythm. Kharif prices attained their highest level in July, after which they fell slightly and similarly rabi prices were highest in September after which they appear to drop. These two months also correspond to the sowing period for the respective harvests and possibly the demand for seed, in addition to the normal consumer demand, contributed to a rise in prices in these months. Contrary to our expectations, the price level of both bajra and moth in the period immediately pre-harvest, from September to November, are uniformly low. In addition to factors of

Table 19: Index of Average Monthly Prices of Foodgrains: Qasba Phagi 1725/26.

(Kharif crops: January 1726 = 100.00 Rabi crops: June 1726 = 100.00).

	KHARIF					RABI		
	Bajra (new)	Bajra (old)	Moth (new)	Moth (old)	Urad	Barley	Wheat (hard)	Wheat (soft)
Sept	-	100.89	-	90.93	92.86	117.91	112.4	111.53
Oct	-	100.57	-	91.93	95.62	115.96	110.27	110.32
Nov	-	97.02	-	91.63	106.26	111.18	106.29	106.94
Dec	105.63	103.48	100.43	98.30	103.82	110.59	103.45	103.48
Jan	100.00	100.00	100.00	100.00	100.00	110.56	103.33	102.34
Feb	100.07	99.24	104.81	102.41	98.12	112.69	103.41	103.39
Mar	103.33	102.70	104.92	105.35	100.69	115.46	108.32	108.96
Apr	102.01	98.30	101.55	99.89	109.11	112.60	107.40	108.61
May	102.64	96.94	98.92	98.82	115.40	101.63	100.81	100.42
June	106.62	102.59	105.48	103.82	127.40	100.00	100.00	100.00
July	111.93	102.18	111.10	105.06	135.34	100.25	100.29	100.04
Aug	102.95	95.82	113.76	102.61	139.64	101.59	102.24	101.36
Mean Price*	41.09	43.73	35.41	39.97	23.12	47.04	33.31	34.11

Source: Roznama Nirakh Bazar, qasba Phagi, VS 1782/AD 1725-26

Notes to Table 19: For the kharif crops bajra and moth two prices are recorded from Maghshri sudi 6 corresponding to early December 1725. These relate to the price of the crop of the current harvest (new) and the price of the old stock of the previous harvest (old). Wheat hard and soft are two varieties of wheat termed katha and bajya in our sources.

\* Mean price is the average price of the crop for the twelve month period in seers per rupee with 40 seers equal to one man-i-Shahjehani or 73.76 kgs.



supply and demand, prices in this period were also conditioned by the size of the unsold stock from the previous harvest and prospects of the coming harvest, the risk of losses from spoilage of stored grain and the fall in value of old stock once the next crop was harvested. Urad, which is a relatively higher value kharif crop, exhibits a wider range in seasonal price variation which also follow the expected pattern of an almost continuous rise in prices after the harvest.

Overarching the very short seasonal cycles were the annual variations in prices which were essentially a function of the pattern of rainfall and its effect on production and the size of the harvest. Annual prices closely reflected variations in the size of the harvest and this relationship was particularly sensitive in a region where the level of integration to the inter-regional network for bulk commodities such as foodgrains was relatively low given the costs of overland transport. The inverse correlation between output and prices is the most obvious in years of famine (see Appendix 3, Figs. 3.1, 3.2). Each of the 'peaks' in the price curves appended corresponds to a year of acute scarcity (or "kahatsali") caused by the failure of the rains.

References to the famine conditions in 1712/3, 1717, 1731, 1755-60 are numerous in the official correspondence between local revenue administrators.<sup>16</sup> The famine years were generally preceded by three to four successive poor harvests and were characterised by a massive increase in the prices of the low-value foodgrains. Unlike the famines in the first half of the century which were generally followed by a fairly rapid recovery in production, the mid-1750s famine marks the beginning of a phase of a long term decline in production that was not reversed for a decade.<sup>17</sup> The graph of regional price trends shows that prices were

highest in the years 1754-60, with 1755 prices being about three times higher than normal. The severity of the drought in the mid-1750s was aggravated further by the incessant Maratha raids during this period. In various complaints made by the peasants regarding taxation levels in this period, the overall fall in production has been specifically ascribed to the series of droughts and Maratha depredations resulting in extreme poverty and the emigration of the peasantry in large numbers.<sup>18</sup> The sharp fall in population and production that resulted from the combined effects of drought and war had a long term effect on the economy of the region which, until the end of our period, had not been able to recover to its pre-1750 level. The severity of the famine over this period was indelibly etched in the memory of the populace who, more than a hundred years later, remembered it as the "dasotia".<sup>19</sup>

Substantial price rises in 1726, 1737, 1742, 1763 and 1770 were also caused by the lack of adequate rainfall.<sup>20</sup> The failure of the monsoon generally led to a rise in the prices of both kharif and rabi grains due to a poorer output in both harvests and the continued effects of food shortage till the next successful season. The effect of drought on the rabi harvest in particular can be gauged from the record of cultivation in pargana Pahadi in 1723. Owing to the failure of the rains, the seasonal stream had dried up and the cultivation of the rabi was possible in only 4 of the 32 villages mentioned in the report, all four of which had kutchha wells.<sup>21</sup> The imminent failure of the monsoons probably signalled a change in the cropping pattern to hardier drought-resistant crops in response to the limited availability of water both in storage devices and subsoil levels. The effect of this shift in the crop-mix perhaps caused a particularly marked rise in the price of wheat in these

years, as compared to the famine years, where the crisis in subsistence caused the prices of mass consumption foodgrains to rise more sharply.

In years such as 1713 and 1760, however, the upswing in the prices of grain harvested in kharif was not followed by a concomitant rise in the rabi prices (see Appendix 3, Fig.3.1). In fact, in qasbas Lalsot, Malarna and Sanganer, production in the rabi harvest of 1713 was considerably greater than in a normal year such as 1716. The non-synchronous trends in the kharif and rabi prices and production probably resulted from the adverse timing of the monsoons rather than the volume of precipitation. The late arrival of the monsoon rains frequently resulted in the failure of the kharif harvest while promoting an extension in cropping in the succeeding rabi season. This would have had the effect of increasing the prices of kharif grains with little, or a muted, impact on the price level of the succeeding rabi crop. On the other hand, the sharp rise in the rabi prices in 1748 and 1758/59, which is not reflected in the preceding or the following kharif prices, can perhaps be attributed in part to the Maratha depredations in the winter of these years by Peshwa Balaji Rao and Malhar Holkar, respectively.<sup>22</sup>

In so far as the revenue for the major foodgrains in the region was assessed in kind at a fixed proportion of the output, the annual variation in prices had a direct and significant impact on the revenues realised by the state. Unlike systems of fixed cash assessments where the inverse relationship between gross output/marked output and prices meant that the impact of price fluctuations on small peasant producers was more negative than positive,<sup>23</sup> in the batai system of assessment, the producers paid a fixed proportion of their output irrespective both of the size of the harvest and the prevailing prices. As has been argued earlier, crop

sharing was in principle a mechanism for risk-sharing which was more advantageous to the peasant in regions of insecure agricultural production subject to repeated droughts and famines. The state, on the other hand, often stood to gain in years of high prices despite the reduced amount of in kind revenue it could collect. The monetary value of the revenue in bad years may equal or even exceed that in normal years. Thus in 1731, a year of severe famine, the total revenue realised from qasba Sanganer was about six per cent higher than the previous year although overall production had declined significantly in terms of the area cultivated (by 16 per cent) and the quantity of revenue in-kind collected (by 32 per cent).<sup>24</sup> Similarly, the revenues of qasba Malarna were more than eleven per cent higher in the famine year of 1717 as compared to 1716.<sup>25</sup> On the other hand, cash assessed revenues, such as in the zabti system, remained the same or declined in years of high prices in proportion to the nature and amount of tax remissions sanctioned.<sup>26</sup> In a mixed system of part cash and part kind revenue payment practised in our region, contradictory movements in the revenue returns dependent upon the mode of revenue realisation provide one of the reasons why it is not possible to use the total annual revenue figures as a simple index of agricultural production.

Turning to the longer term movements in agricultural prices, Table 20 traces the decennial price trends of the four crops bajra, moth, barley and wheat based upon the mean price in each decade. Prices were relatively low prior to the severe drought of 1712/3. The sharp increase in prices as a result of the drought was followed by a fairly unsettled period of price oscillation to be succeeded by a famine in 1717/1718. At the close of the second decade of the eighteenth century, average prices of all four foodcrops stood at a significantly higher level than at the turn of the century. The magnitude of the price increase was much greater for the

Table 20  
Average Prices of Major Foodgrains in Eastern Rajasthan c.1710-1780.

A:	Bajra		Moth		Barley		Wheat	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1691-1711	0.88	53	0.81	53	0.84	79	1.30	78
1712-1719	1.65	100	1.54	100	1.07	100	1.67	100
1720-1729	1.31	79	1.17	76	1.09	102	1.64	98
1730-1739	1.77	107	1.61	105	1.34	125	2.02	121
1740-1744	1.37	83	1.36	88	1.13	106	1.67	100
1745-1754	1.28	78	1.19	77	1.16	108	1.64	98
1755-1764	1.89	115	1.88	122	1.35	126	2.02	121
1765-1774	1.01	61	0.87	56	0.85	79	1.35	81
1775-1779	1.28	78	1.46	95	1.31	122	1.72	103
B: Mean Price (Rs./Mnd)	1.59		1.53		1.28		1.85	
C: % Coeff. Variation	44.61		52.35		36.61		31.51	
D: Modal Price Range	1.25-1.45		1.15-1.35		1.00-1.20		1.50-1.80	

Source: See Appendix 3, Table 3.1

Notes to Table 20:

Section A:

Col. (1) represents the mean of the regional price within the years indicated. In calculating the mean, years of abnormally high prices or famine years (1717, 1731, 1737, 1754, 1755, 1756) have been excluded from the computation for all crops. In addition, rabi grain prices rose to famine levels in 1712 and 1758 and kharif prices in 1713 and 1760. The respective years have therefore been excluded for the rabi crops, wheat and barley, and the kharif crops, bajra and moth. In all, therefore, eight observations have been excluded from each crop series.

Col.(2) The mean price in the period 1712-1719 calculated in col.1 has been taken as base in order to compare relative price changes in each time period for the four crops.

Section B:

The mean represents the arithmetic mean for all observations in each regional price series within the years 1691-1779.

Section C:

The percentage coefficient of variation for all observations in each series =  $\frac{\text{Std.Deviation} \times 100}{\text{Mean}}$

Section D:

The modal price range includes the most frequently occurring price. Each of the ranges incorporates 17 observations for each crop (approx. a quarter of the total number of all observations in each series).

two kharif crops (approximately 100 per cent) and only about 28 per cent for wheat and barley. The 1720s were a period of relative stability in prices marked by a decline in the kharif crop prices which nevertheless continued to be higher than in the pre-1710 period. Rabi grain prices remained high till 1723 and fell thereafter making their average in the 1720s equal that of the preceding decade. After the devastating famine of 1731 there followed another hike in prices of approximately 25 per cent for all four crops. Between 1740-53 prices fell again to the 1720s level to be followed by a decade long series of unremitting crises. In eight of the ten years between 1754-63, the price index stood at over one and a half times the base year, 1716 (See Appendix 3 Table 3.1). Prices of the two kharif crops in particular rose by nearly fifty per cent attaining their highest levels in the decade 1755-64. The rise in wheat and barley prices was more modest in comparison and was on average the same as that in the 1730s. In the next decade, from 1765 to 1774, there was a sudden collapse in prices to approximately the level in the pre-1710 period. This is the only period in the series when the price of moth falls below that of bajra. This dramatic fall in the price level was only partially reversed in the following five years in varying degrees for each of the crops studied. The recovery in the price of barley was most notable followed to a lesser extent by wheat, moth and bajra. At the end of our period, therefore, prices continue to be higher than in the pre-1710 phase but the relative ranking of individual crop prices does not appear to follow as uniform a pattern as in the preceding decades.

What emerges from the above description of price trends is that there was a marked parallel evolution in the prices of the four major foodgrains in the six qasbas studied. Unfortunately, the arhsatta records are not available beyond c.1780 for any of the six qasbas. However, prices of wheat, barley and bajra prevalent in

the city of Jaipur between 1761 and 1897 have been recorded by Dr.T.Holbein Hendley in *A Medico-Topographical Account of Jeypore* published in 1895.<sup>27</sup> Dr.Hendley's tables are reported to have been compiled from the nirakh bazar records of the city under the orders of the then 'Prime Minister' of Jaipur State and represent the average prices in the kharif and rabi seasons of the three foodgrains mentioned. It is unclear, however, if the prices quoted are in terms of the British Indian rupees and seers or the local Jaipuri (Jharshahi) rupee and seer weight. As we are primarily concerned with assessing the trends in prices rather than the absolute value of commodities we have linked the two series by indexing both to a common base year, 1762 (Appendix 3:Table 3.2).

A comparison of the indexed values in the two series shows that for the few years where they overlap, the annual price changes are not always of the same magnitude. This anomaly is particularly marked in the case of bajra prices between 1777-79 which are considerably higher in Hendley's tables than bajra or even wheat prices recorded in the arhsattas for the same years. As we have observed from our examination of the annual arhsatta prices, the general relationship of lower bajra prices relative to wheat was only reversed in years of exceptional scarcity, such as in 1717, 1731, 1755-56. But there is no evidence that famine conditions prevailed in the region in the years 1777-79 as the prices quoted in Hendley's tables appear to suggest. Similarly, the exceptionally high price of barley in the rabi season of 1772, which stood at more than twice that of wheat for the same season, remains inexplicable. These discrepancies raise doubts about the accuracy of the prices recorded in Dr. Hendley's tables. However, barring the few discrepancies noted, the quinquennial trends in the arhsatta and Hendley's series are broadly consistent over the period 1760-75.

Table 3.2 in Appendix 3 combines the price data available for qasba Sawai Jaipur for the period 1730-79 with that in Hendley's tables for the period 1760-1800. In order to make the two series comparable, the annual prices in each series were first indexed to a year that was common to both series and the data complete in respect of values for all three crops, bajra, barley and wheat. The year 1762 was chosen as the base year as it satisfied these conditions and appears to have been a 'normal' year. With the exception of the famine years, such as the severe "chalisa" of 1783/4 and the widespread famine in the early 1790s, prices tended to be lower after the mid-1760s than in the previous decades. Price movements in the last thirty years of the century tended to be unstable and gradually drifted lower, ebbing to their lowest point in the century in the last five years. In fact the troubled decade 1755-64 which saw the highest prices in the century, marks a clearly discernable 'turning point' between the secular rise in prices in the first half of the century and the reversal of this trend in the later years.

To facilitate comparison, the annual indexed prices in both series have been averaged over each quinquennium and the average price for the period 1760 to 1764 set to 100 in Table 21. Section C of Table 21 shows that there was an overall fall of over 20 per cent in the average price of all four foodcrops between the periods 1730-64 and 1765-1800 in the city of Jaipur.

In this chapter we have charted the long term movements in prices. It is the interpretation of these trends and the way in which they relate to the wider economy, however, that proves more challenging. Are price trends simply the consequence of variations in the supply of money or are they causally linked to more fundamental changes in the relationship between population and food supply?



Table 21: Average Prices of Foodgrains in Oasba Jaipur c.1730-1800.

A:	Bajra		Barley		Wheat	
	(A)	(H)	(A)	(H)	(A)	(H)
1730-34	91	-	101	-	104	-
1735-39	96	-	132	-	136	-
1740-44	70	-	87	-	87	-
1745-49	63	-	95	-	91	-
1750-54	75	-	110	-	104	-
1755-59	123	-	136	-	130	-
1760-64	100	100	100	100	100	100
1765-69	48	43	64	58	70	81
1770-74	60	73	77	115	76	92
1775-79	67	110	108	94	95	93
1780-84	-	83	-	85	-	88
1785-89	-	51	-	68	-	67
1790-94	-	90	-	119	-	110
1795-1800	-	39	-	54	-	60
B: Mean Price (Rs./maund)	1.95	1.41	1.64	1.36	2.27	1.72
C: Average index value						
1730-1764 (A)	88		109		107	
1765-1800 (H)		70		85		82

Source: See Appendix 3, Table 3.2.

Notes to Table 21:

Section A: For each of the three crops, the average index values have been derived from the prices calculated from the arhsattas (Col.A) or from Dr.Hendley's tables (Col.H). Cols. A and H represent the mean of the regional price within the years indicated indexed to the average price in the period 1760-64. In calculating the mean, years of abnormally high prices or famine years (1731, 1755, 1756,1784) have been excluded from the computation for all crops. In all, therefore, four observations have been excluded from each crop series.

Section B: The mean price represents the arithmetic mean for all observations in each price series in terms of rupees per standard maund of forty seers.

Section C: The average index value of the prices of bajra, barley and wheat within the stated periods of thirty five years each.

The inadequacy of our knowledge regarding trends in population and productivity in the pre-colonial period make it difficult to relate secular price trends to changes in the internal economy. As a result there has been a marked emphasis on monetary factors in providing explanations for long run price changes.<sup>28</sup> Although the question of money supply is important in an economy which was dependent upon imports for the standard unit of its currency, the silver rupee, the exact mechanism through which money supply affected prices remains unclear. On the other hand, the lack of firm evidence on trends in population, and in particular the sections who were dependent upon the market, makes hypotheses based on changes in demand highly tenuous.

A further problem in the analysis of a regional price series is that the paucity of comparable series for other areas makes it difficult to isolate general price trends from those specific to the locality. For instance, rice prices in Bengal constitute the only other comparable continuous series that is available for the eighteenth century. A comparison of the price trends in Bengal and eastern Rajasthan shows that prices in both regions exhibit an almost synchronous rise in the first half of the century. However, there was a tremendous spurt in prices in Bengal in the third quarter of the century which later levelled out and drifted lower into the early nineteenth century.<sup>29</sup> Thus, the period which saw a deflationary movement in prices in eastern Rajasthan coincided with a marked hike in prices in Bengal despite the stoppage in the import of bullion by the East India Company. Should we then consider the fall in prices in our region after the mid-1760s as an anomaly caused by uniquely local factors which combined to create the downward pressure? Although prices are certainly susceptible to local conditions, the lack of correspondence in the price trends noted above could equally be attributed to the

separateness of Bengal and eastern Rajasthan as constituents of distinct regional economic units which were subject to divergent economic stimuli, particularly after 1757. Let us first examine the local context.

The rise in prices in eastern Rajasthan from about 1720 to 1745 coincided with developments in the political economy of the region that were conducive to economic growth. The reign of Sawai Jai Singh saw the quelling of destructive internal conflict and the formation of a centralised state-apparatus modelled on the Mughal system. Jaipur became the centre of an expanded raj controlling larger resources. In this period of intensive state formation, a sustained effort was made at expanding the spheres of production and exchange. Merchants and traders were encouraged to settle and many migrated from neighbouring Agra and Delhi.<sup>30</sup> An expansion in commercial activity was also facilitated by the closer integration of the region with the trade nexus between Agra and Gujarat. The major trade routes linking north India to the west coast passed through Malwa. With the collapse of Imperial authority in the province of Malwa due to the constant fear of attacks by the Marathas, trade began to flow via Ajmer or western Rajasthan passing through Jaipur.<sup>31</sup> There is evidence that Gujarati cotton traders now began to make purchases in the cotton market at qasba Sanganer.<sup>32</sup> As we shall see in the next chapter, the expansion and intensification of agricultural production that took place in this period must also have stimulated economic activity and pushed up internal demand. The buoyancy of prices in the region was certainly a reflection of the favourable economic and political conjuncture in the first half of the eighteenth century.

Political factors in the history of the Jaipur state have generally been advanced to explain the fall in prices in the latter half of the eighteenth century. The annual Maratha raids between 1748 and 1761 are said to have created a climate of instability causing a serious disruption in trade between Jaipur and the surrounding areas.<sup>33</sup> As a consequence, the supply of foodgrains outstripped demand resulting in a "glut" in the market. While it is likely that the intensified political conflict in the region in this period must have adversely affected the volume of intra-regional trade, there is little evidence to sustain the argument that the region was a grain-surplus area with a significant "exportable" margin. On the other hand, there is no doubt that the severe famine in 1755 and the following five years of scarcity led to considerable depopulation of the region. A more plausible demand-based explanation would be that the depopulation was disproportionately greater in the urban areas and within the ranks of the sections dependent on the market for food, although this hypothesis cannot be verified.

The deflationary trend in prices also coincided with a period that saw a succession of ineffectual minority regimes, unbridled factionalism in court and the successful breaking-away of the powerful lineage-head, Pratap Singh Naruka, to found the Machheri state.<sup>34</sup> In the last thirty years of the century, the raj was constantly under threat of internal fragmentation with the more ambitious contenders invoking the support of the Marathas or the Mughals. It is likely that the eruption of endemic conflict undermined commercial confidence leading to the flight of capital. The available evidence suggests that the exodus of traders and merchants (the "Marwaris") from Rajasthan to the politically stable regimes to the west and successor states of Awadh and Benaras to the east began in the 1780s.<sup>35</sup> It is probable that the emigration of the most prominent mercantile group in Jaipur,

the Jains, began as early as the 1760s following a succession of anti-Jain riots in Jaipur.<sup>36</sup>

In relation to their resident population, the Jains commanded disproportionate prominence in terms of their business and administrative importance. Members of the Jain community held the office of diwan, the highest administrative post in the state bureaucracy, throughout the first half of the eighteenth century,<sup>37</sup> and Jains were reputed to have commanded half the total commercial wealth between Rajasthan and Bengal.<sup>38</sup> The *Buddhi Vilasa*, written in 1770 when sporadic attacks against the Jains were still continuing, records the violent death of a leading Jain preceptor, one Todarmal Terapanthi, by Hindu mobs led by one of the spiritual gurus of Raja Sawai Madho Singh.<sup>39</sup> Although the causes for the series of anti-Jain riots spanning a decade between 1761-70 are not clear, they appear to be associated with the growing political and commercial importance of the militant Vaishnav "bairagi" sects.<sup>40</sup> Madho Singh was the only Jaipur raja to have appointed a member of this sect as personal guru and the king's tacit acquiescence and condoning of the riots is implied in the account presented in the *Buddhi Vilasa*.<sup>41</sup>

While these local factors no doubt had a significant impact on the magnitude and the timing of price shifts in the short term, at a more general level price trends were responsive to the overall regional economic forces which shaped the long-term trends. Price information for other areas of north India during the eighteenth century is fragmentary and generally anecdotal. The available data for the first half of the century appears to follow a general upward trend similar to the observed trend in eastern Rajasthan.<sup>42</sup> There is remarkably little information on

prices in north India during the latter half of the century. Wheat prices in Delhi from 1763-1835 compiled by Jevons indicate that until 1800 prices were in general lower than in the first quarter of the nineteenth century. The crests and troughs in Jevons' price list are broadly similar to those in Hendley's series for Jaipur over the same period.<sup>43</sup> From the evidence available, therefore, it appears reasonable to infer that the secular movements in foodgrain prices in eastern Rajasthan accurately reflected the general price trends in north India during the eighteenth century.

Notes to Chapter VII: Trends in Foodgrain Prices

1. In the arhsattas, the standard format for recording the total amount of grain collected in a particular harvest for each revenue unit includes a quote of the tola weight of the local maund. In the case of the six qasbas under examination, see for example, Arhsatta Qasba Sanganer, VS 1817/AD 1760; Arhsatta qasba Sawai Jaipur, VS 1795/AD 1748; Arhsatta pargana Lalsot, VS 1774/AD 1717; Arhsatta pargana Malarna, VS 1776/AD 1719; Arhsatta pargana Chatsu, VS 1766/AD 1709.
2. Unfortunately, we do not know the weight of the tola used in the region during the period in terms of modern units of weight. S.Hodivala, Historical Studies of Mughal Numismatics, pp.224-34 estimates a tola to be equivalent to 185.5 grains. A contemporary document indicates that the Chatsu maund, of 40 tolas, was fractionally lighter than the "pukka" or standard maund in Delhi in 1726, the ratio between the two being 104.4 : 100, respectively. See Chitti dt. Bhadon sudi 9 VS 1783/AD 1726. The pukka maund was probably the official Mughal unit of bulk weight, the "man-i-Shahjahani", calculated as weighing 73.76 lbs. avoirdupois. (Irfan Habib, Agrarian System, p.369) It is perhaps reasonable to assume therefore that the maund in use in Chatsu, which is also the standard unit used in the study, was almost equivalent to the official Mughal man-i-Shahjahani.
3. S.N.Hasan and S.P.Gupta, "Price of foodgrains in the territory of Amber (c.1650-1750)", PIHC, 1967, pp.350-371. Dilbagh Singh, "Revenue Administration", p.152.
4. S.P.Gupta & Shireen Moosvi, "Weighted Price and Revenue-Rate Indices (c.1650-1750)", IESHR 1975, pp.183-93.
5. *ibid.* However, the method of deriving the mean has not been clearly explained in the article. As four of the six parganas chosen by the authors overlap with the ones we have selected, our reconstruction of their methodology is based on the knowledge that there were a number of missing years in the annual records of each of these parganas. Therefore the ambiguous statement that "mean for the six parganas has been evolved for each year" (p.186) cannot be taken to imply that the price index was uniformly calculated on the basis of values for each of the six parganas.
6. *ibid.*
7. See Chapter VIII on Cropping Patterns.
8. Dilbagh Singh, "Revenue Administration", pp.152-54.
9. S.N.Hasan and S.P.Gupta conclude that the prices at pargana Amber, which in 1728 was reconstituted as pargana Sawai Jaipur, were consistently lower than those at pargana Chatsu in the years 1650-1750. (*idem*, *op.cit.*, p.355.) For the post-1750 period, Dilbagh Singh's price series for parganas Jaipur and Chatsu again show that in general prices were higher in Chatsu. Our calculations, however, indicate the reverse. This discrepancy may possibly be due to the differences in the calculations involved in the conversion of the local maund in

qasba Jaipur to the standard maund of 40 tola weight. Dilbagh Singh specifically mentions that the maund in use in pargana Jaipur was of 40 tola weight and therefore of the same weight as that in pargana Chatsu as well as the standard maund (idem, "Revenue Administration", p.151) In the subsequent calculation of average prices, therefore, adjustments for a non-standard maund would not have been thought necessary. Although Hasan and Gupta do not mention the tola weight of the maund in use in pargana Amber or Jaipur, their figures showing lower prices in pargana Amber/Jaipur than in Chatsu indicate that no correction factor was applied to calculate the average prices in Amber/Jaipur presumably because they reckoned that the maund in use in Amber/Jaipur was of standard weight. Our evidence drawn from the records of qasba Jaipur indicates that the local maund was of 28 tola weight and thus considerably lighter than the standard maund. In our calculation therefore, appropriate adjustments to standardise the maund-weight were made and hence the average prices we have derived for qasba Jaipur are higher than than those in the above studies.

10. The six qasbas fall within a rough isosceles triangle with qasbas Jaipur, Phagi and Malarna forming the three outer points and enclosing an area of approximately three thousand square kilometres. Malarna, lying to the southwest of both Jaipur and Phagi, was equidistant to both (approx.64 miles) while Phagi, on the southeast of Jaipur, was a little over half that distance from Jaipur (approx. 37 miles). cf. Irfan Habib, Atlas of the Mughal Empire, Sheet 6A.
11. idem., "Prices in the Trans-Yamuna tract from the close of the 17th to the latter half of the 18th century", PIHC 1983, pp.263-79.
12. For an excellent discussion on the annual marketing and price cycle see C.J.Baker, An Indian Rural Economy, pp.239-41.
13. S.P.Gupta, "Prices and Rural Commerce in 17th.Century Eastern Rajasthan", PIHC, 1982, pp.270-82.
14. K.R.Hall, "Price Making and Market Hierarchy in Medieval South India", IESHR, 14, 2 (1977), pp.207-30.
15. As the nirakh bazar records have not yet been catalogued and are in most cases incomplete, we were not able to obtain consecutive series longer than one fiscal year. The series analysed above was incomplete with respect to price quotations for only 15 days in the fiscal year.
16. References to famines in the following years are as follows:  
 1712: Chitti dt.Chait vadi 4 VS 1768/AD 1711, qasba Sanganer [No.468]; Amber Records dt.Phagun sudi 1 VS 1769/AD 1712 [No.430]  
  
 1731: Amber Records dt.Sawan vadi 13 VS 1788/AD 1731 [No.156]; Chitti dt.Kartik vadi 1 VS 1788/AD 1731, amils of all parganas , [No.394]; Chitti dt. Maghshri vadi 2 VS 1788/AD 1731, to diwans Vidyadhar and Sahibram [No.395]; Chitti dt.Karik vadi 1 VS 1788/AD 1731, pargana Amber [No.423]; Chitti dt.Kartik sudi 14 VS 1788/AD 1731, pargana Amber [No.393].



- 1755-1760: Sanad dt.Sawan sudi 7 VS 1823/AD 1766, pargana Phagi [376]; Chitti dt.Sawan vadi 10 VS 1819/AD 1762, pargana Phagi [No.404]; Chitti dt.Jesht sudi 2 VS 1821/AD 1764, pargana Phagi [No.53]; Chitti dt.Phagun sudi 7 VS 1820/AD 1763, pargana Tonk [No.54]; Chitti dt.Phagun vadi 11 VS 1818/AD 1762, pargana Tonk [No.55].
17. See Chapter VIII on Cropping Patterns.
  18. Sanad dt.Sawan sudi 7 VS 1823/AD 1766, pargana Phagi [376]; Chitti dt.Sawan vadi 10 VS 1819/AD 1762, pargana Phagi [No.404]; Chitti dt.Phagun sudi 7 VS 1820/AD 1763, pargana Tonk [No.54]; Chitti dt.Chait vadi amavasya VS 1820/AD 1763, pargana Sawai Jaipur [No.201]; Chitti dt.Chait vadi 7 VS 1822/AD 1765, pargana Niwai [No.410]; Chitti dt.Phagun vadi 3 VS 1818/AD 1761, pargana Hindaun [No.384].
  19. See the list of famine years in the gazetteer of the adjoining district of Alwar compiled by Maj. P.W.Powlett. Gazetteer of Ulwar (1878), p.239.
  20. Chitti dt.Asarh sudi 2 VS 1784/AD 1727, to Sah Dodraj [No.372]; Chitti dt.Jesht vadi 14 VS 1784/AD 1728, to Sah Mansaram and Sah Ajabsingh [No.408]; Likhtang dt.Bhadon vadi 3 VS 1783/AD 1726, from Vidyadhar to Diwan Narayandas and Kirparam [No.427]; Chitti dt.Sawan sudi 2 VS 1795/AD 1738, pargana Chatsu [No.398]; Chitti dt.Sawan sudi 2 VS 1799/AD 1742, pargana Phagi [No.276]; Chitti dt.Jesht sudi 2 VS 1821/AD 1764, pargana Phagi [No.53]; Chitti dt.Phagun sudi 7 VS 1820/AD 1763, pargana Tonk [No.54]; Chitti dt.Chait vadi amavasya VS 1820/AD 1763, pargana Sawai Jaipur [No.201]; and A.K.Roy, History of the Jaipur City, Appendix IV, p.212 quoting the Delhi Gazetteer that records the scarcity of 1770.
  21. Yaddashti Pargana Pahadi, V.S.1780/A.D.1723.
  22. Jadunath Sarkar, A History of Jaipur c.1503-1938, pp.237 and 249. Also see Dilbagh Singh, "The Pattern of Agricultural Production in the Qasbas of Chatsu and Malarna (c.1709-1770)", PIHC, 1976, pp.184-189.
  23. Maurice Aymard, "Money and Peasant Economy", Studies in History, vol.II, No.2 (1980), pp.11-20.
  24. Arhsatta Qasba Sanganer, V.S.1787/A.D.1730 and V.S.1788/A.D.1731.
  25. Arhsatta pargana Malarna, V.S.1773/1716 and V.S.1774/A.D.1717.
  26. Remissions could be in the form of a cut in the standard rate of taxation per unit of land for all or some crops in equal or varying percentages; or the revenue on a specific area of the field on which the crop had been destroyed ("nabud") was remitted.
  27. Dr T.Holbein Hendley's table of the prices of bajra, barley and wheat in the kharif and rabi seasons has been reproduced in A.K.Roy, History of the Jaipur City, pp.211-18.

28. CEHII, pp.363-366 and Shireen Moosvi, "The Silver Influx, Money Supply, Prices and Revenue Extraction in Mughal India", Journal of the Economic and Social History of the Orient, vol.xxx, no.1 (1987), pp.47-94.
29. A.S.M.Akhtar Hussain, "A Quantitative Study of Price Movements in Begal during the Eighteenth and Nineteenth Centuries", Ph.D thesis, London 1977, Chapter IV, specially pp.135-140. K.N.Chaudhuri, The Trading World of Asia, pp 99-108.
30. A.K.Roy, op.cit., pp.55-62; G.C.Sharma, Administrative System of the Rajputs, pp.172-173, 151, 154.
31. A.K.Roy, op.cit., pp.60-62.
32. Arzdasht dt.Jesth vadi 12 VS 1747/AD 1690 [No.6]; Arzdasht dt.Phagun sudi 5 VS 1755/AD 1798 [No.424].
33. Dilbagh Singh, "Revenue Administration", pp.161-62.
34. Edward S.Haynes, "Imperial Impact on Rajputana: The case of Alwar, 1775-1850", Modern Asian Studies, 12, 3 (1978), pp 419-437.
35. C.A.Bayly, Rulers, Townsmen and Bazaars, pp.225,249,279-80; A.K.Roy, op.cit., p.91; G.D.Sharma, "The Marwaris: Economic Foundations of an Indian Capitalist Class", in Dwijendra Tripathi ed., Business Communities of India, pp.200-203.; V.D.Divekar, "Political Factor in the Rise and Decline of Cities in Pre-British India - with special reference to Pune", in J.S.Grewal and Indu Banga eds., Studies in Urban History, pp.100-101.
36. C.A.Bayly, Rulers, Townsmen and Bazaars, p.142n. Family histories of the Jains settled in Delhi suggest that they migrated to Delhi between 1750-1800, possibly in search of protection. Also V.D.Divekar, op.cit.
37. A.K.Roy, op.cit., p.182.
38. C.A.Bayly, Rulers, Townsmen and Bazaars, p.141; Kailash Chand Jain, Jainism in Rajasthan, pp.44-49; M.A.Sherring, Tribes and Castes of Rajasthan, pp.50-52.
39. A.K.Roy, op.cit., pp.172-189.
40. Monica Thiel-Horstmann, "Warrior Ascetics in Eighteenth Century Rajasthan and the Religious Policy of Jai Singh II", mimeo, forthcoming in G.H.Schokker ed., Bhakti in Current Research [provisional title], Lieden; David N.Lorenzen, "Warrior Ascetics in Indian History", Journal of the American Oriental Society, vol.98, 1 (1978), p.70.
41. A.K.Roy, op.cit, p.172.
42. Price lists for a few years for Agra and Awadh are quoted in M.Alam, Crisis of Empire, pp. 32, 47-8 and S.P.Gupta, "Prices in the Trans-Yamuna Tract", PIHC, 1983, pp.263-279. Frank Perlin and Andre Wink affirm that prices rose in the Maratha Deccan in the early 18th.century but have not quoted price

series or sources. See Frank Perlin, "White Whale and Countrymen", Journal Of Peasant Studies, vol.5 (1978), p.178 and A.Wink, Land and Sovereignty in India, p.332.

43. Asiya Siddiqi, "Money and Prices in the Earlier Stages of Empire: India and Britain 1760-1840", IESHR, vol.18, nos.2 & 3 (1981), pp.260-63. and compare Dr. Hendley's price series for the same period. A.K.Roy, op.cit, pp.211-218.

## Chapter VIII

### **CROPPING PATTERNS**

In studying the cropping pattern and the trends therein of the six qasbas selected, what we are essentially analysing is the aggregate effect of the cropping choices of individual agriculturists within each unit. The potential cropping possibilities of a region can be said to be broadly determined by its agro-climatic conditions, the level and type of technology and the exchange economy. The extent to which this potential is realised depends upon the interaction between peasant family needs and resources and their response to a given situation. As we have discussed earlier, the limitations to agricultural production in eastern Rajasthan in the eighteenth century were primarily those associated with dryland agriculture in a sparsely populated frontier region. The extent of the arable and the range of crops grown were closely related to the availability of water, draught cattle and labour. The physical constraints on the expansion and intensification of production could, however, be offset by increasing investment in irrigation. Irrigation was crucial for stabilising production through minimising the effects of variable rainfall and making possible the cultivation of higher value crops and thereby enhancing the productivity of land in terms of increased yield as well as a greater intensity of land use. The development of irrigation not only signalled an improvement in the "level of practice" by raising agrarian productivity within the confines of traditional technology, it also represented an increase in labour and capital input. The geographical fluidity of labour and capital that characterised the pre-colonial period meant that the interaction of state initiatives and peasant responses to changing

patterns of supply and demand greatly influenced the development of the rural economy. The ability of the state to channel the direction of agricultural production through measures that promoted capital investment, facilitated the cultivation of certain crops, attracted labour to colonise abandoned lands and protected and encouraged trade were all important stimulants to the local economy. Equally, in times of natural disasters or political disorder, state intervention remained critical to agricultural recovery. Changes in the cropping pattern over time therefore provide an important index of peasant response to causally interlocking changes in production conditions and state action.

In this chapter we shall begin by examining the cropping patterns of the qasbas and the surrounding village. In doing this we shall address ourselves to two general problems: first, to what degree and in what way did the proximity of an urban centre influence the cropping pattern in the hinterland: and second, to what extent can the analysis of long term trends in agricultural production in the qasba be extrapolated to the region as a whole. We shall then analyse the cropping pattern in each qasba using the records of revenue collections. This will entail a discussion on the range of crops cultivated, their relative importance and the trends in their production over the period 1710 to 1770. Lastly, we shall also address the question of the extent to which the differential resource position of a stratified peasantry was reflected in their cropping choices. Although evidence on this aspect is indirect and scanty, it would enable us to identify the social implications of long term fluctuations in agrarian production.

### Specific Aspects of Crop Production in the Qasba.

In order to place our analysis of the trends in the cropping pattern of the six qasbas under study in perspective, a few general observations are necessary. Firstly, it would be pertinent to consider the question of how the cropping pattern in the qasba differed from or coincided with that of the villages. This question assumes importance in the context of a monetised economy in which a high proportion of the agricultural product was meant for exchange. The locational advantages enjoyed by the agriculturists cultivating in the qasba were considerable. These included access to a fixed market, both wholesale and retail; access to the network of trade within and outside the region; as well as the ability to respond to local demand generated by the qasba population comprising both the elite and the artisans, service groups and other non-agriculturist residents. Thus, the qasba could be viewed as a dependable market for a range of agricultural products that provided an incentive to agricultural producers to diversify while protecting them at the same time from the risks of excessive specialisation.<sup>1</sup>

That these factors influenced the cropping pattern of the qasba is unmistakable in each of our six examples. Diversity in crop production was especially marked in the agricultural suburb of the qasba. In the six qasbas, sixty crops were grown in all and on average as many as forty different field crops were cultivated in each qasba over the period. We find that the production of crops such as poppy, tobacco, herbs and a range of vegetables and melons was mainly concentrated in the environs of the qasba almost to the exclusion of the villages in the pargana. These high value crops do not figure in the selection of the major kharif and rabi crops cultivated in four parganas which together accounted for approximately 90 per cent

of the aggregate revenues of each pargana.<sup>2</sup> The pargana aggregates included the revenues from the qasba of the pargana and a varying number of villages. The insignificance of the revenues from the production of high value specialist crops in the pargana aggregates can be contrasted to their proportion in the qasba revenue which normally was about a fifth of the annual revenue (See Tables 6.[X].5 and 6.[X].6 in Appendix 6).

In order to examine this question in greater detail, we have compared the cropping pattern of qasba Sanganer with that of eight villages adjacent to it. As our sources do not provide figures of the gross cropped area or yield, we have used the figures for the revenue derived from each crop as a measure of relative output. As the mode of revenue appropriation (in cash or in kind) was common for the same crop cultivated in the qasba or the village, the principles in the formulation of the revenue demand, it is assumed, were also common for each crop pair, making it possible to use the revenue figures as effective indicators of the relative output of each crop in the village and qasba respectively.<sup>3</sup> In the tabulated figures for the years 1728, 1747, and 1760, we have compared the revenue returns for each crop grown in the qasba with the mean of the aggregated revenues of the selected eight villages (see Table 22, Section II, Col.1 and 2).

However, compiling the ratio of the relative production of crops proved more difficult. This was because the aggregate revenue figures for the qasba and the villages differed in two important ways. First, the cropped area of the qasba was considerably larger than that of an average village. This made a comparison of the absolute revenue returns for crops common to both units, like cotton, sugarcane and the foodgrains, meaningless. Second, the crop-mix of the qasba and the villages

Table 22 : Comparison of Agricultural Production in Qasba Sanganer and Adjacent Villages.

I. Deflated Relative Revenues of the qasba and the average of 8 villages (in Rupees correct to the second decimal place).

	1728		1747		1760	
	Qasba	Av. Vill.	Qasba	Av. Vill.	Qasba	Av. Vill.
1. Kharif Zabti	254.80	23.77	354.90	28.46	202.11	14.62
2. Rabi Zabti	63.76	0.18	137.38	0.73	135.63	0.20
Total Zabti	318.56	23.95	492.28	29.19	337.74	14.82
3. Kharif Jinsi	31.41	13.82	36.81	12.28	86.03	21.39
4. Rabi Jinsi	374.32	62.23	326.23	58.53	387.27	63.79
Total Jinsi	405.73	76.05	363.04	70.81	373.30	85.18
Kharif Rev. (1+3)	286.21	37.59	391.71	40.74	288.14	36.01
Rabi Rev. (2+4)	438.08	62.41	463.61	59.26	522.90	63.99
Total Revenue	(A) 724.29	100.00	(B) 855.32	100.00	(C) 811.04	100.00

II. Comparative Cropping Pattern.

Crop	1728				1747				1760			
	Qasba		Av. Vill		Qasba		Av. Vill		Qasba		Av. Vill	
	Revenue	Revenue	Qasba:Vill.	Ratios	Revenue	Revenue	Qasba:Vill.	Ratios	Revenue	Revenue	Qasba:Vill.	Ratios
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
<b>Kharif Harvest</b>												
Cotton	2023.84	137.71	203	100	1782.13	82.50	253	100	338.50	15.61	267	100
Sugarcane	256.28	27.41	129	100	124.53	21.46	68	100	124.88	0.0	-	-
Maize etc.*	839.56	65.92	175	100	1449.72	118.02	144	100	448.82	54.41	102	100
Garden Produce	301.50	0.0	-	-	611.03	0.0	-	-	356.06	0.0	-	-
Sweet Potato	318.03	0.0	-	-	279.34	0.0	-	-	29.13	0.0	-	-
Moth	134.47	78.03	24	100	263.88	76.20	60	100	308.00	62.60	61	100
Mung	20.31	1.74	161	100	-	1.27	-	-	32.19	7.41	54	100
Urad	40.91	0.39	1449	100	29.91	0.0	-	-	65.13	11.28	71	100
Bajra	5.78	31.98	2	100	28.66	18.94	82	100	46.81	21.15	27	100
<b>Rabi Harvest</b>												
Melons, Veg.	623.53	1.77	4864	100	1138.69	5.77	2308	100	668.56	0.98	8412	100
Poppy	171.31	0.0	-	-	98.09	0.0	-	-	0.0	0.0	-	-
Tobacco	23.38	0.0	-	-	175.34	0.0	-	-	5.41	0.0	-	-
Maize	29.09	0.0	-	-	118.56	0.0	-	-	34.16	0.0	-	-
Condiments	0.0	0.0	-	-	39.91	0.0	-	-	9.63	0.0	-	-
Barley	2089.72	90.02	321	100	1699.38	235.54	84	100	1391.13	115.98	148	100
Wheat	237.34	180.76	18	100	837.56	216.17	45	100	553.50	100.04	68	100
Gram	469.13	108.88	60	100	0.0	0.0	-	-	0.0	36.38	-	-
Mixed Grain	671.03	0.0	-	-	0.0	8.76	-	-	1021.37	53.15	237	100

Source : Arhsatta records, Qasba Sanganer for the relevant years.

Notes to Section I and Section II of Table 22:

Section I : Under the col. 'Average Village', the mean values for the aggregate revenue of the 8 villages have been entered. Using the method for deflating the revenue discussed in Appendix 5, the relative size of the qasba vis-a-vis the average village is given by (A), (B) and (C) for 1728, 1747, 1760 respectively.

Section II : Col. 1 and col. 2 give the actual revenues obtained for the qasba and average of 8 villages respectively. Col. 3 and 4 show the relative ratio of the revenue from each crop after the qasba figures have been scaled down to allow for the difference in the cropped area of the qasba and the average village. Thus col. 3 = (col. 1/A ÷ col. 2) × 100 for 1728, while the divisor for 1747 and 1760 is B and C respectively, as derived in Section I above.

\*Maize etc. shows the combined revenue figures for maize, madwa, chola and guwar.



varied significantly. The qasba produced very many more types of crop in each harvest and specialised crops like poppy, tobacco and various kinds of vegetables were cultivated almost exclusively in the qasba. The cropping pattern of the qasba and village differed in both the crops grown and their proportional distribution. Thus it was also not possible to compare the percentage distribution of the aggregate revenue between crops within each unit due to the distortion caused by the difference in the crop mix of the qasba and the villages.

The method that we used to form a relative index of cropping pattern in the qasba and the average village consisted first, of determining a relative notional revenue index that could provide a proxy for the relative output of the qasba vis-a-vis the average village. In order to establish a single index of relative production, the aggregate revenue figures of the qasba for each season and mode of assessment were deflated to eliminate the variations in revenue returns between the two units arising from differences in the crop composition, rates of taxation or the price at which the revenue in kind was sold. For both the qasba and the villages we had two sets of figures. For the zabti or cash assessed crops the agricultural area was stated while for the crops assessed in kind the quantity of grain in maunds was specified along with the total revenue derived from each form of levy. Thus it was possible to calculate the multipliers or average rate of taxation per unit of land for zabti crops and the average price at which grain was sold for the jinsi crops for each of the units for each season. The multipliers for the average village were then used to deflate the qasba revenues. The calculations involved in the deflation have been given in greater detail in Appendix 5.

The deflated qasba revenue thus corresponds to the notional revenue that would have been realised from the qasba had the crop composition, average rate of taxation and average price at which grain was sold been the same in the qasba as in the 8 villages. Having eliminated the effect of variation in crop composition between the two units, it became possible to compare the notional revenue of the qasba with the revenue of the average village in order to provide a measure of relative output. The ratios of the relative output are given by A, B and C for the years 1728, 1747 and 1760 respectively in Section I, Table 22. This ratio was then used to scale down the actual revenue returns of crops grown in the qasba in order to take into account the difference in the relative output of the qasba and the average village. This set of figures could be compared directly and have been stated in percentage ratios with the value for the average village being set to 100 for those crops which were common to both units (Cols 3 and 4 of Table 22).

It needs to be emphasised that the notional index of relative output that has been calculated by this method is not an accurate measure of gross cropped area. This is because it is based on the assumption that the yield per bigha or the quality of land and irrigational facilities were identical in both units being compared. However, the higher average rates of revenue demand per bigha in the qasba for crops such as cotton suggests that the average yield was higher in the qasba. The higher productivity in the qasba was primarily due to a larger proportion of land being irrigated. Taking the example of cotton production in 1728, the area cultivated in the qasba was 1256.8 bighas while the average area under cotton in the 8 villages was 147.9 bighas. Adjusting the cotton acreage in the qasba by applying our ratio of relative output for the year (724.29 : 100), the comparable ratio of area cultivated was just 118 : 100 and considerably lower than the ratio of 203 : 100 that

represented the ratio of relative output. However, if we take the variation in the rate of taxation per bigha for cotton in the two units (173 : 100) as indicative of the differential in yield, the 1256.8 bighas of cotton producing land in the qasba had an outturn equivalent to about 2174 bighas of cotton acreage in the villages. Applying our ratio of relative output to the qasba acreage so calculated, the relative area devoted to cotton in the two units is thus 204 : 100 - which is very close to our ratio of relative cotton output in the qasba and the villages. Hence our notional index of relative production can be taken as indicative of the relative 'size' of the qasba and the average village with the proviso that the 'size' was not a simple measurement of areal variation but a composite measure that took into account both area and yield.

The results obtained, presented in Section II of Table 22, show that not only did the qasba specialise in the production of certain crops but that in relation to the village it also produced more 'cash' crops like cotton and sugarcane. The production of more lucrative crops in the qasba was at the expense of foodgrain production. This is also apparent if we compare figures for the qasba and the average village under the heads Total Zabti and Total Jinsi showing aggregate percentage annual revenue derived in cash and in kind (Section I of Table 22). The proportion of revenue levied in cash, and hence the cultivation of high value crops was invariably greater in the qasba than the villages. The exception to this pattern was the considerable cultivation of barley in the rabi harvest in the qasba while more wheat was grown in the villages. Wheat was a luxury foodgrain which was priced considerably higher than barley and which required better soil, artificial irrigation and greater labour in tillage. From the point of view of the peasant, it could function both as a 'cash' crop in normal years or as a foodcrop in years of

scarcity. The significantly higher production of barley in the qasba may possibly have been because the more productive and irrigated land was devoted to the cultivation of crops like poppy, tobacco, maize, condiments, winter vegetables and sugarcane. Barley production may also have substituted for the shortfall in the cultivation of the staples - bajra and moth - in the kharif harvest. Interestingly, in both the qasba and the village, the rabi harvest was more important in terms of the revenue realised. In the villages this was due to the substantial cultivation of wheat, which indicates that irrigated land in the villages was generally devoted to the production of wheat while in the qasba the most productive land was reserved for the cultivation of sugarcane and winter vegetables. Lastly, we note that although in absolute terms agricultural production varied in the three years chosen for comparison, the cropping ratios for each crop broadly retain their relative proportionality.

The second general issue that we posed was the ranking of the qasbas in terms of their relative revenues to form some idea of their relative size. While the issue in itself is not important, it does provide a framework for the later discussion on the cropping pattern of each qasba. For instance, the cotton acreage in both qasbas Chatsu and Phagi was about half the aggregate kharif cash assessed area. However, the cotton acreage in absolute terms was five times larger in Phagi than in Chatsu. The difference in absolute acreage not only reflected differences in crop composition and the distribution between crops assessed in cash, for which we have the area figures, and those in kind, for which comparable area figures are not available, but also the difference in the agricultural suburb included within the administrative boundaries of the qasbas.

**Table 23 : Index of Relative Agricultural Production in Six Qasbas**  
 [All figs. relative to the base value for qasba Chatsu  
 and correct to the second decimal place.]

	<u>Jaipur</u>	<u>Phagi</u>	<u>Sanganer</u>	<u>Malarna</u>	<u>Lalsot</u>	<u>Chatsu</u>
<b>I. Relative Area under Zabti (bighas)</b>						
Kharif Area	34.65	60.78	64.95	7.66	91.84	31.50
Rabi Area	23.05	3.44	28.91	1.83	87.66	68.50
Tot. Zabti Area	57.70	64.21	93.86	9.49	179.50	100.00
<b>II. Relative Quantity of Revenue in kind (maunds)</b>						
Kharif Qty.	73.10	213.89	16.03	246.43	42.34	73.35
Rabi Qty.	180.78	489.95	427.54	295.60	14.58	26.65
Tot. Jinsi Qty.	253.88	703.84	443.57	542.03	56.92	100.00
<b>III. Relative Revenues (Rupees)</b>						
1.Kharif Zabti	32.13	25.89	63.52	8.85	58.90	16.55
2.Rabi Zabti	15.27	2.28	18.89	1.40	82.80	64.72
Total Zabti Rev.	47.40	28.15	82.41	10.25	141.70	81.27
3.Kharif Jinsi	24.62	35.69	9.43	41.34	10.04	14.12
4.Rabi Jinsi	59.69	81.19	93.24	53.99	2.34	4.61
Total Jinsi Rev.	84.31	116.88	102.67	95.33	12.38	18.73
Kharif Rev.(1+3)	56.75	61.56	72.95	50.19	68.94	30.67
Rabi Rev. (2+4)	74.96	83.47	112.13	55.39	85.14	69.33
Total Revenue	131.71	145.03	185.08	105.58	154.08	100.00
Ranking	(4)	(3)	(1)	(5)	(2)	(6)
<b>IV. Relative Average Rate of Taxation (Zabti) /Price of Sale (Jinsi) :</b>						
Kharif Zabti	174.73	84.07	183.16	217.74	121.64	100.00
Rabi Zabti	72.47	85.94	70.39	80.29	100.88	100.00
Kharif Jinsi	126.30	92.92	234.45	96.35	106.20	100.00
Rabi Jinsi	139.50	93.11	108.68	99.27	110.89	100.00
<b>V. Deflated Relative Revenues : Base = Qasba Chatsu</b>						
1.Kharif Zabti	18.39	30.77	34.68	4.06	48.42	16.55
2.Rabi Zabti	21.07	2.65	26.84	1.74	82.08	64.72
Total Zabti Rev.	39.46	33.43	61.52	5.80	130.50	81.27
3.Kharif Jinsi	19.49	38.41	4.02	42.91	9.45	14.12
4.Rabi Jinsi	42.79	87.20	85.79	54.39	2.11	4.61
Total Jinsi Rev.	62.28	125.61	89.81	97.30	11.56	18.73
Kharif Rev.(1+3)	37.88	69.18	38.70	46.97	57.87	30.67
Rabi Rev. (2+4)	63.86	89.85	112.63	56.13	84.19	69.33
Total Revenue	101.74	159.03	151.33	103.10	142.06	100.00
Ranking	(5)	(1)	(2)	(4)	(3)	(6)

**Sources:** Arhsatta records of the six qasbas, 1710-80. Also see Appendix 5 for a discussion of the methodology.

The method used to compute comparable production indices in Table 23 are, in principle, similar to that discussed for Table 22. However, due to the gaps in the series of arhsattas records, there was no single year in the period for which we had data for each of the six qasbas in order to attempt a point comparison of the relative output of the agricultural hinterland of the qasbas. Further, the gaps in the series are irregular and so the number of observations for each qasba differ. To circumvent these problems of imperfect series, we computed the average statistic for the years for which we had data for qasba Chatsu and each of the five other qasbas in turn. Qasba Chatsu was used to calculate the base statistic as its series was the most complete, with the largest number of observations over the period 1710-75. Thus although the years as well as the number of observations in each pair of comparable figures common to qasba Chatsu and the other five qasbas were different, in each case the average statistic was derived as a percentage of the average values for the corresponding years in qasba Chatsu. While this method of averaging conceals differential medium term movements in the relative values, it has the advantage of providing an overall average which minimises the errors inherent in a simple mean of an imperfect series. The average thus derived also takes into account the short-term or annual variations in production and revenue caused by factors common to the region as a whole such as droughts and wars.

However, we find that the figures for relative area for cash assessed crops and relative quantity of grain comprising revenue in kind cannot be used to determine the relative size of the qasbas as the two are not comparable and were generally inversely related (compare Sections I and II, Table 23 for each qasba). On the other hand while the relative aggregate revenue provides us with an indicator of the

variation in the average value of the crops grown it cannot be used to approximate relative production (Section III, Table 23). This was because there was considerable inter-qasba variation in the rate of taxation per unit of land for the same cash assessed crop sown as well as a distinct hierarchy in the sale prices of crops that were sold to convert grain revenue into cash.<sup>4</sup> Using the method described above for Table 22, a one to one relative statistic for each unit has been computed by deflating the relative revenue figures of the five selected qasbas by the relative average rate of taxation per bigha and the relative average price at which grain was sold in qasba Chatsu, which has been taken as the base for all the calculations. The deflators, calculated in percentage relatives, are given in Section IV, Table 23 (see Appendix 5, for the calculations involved in the deflation). The notional revenue values thus obtained provide a proxy for the average relative output and hence cropped area of the qasbas had their crop composition, rates of taxation and prices been identical (Section V, Table 23).

Thus while the relative revenue provides us with an indicator of the value of relative output in the qasbas, variations in which could be due to higher productivity, levels of taxation, prices or crop composition, the deflated revenues provide us with an notional index of the relative physical size of the gross cropped area. The difference in the two indicators is particularly striking in the case of qasba Phagi which was ranked third in terms of relative revenue but appears to have been the qasba with the largest agricultural suburb (compare ranking in Section III and V, Table 23). The reason for the lower ranking of Phagi in terms of relative value of agricultural product was because cultivation in Phagi was largely devoted to the production of foodgrains assessed in kind. In addition to the fact that foodgrains were generally of a lower monetary value than 'cash' crops, the

relative prices in qasba Phagi were also the lowest among the six qasbas. Thus, even the component of the total revenue derived from the sale of foodgrains was lower than would have been obtained from an equivalent sale in qasbas Jaipur and Sanganer where prices were relatively higher.

### Cropping Trends.

Our examination of cropping trends shall focus on the shifts in crop composition over the short term in each of the six qasbas in turn and then turn to the analysis of long-run trends in agricultural production for the region as a whole. To do this we shall primarily use as indices the physical measurements of acreage cultivated or quantity of produce taken in revenue.<sup>5</sup> Recent studies of the production pattern at the level of the pargana have invariably relied on using the figures for the revenue obtained from the taxation of each crop as a proxy for establishing intra-crop, inter-harvest and annual comparability.<sup>6</sup> While such a method is justified for some levels of comparison, we hope to show in our discussion that the limitations of the data cannot be overcome by relying exclusively on an index that is at best only an indirect and approximate indicator of the relative value of agricultural output. All the figures and tables related to agricultural production have, for ease of reference, been grouped together and can be found in Appendix 6.

#### Qasba Chatsu:

In qasba Chatsu, agricultural production in the winter or rabi harvest was more important than the kharif harvest over the period 1710-70 (Table 6.C.1). This was



primarily due to the extensive cultivation of irrigated wheat and barley. The form of revenue assessment in the qasba was predominantly by the zabti method of a specified cash levy per unit of cultivated land in both harvests.

The major crops grown in the kharif harvest were cotton, vegetables, maize (makka), bajra, and moth along with smaller quantities of coarse millets, pulses and indigo (Table 6.C.2). The aggregate acreage figures for the crops assessed by the zabti method show an expansion from 1730 - 1741, followed by a slight fall between 1742-56 and an absolute fall to a level below the pre-1723 period from 1756-70 (Figure 6.C.1). These variations in the aggregate acreage resulted from the differences in the trends in the acreages of the major zabti crops. In the period from 1723-42 there was a significant expansion in the cultivation of cotton, maize, and vegetables resulting in the peak in zabti acreage in 1737. Subsequently, cotton and kodon cultivation began to decline from 1738 while between 1742-53 indigo cultivation in the qasba ceased altogether. However, the zabti acreage between 1742-56 tended to be higher than in the pre-1723 period as the decline in the cultivation of these crops was offset by the continued expansion in acreage of maize and vegetables. Further, cotton cultivation continued at a level higher than in the pre-1723 period, although marked by a high degree of annual fluctuation. From 1756 to the end of our period there was an absolute decline in the kharif zabti area due to the fall in the acreage of the major zabti crops, i.e. vegetables, maize, kodon, ralo and chola. The exceptions to this general phase of decline were indigo, which began to be cultivated again on a small scale, and cotton, the cultivation of which continued to fluctuate but did not decline from its 1738 level.

The trend in the production of the kharif foodgrains, which were assessed by the crop-sharing or jinsi mode of revenue appropriation, was somewhat different (Table 6.C.2). Of the foodgrains, the main crop was moth and smaller quantities of bajra, juwar, and pulses such as mung and urad were also produced. While the production of moth shows no clear long-term trends, the aggregate figures for the quantities of revenue in kind reflect phases in the production trends of bajra, juwar and the pulses. In the period 1710-24, production of both bajra and juwar was high. Subsequently, the output of these crops gradually tailed off but the fall in the aggregate quantity of produce revenue between 1726 and 1738 was to some extent offset by the increase in the production of the higher value pulses from about 1733 to 1750 (Figure 6.C.2). However, this dramatic decline in production appears to have been temporary and in the last few years of our series for Chatsu, 1766-71, the quantity of revenue in kind was at a level similar to that in 1730-55. Thus the trend in the aggregate quantities taken in produce revenue fall into four phases - i.e., an initial period of high production between 1710-26 followed by a decline to approximately half of the average annual production of 1710-26 in the period between 1730-55, to be succeeded by a phase of further decline between 1755-65; and, finally, a partial recovery in production to the 1730-55 level in the last phase between 1765-70.

The apparently inverse relationship between the production trends for the cash and kind assessed crops in the initial phases-i.e. the periods 1710-30 and 1730-40, was perhaps due to the substitution of lower value crops like bajra and juwar for the cultivation of cotton, vegetables and maize. An absolute increase in the area cultivated in the kharif harvest between 1730-40 cannot be ruled out, although this would be difficult to verify. From 1740 to 1755 there was a slight decline in

cultivation, especially of cotton and indigo, that preceded a phase of a significant fall in the production of both zabti and jinsi crops from 1755/6. While the zabti acreage figures show no reversal in the trend of agricultural decline following this date, the production of jinsi foodcrops increased.

The major crops grown in the winter harvest were wheat, barley and vegetables.(Table 6.C.3). Wheat and barley were assessed primarily by the zabti form of assessment, and assessment in kind was largely confined to unirrigated winter cereals and contributed a seasonally variable and relatively insignificant proportion of the annual revenue. Irrigated land sown with wheat or barley attracted an identical rate of cash assessment and the combined acreage of both crops was entered in the revenue records under the head of "chomli".<sup>7</sup> The production of wheat and barley on irrigated land dominated agricultural production in the rabi harvest. The variation in the area under chomli and consequently in the revenue derived from it determined the overall trends in the aggregate production indices for the rabi harvest in qasba Chatsu.

The annual aggregate figures for the area under zabti cultivation in the rabi harvest were consistently high during the period 1710-55, averaging over two thousand bighas per year (Fig.6.C.3). The variation from year to year was small. From 1756 however, there was a fall in the zabti cultivated area by approximately a third, and this decline in acreage was especially marked in the years 1756-60. Although both the area under chomli and the land devoted to market gardening fell, the decline was proportionately greater in the latter. However, the variation in annual rabi zabti assessed area continued to be small despite the overall fall. The

trends in the rabi acreage were however significantly different from the trend in the revenue derived from cereal cultivation in the qasba.

Although the area under chomli cultivation was fairly stable till 1755, there was a sudden increase in the rabi revenues in the 1730s (compare Figs.6.C.3 and 6.C.6). This was due to an increase in the tax rate per bigha for chomli in 1726. The rates of taxation on irrigated wheat and barley were graded into eight categories, the highest rate in the pre-1726 phase being Rs.1.13 and the lowest Rs. 0.50 with one and two anna increments in the intermediate rates of taxation.<sup>8</sup> In 1726, all eight grades were more than doubled, the revised rates being Rs. 2.38 for the highest tax category and Rs. 1.75 for the lowest.<sup>9</sup> In the 1740s there was a gradual decline in the average rate of taxation on chomli from Rs. 1.88 per bigha to Rs. 1.50 and this decline accounts for the fall in rabi revenues in this period which is not reflected in a proportionate decline in acreage. While the earlier increase in rates appears to have been part of a general revision in the cash rates for winter cereals observable in other parganas as well, the decline in the average rate of tax in the post-1740s did not result from a restructuring of the standard rates but a shift towards the more lightly assessed tax grades under which chomli was taxed.

The trends in the annual revenue from both kharif and rabi harvests reflect changes in the cropping pattern of the qasba as well as price and revenue rate variations. In the initial phase between 1710 to 1723, the revenue derived from the kharif and rabi harvests was roughly equivalent (Table.6.C.1). In this period, the variations in the annual revenue were primarily the result of yearly fluctuations in the prices of the foodgrains that were mainly assessed in kind in the kharif harvest. The rabi revenue was relatively stable as the acreage under its major tax category,

chomli, varied little from year to year and was subject to a fixed cash levy. In the subsequent years till the early 1740s, the annual revenue became significantly higher and also more stable (Fig.6.C.7). This was due to two factors. First, in the kharif harvest there was a shift from the cultivation of foodgrains such as bajra, juwar, kodon and ralo to cotton and vegetables. While this change in the crop-mix in the kharif harvest did not lead to a substantial increase in the kharif revenue, the seasonal returns became more stable as a major portion of the revenue was realised by the zabti method and so the fluctuations caused by the annual price variations were reduced (Fig.6.C.5). In the same period, the rabi revenues virtually doubled due to the increase in the zabti rates imposed on the irrigated winter cereals (Fig.6.C.6). After the revision in the tax rates for chomli, about two-thirds of the annual revenue came to be derived from the rabi harvest and henceforth the trends in the annual revenue obtained from the qasba essentially followed the trend in rabi revenues. In the period between 1740-55, there was a decline in the annual returns due to the fall in the average rate of taxation on chomli and the gradual decline in overall kharif production.

In the foregoing discussion based on trends in aggregate areas cropped and quantities produced, we noted an absolute decline during the period 1755-65 for each type of assessment and each harvest. This general decline in production is however not as acutely reflected in the annual revenue returns (Fig.6.C.7). Thus, contrary to what we would have expected from the analysis of the area and quantity statistics, the overall decline from 1755-65 followed by a revival in the production of kharif and rabi jinsi assessed foodgrains from 1765-70, appears in the revenue figures as a phase of uniform decline extending from 1755-70. This anomaly is attributable to the continuous scarcity and famine conditions leading to

the rise in the prices of both the kharif and rabi foodgrains from 1756 to about 1763 that resulted in higher than average revenue returns during this period. The decade of high prices and scarcity conditions was followed by a sudden sharp fall in prices in the next decade as discussed in the previous chapter. A general decline in price of foodgrains meant that the annual revenue remained virtually the same in both these decades despite the small upswing in foodgrain production in the late 1760s.

#### Qasba Malarna

A comparison of the annual revenues derived in the kharif and rabi harvests shows that there were alternating periods when either the kharif or the rabi harvest was more important in terms of the annual revenue contributed. Between 1711-17 and 1731-64 rabi production was more important while revenues obtained from the kharif harvest predominated in the intervening period from 1718-30 and after 1765 (Table 6.M.1). In both harvests, the seasonal revenues were largely composed of taxation on the cultivation of foodgrains. As these were collected in kind, the annual fluctuations in the total revenue collections of qasba Malarna were accentuated.

The aggregate area sown with zabti crops in the kharif harvest was small ranging from 79 bighas to 471 bighas (Fig. 6.M.1). The major kharif cash-assessed crops were, in decreasing order of importance in terms of relative cultivated area, sugarcane, cotton, vegetables, maize, tobacco, and indigo (Table 6.M.2). In the period from 1711-43, cropping was dominated by the production of sugarcane whose acreage remained fairly stable. Cotton was of secondary importance during

this period but fluctuations in its acreage gave rise to the troughs and crests in the aggregate kharif area figures between 1711-43. In terms of the crop composition, the mid-1740s mark a turning point in the cropping pattern of the kharif zabti crops. Sugarcane cultivation began to decline in absolute terms from 1738 and in relation to the other crops from 1744 onwards. Over the same period, there was an expansion in the areas sown with vegetables (from 1745), tobacco (from 1744) and indigo (from 1737). These shifts reversed the earlier trend of falling aggregate zabti area from 1730-43 and a cycle of expansion and contraction is evident between 1744-50. The average zabti assessed area in this period however remained lower than in the preceding phase between 1730-43. Subsequently, we note an expansion in maize cultivation, both in absolute and relative terms from 1756, while indigo ceased to be grown between 1754-58. However, no clear trend emerges during this phase from 1751-69 due to wide fluctuations in the yearly figures. The period 1775-82 marks the lowest ebb in the average kharif zabti acreage due to a general fall in the cultivation of all kharif cash assessed crops.

The major food crops grown in the kharif harvest were bajra, juwar, moth, and sesame or til (Table 6.M.2). From 1711-30, the trends in the aggregate quantity figures for kharif appear to be mirror images of the zabti area figures, each phase of expansion and contraction being inversely related (compare Figures 6.M.1 and 6.M.2). In the period 1732-63, however, aggregate jinsi produce figures began to decline, despite occasional good years, in roughly two stages - from 1732-50 the decline was gradual and the good years frequent, while the phase from 1750-63 marks the period of the lowest average quantities produced. This period of gradual decline coincided with the decline in the quantity of moth produced. However, there was a revival in production from 1765-69 that was especially marked for

bajra and juwar (Table 6.M.2). Overall the relative output of bajra, juwar and til remained fairly consistent signifying no basic change in the cropping pattern of the jinsi food crops.

The principal crops of the rabi harvest were the food crops, barley, wheat and gram, with a limited cultivation of higher value crops like poppy and vegetables (Table 6.M.3). The latter were invariably assessed by the zabti method. The cash assessed area in the rabi harvest was small, averaging about 75 bighas annually over the period (Fig.6.M.3), mainly devoted to vegetables, onions, poppy, tobacco and irrigated barley and wheat assessed under the category of "khatli".<sup>10</sup> In qasba Malarna khatli land (manured fields irrigated by river water) was sown with wheat and barley as is apparent from the subdivision of khatli into wheat and barley in the arhsattas with separate revenue schedules for each crop.<sup>11</sup> The separate schedules imply that khatli was not another term for the mixed crop of wheat and barley called "gojai" but a specific category linked to the productivity of land. In qasba Amber, khatli land was assessed at half the rate per bigha of well-watered kyari or seko land implying that land categorised as khatli was less productive with a more variable outturn that was dependent upon the availability of river water than the more stable and regulated irrigation possible by wells.<sup>12</sup> The area assessed under khatli has been recorded only at varying intervals in the time series, except for a short continuous period between 1726-37. Poppy was cultivated sporadically from 1718-46 after which both poppy and tobacco production ceased. The subsequent decline in the cultivation of rabi vegetables and melons from 1750 signalled a fall in aggregate rabi zabti acreage to less than half that of the previous phase.



Crop sharing was the predominant mode of assessment for the major winter crops, barley, wheat and gram, in qasba Malarna. The chart of aggregate quantities of produce revenue in the rabi harvest shows a cyclical pattern marked by alternate troughs and crests without, however, a clear long term trend (Fig.6.M.3). While barley accounted for the largest proportion of the rabi foodgrains for the entire period, there appears to have been an expansion in the relative quantity of wheat produced from about 1743 (Table 6.M.2). The expansion in wheat production began in 1725 but becomes obvious at the level of relative proportions only after the decline in the production of the mixed crop, baijhari, from 1743.

The short term movements in the aggregate annual revenue returns can be broadly periodised into three phases. From 1711-30, there was a period of a gradual and consistent increase in revenue which peaked in 1725. The initial increase in annual revenue was due to the gradual expansion in the production of cotton, a cash assessed crop, in the kharif harvest from 1711-18. Despite the subsequent temporary decline in cotton production till 1725, the phase of expansion in the annual revenue continued till 1730 owing to the continued increase in the cultivation of juwar in the kharif harvest and barley in rabi. In the second phase, between 1732-57, the average revenue remains high but the fluctuations between years become larger. During this period, there was a slight decline of about nine per cent in the aggregate annual quantity of produce revenue. This decline is, however, not reflected in the annual revenue totals. Probably the relative increase in the cultivation of the higher value wheat crop from 1743 onwards accounted for higher revenue returns despite the slight decline in foodgrain production. The third phase, from 1758-79, appears in the aggregate revenue statistics as an undifferentiated period of decline. Although there was a general fall in production

in both harvests during this period, the recovery in kharif foodgrain production noted for the years 1765-69 is not reflected in the revenue returns. This is similar to the discrepancy observed earlier in the case of qasba Chatsu and can be attributed to the sharp swing in prices from the mid-1750s to the early 1770s - the initial decade being marked by famine level prices leading on to a sudden price collapse. The fluctuation in prices had the effect of smoothing out the revenue figures thereby masking the partial recovery in kharif foodgrain production. Looking at overall trends, there appears to have been a period of expansion in production and revenue between 1722-54 which was not limited to either harvest or to a particular crop, followed by an absolute fall in both production and revenue.

#### Qasba Phagi.

A comparison of the percentage of annual revenue derived from the kharif and rabi harvests shows that on average, the rabi revenue was one and a half times more than that derived in the kharif season (Table 6.P.1). However, the distribution of the average annual revenue till 1743 was more equitable, the percentage ratio between the two being 47 : 53 for the kharif and rabi harvests, respectively. But from 1743 onwards the average rabi revenue became a little over twice that obtained in the autumn harvest, the ratio falling to 31 : 69. The revenue derived through the cash or zabti mode of revenue assessment was fractionally higher than that from the sale of the jinsi crops. Initially, between 1715-23, the aggregate zabti revenue was about 10 per cent lower than that in kind (Table 6.P.1). However, from 1725-42, due to the rapid expansion in the cultivation of the major zabti crops - cotton and kodon - the relationship was reversed with zabti revenue reaching a level 10 per cent higher than the aggregate jinsi returns. Subsequently,

no systematic pattern in the distribution of the annual returns as between the two modes of assessment can be seen although, on average, the percentage of zabti revenue remains a little higher (c. 52%). Zabti assessment was the principal method of revenue realisation in the kharif harvest, while crop-sharing dominated in the rabi harvest.

The major crops grown in the kharif harvest were cotton, kodon, maize, indigo and a minor millet, kagani, that were assessed by the zabti method; and, juwar, moth, bajra and sesame, assessed by crop-sharing or jinsi assessment (Table 6.P.2). Of these, cotton and juwar dominated the kharif cropping in terms of their relative acreage and output.

An examination of Fig.6.P.1 shows that in the years between 1715-27 there was a gradual decline in the aggregate zabti assessed area in the kharif harvest, despite a sharp fall in 1717 and an unprecedented expansion in 1723. The average zabti area in this period, however, remained 7 per cent higher than the mean aggregate area for the entire series. This was followed by a phase of expansion that began in 1728 and continued till 1732, with the exception of the famine year of 1731. From 1733, the year after the maximum zabti area was recorded in the kharif harvest, there was a phase of gradual decline that continued till 1746. The culmination of this cycle of expansion and contraction was, however, not repeated in the following phase. From 1746-60, the zabti area remained low, falling to 40 per cent of the overall mean for the entire series.

The trends in the movement of aggregate kharif zabti area reflect the variations in the cropping pattern of primarily, cotton and kodon, which together accounted

for more than 80 per cent of the area till 1743 (Table 6.P.2). The expansion from 1728 noted above was due to the expansion in the acreage cropped of both these crops. However, from 1736 the area sown with kodon began to decline and thereafter from 1743, cotton acreage also declined. The decline in the cultivation of these two major crops was partially offset by an increase in the cultivation of kagani between 1743-45 and indigo between 1741-51. From 1746 onwards, however, there was a general decrease in the area cultivated for all kharif zabti crops accompanied by a shift in the relative cropping composition. In relative terms, there was a shift away from cotton and kodon to maize and kagani. In other words, the decline in the cultivation of cotton and kodon from the mid-1740s was both relative and absolute although they continued to be the two major zabti assessed crops.

Our examination of the zabti rates of taxation in qasba Phagi in an earlier chapter indicated that there had been a slight downward revision in revenue rates from the 1740s (see Table 10). The revision in rates was probably sanctioned in response to the falling off in cash crop production and the fall in prices in the same period (see Table 19). A continued downward trend in the kharif cash crop production, however, suggests that the magnitude of the deduction in rates was insufficient to offset the price decline making the cultivation of cotton in particular uneconomic. It is likely that only those cultivators who enjoyed concessionary rates of taxation and also controlled the best quality irrigated land were able to continue cultivating cotton.

The kharif foodgrain production, assessed by the jinsi mode, was dominated by the cultivation of juwar, with moth bajra and sesame being produced in smaller

amounts (Table 6.P.2). In the first two phases between 1715-28 and 1730-45, the trend in the quantities of jinsi crop production appears to be inversely related to that of the zabti acreage (compare Figs. 6.P.1 and 6.P.2). Starting from a period of high production in the first phase, jinsi production begins to decline from 1730, roughly coinciding with the phase of zabti expansion that commenced in 1728/9 (Fig.6.P.2). From 1746 onwards, however, the significant decline in the zabti revenue noted above was repeated for the jinsi revenues. This decline was most marked in the production of juwar resulting in a relative shift from juwar to moth and bajra cultivation.

The major rabi crops were the foodgrains, barley, gram and wheat, while the zabti assessed crops included a small area cultivated with vegetables, poppy and tobacco (Table 6.P.3). On average, the rabi cash assessed area amounted to just five per cent of that similarly assessed in the kharif harvest. The bar chart showing the temporal movements in the aggregate rabi zabti area begins with a phase of decline following the peak acreage in 1716 (Fig.6.P.3). This lasted till 1733, to be succeeded by an upswing from 1734-60, although the expansion during this period was marked by a high level of annual variation. The profile of the chart reflects the behaviour of the area entered under "kyari". Kyari denoted carefully prepared plots that were irrigated and, in qasba Phagi, were sown with wheat or barley.<sup>13</sup> The peaks in the rabi zabti acreage in 1716/1717 and a sustained upswing between 1734-60 were due to the inclusion of kyari in the zabti assessed area. The discontinuation of the zabti assessment of irrigated wheat and barley between 1721-33 may have been for a variety of reasons related to either a change in state regulations, a preference for the physical division of the crop instead of a fixed cash sum, or a shift in the cropping choices of the cultivator on high value irrigated

land. Next in importance to kyari cultivation were the winter vegetables and melons grown in summer as can be seen from the figures for garden produce in Table 6.P.3, which represents the aggregated values of the individual entries in the revenue records for each type of vegetable or melon. The cultivation of market vegetables and melons began to fall in relative terms from 1749 onwards.

Unlike the other qasbas, market gardening in qasba Phagi was relatively insignificant in both the autumn and winter harvests. This was perhaps indicative of low local demand due to a smaller non-agricultural qasba population. It is reasonable to speculate that although qasba Phagi as a revenue unit included within it the largest extent of taxable agricultural land, it had a smaller 'urban' complement of resident elites and administrative, commercial, artisanal and other non-agricultural personnel than, for instance, qasbas Sanganer or Jaipur.

The major jinsi assessed crops in the rabi harvest were, in order of relative proportion of annual output, barley, gram, wheat and a mixed barley and wheat crop called gojai (Table 6.P.3). The magnitude of the annual fluctuations in the aggregate produce revenue makes it difficult to attempt a rough periodisation of the production trends (Fig.6.P.4). A distinct phase of expansion, however, can be identified interposed between two phases of lower and approximately similar levels of production. The upswing from 1724-36 was due to the increase in the cultivation of gram and barley in this period, specially the former. The following decline in seasonal output was owing to the fall in gram cultivation, in both absolute and relative terms, that could not be compensated for by the relatively small increase in the cultivation of gojai. In fact from 1734 onwards the rabi harvest was completely dominated by the cultivation of barley and wheat and their

mixed crop, gojai, which formed a substantial proportion of the jinsi produce revenue as well as the zabti assessed area under kyari.

The graph of the annual revenue returns accurately reflects the increment in revenues arising from the expansion in production in both harvests during the period 1725-36/41 (cf.Figs.6.P.5, 6.P.6, and 6.P.7). For the kharif harvest, the expansion was primarily in the cultivation of cotton and kodon while gram and barley production increased in the rabi harvest. Thereafter, the chart shows a stepped decline through two cycles running from 1741-46 and from 1749-60 (Fig. 6.P.7). This decline in the revenues was caused both by a fall in production, primarily in the kharif harvest, as well as by a shift in the cropping pattern towards lower value crops in both harvests.

#### Qasba Sanganer

The cropping pattern of qasba Sanganer differed from that of the other qasbas in the variety of specialist and non-food crops that were grown there. These included a range of dye plants besides indigo like safflower, henna and a root yielding red dye called aal (*Morinda tinctoria*); condiments and medicinal plants like cumin, ajwain (lovage), and isabgol (*Plantago ovata*); as well as small amounts of poppy, tobacco, betel leaves, and rice for the local market. Not all these crops, however, were grown every year and their cultivation was limited in terms of the total annual output. The cultivation of these special crops contributed to the variety in the overall produce mix of the qasba without however altering the local pattern of cotton and maize cultivation in the kharif harvest and barley in the rabi season common to the surrounding villages. Where the cropping pattern of the qasba

differed significantly from that of the villages was in the extensive cultivation of vegetables both in the kharif and rabi harvest which together contributed to about 20 to 25 per cent of the annual revenue from crop production in the qasba. For example, in 1740, of the annual revenue of Rs.9380, the proceeds from market gardening were Rs.2086 or a little over 22 per cent, and the area devoted to vegetables was 1547 bighas.<sup>14</sup>

The revenue returns indicate that the rabi harvest was more important than the kharif in terms of average revenue returns for each harvest. As in qasba Phagi, the mode of revenue appropriation in qasba Sanganer was also predominantly in cash by the zabti system in the kharif harvest, while in the rabi harvest crop sharing or jinsi batai prevailed (Table 6.S.1). This difference in the mode of assessment related to the nature of the crops grown in the two harvests. Crops like cotton, sugarcane and vegetables, that could only be assessed by the zabti method, were the major kharif crops while cereal production, generally assessed in kind, was more significant in the rabi harvest. Overall, the jinsi assessed revenue was slightly larger in percentage terms than zabti revenue, the ratio between the two being 52 : 48 respectively.

The major zabti crops in the kharif harvest, in descending order of relative acreage cultivated, were cotton, maize, vegetables, a coarse millet called madwa, sweet potato or sakarkandi, sugarcane and a fodder crop, guwar (Table 6.S.2). In the first half of the century, the aggregate area occupied by cash assessed crops was large and fairly stable (Fig. 6.S.1). The profile of the aggregate area graph in the period 1708-56 closely reflects the changes in the acreage of cotton and maize which together accounted for more than 50 per cent of the kharif zabti area. While



the percentage acreage of vegetables and madwa remained stable at 15 per cent each in this phase, guwar began to be cultivated from the mid-1730s and its production increased steadily. Sugarcane cultivation, on the other hand, was significant in terms of relative acreage and revenue returns till 1724, after which it declined sharply remaining stagnant until 1768. Between 1768-73, there was a partial revival in cane cultivation but the area cropped was smaller than that in the initial period. The year 1756, marked by the smallest figure for the aggregate kharif zabti area, signalled the phase of decline in the cultivation of all the major zabti crops and the average area cultivated fell to half its previous level. The decline, however, was not uniform for all crops resulting in a relative shift in the cropping proportions. The relative cropped area of both the major crops, cotton and maize, declined by about 10 per cent. Despite this, cotton continued to be the most important crop in terms of relative cropped area, but market gardening displaced maize as the crop next in importance to cotton. Similarly, madwa was displaced by the relative expansion in the cultivation of sweet potato, guwar and sugarcane.

The major jinsi assessed crops in the kharif harvest were moth, bajra and urad. Although the average aggregate quantity of the levy in kind was small with a mean of 123 maunds, it fluctuated widely from year to year ranging from less than a maund of moth in 1764 to 913 maunds in 1708. Thus no clear periodisation of the aggregate jinsi returns is possible. There was a relative expansion in the production of moth from about 1733 after which year moth accounted for more than 50 per cent of the aggregate jinsi quantity in successive years.

The insignificance of the jinsi assessed foodgrain production meant that the pattern of kharif revenue returns broadly coincided with the cycles in the aggregate zabti area figures as can be seen from Figures 6.S.5 and 6.S.1. However, the graphs of these two aggregate values vary slightly due to the disproportionate effect that the cultivation of a bigha of sugarcane had on the average revenue returns per unit of land.<sup>15</sup> Thus between 1708-16, the revenue curve shows a steady upward trend that reaches a peak in 1715, registering an increase of 71 per cent over the period while the aggregate zabti area increased by just 49 per cent over the same period. This is mainly attributable to the expansion in sugarcane acreage during this period. The percentage revenue from sugarcane was generally 10 per cent higher than the percentage area cropped as can be seen from Tables 6.S.2 and 6.S.3. Over the years 1708-44, the revenue returns continued to remain high (on average, 25 per cent higher than the overall mean for the kharif harvest), but thereafter began to decline. From 1745-56 the drop in revenues was gradual, averaging about 28 per cent as compared to the preceding phase, but from 1760 there was a further 35 per cent fall in the average revenue returns (Fig.6.S.5).

In the rabi harvest, the revenue derived from cash assessed crops averaged a little over 20 per cent of the total rabi revenue (Table 6.S.1). The zabti assessed crops were mainly melons and vegetables, with relatively smaller cultivation of poppy for opium, tobacco, winter maize, and condiments (Table 6.S.2). There appears to have been no discernable shift in the relative acreages of these crops over the years. There was however a phase of expansion in aggregate rabi zabti area over the period 1740-45, owing mainly to the significant increase in the cultivation of vegetables and, to a smaller extent, tobacco (Fig. 6.S.3 and Table 6.S.2).

The major rabi crops were, however, the cereals barley, wheat and gram and their admixtures. Of these, barley contributed over 60 per cent of the aggregate quantity of produce revenue (Table 6.S.2). Hence, the year to year fluctuations in barley production are the major explanatory components of the annual fluctuations in the aggregate produce revenues (Figure 6.S.4). Relative to barley, wheat cultivation was small (average 15 per cent ) but more important than gram (Table 6.S.2). Wheat cultivation went through a period of relative decline in the decade between 1728-38, being substituted by gram initially till 1732 and later by the wheat and barley admixture, gojai. In the latter half of the eighteenth century, there appears to have been a shift from the sole cropping of barley to a mixed cropping system composed of barley, wheat and gram, either in combinations of two or three (gojai, gochani and baijhari), as well as an increase in the cultivation of the hardier rabi crop, gram (Table 6.S.2). This shift in cropping pattern occurs in a period which sees an overall fall in production, population and resources due to repeated droughts and political instability caused by Maratha raids. In this context, it is plausible to argue that there was a retreat from the cultivation of marginal land, on which lower value crops such as barley were grown, to the better quality land capable of producing crops like wheat or wheat combinations and which yielded better returns while not requiring the scale of investment needed for specialist cash crops such as indigo, poppy or tobacco.

The discontinuity in the revenue series of Sanganer makes it difficult to periodise the phases in the production of rabi cereals. Broadly, from 1710-46, the aggregate produce quantity was on average 12 per cent higher than in the phase from 1747-72 (Figure 6.S.4). This broad periodisation also appears to coincide with that of aggregate rabi revenue (Figure 6.S.6). In the initial phase between 1708-44,

there was a gradual increase in the rabi revenue marked by short cyclical fluctuations with the troughs of each cycle successively higher than the last. Subsequently, there was a 24 per cent decline in revenue, reflecting the decline noted above in the rabi cereal production as well as the sharp contraction in the acreages of the zabti assessed crops.

The annual receipts of revenue in each fiscal year, show that there was an overall decline of approximately 30 per cent between the period 1708-44 and 1745-72 (Figure 6.S.7). The analysis of overall production trends in the kharif and rabi harvests indicates that the decline began in the mid-1740s. However, for the kharif harvest we note that the decline was gradual till 1756 after which there was a further fall between 1760-72. Although it is not possible to accurately locate the stages in the decline in rabi production it is apparent that there was an overall fall in production in both harvests with the mid-1740s as the turning point. Unlike the other qasbas, there was no phase of expansion in production in the early decades of the century in Sanganer.

In so far as the revenue returns are not accurate reflections of actual changes in overall production, we can surmise that the magnitude of the overall decline in revenues was more or less consistent with the fall in production. The difference in these two could be due to changes in the prices of the major jinsi assessed crops, change in the revenue rates of the zabti crops in either harvest, or a shift in crop composition from higher to lower value crops or vice-versa. While we have examined the first two factors in other chapters, we are concerned here with changes in the cropping pattern. In the case of qasba Sanganer, the absolute and relative decline in the cultivation of higher value crops like cotton, indigo, and

maize in the kharif harvest from the mid-1740s indicates that the fall in the revenue was perhaps greater than the actual fall in cultivated acreage.

#### Qasba Lalsot

The records of qasba Lalsot are unique in that the assessment of revenue was principally made in cash for all the major crops, with only a small fraction of the revenue derived from crop-sharing. This makes it possible to directly compare the trends in the cropping pattern between harvests and crops using acreage figures as a uniform unit of comparison. The distortions inherent in using the revenue values as a proxy for determining spatial and temporal changes in crop distribution and overall agricultural production are thereby minimised.

An attempt to compare the relative extent of production in the two harvests illustrates the problem of relying exclusively on the revenue figures as a proxy for the level of production. On comparing the distribution of the annual revenues we see that initially, from 1712-30, the ratio of the aggregate kharif revenue to rabi was, on average, 56 : 44 (Table 6.L.1). After 1730, however, the revenues from the rabi harvest increased and the average distribution became 41 : 59. The reversal in the percentage distribution of the revenues, however, cannot be taken to imply that there was a relative expansion of production in the rabi harvest from 1730. As we shall see in more detail later, rabi production remained more or less stable from 1712-57, both in terms of cropped area and the crop-mix. Despite the stability in production, the rabi revenue figures show a sudden increase from 1730 onwards. On the other hand, kharif production, both in real and value terms, had begun to expand from 1730-42. The sudden increase in the rabi revenues, causing the

reversal in the ratios of kharif and rabi revenue from 1730 onwards, was due to the enhancement in the rates of revenue per unit of land for the major rabi crops wheat and barley. The magnitude of the increase in the taxes on rabi cereals and the distorting effect this had on the inter-harvest distribution of revenue was such that it effectively masked the real expansion that took place in kharif production from 1730-42. Overall, therefore, the extent of cultivation in the kharif harvest remained higher than that in the rabi, although as we have seen, in value terms the rabi harvest yielded higher returns.

In the first half of the eighteenth century, the cropping composition of the kharif harvest in qasba Lalsot was dominated by the cultivation of cotton and sugarcane (Table 6.L.2). The other crops grown were vegetables, guwar, maize, millets, moth, ajwain, and chola. Except moth and up until 1737, bajra, all the other crops were assessed in cash. Analysis of figure 6.L.1 shows that there was an increase of approximately 37 per cent in the average zabti assessed area from 1730-42 as compared with the pre-1730 phase. The expansion in the kharif revenue over the same period, on the other hand, averaged just 12 per cent (Figure 6.L.5). The disproportionate increase in the area statistics was partly due to the change in the manner of assessment of bajra. After an initial period of assessment in kind, bajra began to be taxed in cash per unit of land sown. Thus the scale of expansion in the kharif harvest between 1730-42 was perhaps closer to 12 per cent than the 37 per cent indicated by the area figures.

The expansion in kharif production from 1730-42, was accompanied by a relative shift in the crop composition. The increase in aggregate acreage was, in relative terms, most marked for cotton although there was an expansion in the

absolute acreage of both cotton and sugarcane (Table 6.L.2). On the other hand, over the same period there was a fall in bajra production. Till 1737, bajra was assessed in kind after which it was assessed in cash. The relative revenue derived from the cultivation of bajra, irrespective of the mode of its assessment, has been used as the basis for comparison in order to indicate the magnitude of the decline in bajra production from 1731-47 (Table 6.L.4). There appears to have been a shift from the cultivation of bajra to cotton and sugarcane from 1730-42, along with a significant overall increase in gross cropped acreage in the kharif harvest.

This period of a boom in production was followed by a gradual decline from 1745-63 after which there was a further fall (Fig. 6.L.1). There was also a change in the crop composition that coincided with the fall in overall production. Cotton acreage began to fall in relative terms from 1748 and sugarcane from 1756 while bajra, maize and guwar cultivation expanded (Table 6.L.2). Overall the fall in the aggregate area from 1742-70 was about 20 per cent while the drop in revenue during the same period was more than 28 per cent. The greater magnitude of decline in revenue was owing to the relative shift in the cropping pattern from the production of higher value crops, cotton and sugarcane, specially the latter, to the food crops, bajra, maize and guwar.

Barley and wheat were the major crops grown in the rabi harvest, together accounting for as much as 90 per cent of the cropped area in the harvest. The other crops such as poppy, winter vegetables and melons, gram and mixed crops were of minor importance. Till 1722, the area cultivated with wheat or barley was not separately specified, their combined acreage being taxed under two categories, "kyari" and "bor", corresponding to irrigated and unirrigated land. At some point

between 1723 and 1729, there was a revision in the rates of taxation that necessitated a separate record of the wheat and barley acreages in addition to the separate recording of each into the revenue categories corresponding to irrigated and unirrigated.<sup>16</sup> An upward revision in the rates of taxation on irrigated cereal acreage, however, did not result in a change in the cropping pattern. There was a marked stability in both the crop composition and the annual cropped area from 1712-57 (Table 6.L.2 and Fig. 6.L.3). From 1758, along with a wider range in annual fluctuation, there was an overall decline of about 20 per cent in both the average area cropped and revenue. The decline in acreage during this period was marginally greater for barley than for wheat.

From the above analysis of the two harvests, it appears that there were three short term cycles in the long term trend of decline in agricultural production in the suburb of qasba Lalsot (Fig. 6.L.7). There was an increase in revenue in the initial phase between 1730-45, averaging 37 per cent over the years 1712-22. This expansion was due both to the revision in taxation rates for cereal crops in the rabi harvest as well as the expansion in the cultivation of higher value crops, cotton and sugarcane, in the kharif harvest. Subsequently, the shift in the cropping pattern in the kharif harvest away from 'cash' crops to food crops from 1742 onwards as well as the decline in rabi cereal production from 1758 resulted in a slight fall in the annual revenues by 10 per cent in the phase that extended from 1747 to 1765. The last decade in our series, 1767-77, was marked by a further decline in the revenue by 27 per cent over the preceding period. The overall fall in revenue in qasba Lalsot was not only due to the fall in production in both the harvests but also because of the shift in the crop composition towards lower value crops, especially in the kharif harvest.



## Qasba Jaipur

The trends in agricultural production in the suburbs of qasba Jaipur, the residence of the Jaipur Maharaja since its foundation in 1727, differ radically from that of any of the qasbas analysed so far. Here production was not only more stable but expanded consistently during the course of the century. The cropping pattern in qasba Jaipur also differs from the other qasbas in terms of the importance of the cultivation of high value food crops to meet urban demand such as vegetables and maize in the kharif harvest and wheat in the rabi harvest.

The distribution of annual revenue between the autumn and winter harvests was almost even indicating that production in the winter harvest was as important as that in the rain-fed kharif season and that the cultivation of two crops a year was a general practice (Table 6.J.1). As in the other qasbas, the mode of revenue appropriation in qasba Jaipur was also predominantly in cash for the kharif season and in kind for the rabi season.

The major crops cultivated in the kharif harvest were a variety of vegetables and maize together accounting for about 60 per cent of the kharif zabti assessed area (Table 6.J.2). Smaller areas were devoted to sugarcane, sweet potato and a coarse grain, madwa. Unlike the other qasbas, and the region as a whole, cotton cultivation in Jaipur was irregular and of minor importance. The relative acreages of the major crops remain virtually unchanged over the whole period with a slight rise in the proportion devoted to market gardening from 30 per cent of the aggregate zabti area till 1756, to 40 per cent in the subsequent period till 1770. This expansion in the relative area of garden produce did not imply a proportional

fall in the other major crop, maize, but a displacement of the minor crops like sunnhemp, small millets and cotton. The overall trend in the aggregate zabti area was, as mentioned above, one of consistent expansion which can be divided into two phases (Fig. 6.J.1). From 1733-47, the average area on which zabti crops were grown was approximately 668 bighas. From 1750 onwards, however, there was an unprecedented expansion by over 50 per cent in the aggregate zabti assessed area, the average zabti acreage increasing to 1012 bighas.

There were only a small number of crops which were taxed in kind and the aggregate quantity of grain taken as revenue and the sale proceeds of these was not very significant (Fig.6.J.2 and Table 6.J.4). The chart showing the aggregate jinsi quantities exhibits wide annual fluctuations which correspond to the pattern of bajra production (Fig. 6.J.2). Bajra was the major jinsi assessed crop accounting for more than 95 per cent of the aggregate grain production (Table 6.J.2). A small quantity of moth was also produced, while the production of paddy and sesame was very low. There was a sudden decrease in the production of bajra after the maximum produce revenue recorded in 1756. This coincides with the increase in the cultivation of vegetables noted above. Thus the massive expansion in the cultivation of zabti crops from the 1750s was perhaps to some extent due to substitution of lower value crops like millets and moth, but the magnitude of the expansion in aggregate zabti acreage suggests that there was also an overall expansion in cropped area.

Given the predominance of cash assessment over kind in the kharif harvest, we would expect the aggregate kharif revenue trends to closely follow those of the aggregate zabti area. The revenue returns, however, fluctuated more widely from

year to year and there is no apparent increase in kharif revenues from 1750 corresponding to the phase of expansion of aggregate cropped area noted above. On closer examination, we find that till 1756, the peaks in the kharif revenue chart can mostly be explained by the fluctuations in the produce revenues (cf. Figs. 6.J.5 and 6.J.2). The extraordinary increase in the revenue in 1756 is attributable in part to the high grain revenue received that was sold at the famine-level prices in that year.<sup>17</sup> The expansion in the aggregate kharif zabti area that took place after 1756 is not reflected in the kharif revenues due to the fall in the average unit rate of taxation caused by a shift towards the cultivation of garden produce which was taxed at a lower rate than maize, cotton, or sugarcane. The effect of the crop substitution that took place in the 1750s thus had the effect of under-representing the expansion in acreage in terms of the aggregate revenue returns.

In the rabi harvest, the major crops cultivated were vegetables, barley and wheat with a small amount of poppy cultivation for the production of opium. Of these, vegetables and poppy were assessed in cash, the acreage thus taxed being dominated by vegetable production (Table 6.J.3). The trend in the aggregate zabti area essentially follows that of the kharif zabti area, namely a gradual expansion till 1750 after which there was a further significant increase averaging twice that in the pre-1750 phase (Fig. 6.J.3). The rabi harvest was, however, dominated by the cultivation of the cereals wheat and barley that were assessed in kind by the jinsi method (Table 6.J.1). The aggregate jinsi quantity chart showing the quantities of barley and wheat revenues in kind also indicates a gradual increase though in short cyclical movements (Fig. 6.J.4). The expansion of gross production coincided with a shift in the cropping pattern. Till 1750, the relative proportion of barley and wheat production was approximately equal but thereafter wheat production

expanded to be four times that of barley (Table 6.J.3). In real terms, however, there was no decline in the quantity of barley appropriated in kind indicating that its acreage probably remained stable. There does not appear to have been a substitution of barley for higher value crops such as wheat or vegetables, but an overall expansion in rabi cultivation from 1750 equivalent to the increase in the cultivation of wheat and vegetables.

The rabi revenues (Fig. 6.J.6) do not exactly correspond to the above trends in production although the overall increase in revenues is apparent. The dissimilarities, especially of a sudden increase in the aggregate rabi revenue in 1755/6, can be explained in terms of the change in prices. The predominance of the jinsi form of assessment necessitated the sale of the grain revenues at the prevailing price by the state. The total revenue received was then a function of both the actual production as well as the current price. With the increase in the production of wheat, a high value crop, as well as the expansion in vegetable cultivation, the revenues from 1750 onwards should have shown a substantial increase. The revenue curve, however, does not reflect the magnitude of the expansion as there had been a fall in prices from about 1763 onwards which depressed revenue levels especially in comparison with the preceding decade which had witnessed very high prices.

Overall, there was an expansion in production in both the kharif and the rabi harvest accompanied by a shift in crop composition through substitution as well as an increase in cropped acreage. This expansion was slow and fluctuating at first but from the early 1750s it was significant. The annual revenue returns also show an overall increase but the magnitude of the expansion was smaller than that of

gross production (cf.Figs. 6.J.7 with 6.J.1., 6.J.3 and 6.J.4). This was due to substitution of crops liable to high rates of taxation by the relatively lightly taxed category of vegetables in the kharif harvest and due to the fall in grain prices that affected the returns on the expanding production of wheat. The sudden rise in the annual revenue returns between 1755-57, followed by an equally dramatic fall to a level slightly higher than the pre-1755 level was due to the sharp rise in the prices during these famine years. Thus despite the apparent sluggishness of revenue expansion, the other indicators show a trend of consistently expanding production in Jaipur.

The cropping pattern in qasba Jaipur differed significantly from the other qasbas studied both in its crop-mix as well as the long term trends in production. The predominance of market gardening and wheat cultivation in the qasba indicates that the urban market of the political and administrative capital of the region stimulated the production of these crops. It is also possible that the relative political security in the immediate hinterland of the capital in the second half of the eighteenth century led to the migration of capital, skills and labour from the outlying parganas that were repeatedly ravaged by the Marathas in this period. This would perhaps explain the continued expansion in overall production in qasba Jaipur during a period when production in the region as a whole declined significantly.

The trends that emerge from the foregoing analysis of the cropping pattern of the six qasbas exhibit a broad uniformity in the phases of expansion and decline, with the notable exception of qasba Jaipur. The phase of expansion began from 1720 and continued till about the mid-1740s although the magnitude of the

expansion in agricultural production in the qasbas varied. The expansion was accompanied by an increase in the cultivation of cotton and other cash crops in the kharif harvest and a concurrent expansion in rabi production. The latter was due to the increased cultivation of the hardier rabi crops - barley and gram - rather than wheat. Contrary to the twentieth century classification of the region as a kharif mono-cropping region predominantly producing secondary food grains, bajra and moth, in the eighteenth century in all the qasbas analysed, the output of the rabi harvest was at least as significant as that of the kharif harvest.<sup>18</sup> The analysis of the cropping pattern in the parganas of which the qasbas studied were the administrative centres also shows that in terms of the revenue distribution between the harvests, the rabi harvest was more important than the kharif.<sup>19</sup> In the semi-arid tropics, the cultivation of a second crop after the autumn harvest requires careful management of water resources either through temporary storage of rainwater in tanks, or by tapping groundwater by lifting devices, mainly temporary and permanent wells. The widespread and extensive cultivation in the rabi harvest therefore indicates that there was considerable investment of capital in agriculture during the second quarter of the eighteenth century..

The period from the mid-1740s to about 1755/6 was a phase of transition signalling the subsequent decline in overall production. In this period the decline was more marked in the case of the kharif than the rabi harvest. After the severe drought and famine in 1755/6, however, agricultural production fell sharply in both harvests. In this period there was also a relative shift to foodgrain production and revenue came to be increasingly collected in kind. In the two decades between 1755 and 1775 (which marks the end of our statistical series) agricultural production

in the qasbas continued to stagnate at a level that was significantly lower than that in the first half of the century.

### Cropping Choices

The overview of the short term variations in cropping trends in the qasbas clearly shows that agricultural production was sensitive to changes in political, environmental and economic conditions and that these played a vital role in peasant production decisions. For the historian, however, the more fundamental questions which seek to understand the nature of peasant decision-making and their response to the market remain problematic. In the context of a highly monetised economy and the unequal distribution of economic resources, it would be pertinent to investigate if there was a systematic difference in the cropping pattern of various sections of agriculturists and whether such differences were directly associated with their differential resource positions. Fortunately, our sources allow us a glimpse of the variation in the cropping pattern of individual agriculturists.

It has been argued that the zamindars, revenue grantees revenue officials and village headmen were endowed with a greater command over resources that enabled them to produce commercial crops for sale.<sup>20</sup> The advantages that these agriculturists possessed were capital for investment, access to the credit and produce markets, and the ability to undertake risks associated with the production of specialist crops. On the other hand, 'ordinary' peasants (*reza riaya*) were unable to cultivate commercial crops because these "generally required a larger investment than an ordinary peasant could afford".<sup>21</sup> The evidence of a khasra, or record of crop production and the associated taxation for each cultivator, of a village in

pargana Chatsu, dated 1796 has been cited in support of this view.<sup>22</sup> This khasra of the kharif harvest shows that one of the three patels in the village was the largest single producer in terms of both number of crops and volume of output.<sup>23</sup> In contrast, 16 of the 36 cultivators in the village produced only one foodcrop. However, a closer examination of the khasra cited shows that these inferences need to be qualified. While there was undoubtedly a wide difference between the gross production of the largest producer and the majority of the small peasants, we find that at least fourteen of the thirty six cultivators in the village produced cotton, and all of them were substantial peasants with a larger and more diversified production range than one of the three patels in the village.<sup>24</sup>

Our evidence raises questions in respect of some of the assumptions made in the hypothesis above. Our objections arise primarily from the implied equation of the revenue classification of agriculturists into khudkasht or gharuhala and raiyati with uniform strategies of production within each such category as well as the supposedly sharp distinction between the two. The implication that command over resources would necessarily influence production decisions towards an intensification in agricultural production, or the assumption that the majority of the peasants were too overtaxed and pauperised to cultivate cash crops needs to be examined.

Baker has suggested that production strategies in semiarid regions can be analytically distinguished into two basic types - the 'minimal' and the 'intensive'.<sup>25</sup> Modifying Bakers schema, we would suggest that three distinct types of cultivating 'strategies' can be envisaged :



a) an extensive system of food grain production associated with large scale bhomia/zamindar holdings cultivated primarily through bonded labourers (halis) and retainers (vasidars). The investment rationale of the big zamindars/bhomias in our region would perhaps be dictated by their attempt to enhance their political authority and prestige through a greater control over men, larger retinues, religious and charitable donations, and conspicuous consumption rather than maximising productivity.<sup>26</sup> The production strategy of such producers would be directed towards increasing the gross output of food to feed dependants as well as used to maintain submission and subordination through occasional gestures of 'benevolence' in the form of food doles.<sup>27</sup>

b) an 'intensive' strategy adopted by proprietor-cultivators of larger than average holdings and the best agricultural lands. Such a strategy required the highest inputs of capital and labour - both animal and human. Capital was required for digging wells, buying seed and cattle, and procuring labour. Production was geared towards cultivating marketable crops and returns were in the form of higher yields and more secure production. This strategy needed a considerable financial outlay and a significant command over the labour of poorer cultivators within the village.

c) 'minimal' strategy pursued by peasant families with little or no capital in order to eke out a living barely rising above subsistence. Such peasants were primarily dependent upon rain-fed cultivation of millets in the kharif harvest and a few leguminous crops that were saleable for limited cash requirements.

Some of the arguments above are substantiated by the analysis of the khasra of the rabi harvest of a village for the year 1734. Khasras form a part of the body of information on the basis of which the tax liability of each tax payer was computed.

The khasra that was analysed records the quantity of grain in maunds that was shared between the state and the peasant, the proportions at which the sharing was done, and the respective amount of grain accruing to the state and the taxpayer. The number of taxpayers recorded is 102 which indicates that the village was larger than an average sized village in Jaipur in 1901.<sup>28</sup> It is possible that the number of residents was in fact higher as those peasants who did not have the resources to cultivate in the rabi harvest would obviously not have figured in the list of taxpayers for that harvest. The uniqueness of the khasra lies in that it records the full names of the cultivators enabling us to differentiate them by caste. However, about 20 of these names remain unidentified. A complete list of the taxpayers and their individual liabilities are tabulated in Appendix 8.3.

An analysis of the cropping pattern accords with the strategies as outlined above (Table.24). Four taxpayers out of the 102, have been identified as the bhomias (category.I) and they accounted for about 16 per cent of the total grain production in the village. However, they only produced barley and low value mixed grains. On the other hand, the 45 gharuhala cultivators – that is, Brahmins, Rajputs, Kayasthas, 8 patels and a patwari (Cat.II to VII) – produced about half of the total barley and low value grains and more than three-fourth of the potentially marketable high value wheat crop. Their contribution to the revenue was virtually in the same proportion as their relative output. This appears to indicate that in village Naelo, the rates at which revenue was levied was not systematically biased in favour of the gharuhalas – with the exception of the bhomias. The 20 peasants of the agriculturist castes (paltis) produced 8.5 per cent of the total barley and 12.25 per cent of the wheat produced in that year. The fact that the agricultural castes

Table 24 : Crop Distribution and Taxation : Mauza Naelo (1734)

Caste/ Status (1)	Nos (2)	Crop (3)	Taxable Produce (4)	Asami Share (5)	State Share (6)	Av. Tax Rate (7)	%Total Revenue (8)
<b>A: High Caste/Status:</b>							
I.Bhomias	4	Barley	1073.00	750.06	322.94	30.10	17.67
II.Rajputs	7	Barley	605.29	434.62	170.67	28.20	9.34
		Wheat	184.66	127.66	57.00	30.87	12.18
III. Patels	8	Barley	969.63	637.02	332.61	34.30	18.20
		Wheat	284.75	189.72	95.03	33.37	20.30
IV.Patwari	1	Barley	16.50	11.00	5.50	33.33	0.30
		Wheat	6.00	4.00	2.00	33.33	0.43
V.Kayasthas	7	Barley	529.13	349.86	179.25	33.88	9.81
		Wheat	181.00	117.22	63.78	35.24	13.63
VI.Brahmans	23	Barley	678.27	435.30	242.97	35.82	13.30
		Wheat	333.75	203.40	130.35	39.06	27.85
VII. Muslim	1	Barley	108.00	80.32	27.68	25.63	1.51
Sub-total (A):	51	Barley	3979.82	2698.20	1281.62	32.20	70.14
		Wheat	990.16	642.00	348.16	35.16	74.40
<b>B: Raiyati/Non-Privileged:</b>							
VIII.Agricult- -urists	20	Barley	474.17	302.78	171.31	36.14	9.38
		Wheat	157.81	91.97	65.84	41.72	14.07
XI.Menials	11	Barley	8.06	5.35	2.71	33.62	0.15
XII.Caste/ Status unknown	20	Barley	604.48	408.23	196.25	32.47	10.74
		Wheat	139.50	85.52	53.98	38.70	11.53
XIII. Awjan	(7)	Barley	506.75	331.52	175.23	34.58	9.59
Total	102	Barley	5573.28	3746.08	1827.20	32.79	100.00
		Wheat	1287.47	819.49	467.98	36.35	100.00

Source : Khasra mauza Naelo dated Jeth Sudi 2 compiled for the rabi harvest of V.S.1791/A.D.1734. [Based on Appendix 8.3, Table 8.3.1]

Notes to Table 24: Col.2 gives the number of taxpayers in each category. The average rate of taxation (col.7) indicates the proportion of revenue collection in relation to the taxable produce for each category of asami (col.6 /col.4). In col.8, the contribution of revenue by each category has been expressed as a percentage of the total revenue received for each crop by the state.

form such an insignificant proportion of the recorded taxpayers suggests that only a few had been in a position to cultivate their land in the rabi harvest.

The analysis of the khasra indicates that the cultivation pattern of the zamindars was quite distinct from that of the village elite. While the former controlled larger holdings, their cropping choices were not geared towards the production of high value crops. The privileged sections, on the other hand, appear to have dominated village production and used their command over village resources to cultivate more extensively than the raiyati. However, we find that of the aggregate output of the privileged sections, the valuable wheat crop comprised a quarter with the remaining consisting of barley and the mixed crops. The ratio of wheat output to the aggregate output of the unprivileged cultivators was also the same. The crop composition therefore did not differ as dramatically between the two categories as the extent of the acreage under their respective control.

It could be argued that perhaps this disproportion in the extent of cultivation between the privileged sections and the raiyati could, in part, be attributed to the fact that the crops of the rabi harvest depended upon artificial irrigation. It is possible therefore that the lack of resources to provide irrigation was the prime reason for the low output of the unprivileged sections. This hypothesis would then lead to the further proposition - if irrigation was the primary factor in explaining the disparity in production between the privileged and the nonprivileged sections of the village, then the difference ought not to be so great for the kharif season which was primarily dependent upon rainfall. Unfortunately we do not have a complete khasra of the kharif harvest to examine this question with comparable data.<sup>29</sup>

What we do have is an account of the dues payable to the bhomia by the agriculturists of qasba Chatsu in the kharif season of 1690.<sup>30</sup> Bhomi was a cess calculated at 0.75 takas per bigha for zabti crops and 0.75 seers per maund of grain collected in kind in pargana Chatsu. The castes and sections exempt from the payment of this cess have been identified and the details of the various crops produced by them has been recorded. The agriculturists exempted from taxation belonged to the Rajput, Bhat, Brahman, Deswali, Nagori and Sah castes and the revenue officials, the chaudhuri, qanungo and patel. These correspond to the privileged sections on the basis of their social status and the exemption granted to them. The agriculturists on whom the cess was levied have not been differentiated by caste but simply placed under the collective term of raiyati. The relative crop distribution within the categories of privileged and raiyati have been presented in Table.25.

The unprivileged or raiyati category cultivated a larger percentage of the total area under cash assessment and produced a larger quantity of foodgrains than the privileged sections in qasba Chatsu. Table 25 also shows that the raiyati grew a greater proportion of cash crops than the privileged sections. Cotton cultivation, however was evenly distributed between the two. In a cattle census recorded for qasba Chatsu in 1666, the relative ratio of bullock-owners belonging to the privileged category and the raiyati was 4: 6, respectively.<sup>31</sup> If this ratio is taken as a proxy for the relative number of these two sections in qasba Chatsu, then the raiyati were actually growing more specialised cash crops in the qasba than the privileged sections. This is particularly apparent for the dye crops and vegetables while cotton acreage was proportionately greater under the category of privileged cultivators. On the other hand, the raiyati were producing a much smaller quantity

Table 25: Crop Distribution : Oasba Chatsu (1690)

A: Zabti Crops (area in bighas)

Crops	Total Area	Privileged Area	Raiyati Area
Cotton	476.90	234.35	242.55
Indigo	58.95	0.00	58.95
Henna	54.55	16.10	38.35
Vegetables	192.35	13.90	178.35
Ralo (millet)	8.10	2.50	5.60
Kodon (-do-)	70.00	25.80	44.20
Varti (-do-)	0.90	0.00	0.90
Sunn-hemp	0.60	0.60	0.00
Total	862.25	293.25	569.00
Percentages	100.00	34.00	66.00

B: Jinsi Crops (in maunds)

Crops	Total Quantity	Privileged Quantity	Raiyati Quantity
Bajra	234.98	158.23	76.75
Juwar	54.88	18.50	36.38
Moth	908.38	377.23	531.10
Urad	26.10	16.48	9.62
Mung	13.45	12.38	1.07
Guwar	3.35	3.35	0.00
Sesame	23.10	14.15	8.95
Sali (rice)	50.25	0.00	50.25
Singhara	15.65	0.00	15.65
Total	1330.13	600.35	729.78
Percentages	100.00	45.13	54.87

Source: Jamabandhi Bhomi Pargana Chatsu Fasl Kharif VS. 1747/ 1690 AD.

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of grain than was justified by their numbers. The observations that emerges from Table 25 would tend to corroborate our initial hypothesis that the difference in the crop composition as well as the extent of cultivation between the privileged sections and the raiyati was not as disparate in the kharif harvest as it appears to have been in the rabi. However, as we had shown earlier in the chapter, the cropping pattern in the qasba was atypical of the pargana as a whole due to its locational advantage over the villages and the fact that specialist cultivators, such as Malis, growing commercial crops like vegetables and dye-plants tended to concentrate in the hinterland of the qasba.

Although nothing conclusive can be said about the cropping pattern of individual agriculturists on the basis of the data available, it is clear that this aspect needs to be examined in greater detail. Our evidence questions the underlying assumptions on the basis of which official tax categories or social groups have been identified with economic strata which in turn have been attributed with a distinct pattern of cultivation. In an earlier chapter, our examination of economic differentiation within the peasantry based on bullock ownership showed an absence of extreme inequalities, with the majority of the peasants of each caste group clustered in the 'middle peasant' category.<sup>32</sup> Hence agriculturists pursuing an 'intensive production strategy' cannot be seen to be confined to one or the other of the tenurial or social categories. The incentive for agriculturists to expand and intensify production, such as witnessed in the second quarter of the eighteenth century in our region, involved a complex interaction between diverse factors such as the availability of credit and resources, changes in prices and the tax demands of the state, and the needs of the cultivating units. The available evidence so far suggests that the sections of rural society that were in a position to respond most

dynamically to the growth of commodity production were the village elites and that these sections were also involved in the provision of credit to finance cultivation and the marketing of crops. Our imperfect understanding of the integral links between production, credit and marketing make it difficult at present to assess the role of such 'agrarian managers' in regulating the cropping choices of the dependent peasants.



Notes to Chapter VIII: Cropping Patterns

1. The generative aspects of pre-industrial towns and their impact on agricultural production in the hinterland have been emphasised in E.A. Wrigley, "Parasite or Stimulus: The Town in a Pre-Industrial Economy", in E.A.Wrigley and Philip Abrams eds., Towns in Societies, p.301.
2. See S.Nurul Hasan, K.N.Hasan and S.P.Gupta, "The Pattern of Agricultural Production in the Territories of Amber (c.1650-1750)", PIHC, 1966, pp.248-252 (Table I).
3. See Appendix 5 for a discussion on the nature of the revenue data and its limitations which makes it difficult to directly compare the relative production of crops assessed in cash with those assessed in kind.
4. See Chapter VI on Trends in Revenue Rates and Chapter VII on Trends in Foodgrain Prices.
5. See Appendix 5 on the nature of the statistical data and the problems associated with using the revenue records.
6. See S.N.Hasan, K.N.Hasan and S.P.Gupta, "The Pattern of Agricultural Production", pp.244-264 and D.Singh, "Revenue Administration ", pp.92-145.
7. In the arhsatta records, irrigated land devoted to the cultivation of wheat and of barley has not been distinguished, their aggregate areas and revenues being entered under the head of chomli. S.P.Gupta and D.Singh have taken chomli to mean a specific type of crop. D.Singh places it in the category of rabi vegetables possibly identifying it with "chowlee" or Asparagus bean (*Vigna Catjang*).[cf. D.Singh, "The Pattern of Agricultural Production in the Qasbas of Chatsu and Malarna (c1709-1770), " PIHC 1976, pp.184-187]. The latter is, however, a kharif and not a rabi crop that ripens in November-December. The basis for our identification of chomli as a local term for irrigated wheat and barley is because this is specifically stated in the arhsatta of qasba Chatsu dated VS 1767/AD 1710. Evidence from the other qasbas also indicates that it was not unusual for irrigated land under cereal production to be collectively assessed under general categories like "kyari", "seko" or "khatli".
8. For example, see Arhsatta, pargana Chatsu, VS 1774/AD 1717.
9. Arhsatta, pargana Chatsu, VS 1783/AD 1726.
10. See Section on Ulwar (Alwar) by Maj. P.W.Powlett, Rajputana Gazetteer, vol.III., 1880, pp.280, where "katli" has been identified as the "dried up bed of a seasonal river...fit to bear rabi crops by the aid of peculiar manure." Wilson calls such land "khatiri" and Platt defines "khatli" as manured land only. Wilson's Glossary, p.283. That khatli denoted river irrigated land is confirmed by the entry in the Jamabandhi of pargana Tonk, VS 1771/AD 1714, where "khatli nadi ki" is specified.
11. Arhsatta, pargana Malarna, VS 1786/AD 1729.

12. Arhsatta, qasba Sawai Jaipur VS 1821/AD 1764.
13. In the Taqmina Kishtwar Fasl Unhalu, pargana Phagi, dated VS 1770/AD 1723, it has been stated that the crops grown on kyari land were barley, wheat and vegetables. However, as vegetable acreage was always separately specified in the arhsatta accounts, it can be assumed that the term was specific to irrigated barley or wheat cultivation. This is corroborated by references to kyari land producing only wheat and barley in other parganas as well. See Taqmina fasl rabi VS 1760/AD 1703, for qasba Sanganer and eight adjoining villages; Arhsatta, pargana Chatsu, VS 1767/AD 1710; Arhsattas, pargana Dausa, VS 1801/AD 1744 and VS 1802/AD 1745. In the latter reference, a combined term "kyari seko ki" has been used, suggesting that the two terms were considered synonymous, and that both were used to denote irrigated wheat and barley cultivation.
14. Arhsatta, qasba Sanganer, VS 1797/AD 1740.
15. The average rate of taxation on sugarcane cultivation was about Rs.4.50 per bigha. See Chapter VI on Trends in Revenue Rates for a discussion of 'average' rate in the context of a system of differential taxation.
16. See Chapter VI on Trends in Revenue Rates where the revision has been discussed in detail.
17. There was widespread scarcity and famine during the years 1755-57 leading to a price increase of approximately 300 per cent. See Chapter VII on Trends in Foodgrain Prices.
18. Asim Kumar Sen, "Agro-Climatic regions of Rajasthan", Annals of Arid Zone, vol.II, nos.1 & 2 (1972), pp.31-40.
19. S.N. Hasan et.al., "The Pattern of Agricultural Production", observe this for the period 1650-1750. The tables of percentage distribution of revenue between the two harvests in the period 1750-1800 show a similar relationship though marked by an overall decline in the percentage of rabi revenues in the period. D.Singh, "Revenue Administration", pp.120-127.
20. Irfan Habib, "Potentialities of Capitalist Production", Enquiry, NS vol.III, no.3 (Winter 1971), p.20.
21. ibid.
22. Tapan Raychaudhuri and Irfan Habib eds., CEHII, p. 222.
23. For the tabulation giving details of the crops produced by each peasant see S.P.Gupta, "Khasra Documents in Rajasthan", Medieval India-A Miscellany, vol.4, 1977, pp.168-176.
24. ibid.
25. C.J.Baker, An Indian Rural Economy, p.138-144.

26. Walter Neale, "Land Is To Rule", in R.E.Frykenberg ed., Land Control And Social Structure in Indian History, pp.3-15.
27. N.Bhattacharya has termed such interest free loans from landowners to tenants and labourers as 'social loans.' See idem, "Agrarian Change in Punjab : 1880-1940", 1985, pp.467-468
28. In the Census of 1901, the average number of rural inhabitants in the 5,735 vilages in Jaipur district was about 386. An estimate of the agricultural population of village Naelo in 1734, based upon the number of taxpayers recorded in the khasra and adjusted for average size of family, suggests that its population was probably twice as large ( $102*5=510$ ) as that of an 'average' village in 1901.
29. While the khasra analysed by S.P.Gupta is of the kharif harvest, the caste of each agriculturist has not been mentioned. This makes it impossible to attempt a comparative analysis of cropping pattern with reference to the caste-based stratification in the village.
30. Jamabandhi Bhomi Fasl Kharif, pargana Chatsu, VS 1747/AD 1690.
31. The ratio has been calculated on the basis of the figures given in the Yaddadashti Hal Bail, pargana Chatsu, VS 1723/AD 1666. This document is a census of all the bullock owning agriculturists in the khalisa or state administered villages and lists each agriculturist, identified by caste, and the number of bullocks owned. In deriving the ratio of privileged to unprivileged agriculturists we have included the same castes in the privileged sections as had been exempted from bhomi taxes in 1690. The census is incomplete as it does not list poor peasants who did not possess bullocks, and consequently the ratio of privileged section to small peasants is probably biased in favour of the former.
32. See Chapter III on Agrarian Relations.

## Chapter IX

### CONCLUSION

A brief summary of the trends in the indices of production allows us an overview of the distinct phases in the history of agricultural production in eastern Rajasthan in the eighteenth century. Following a quarter century of intense political conflict during the latter period of the seventeenth and early eighteenth century, the main problem confronting the state was the resettlement of peasants and the reoccupation of abandoned land. The dramatic upswing in foodgrain prices in the second decade of the eighteenth century, especially of the staples bajra and moth, did not have an appreciable effect on production in the qasbas. During this period foodgrain cultivation dominated both seasons but no clear expansion in production is discernible. It appears probable that the frequency of severe scarcities and famines in the decade held back the vigorous expansion that soon followed. From the early 1720s, production began to expand gradually, the phase of 'high' cultivation becoming pronounced between 1730 to 1745 and coincided with the years of consistently high prices. During this phase, the cultivation of cash crops such as cotton, vegetables and sugarcane expanded in the autumn harvest, particularly in qasbas Chatsu, Phagi, Lalsot and Malarna. The increase in the cultivation of the rabi staples - barley and gram - in the same period can perhaps be seen as a compensatory adjustment for the slight fall in the cultivation of the kharif foodgrains in the qasbas. Thus, after an initial lag, the phase of high prices also corresponded with an expansion in overall acreage as well as an increase in the cultivation of cash crops.

The shift in the pattern of production in the next decade between 1745 to 1755 also appears to follow the general price trend. In this phase, while the prices of the rabi foodgrain remained high, those of the kharif harvest showed a slight decline. Cultivation in this period gradually receded, but the fall was disproportionately greater in the case of the high value crops cultivated in the kharif harvest than in the rabi season which was dominated by grain production. The years following the succession of scarcities and droughts that began in 1755 saw a sharp fall in production in all the qasbas for a decade. The crisis in production pushed up prices of foodgrains to their highest level in the century. In the mid-1760s, however, prices abruptly collapsed by as much as half their previous level. Agricultural production, however, continued to stagnate at a level significantly lower than in the whole of the first half of the century and was composed almost entirely of low value foodcrops assessed in kind. The data for this period is patchy, but the figures for the available years indicates that there was a slight revival in production in qasbas Chatsu and Malarna after the worst effects of the famine were over around 1765, but there was no abatement in the spiral of decline that had set in in qasbas Lalsot and Sanganer.

The coterminous changes in the secular movements in prices and cropping changes seem to clearly indicate that crop production in the qasbas was responsive to price changes. But what does this tell us of peasant incomes and their response to the market? The expansion in crop production in the first half of the century, particularly in the cultivation of cash crops, when prices doubled underlines the "rationality" of peasant economic behaviour. In this phase of expansion, when both production and prices rose together, incomes in general must have also risen albeit differentially. As we have seen, the tax demand on the cultivation of cash crops

fell in real terms in this period and hence not only did producers realise a higher price for the crop, they also retained a larger proportion of it. Peasants who commanded the resources to invest in the construction of wells and the cultivation of cash crops would have profited in a period of rising prices and an unchanging tax demand. Such cultivators would have certainly included the "agrarian managers" - the village elite and rich agriculturists who provided the facilities necessary for production such as credit, seed and cattle. The availability of easier credit in a phase of boom would have also made it possible for more peasants to finance productive investment in agriculture. The increased demand for labour for agricultural intensification and expansion during this period would also have provided poor and marginal peasants who lacked adequate resources to sustain independent production with the means to supplement their meagre income.

Similarly it would be reasonable to argue that the decline in prices in the second half of the century without a compensatory downward revision in revenue rates made the cultivation of fine crops uneconomical. Hence, peasants fell back to protective strategies, reordering production to the needs of self-sufficiency. The fall in prices, depopulation and the disruption in trade discouraged productive investment and contributed to the sharp fall in production and an overall decline in all incomes derived from agriculture. Such an unfavourable economic conjuncture must have impoverished the peasantry as a whole, but it is doubtful if it significantly reduced the inequalities in rural society. The period of recession and poor harvests saw an intensification of conflict in the village over the collection and distribution of revenue. The rural elite added to their assets by foreclosing on mortgages of land which had been improved by the investment of capital in irrigation. At the same time, the depletion in the resources of the poor peasants led

increasingly to a greater degree of agrarian dependence in the second half of the century.

The evidence of sustained agricultural expansion in the early decades of the eighteenth century testifies to the dynamic potential of pre-colonial agriculture and the ability of peasants to respond to market incentives. Peasants did not, however, simply respond as individuals to the presence of an abstract market. There were other equally crucial determinants of peasant response that were conditioned by a complex interaction between ecological constraints, peasant needs and state action. A primary concern of our study has been to locate the secular trends in agricultural production in the eighteenth century within the context of the interaction between the state and agrarian production system. In examining the role of the state in the spheres of rural taxation, credit and marketing, the records of the eighteenth century Jaipur state have proved particularly useful in providing a micro-level view of the changing interaction between the state and rural society during a phase of agricultural expansion as well as one of agrarian recession.

The critical limits to the expansion in production in eighteenth century eastern Rajasthan were the availability of water and the shortage of labour. The frequency of periodic droughts and poor yields occasioned by the inconstant monsoons and the absence of perennial rivers underlined the inherent fragility of the agrarian landscape. The uncertainties associated with semi-arid agriculture were further accentuated by the fluidity of labour and capital in the pre-colonial period. Rural migration and the en masse desertion of villages formed a vital part of the peasants response to adversity. Wars, famines and excessive taxation were the oft cited reasons for the migration of peasants. At the same time, crises in subsistence and

the accompanying depopulation and fall in demand discouraged productive investment and coincided with the retreat of 'high' farming. The constraints imposed by ecology and low population densities in the semi-arid agrarian economies of pre-colonial India defined and set limits to the share of the social product that the state could claim. Raising agricultural production and expanding the resource base required close attention to the rural economy and the active implementation of policies that sought to attract and retain labour and encourage productive investment in land. These underlying concerns were reflected in a range of state actions and official directives that sought to regulate rural production and exchange as part of a coherent and vigorously pursued agrarian policy.

The policies of the Jaipur state towards agriculture fall into two broad categories: those that affected agricultural production in the long run and those that influenced the distribution of the product. The structure of agricultural taxation - both the level of assessment and the modes of collection - were the principal mechanism for the distribution of the income generated in agriculture. The fundamental aims of the state required a system of taxation which achieved a balance between the increased demand for revenue by the state and the possibility of excessive exploitation of the peasant resulting in migration and a steady demographic decline. In the pursuit of its objectives, the Jaipur state drew from the repertoire of Mughal practices and precedents but adapted them to local conditions. In a dry farming region such as eastern Rajasthan, the spectre of famine and its attendant devastation provided an equally compelling rationale for the state to implement policies that were flexible enough to respond to short-term production crises while at the same time incorporating incentives to stabilise and expand production.



A central feature of the revenue policy of the state was to allow revenue levied on the production of foodgrains to be paid in grain through a system of crop-sharing thereby ensuring that the risks of production shortfalls were shared between the state and the peasant. As we have argued, the rationale for the collection of revenue in kind for foodgrains derived from considerations of peasant welfare and the agricultural practice of intercropping prevalent in dry farming regions that made it difficult to impute a standard cash value to the state's share of the output. On the other hand, taxes on the production of crops destined for the market were paid in cash at a fixed rate per unit of land. These cash rates were graded to incorporate variations in the price of the crop sown and the level of productive investment of labour and capital that such cultivation entailed. The concept of differential rent built into the structure of taxation ensured that cultivators who grew cash crops and risked greater investment were not penalised for their efforts. At the same time, the risk of a substantial loss in case the crop failed was sought to be minimised by the remission of revenue in such instances. The state also encouraged agriculturists to grow higher value crops by funding the purchase of seed or the sinking of wells but these activities were generally left to private initiative. Other forms of direct incentives, such as tax breaks or concessional tax rates, encouraged the expansion in production and enabled the resettlement of abandoned lands. Special concessionary tax codes for migrant cultivators and the fact that in areas of expanding agriculture cultivators could negotiate their contracts underlines the essential bargaining strength of the primary producers in setting limits to the demands of the state.

The effectiveness of the formal tax codes in stimulating production depended to a large degree on the mechanism of tax collection and the ability of the state to

define and limit the power of the social intermediaries who mediated in the processes of revenue extraction. It is generally accepted by historians that the implementation of the revenue policies of the pre-colonial state was delegated at the village level to structures dominated by the village elites. The aims of a carefully structured system of taxation, it is argued, were bound to be defeated as the practicalities of revenue collection from a multitude of spatially dispersed producers meant that the 'dominant' elements were entrusted with the responsibility of allocating the aggregate revenue demand assessed on the village as a whole. Our evidence, however, indicates that the assessment of liability by the state extended to individual taxpayers and the detailed recording of such assessments and arrears if any must, at the very least, have limited the scope for manipulation by the village headman. The evidence of the khasra records therefore suggests that taxpayers liabilities were not arrived at in an arbitrary manner but were drawn up in accordance with the principles of taxation specified by the state and in conformity with local customs. At the same time, the privileges of the village elite and the socially dominant castes in the countryside were sought to be limited to preferential taxation and customary exemptions in recognition of their indispensable role in production and revenue collection. As much of our analysis of village conflict indicates, the nomination of a member of the numerically dominant agriculturist caste in the village as the village headman served to contain the power of the socially dominant castes in the village.

As the major part of the revenue of the state was collected in grain, an active strategy of intervention in the market was one of the key components of the overall agrarian policy of the state. The role of the pre-colonial state in the regulation of the exchange economy has been understood to have operated at a very rudimentary

level. The general view is that the state limited itself to taxing traders or instituting monopolies over the sale of certain high value commodities. The records of the Jaipur state however shows that the state pursued an active policy of intervention in the market in order to realise the full value of its grain stocks while also protecting peasants from the adverse movements of prices. The control exercised by the state over the foodgrain market was effected through the continuous monitoring of current prices and a regulated mechanism of sale that requisitioned the services of the resident traders as the virtual agents of the state. The element of coercion implicit in the relationship between the state and the trader must however be seen within the context of an essentially symbiotic interdependence in which the state recognised that the services provided by the merchants were indispensable to the functioning of a centralised administrative system.

Another activity which frequently overlapped with grain trading and with which it was closely linked was the provision of credit. The widespread dependence of the peasants upon moneylenders for the provision of consumption loans was symptomatic of a chronic deficit in the rural sector which was causally linked to the high level of the revenue demand and the instability of production. Loans were primarily supplied at the commencement of the production cycle to provide seed, to purchase draught animals and to feed the peasant families from one harvest to the next. The records of the Jaipur state indicate that the state was aware that the advance of money and grain at this stage in the production cycle was critical to sustain immediate production but, if unchecked, the terms imposed by the moneylenders could prove deleterious in the long-run. However, it was infeasible for the state to service a vast number of petty borrowers and it

recognised that this could be done more effectively by the professional moneylenders. In order to prevent the subordination of its claim to the peasants' produce to that of the moneylenders, the state adopted a two pronged strategy: first, the state attempted to institute limits on the demands that the bohras could enforce on the borrowers such as the stipulation that loans should not be carried forward and thus compounded from one harvest to the other; and second, in situations when the moneylenders refused to provide short-term loan facilities, the state intervened to offer an alternative source of credit in the form of taccavi loans. In times of famines in particular, state loans were critical to recovery and served as a form of social subsidy to prevent large scale desertion by the peasantry.

The underlying theme in our study has been that the agrarian policy of the state was a coherent and complex amalgam of interrelated elements that aimed to achieve an acceptable balance between inter-locked and contradictory interests in rural society. The agrarian policy attempted to mediate between the revenue demands of the state on the one hand and the social reproduction of the primary producers on the other, along with the need to reconcile these two primary interests with the conflicting and often competing demands of the traders, the moneylenders and the landed aristocracy. A measure of the effectiveness of these policies was the sustained growth and agrarian prosperity during the reign of Sawai Jai Singh when the active implementation of the state's agrarian policy coincided with favourable economic trends and a phase of relative political stability. Climatic imbalances during this period resulted in famines but the destructive impact of such crises in production was contained by state intervention which aimed to restore incentives to stimulate production and which enabled a relatively rapid recovery.

The inability of the state to respond actively to widespread drought, on the other hand, had a domino effect on all interlinked sectors in the economy that resulted in the drought rapidly deteriorating into a severe famine followed by a prolonged period of agrarian recession. The secular decline in agrarian production in the region during the second half of the eighteenth century can be traced to the devastation caused by the irruption of endemic warfare and the payment of large indemnities to the Marathas. During this period of intense fiscal pressure, the state was unable to deploy adequate resources to support a system of state loans which was instrumental in providing relief aid. In the wake of the famine of 1755/56, the state initially attempted to encourage moneylenders to release funds by guaranteeing the return on capital. As a result the state was forced to subordinate its claim to the surplus to that of the providers of credit upon whom it came to depend increasingly. This arrangement coincided with a sharp contraction in agricultural production and meant that there was an increasing risk attached to the state's revenue returns. Contemporary records of the period ascribe the fall in production to the depredations of the Marathas and the depopulation after the famine years. Our evidence also suggests that during this period trade declined and there was a flight of capital from the region. The negative effects of political insecurity and famine on production were aggravated by the underlying downturn in the economy reflected in the secular decline in prices. In the changed context of this period, the farming of revenue through competitive bidding became increasingly prevalent. The rationale for the adoption of revenue farming can perhaps be attributed to an attempt by the state to stem the long-term decline in revenue and to distance itself from the element of risk in production in return for a smaller but more secure cash income.

It could reasonably be argued that we have ascribed to the state a degree of cognitive action and control over the economy that it did not really possess. In part, this is a result of the orientation of our sources which limit themselves to the concerns of the state in the rural economy. However, it is the careful recording of the minutiae of taxation that has enabled us to explore the linkages between the primary producers and the state. These linkages we have argued were operated through a set of carefully formulated policy measures which were responsive to the complex realities of agricultural production and the objectives of the state.

This bias of our sources must be balanced by the fact that they also reveal the major limitations of state fiat in that the Jaipur state could never control or set boundaries to the power of the intermediary groups upon whom it was dependent but whose interests conflicted with its own. Hence the state could not provide the political and economic protection that was necessary except for relatively short periods and within the confines of small, closely administered domains. The tensions that originated in the social sphere of production had repercussions at all levels of rural life and in turn impacted on economic activity. The states' concern with agricultural production has to be evaluated within the context of its failure to address itself to two major issues that together comprised the most important limits to agricultural growth, namely, the provision of adequate irrigation and the establishment of an efficient grain distribution network to combat the devastation of famine.

### Appendix 1 : Price Hierarchies

The five tables below show the average difference in the price levels of five crops in the six qasbas. As indicated in the text, each table was constructed in two stages. First, the common years for which prices were available for any two qasbas were extracted and the mean obtained for each pair of comparable observations. Thus we got a pair of mean values for common observations for each of the following relationships, viz.,

[The symbols used to identify the qasbas are C=Chatsu M=Malarna S=Sanganer J=Jaipur P=Phagi L=Lalsot. The same symbols are used in subsequent tables]

C : M	M : S	S : J	J : P	P : L
C : S	M : J	S : P	P : L	
C : J	M : P	S : L		
C : P	M : L			
C : L				

In the calculation of each of the fifteen sets of mean values for common years, where the number of such observations was less than ten the sample was considered too small to be statistically relevant and was therefore ignored. As the common years as well as number of observations in each pair of mean values was specific to the particular relationship being compared, the mean values were converted into relative ratios. These were calculated by imputing a notional value of 100 to the mean of each qasba in turn in each set of relationships derived above. These relative ratios are given in section A of the tables below. Section B gives the sum of the relative ratios for each qasba in the matrix which, when divided by the

relevant number of qasbas being compared, gives the figure in Section C. The latter represents the average difference in the prices of each foodgrain in the qasbas and this value has been later used in the estimation of the missing prices. The last row of ratios in Section D of each table gives the values in section C indexed to the average price ratio of qasba Malarna as the base in order to facilitate comparison of the price differentials for the five crops.

Table 1.1 : Matrix of Bajra Prices

	C	M	S	J	P	L
A:						
C	100.00	94.46	112.20	123.37	88.13	114.63
M	105.86	100.00	122.46	150.77	105.76	117.02
S	89.13	81.66	100.00	105.27	83.12	96.56
J	81.06	66.33	94.99	100.00	72.76	84.54
P	113.47	94.55	120.31	137.32	100.00	127.85
L	87.24	85.46	103.56	118.29	78.22	100.00
B:(Sum)	576.57	522.46	653.52	734.74	527.99	640.60
C:(Sum/6)	96.10	87.08	108.92	122.46	88.00	106.77
D:(M=100)	110	100	125	141	101	123

Table 1.2 : Matrix of Moth Prices

	C	M	S	J	P	L
A:						
C	100.00	92.91	156.26	135.51	91.60	101.69
M	107.63	100.00	159.18	161.07	101.74	104.29
S	63.99	62.82	100.00	83.29	55.61	65.09
J	73.80	62.09	120.06	100.00	70.04	60.01
P	109.18	98.29	179.83	142.77	100.00	108.83
L	98.34	95.89	153.63	151.49	91.89	100.00
B:(Sum)	552.94	512.00	868.96	774.13	510.88	539.91
C:(Sum/6)	93.16	85.33	144.83	129.02	85.15	89.99
D:(M=100)	108	100	170	151	100	105



The extremely high ratios of moth prices in qasba Sanganer are due to the inclusion of an additional tax on the production of all pulses (nirni) in the total proceeds from the sale of moth revenue in grain. As the average harvest price has been determined by dividing the total proceeds by the total quantity of grain sold, the price calculated is higher than the actual sale price. However, it was not possible to exclude the tax element in our calculations as its amount has been separately mentioned only in a few arhsattas. In the computation of the regional moth price, therefore, the prices of qasba Sanganer have been excluded as these would tend to artificially inflate the average for the region.

Table 1.3 : Matrix of Barley Prices

	C	M	S	J	P
A:					
C	100.00	94.99	106.23	123.59	67.99
M	105.88	100.00	115.25	131.66	77.50
S	94.14	86.77	100.00	107.56	61.31
J	80.91	75.95	92.97	100.00	54.68
P	147.08	129.03	163.11	182.88	100.00
B:(Sum)	528.01	486.74	577.56	645.69	361.48
C:(Sum/5)	105.60	97.34	115.51	129.14	72.30
D:(M=100)	109	100	119	138	76

Note: In the above matrix, the values for qasba Lalsot have been excluded as the number of comparable observations with other qasbas was always under ten. This was because barley was generally a zabti or cash assessed crop in Lalsot. Therefore only in the few years when barley was assessed in kind are there any price figures recorded.

Table 1.4 : Matrix of Wheat Prices

		M	S	J	P
A:	M	100.00	111.52	136.44	101.21
	S	89.67	100.00	115.38	82.84
	J	73.29	86.67	100.00	72.22
	P	98.80	120.72	138.47	100.00
B:(Sum)		361.76	418.91	490.29	356.27
C:(Sum/4)		90.44	104.73	122.57	89.07
D:(M=100)		100	119	136	98

Note: The ratios for wheat prices of qasbas Lalsot and Chatsu have been excluded as the number of comparable observations were less than ten.(cf. Note for barley above)

Table I.5 : Matrix of Gram Prices

		C	M	P
A:	C	100.00	93.51	85.18
	M	106.95	100.00	105.10
	P	117.40	95.15	100.00
B:(Sum)		324.35	288.66	290.28
C:(Sum/3)		108.12	96.22	96.76
D:(M=100)		112	100	101

Note: The ratios for gram prices of qasbas Lalsot, Jaipur and Sanganer were excluded as the number of comparable observations were less than ten.

## Appendix 2: Estimation of Prices for Years with Missing Data.

As discussed in the text, the systematic hierarchy in the prices of the major foodgrains across qasbas and the close correlation in their long term trends, made it feasible to estimate the missing values in the price series. First, we selected the major foodcrops that were commonly cultivated in each of the six qasbas and for which we had most complete price series. On this basis, two kharif crops, moth and bajra, and two rabi crops, wheat and barley, were chosen. Then for each crop, the average difference in the relative price level between qasbas (Section C of Tables 1.1 to 1.4 of Appendix 1.) was used as a ratio to estimate the missing observations in any one series for which there was a corresponding price figure in the parallel series. When there were two or more corresponding values in parallel series for any year, the missing value was estimated using the price from the series that had the largest number of non-missing observations. This criterion was adopted as the accuracy of the price estimation depended upon the accuracy of the price hierarchies previously calculated ( Appendix 1.). The latter would tend to be more accurate when the number of total observations, and hence, the comparable observations between parallel series was high. As is evident from the accompanying tables and figures, for all the four crops selected, the largest number of observations as well as the maximum spread of values within the period 1710 to 1780 was for qasba Malarna. Systematic application of this criterion has, therefore, introduced an element of bias in the price estimations in favour of prices in qasba Malarna. However, as the object of our exercise is to analyse the long-term trends which are broadly similar in all the qasbas studied, the bias is not thought to be of such a magnitude as to vitiate the conclusions.

Using the method discussed above, an estimated price series was calculated for each crop and qasba. As indicated in Appendix 1., the price hierarchies and therefore the price estimates could not be calculated for certain crops where the number of comparable observations in the series were too few for average price ratios to be computed. Thus it was not possible to estimate the price of wheat in qasbas Chatsu and Lalsot and barley in Lalsot. Lastly, the price of moth in qasba Sanganer was excluded from the calculations of price estimations because in Sanganer moth prices were artificially inflated which would affect the later calculation and comparison of regional prices.

The estimated price series for the four crops, barring the above mentioned exclusions, are presented in tables 2.1 to 2.4. alongside the actual prices recorded in our sources. In order to verify the validity of the method, the estimated prices were then plotted with the recorded prices in order to compare the two. In the figures that follow, the numbering sequence begins with the identifying initial of the qasba followed by digits 1 to 4 where 1=bajra, 2=moth, 3=wheat and 4=barley. The graphs indicate a broad synchrony in the actual and estimated prices. The close coincidence of the two series, specially for qasbas Malarna, Chatsu and Phagi, indicated that it was possible to interpolate the estimated prices for the years for which we had missing values. Having derived a complete price series for each crop and the qasba studied through interpolation, the parallel series for each crop were arithmetically averaged to give a regional price for each of the four crops. The prices of the four foodgrains in qasba Jaipur are included in the regional index only from 1728 onwards as this was the first fiscal year after the foundation of the city in late November 1727. The average regional prices thus derived are presented in Appendix 3. Table 3.1

TABLE 2.1: ACTUAL AND ESTIMATED PRICES OF BAJRA  
 Note: A=actual prices E=estimated prices

YEAR	MALAANA		PHAGI		CHATSU		SANGHER		JAIPUR		LALSOT	
	A	E	A	E	A	E	A	E	A	E	A	E
1691	.	0.75	0.76	.	.	0.83	.	0.94	.	.	.	0.92
1697	.	0.06	0.87	.	.	0.55	.	1.07	.	.	.	1.05
1708	.	0.74	.	0.74	.	0.81	0.92	.	.	.	.	0.93
1710	.	0.80	.	0.81	0.88	.	.	1.08	.	.	.	0.98
1711	.	0.80	.	0.81	0.88	0.87	0.99	1.30	.	.	.	0.98
1712	.	1.81	.	1.83	2.00	1.44	1.58	2.27	.	.	1.59	2.22
1713	2.71	2.51	.	2.74	.	2.99	3.14	3.39	.	.	2.75	3.33
1714	1.09	1.07	.	1.10	1.10	1.20	.	1.36	.	.	1.23	1.33
1715	1.64	1.39	1.43	1.66	1.54	1.82	1.77	2.06	.	.	2.05	2.02
1716	1.35	1.07	1.21	1.36	1.18	1.49	1.51	1.68	.	.	1.85	1.65
1717	2.64	2.44	2.42	2.67	2.69	2.97	.	3.30	.	.	3.33	3.23
1718	1.97	1.36	1.78	1.93	.	2.17	.	2.46	.	.	2.18	2.42
1719	1.62	1.23	.	1.63	.	1.78	.	2.02	.	.	1.67	1.98
1720	1.26	1.23	1.25	1.27	.	1.39	.	1.57	.	.	.	1.54
1721	1.18	1.26	.	1.19	1.39	1.30	.	1.47	.	.	1.62	1.44
1722	1.27	1.28	.	1.28	.	1.40	.	1.59	.	.	1.57	1.56
1723	1.15	1.31	1.59	1.17	1.44	1.27	.	1.44	.	.	.	1.42
1724	.	0.87	.	0.88	0.96	1.42	1.61	1.09	.	.	.	1.07
1725	1.21	0.98	0.99	1.22	.	1.33	.	1.51	.	.	.	1.48
1726	1.45	1.52	1.54	1.46	.	1.60	.	1.81	.	.	.	1.77
1727	0.79	0.96	0.97	0.80	.	0.87	.	0.98	.	.	.	0.96
1728	0.73	1.06	1.07	0.74	.	0.87	1.23	0.92	1.38	1.03	.	0.99
1729	1.38	1.12	1.33	1.39	.	1.52	.	1.72	1.45	1.94	.	1.69
1730	2.38	1.65	1.72	2.32	1.82	2.54	1.64	2.87	.	3.23	.	2.82
1731	0.81	3.02	.	4.05	3.33	4.43	.	5.02	.	5.64	4.10	4.92
1732	1.05	1.13	1.27	1.06	1.25	1.15	1.48	1.31	.	1.47	.	1.28
1733	.	1.13	1.07	1.14	1.25	1.17	.	1.42	1.37	1.59	1.37	1.39
1734	.	1.61	1.56	1.62	1.77	1.71	.	2.01	.	2.26	1.84	1.97
1735	.	1.73	.	1.74	1.90	.	.	2.16	.	2.43	.	2.12
1736	1.67	1.85	1.87	1.69	.	1.84	2.12	2.09	2.02	2.35	.	2.85
1737	1.77	2.04	.	1.79	2.25	1.96	2.48	2.22	2.64	2.49	2.32	2.17
1738	1.62	1.84	.	1.63	2.03	1.78	.	2.07	.	2.27	.	1.98
1739	.	1.43	.	1.45	.	1.58	1.79	1.47	.	2.01	.	1.76
1740	.	0.98	.	0.99	1.08	1.07	1.22	1.23	.	1.38	.	1.20
1741	.	1.21	1.07	1.22	1.33	1.17	.	1.51	1.23	1.70	.	1.48
1742	.	1.58	1.27	1.59	1.74	1.39	1.94	1.97	2.04	2.22	.	1.93
1743	0.89	1.04	1.09	0.90	1.14	0.98	1.54	1.11	1.59	1.25	.	1.09
1744	1.12	1.51	1.33	1.13	1.67	1.24	.	1.40	1.79	1.56	.	1.37
1745	0.77	0.88	1.05	0.78	0.97	0.85	1.23	0.97	1.19	1.09	.	0.95
1746	1.22	1.60	1.62	1.23	.	1.34	1.83	1.52	1.73	1.71	1.57	1.49
1747	1.02	1.20	.	1.03	.	1.12	1.50	1.27	1.43	1.43	1.21	1.25
1748	1.09	1.31	.	1.10	1.44	1.21	.	1.37	.	1.54	.	1.34
1749	0.97	1.05	1.27	0.98	1.15	1.07	.	1.21	.	1.36	.	1.19
1750	.	1.12	0.92	1.13	1.23	1.06	.	1.48	1.25	1.57	.	1.37
1751	1.09	1.29	1.44	1.11	1.43	1.21	.	1.37	.	1.54	.	1.34
1752	.	1.02	.	1.03	1.13	.	.	1.28	.	1.44	.	1.25
1753	.	1.24	1.07	1.26	1.37	1.17	.	1.56	.	1.75	.	1.52
1754	1.92	1.51	1.52	1.94	.	2.12	.	2.40	.	2.70	.	2.35
1755	.	4.26	2.89	4.31	4.71	3.15	.	5.33	4.66	6.00	.	5.23
1756	2.88	3.19	.	2.91	.	3.17	.	3.60	4.48	4.04	3.39	3.53
1757	1.31	1.78	2.09	1.32	1.96	1.44	.	1.63	4.23	1.84	.	1.60
1758	1.45	1.36	.	1.47	1.50	1.68	.	1.82	.	2.04	.	1.70
1759	1.55	1.70	1.81	1.57	.	1.71	.	1.94	2.20	2.18	.	1.90
1760	2.12	1.66	1.72	2.14	1.83	2.34	2.13	2.65	.	2.98	.	2.59
1761	1.71	1.71	.	1.72	1.88	1.88	1.83	2.13	2.16	2.40	.	2.09
1762	1.33	1.21	.	1.35	1.33	1.47	.	1.67	1.63	1.88	.	1.64
1763	1.90	1.74	.	1.92	1.92	2.10	.	2.38	2.29	2.68	.	2.34
1764	.	1.75	.	1.76	1.93	.	.	2.18	.	2.46	.	2.14
1765	1.09	0.79	.	1.10	0.87	1.20	.	1.36	.	1.53	.	1.33
1766	0.68	0.72	.	0.69	0.79	0.75	0.97	0.85	.	0.96	.	0.83
1767	0.92	0.72	.	0.93	0.80	1.02	.	1.16	1.05	1.30	.	1.13
1768	0.70	0.58	.	0.71	0.64	0.77	0.75	0.68	1.04	0.99	.	0.86
1769	0.60	0.43	.	0.61	0.44	0.66	.	0.75	0.95	0.84	.	0.74
1770	.	0.97	.	0.98	.	1.07	1.21	1.09	.	1.23	.	1.19
1771	.	1.00	.	1.01	1.10	.	1.07	1.25	1.43	1.40	.	1.22
1772	.	1.13	.	1.11	.	1.21	1.37	1.49	1.68	1.54	.	1.34
1773	.	0.85	.	0.86	.	0.94	1.37	.	.	1.20	.	1.05
1774	.	.	.	.	.	.	.	.	.	.	.	.
1775	1.02	.	.	1.03	.	1.12	.	1.27	.	1.43	.	1.25
1776	0.77	.	.	0.78	.	0.85	.	0.96	.	1.08	.	0.94
1777	1.28	.	.	1.29	.	1.41	.	1.60	.	1.80	.	1.57
1778	1.33	1.25	1.27	1.34	.	1.46	.	1.66	.	1.86	.	1.63
1779	1.18	.	.	1.12	.	1.22	.	1.38	.	1.55	.	1.35
1782	1.12	.	.	1.13	.	1.23	.	1.39	.	1.57	.	1.37

TABLE 2.2: ACTUAL AND ESTIMATED PRICES OF MOTH

Note: A=actual prices E=estimated prices

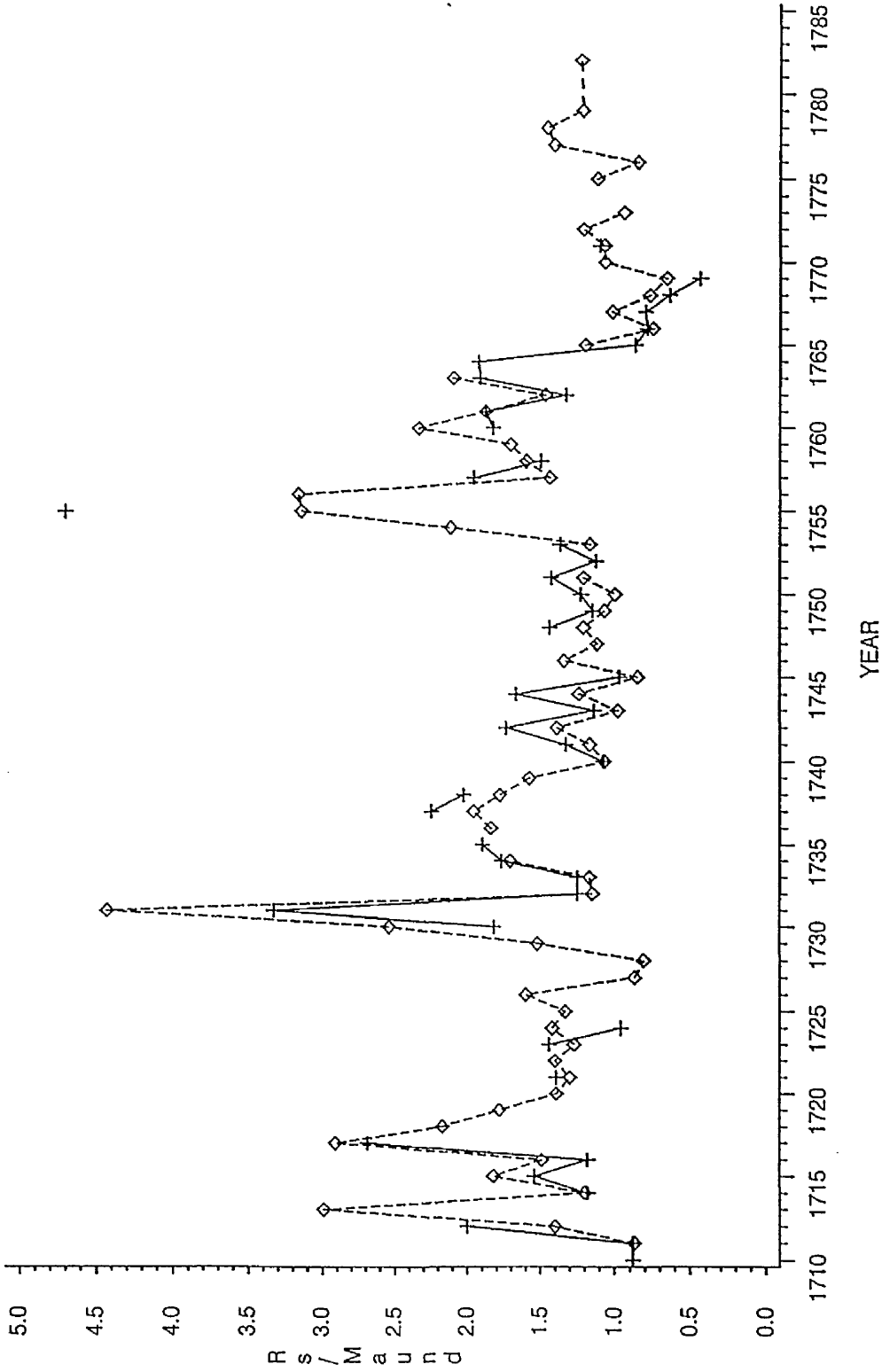
YEAR	MALARNA		PHAGI		CHATSU		JAIPUR		LALSOT	
	A	E	A	E	A	E	A	E	A	E
1691	.	0.56	0.56	.	.	0.61	.	.	.	0.59
1697	.	0.96	0.96	.	.	1.04	.	.	.	1.02
1708	.	0.73	.	0.73	.	0.79	.	.	.	0.77
1710	.	0.81	.	0.81	0.88	.	.	.	.	0.86
1711	.	0.85	.	0.85	0.92	1.47	.	.	.	0.90
1712	.	1.76	.	1.76	1.90	1.44	.	.	1.78	1.86
1713	2.45	2.41	.	2.44	.	2.64	.	.	2.54	2.58
1714	1.22	1.16	.	1.22	1.25	1.32	.	.	1.58	1.29
1715	1.62	1.45	1.24	1.62	1.57	1.75	.	.	2.05	1.71
1716	1.34	0.82	1.19	1.34	0.89	1.45	.	.	1.62	1.42
1717	2.51	3.48	2.48	2.51	3.76	2.72	.	.	3.05	2.65
1718	1.95	2.38	2.37	1.95	.	2.11	.	.	2.17	2.06
1719	1.06	1.12	.	1.06	.	1.14	.	.	1.19	1.12
1720	1.29	1.15	1.15	1.28	.	1.39	.	.	1.40	1.36
1721	1.20	1.26	.	1.19	1.36	1.29	.	.	1.50	1.26
1722	1.10	1.33	.	1.10	.	1.19	.	.	1.40	1.16
1723	1.24	1.47	1.65	1.23	1.58	1.33	.	.	.	1.30
1724	.	0.74	.	0.74	0.80	1.26	.	.	.	0.78
1725	1.18	1.11	1.11	1.18	.	1.28	.	.	.	1.25
1726	1.45	1.78	1.78	1.44	.	1.56	.	.	.	1.53
1727	0.76	0.82	0.82	0.76	.	0.83	.	.	.	0.81
1728	0.65	0.91	.	0.65	.	0.70	1.37	0.98	.	0.68
1729	1.29	1.30	1.30	1.28	.	1.39	1.29	1.94	.	1.36
1730	2.12	1.51	1.62	2.11	1.63	2.29	.	3.20	1.78	2.23
1731	4.85	4.11	4.09	4.84	4.44	5.24	.	7.34	4.10	5.12
1732	1.06	1.32	1.09	1.05	1.43	1.14	.	1.60	.	1.11
1733	.	1.03	1.12	1.03	1.11	1.22	1.46	1.56	1.39	1.08
1734	.	1.16	1.15	1.15	1.25	1.24	.	1.75	1.57	1.22
1735	.	1.37	.	1.36	1.48	.	.	2.07	.	1.44
1736	1.70	2.14	2.14	1.70	.	1.84	2.34	2.57	.	1.79
1737	1.66	1.76	.	1.65	1.90	1.79	2.62	2.50	1.98	1.75
1738	1.64	1.72	.	1.64	1.86	1.78	.	2.49	.	1.73
1739	.	1.52	.	1.52	.	1.64	1.94	2.30	.	1.60
1740	.	0.86	.	0.86	0.93	1.51	.	1.30	1.07	0.91
1741	.	0.99	0.99	0.99	1.07	1.07	1.03	1.49	1.19	1.04
1742	.	1.99	1.75	1.99	2.15	1.89	1.94	3.01	.	2.10
1743	1.08	1.26	1.39	1.08	1.36	1.16	1.84	1.63	.	1.14
1744	1.14	1.37	1.57	1.14	1.48	1.23	1.52	1.73	.	1.21
1745	0.76	0.86	1.06	0.76	0.93	0.82	1.10	1.15	0.87	0.80
1746	1.22	1.56	.	1.22	.	1.32	2.07	1.85	1.57	1.29
1747	1.10	1.02	.	1.10	.	1.19	1.38	1.66	1.19	1.16
1748	1.11	1.26	.	1.11	1.36	1.20	.	1.68	1.25	1.17
1749	0.99	1.09	1.19	0.99	1.18	1.07	.	1.50	.	1.05
1750	.	1.15	0.95	1.15	1.24	1.03	1.24	1.74	.	1.21
1751	0.89	1.07	1.25	0.89	1.15	0.96	.	1.35	.	0.94
1752	.	0.93	.	0.93	1.00	.	.	1.40	.	0.98
1753	.	1.20	1.09	1.20	1.29	1.18	.	1.81	1.19	1.26
1754	2.02	1.57	1.57	2.02	.	2.19	.	3.06	1.48	2.13
1755	.	4.49	.	4.48	4.85	3.52	5.31	6.78	.	4.73
1756	3.09	3.44	.	3.08	.	3.34	5.20	4.67	3.39	3.26
1757	1.26	1.79	1.94	1.25	1.93	1.36	6.62	1.90	1.84	1.32
1758	1.52	1.50	.	1.52	1.62	1.64	.	2.30	1.62	1.60
1759	1.68	1.59	1.58	1.68	.	1.81	2.16	2.54	1.40	1.77
1760	2.29	1.95	1.96	2.28	2.11	2.47	.	3.46	.	2.41
1761	2.11	1.63	.	2.10	1.76	2.28	1.91	3.19	1.67	2.22
1762	1.37	1.16	.	1.36	1.25	1.48	1.69	2.07	1.29	1.44
1763	1.86	1.67	.	1.86	1.81	2.01	2.30	2.81	1.72	1.96
1764	.	1.61	.	1.61	1.74	1.70	.	2.43	1.67	1.70
1765	0.88	1.00	.	0.88	1.08	0.95	.	1.33	1.15	0.93
1766	0.73	0.70	.	0.73	0.76	0.79	.	1.11	.	0.77
1767	0.72	0.75	.	0.71	0.81	0.77	1.14	1.08	0.76	0.75
1768	0.62	0.52	.	0.62	0.56	0.67	0.96	0.93	0.60	0.65
1769	.	0.52	.	0.52	0.56	0.68	0.95	0.78	.	0.55
1770	.	0.67	.	0.67	.	0.72	1.44	1.01	1.30	0.70
1771	.	1.03	.	1.02	1.11	0.74	1.43	1.55	.	1.08
1772	.	0.72	.	0.72	.	0.78	.	1.09	.	0.76
1773	.	0.83	.	0.82	.	0.89	.	1.25	.	0.87
1774	.	.	.	.	.	.	.	.	.	.
1775	1.08	.	.	1.08	.	1.16	.	1.63	.	1.14
1776	0.93	.	.	0.93	.	1.00	.	1.40	.	0.98
1777	1.79	1.37	.	1.78	.	1.93	.	2.70	1.44	1.88
1778	1.51	1.14	1.13	1.50	.	1.63	.	2.28	.	1.59
1779	1.08	.	.	1.08	.	1.17	.	1.63	.	1.14
1782	1.08	.	.	1.08	.	1.17	.	1.64	.	1.14





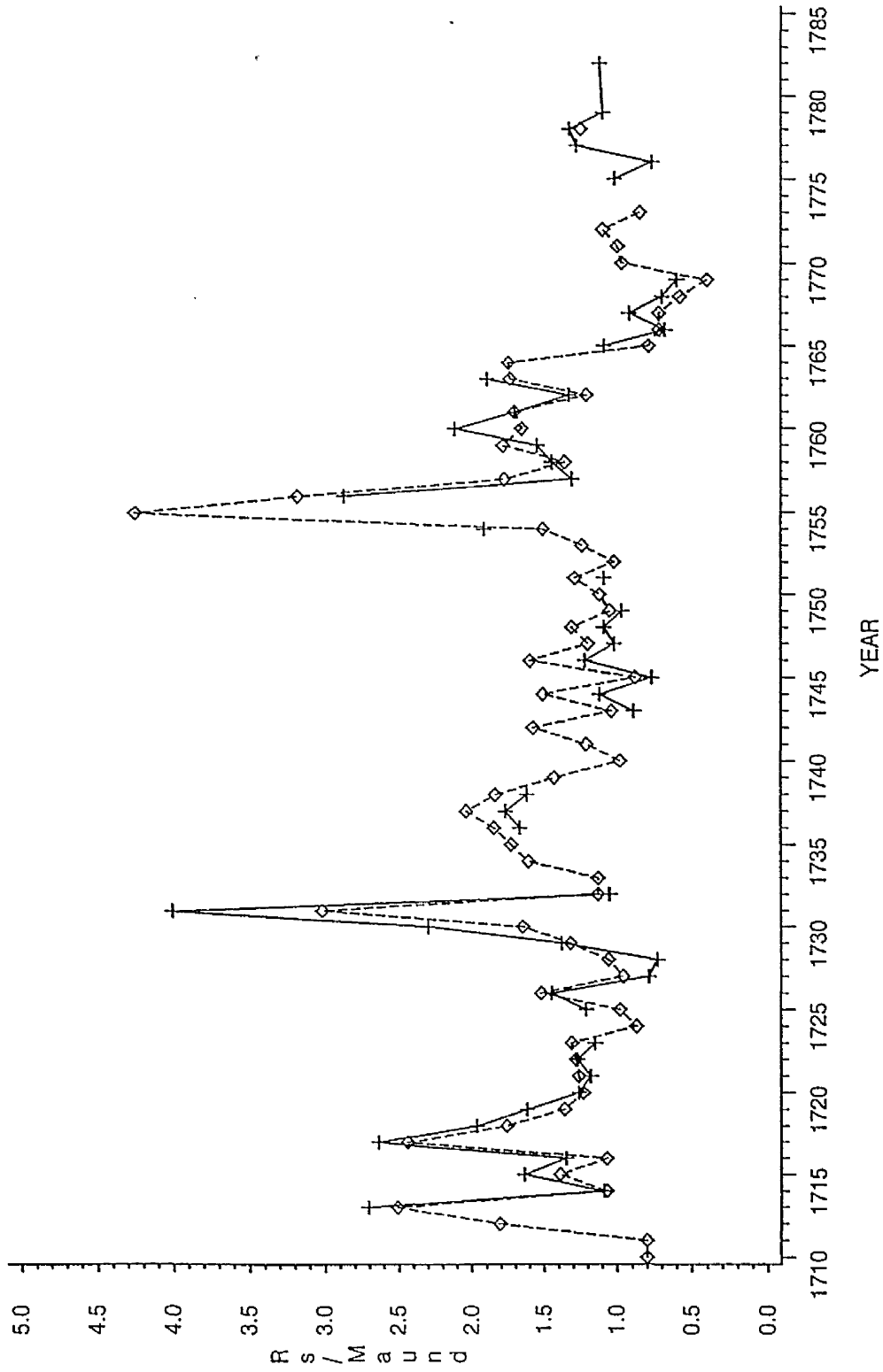


FIG 2.C.1: PLOT OF ACTUAL AND ESTIMATED PRICES OF BAJRA, QASBA CHATSU



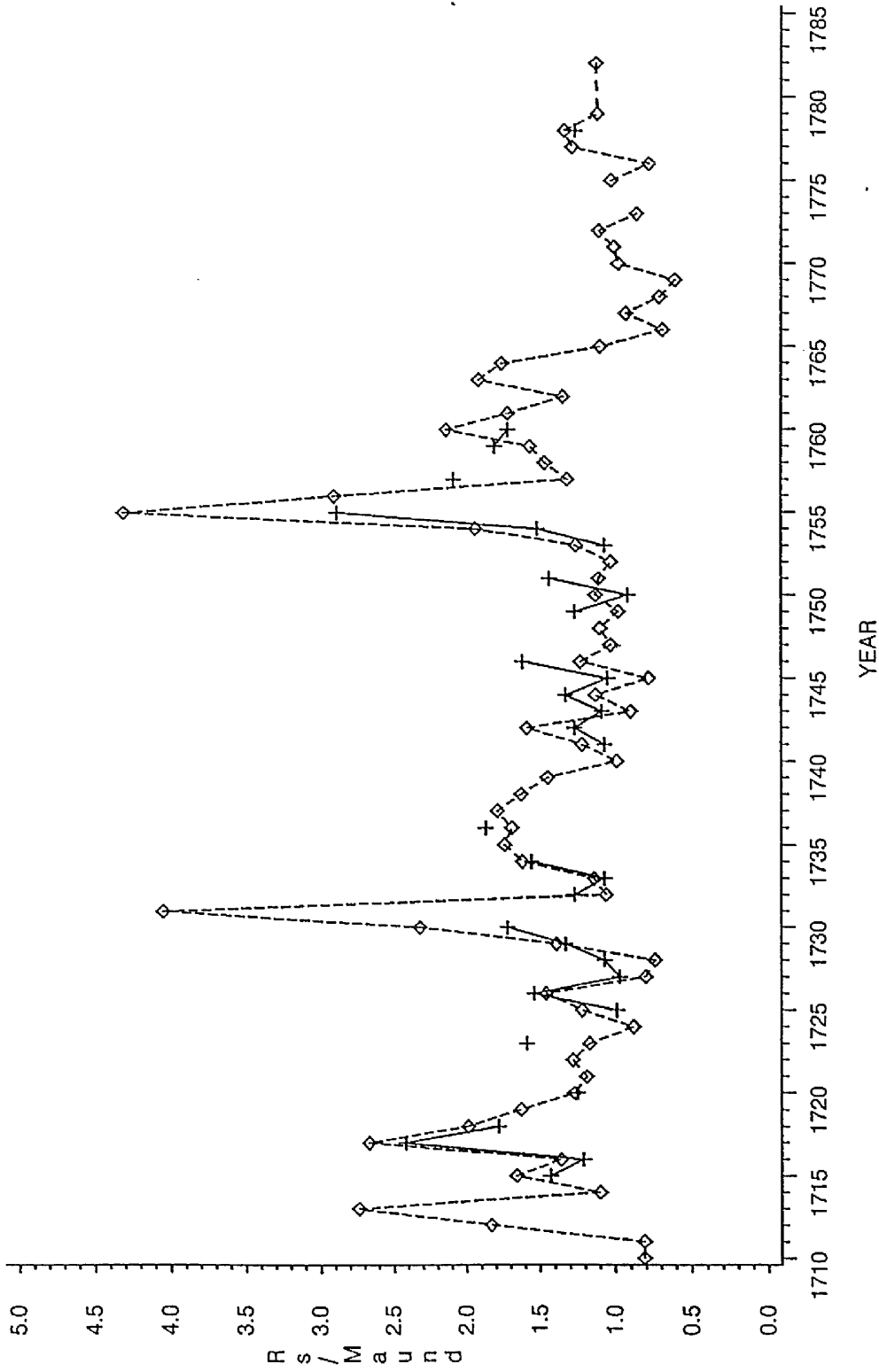
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG 2.M.1: PLOT OF ACTUAL AND ESTIMATED PRICES OF BAJRA, QASBA MALARNA



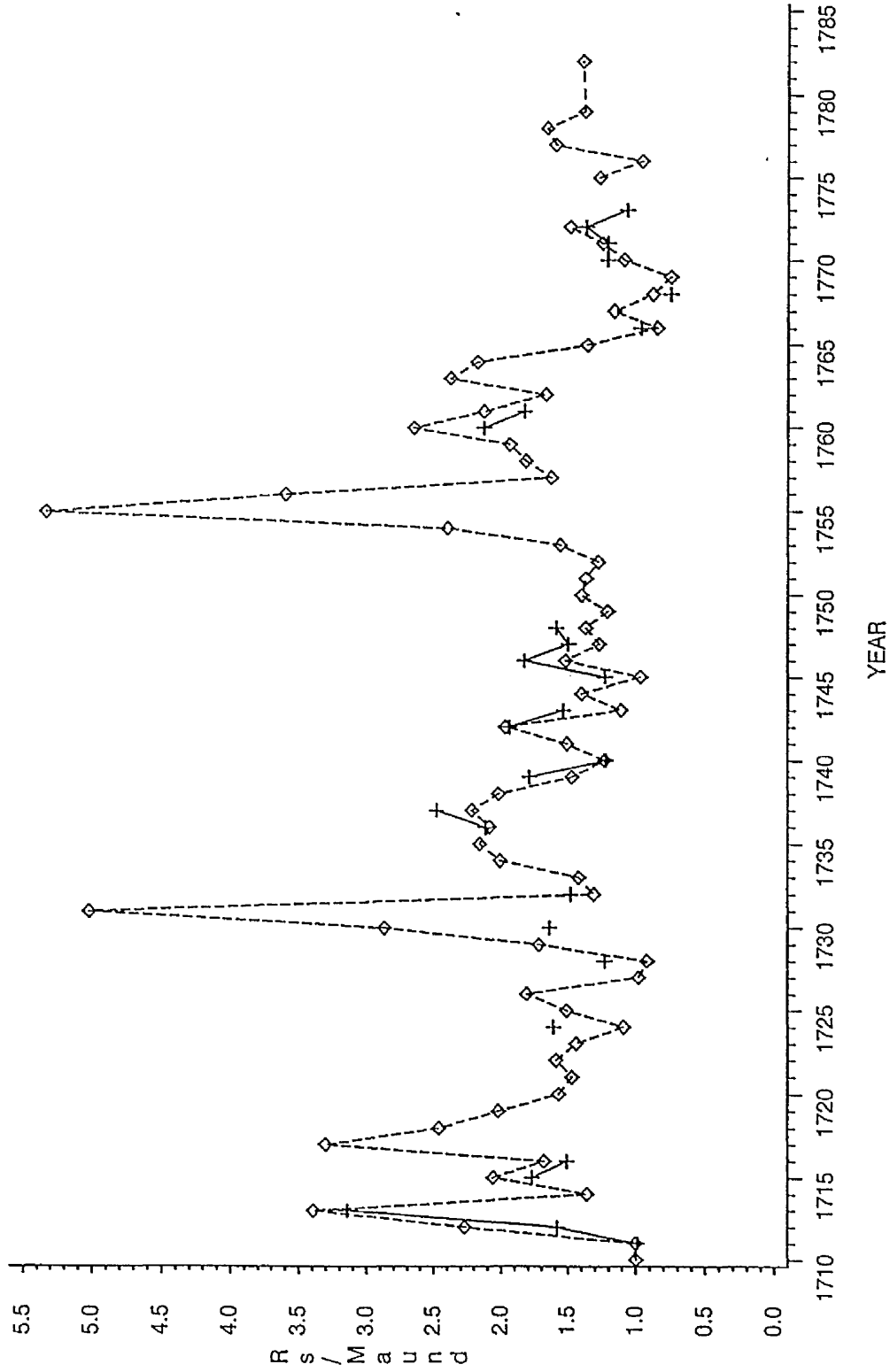
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG 2.R1: PLOT OF ACTUAL AND ESTIMATED PRICES OF BAJRA, QASBA PHAGI



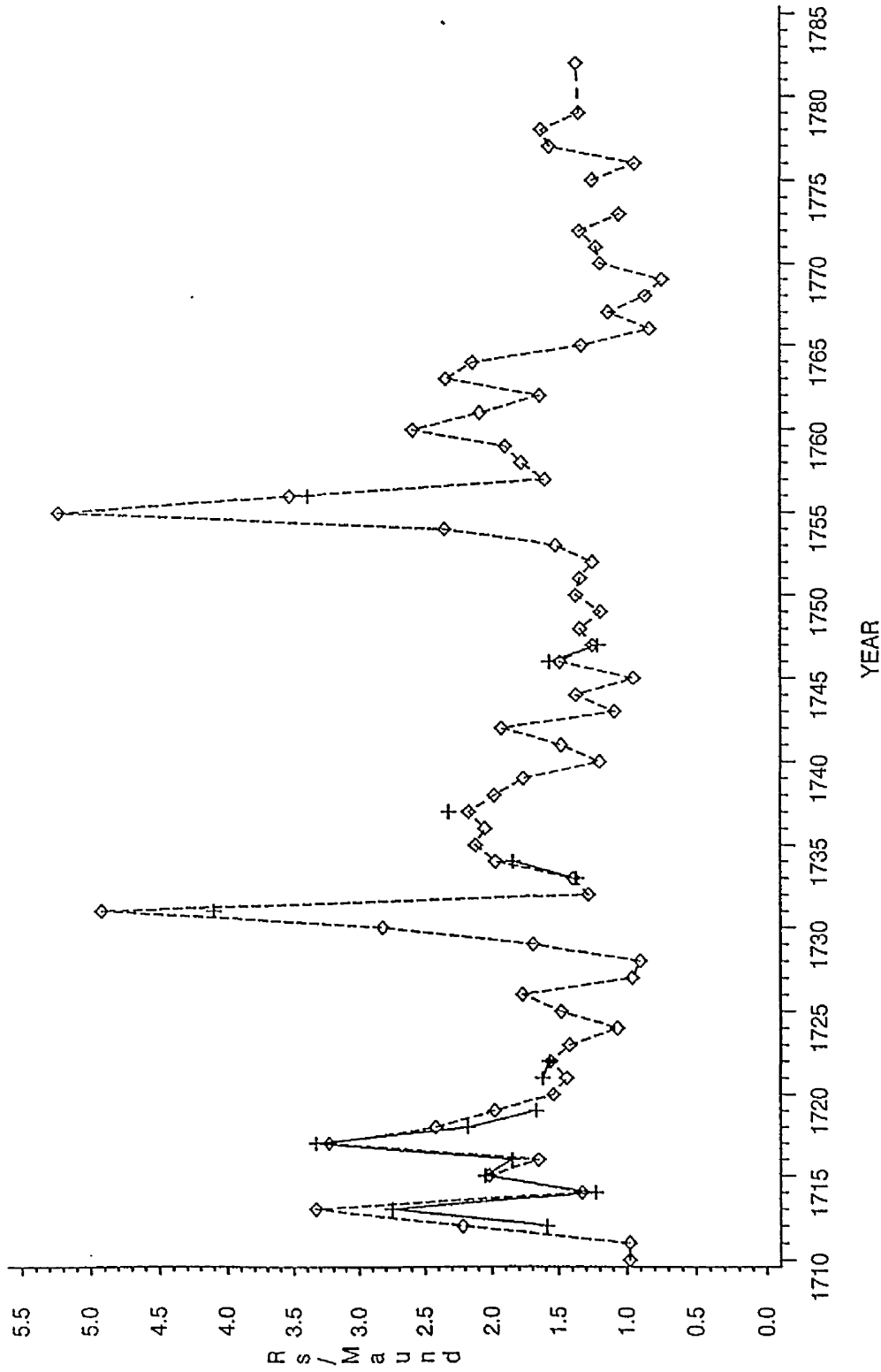
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG 2.S.1: PLOT OF ACTUAL AND ESTIMATED PRICES OF BAJRA, QASBA, SANGANER



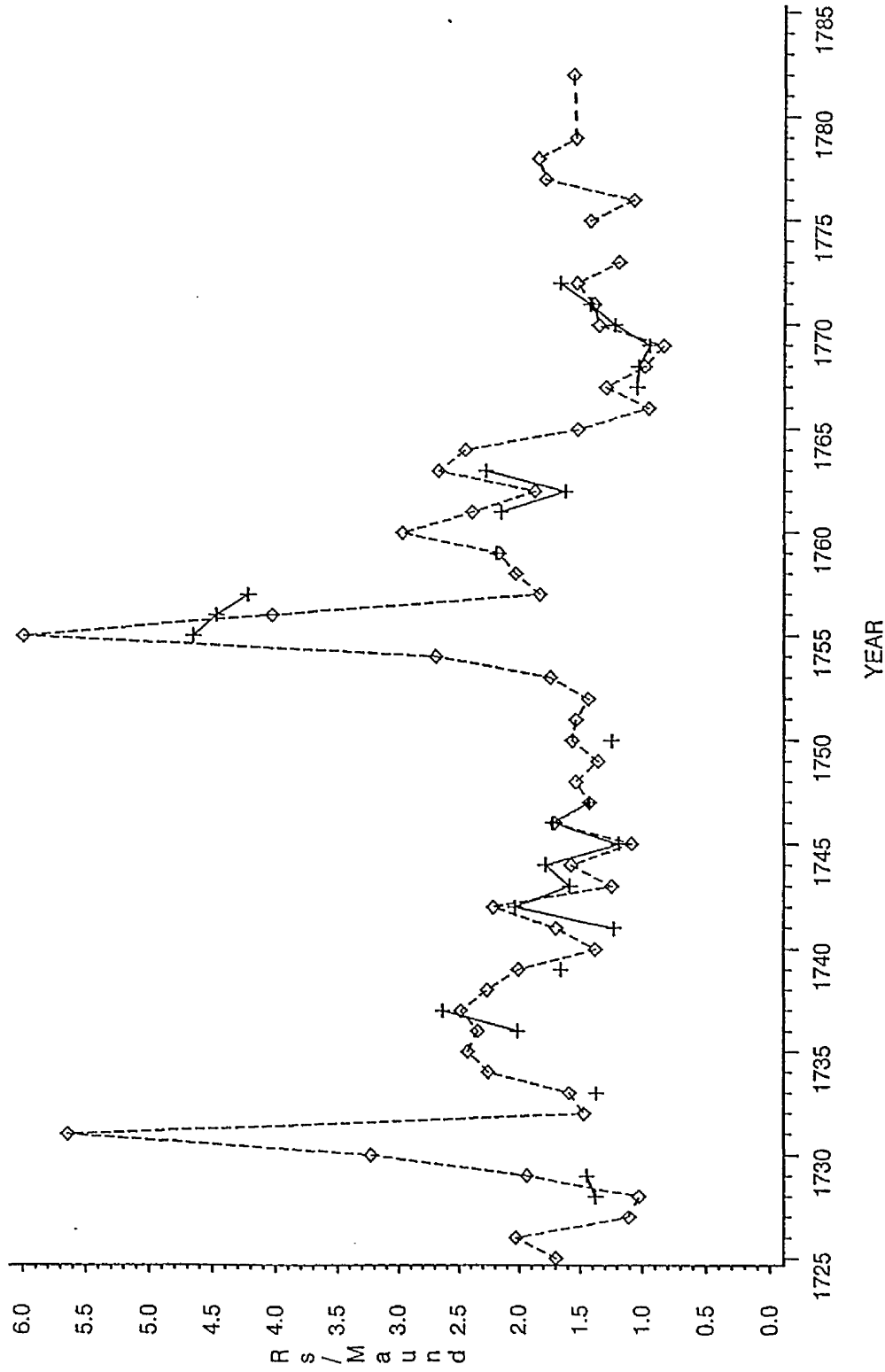
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG. 2.L.1: PLOT OF ACTUAL AND ESTIMATED PRICES OF BAJRA, QASBA LALSOI



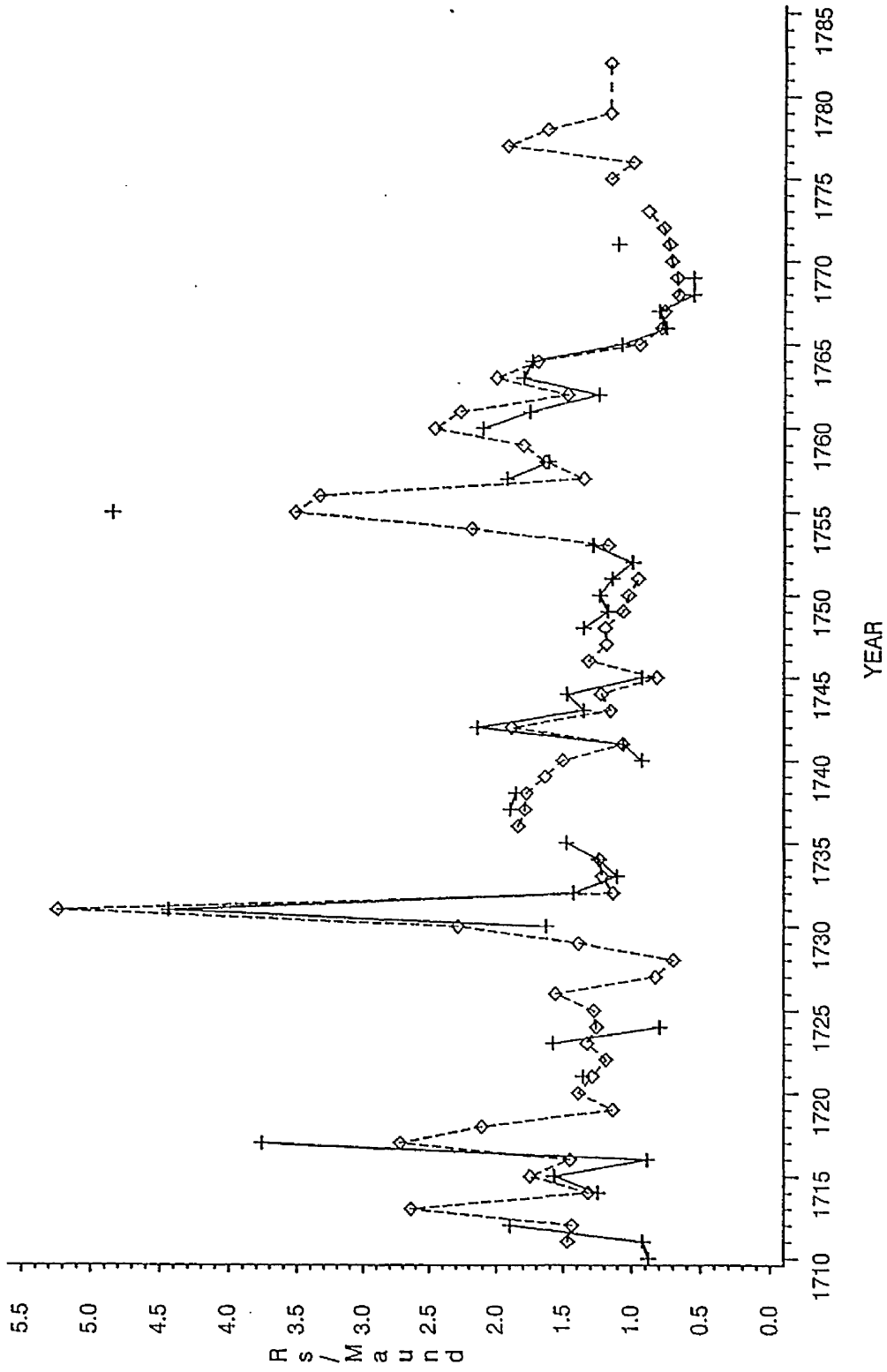
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG 2.J.1: PLOT OF ACTUAL AND ESTIMATED PRICES OF BAJRA, QASBA JAIPUR



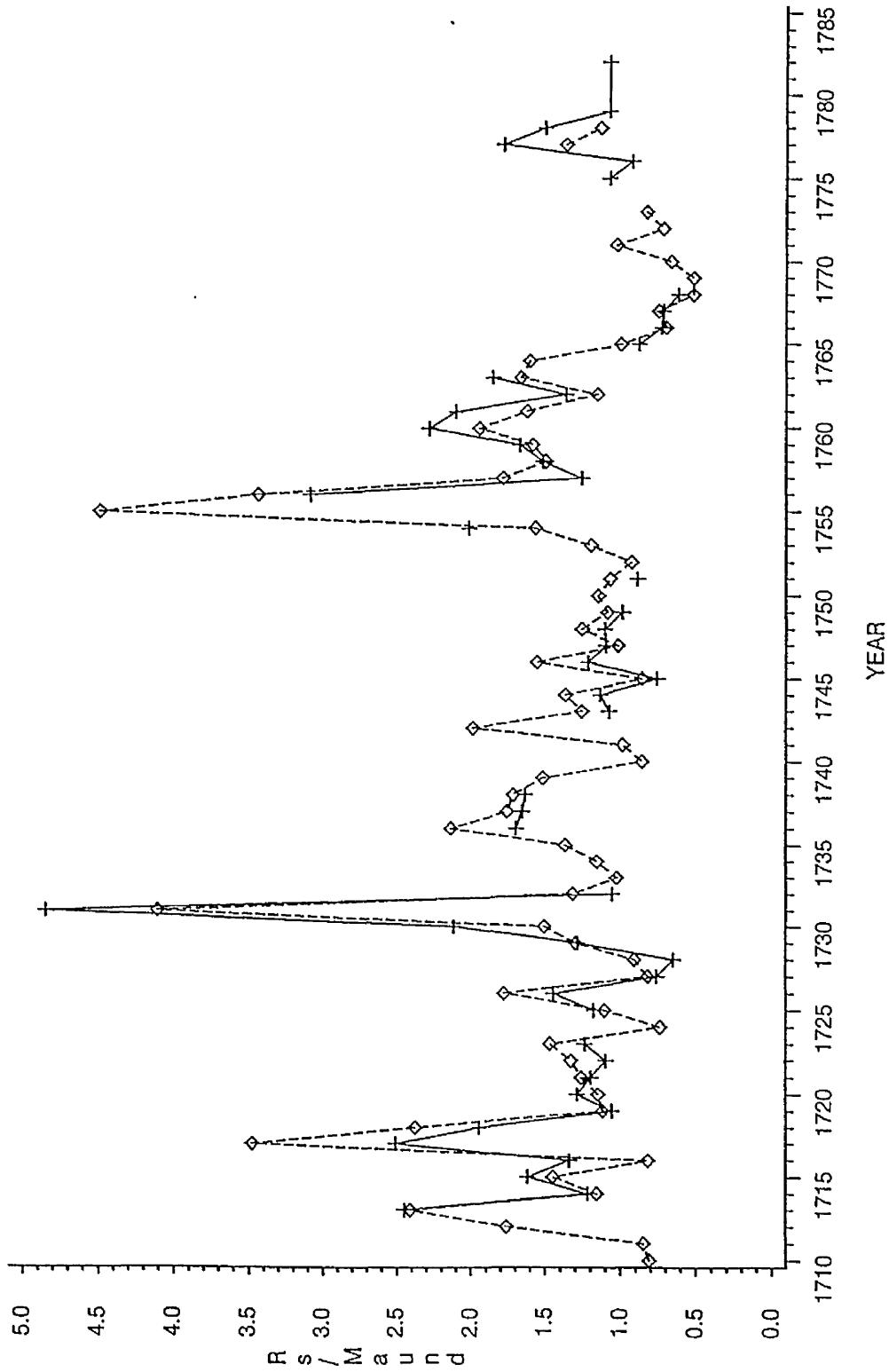
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG 2.C.2: PLOT OF ACTUAL AND ESTIMATED PRICES OF MOTH. QASBA CHATSU



Symbols used: Actual Price = ——— Estimated Price = - - - - -

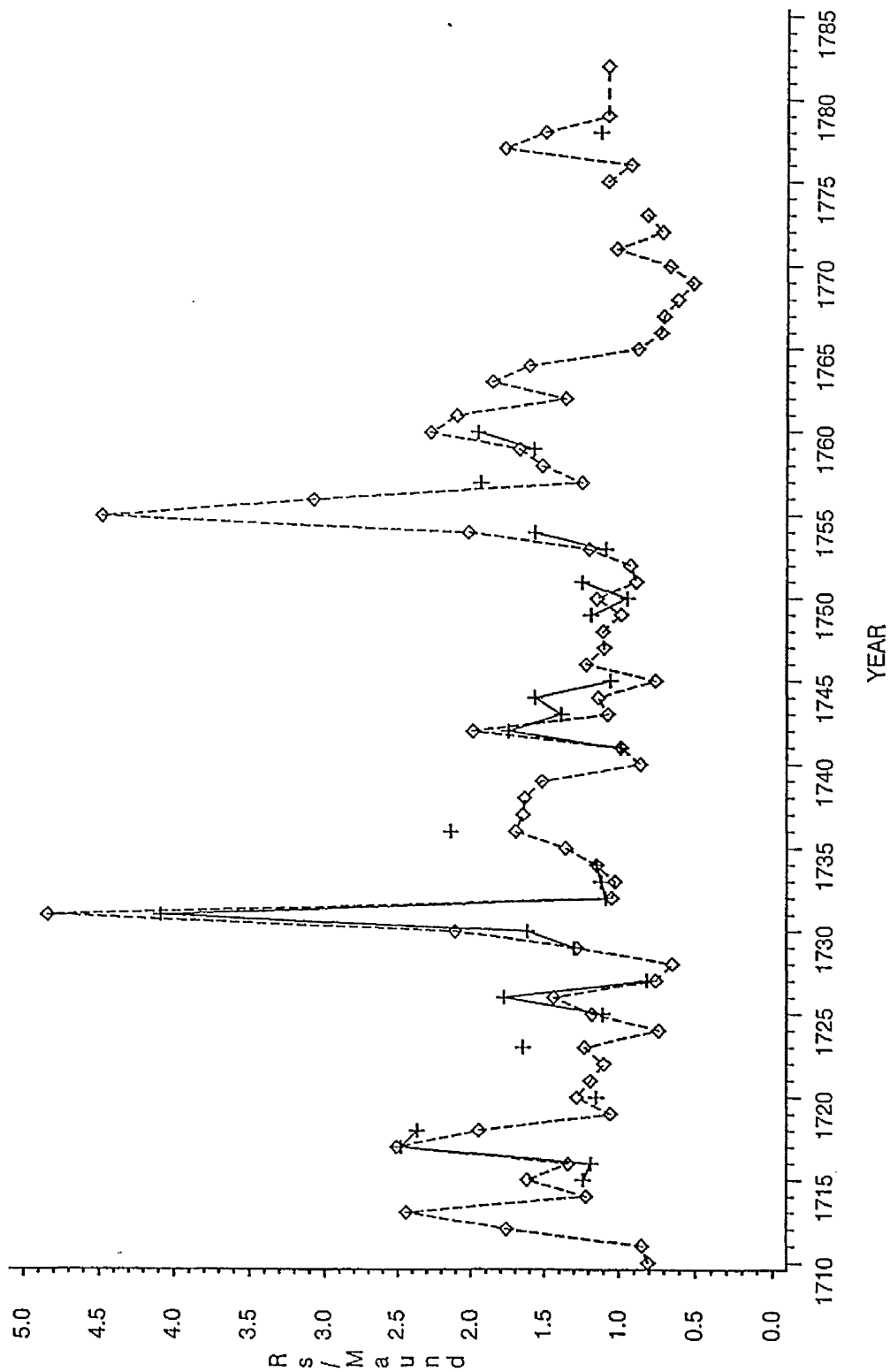
FIG 2.M.2: PLOT OF ACTUAL AND ESTIMATED PRICES OF MOTH. QASBA MALARNA



Symbols used: Actual Price = ——— Estimated Price = - - - - -

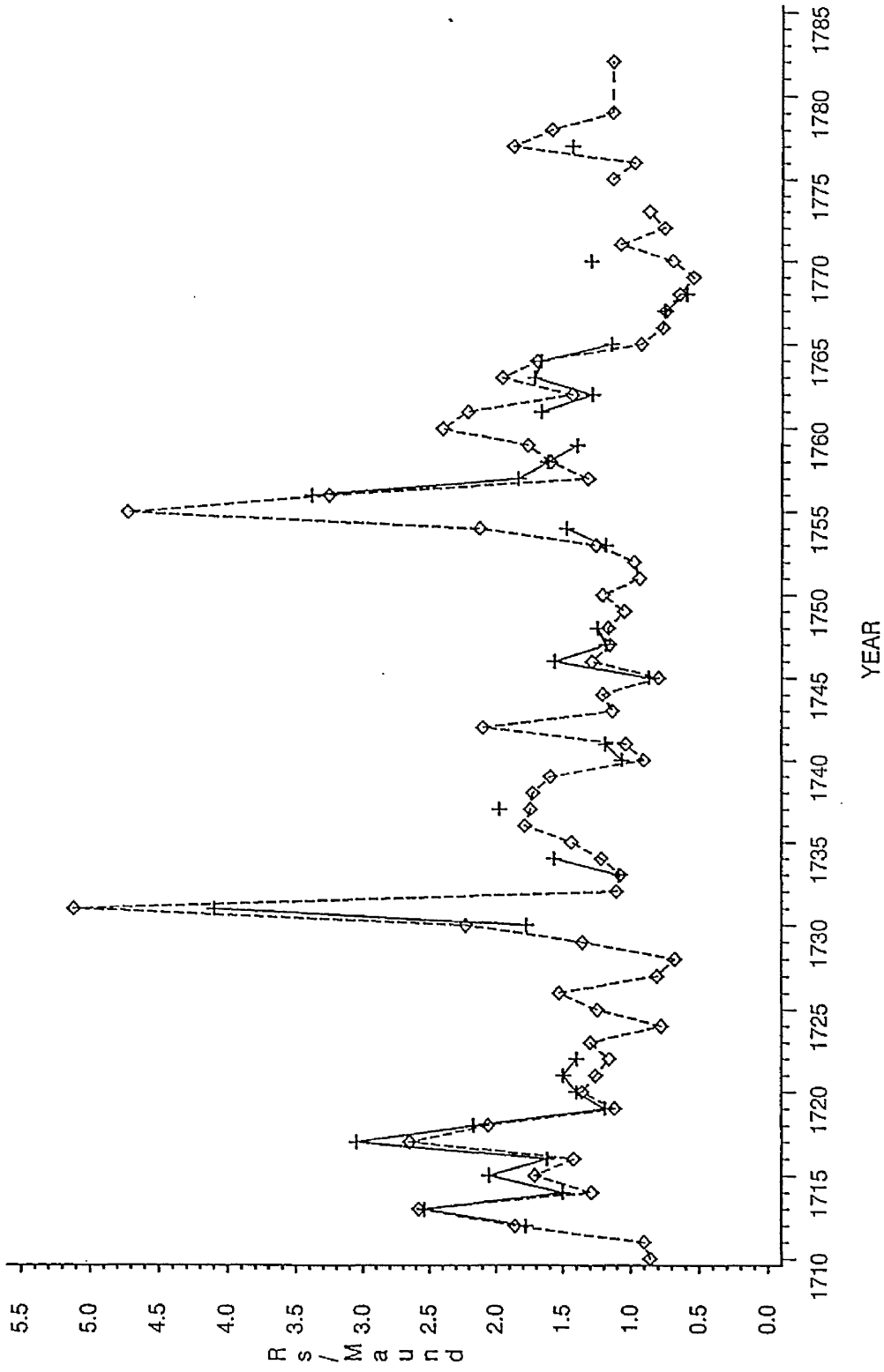


FIG 2.P2: PLOT OF ACTUAL AND ESTIMATED PRICES OF MOTH. QASBA PHAGI



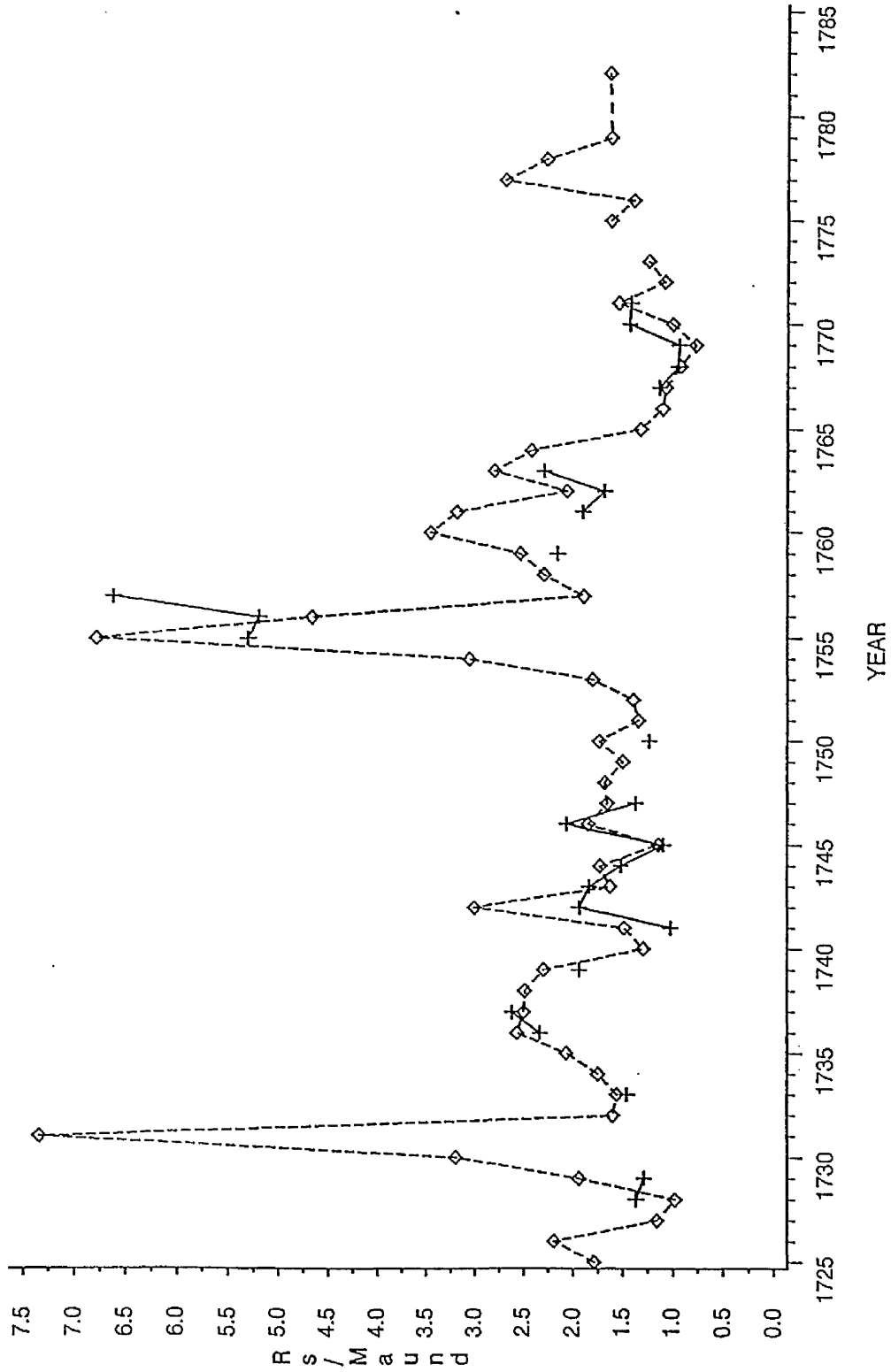
Symbols used: Actual Price = — Estimated Price = - - - - -

FIG 2.L.2: PLOT OF ACTUAL AND ESTIMATED PRICES OF MOTH, QASBA LAISOT



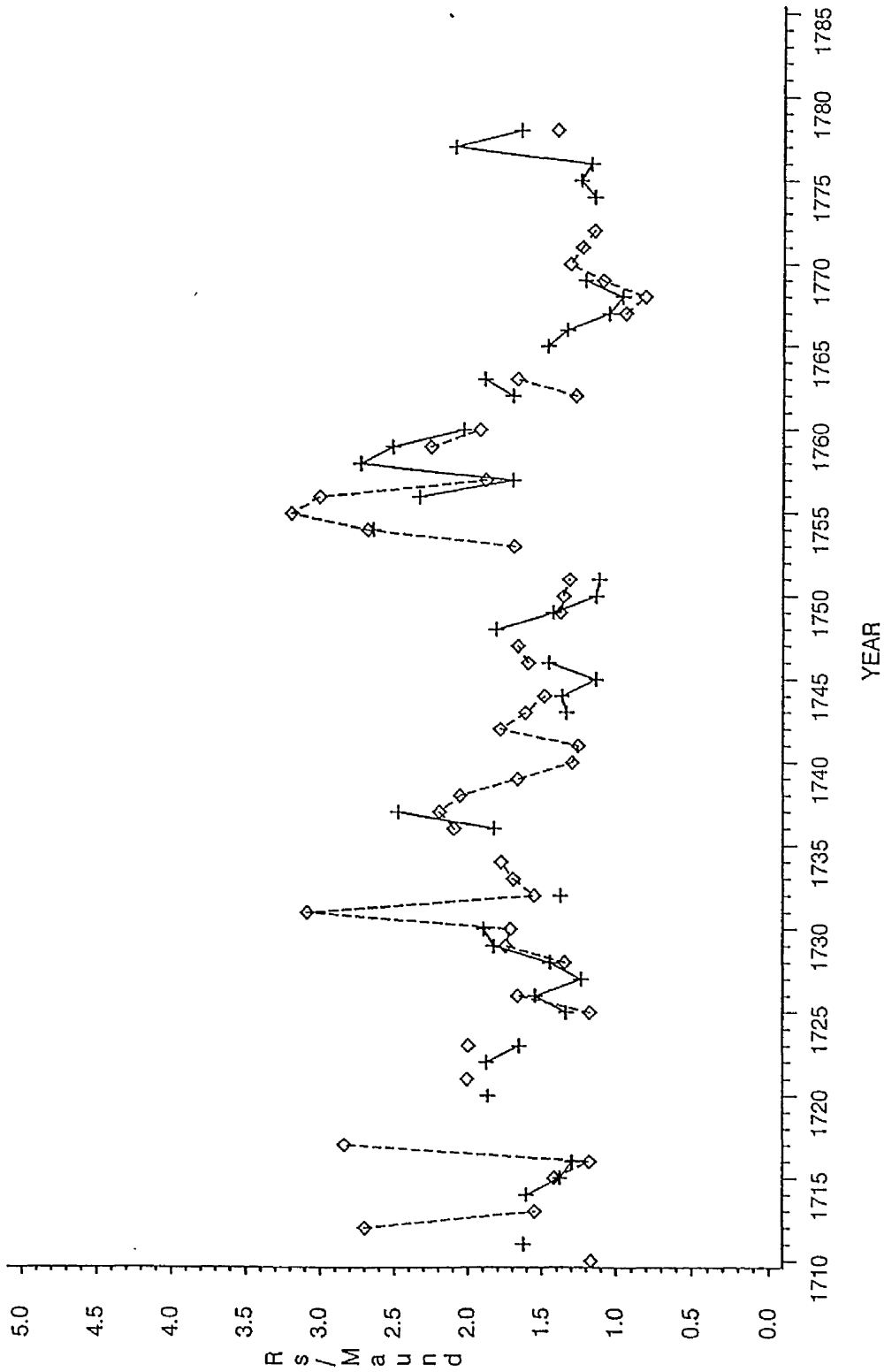
Symbols used: Actual Price = — Estimated Price = - - - - -

FIG 2.J.2: PLOT OF ACTUAL AND ESTIMATED PRICES OF MOTH, CASBA JAIPUR



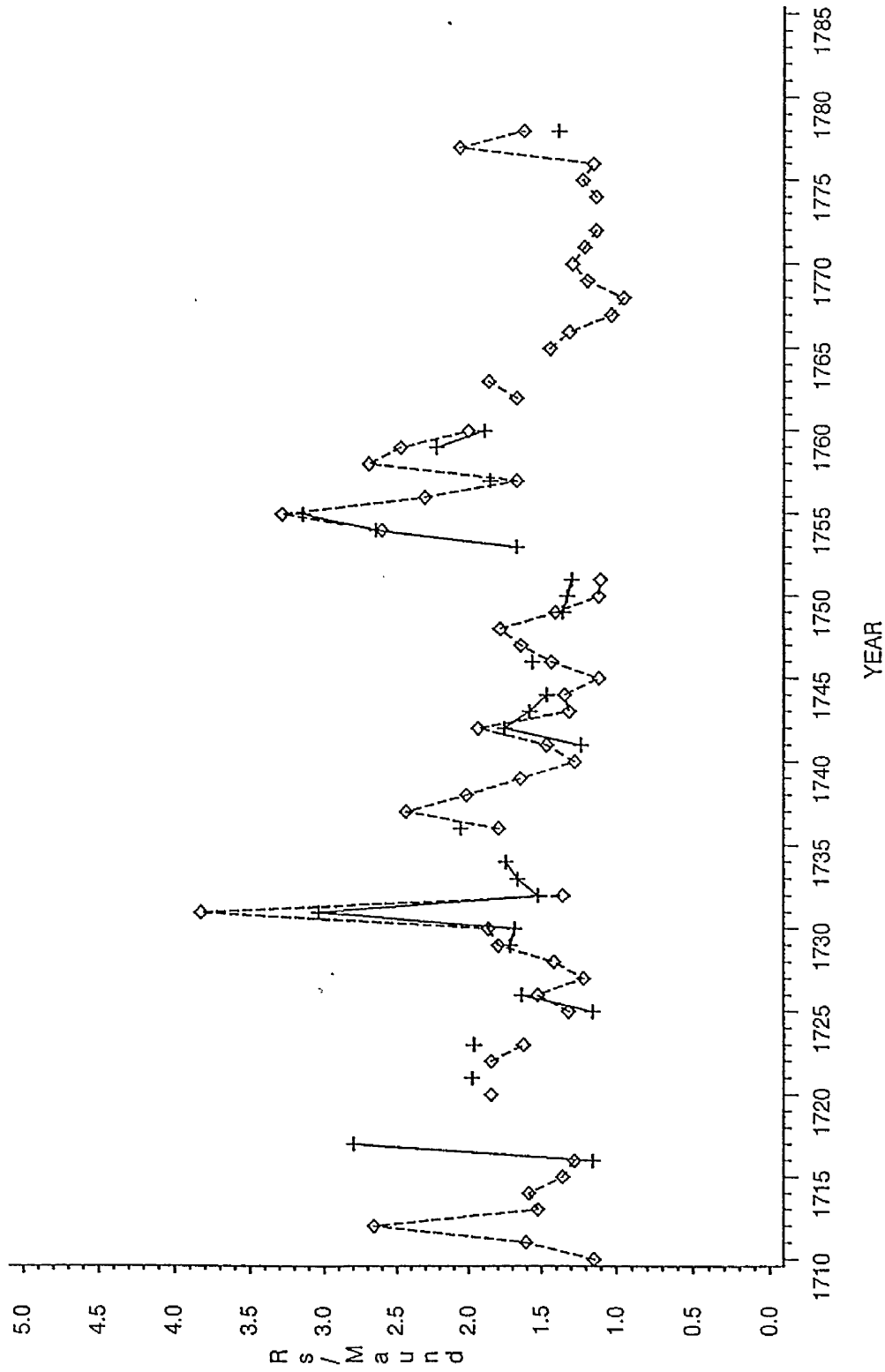
Symbols used: Actual Price = ——— Estimated Price = - - - - -

FIG 2.M.3: PLOT OF ACTUAL AND ESTIMATED PRICES OF WHEAT, QASBA MALARNA



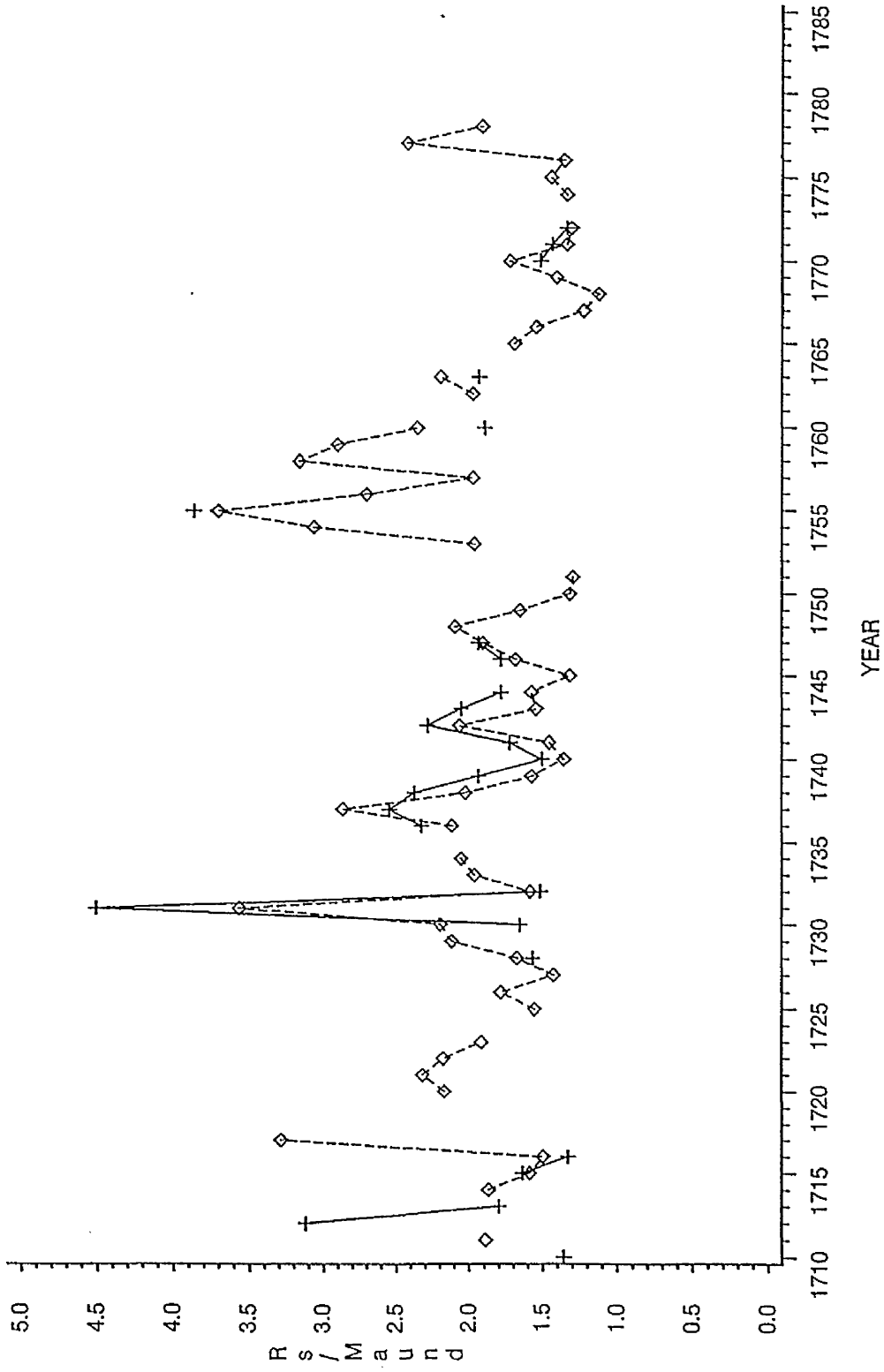
Symbols used: Actual Price = — Estimated Price = - - - - -

FIG 2.P3: PLOT OF ACTUAL AND ESTIMATED PRICES OF WHEAT, QASBA PHAGI



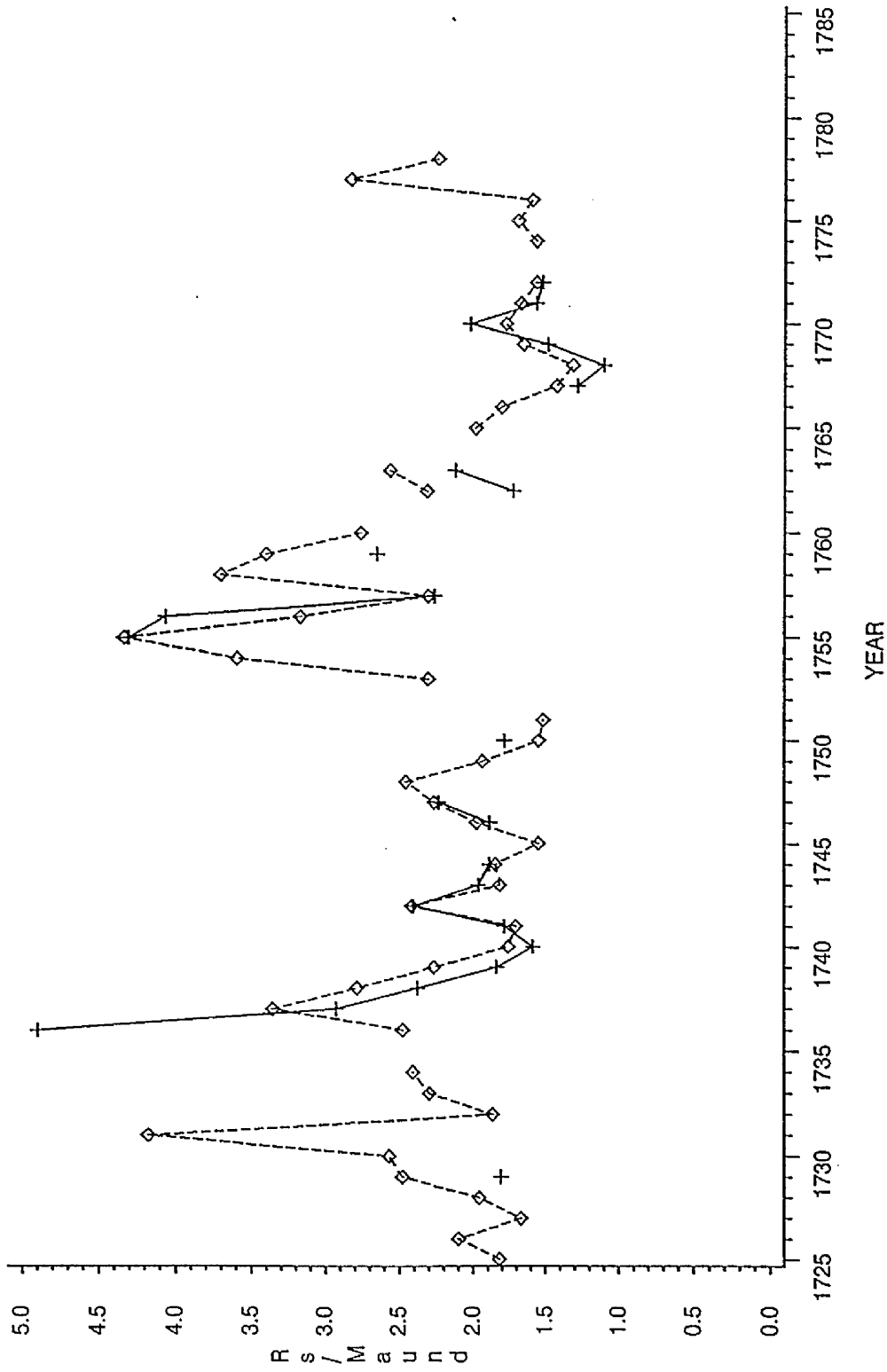
Symbols used: Actual Price = ——— Estimated Price = - - - - -

FIG 2.S.8: PLOT OF ACTUAL AND ESTIMATED PRICES OF WHEAT, QASBA SANGANER



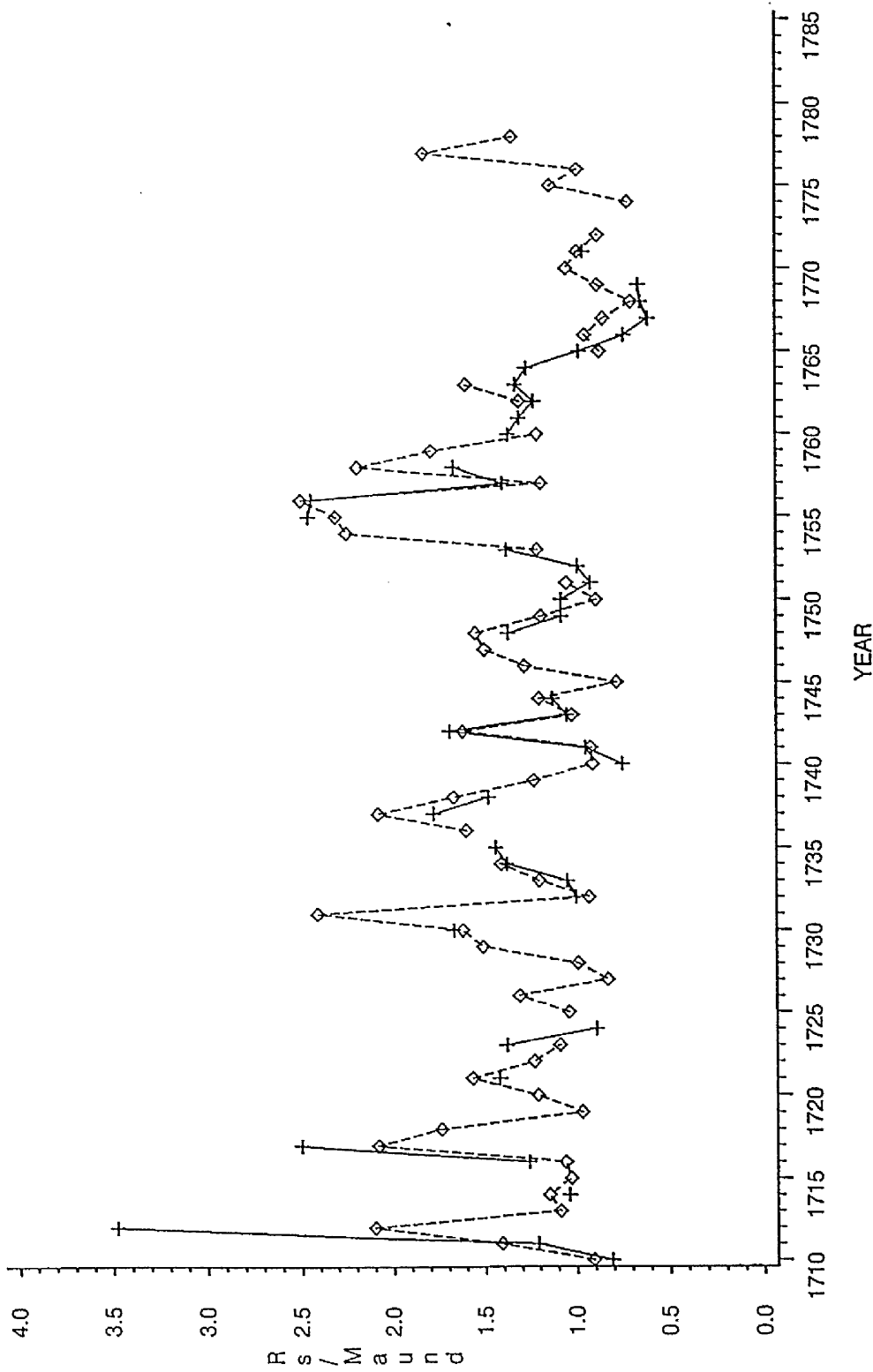
Symbols used: Actual Price = + Estimated Price = ◆

FIG 2.J.3: PLOT OF ACTUAL AND ESTIMATED PRICES OF WHEAT, QASBA JAIPUR



Symbols used: Actual Price = — Estimated Price = - - - - -

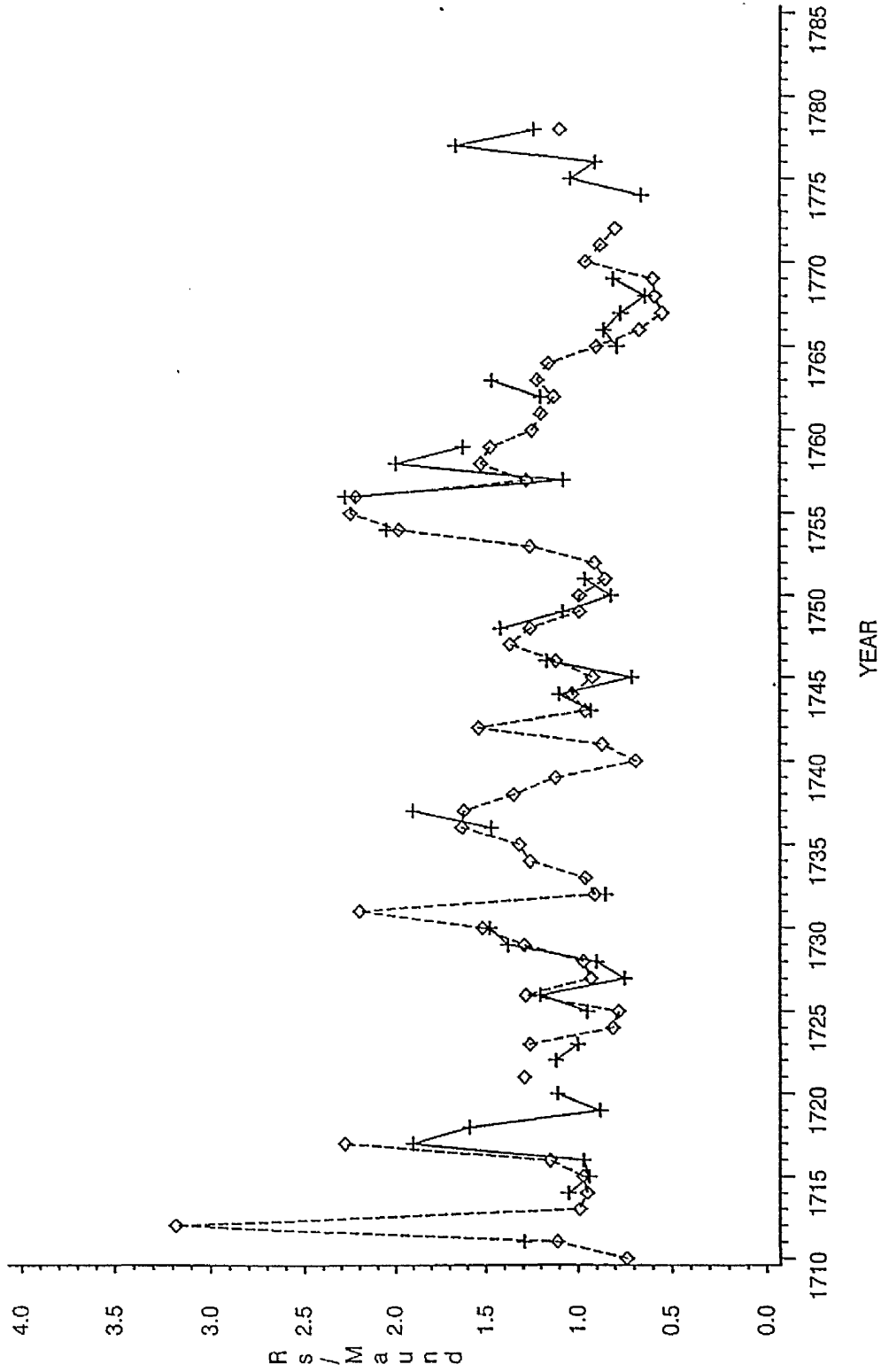
FIG 2.C.4: PLOT OF ACTUAL AND ESTIMATED PRICES OF BARLEY, QASBA CHATSU



Symbols used: Actual Price = \_\_\_\_\_ Estimated Price = - - - -

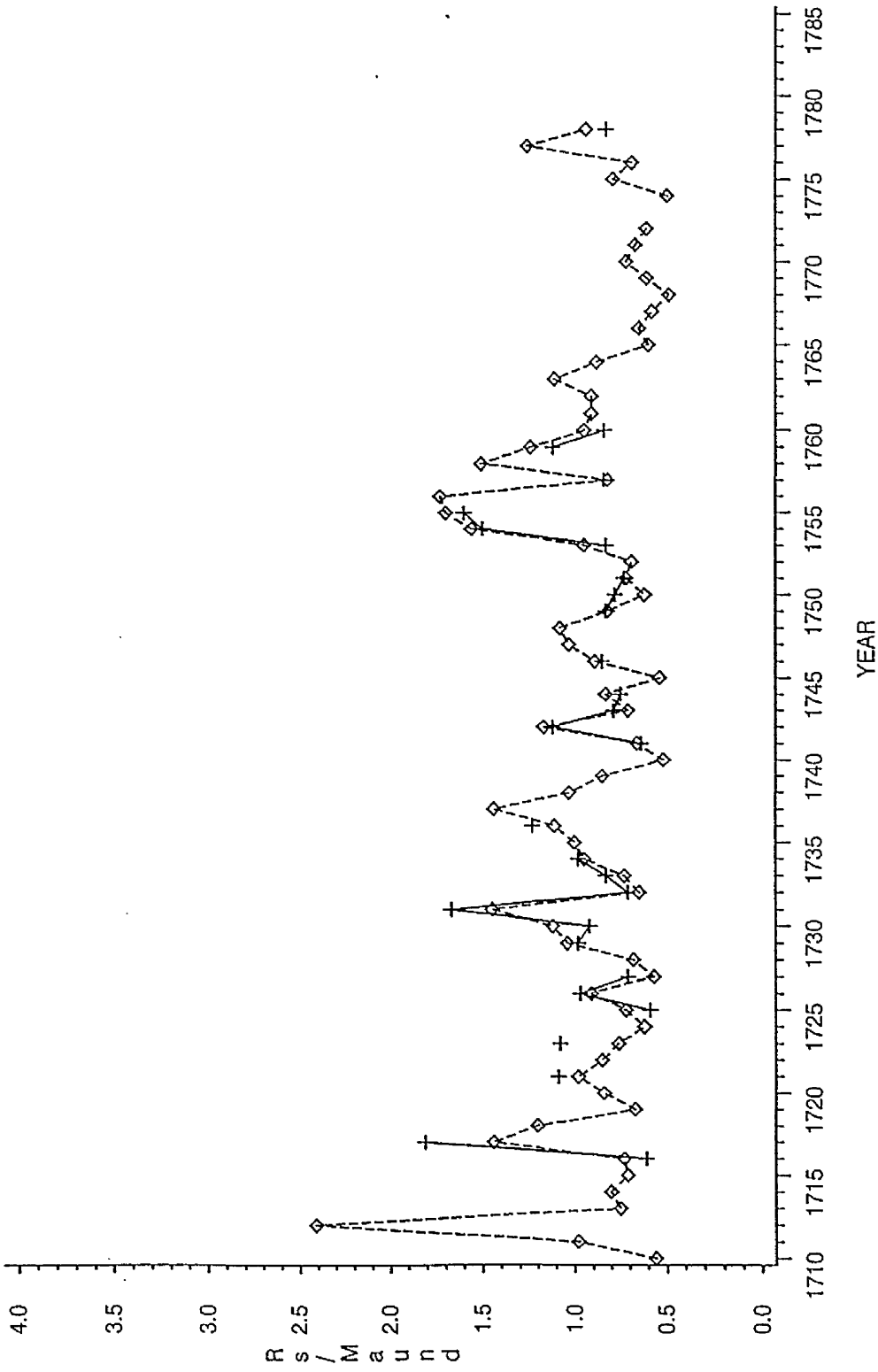


FIG 2.M.4: PLOT OF ACTUAL AND ESTIMATED PRICES OF BARLEY, QASBA MALARNA



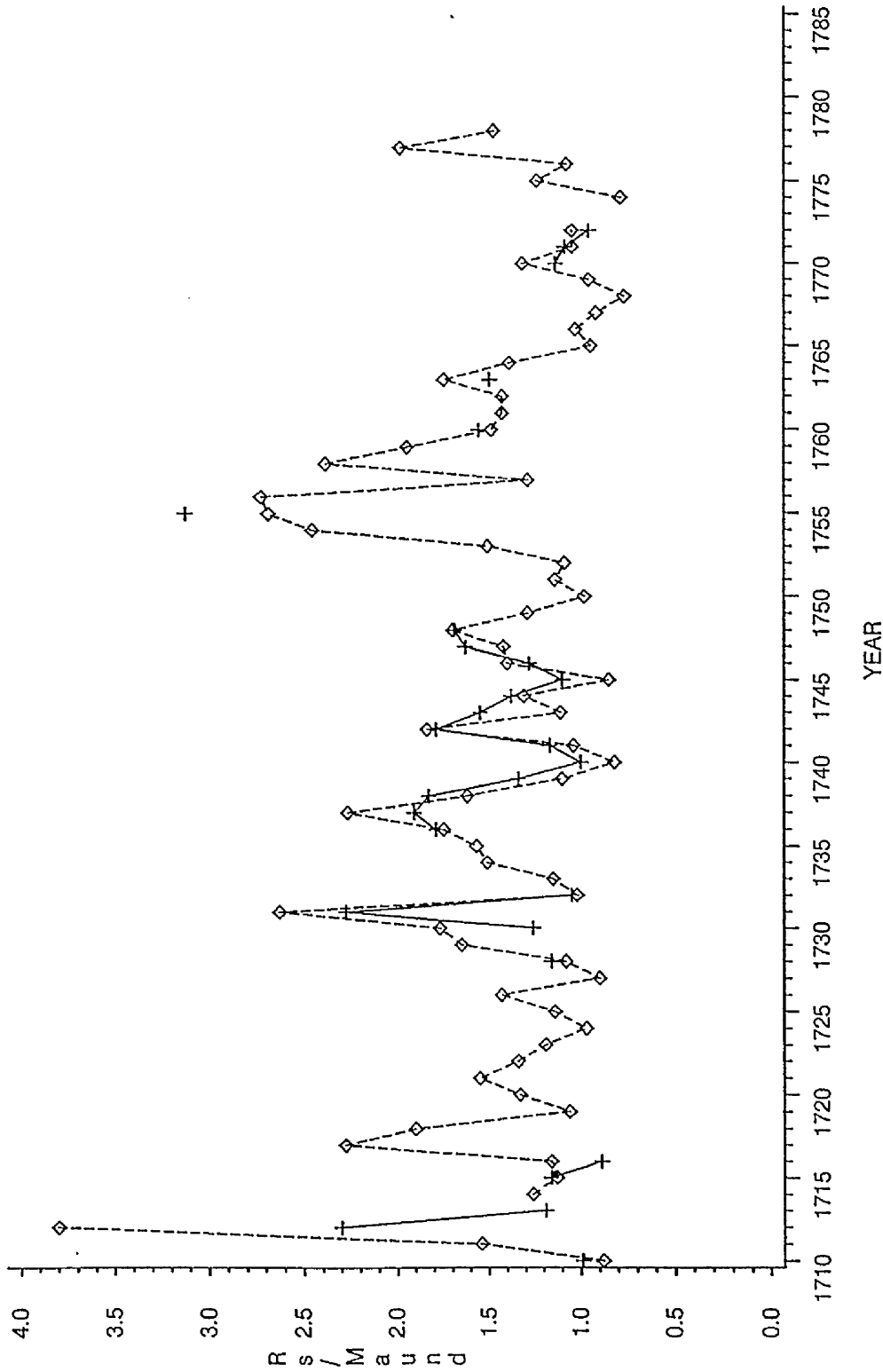
Symbols used: Actual Price = —◆— Estimated Price = - - - -

FIG 2.P4: PLOT OF ACTUAL AND ESTIMATED PRICES OF BARLEY, QASBA PHAGI



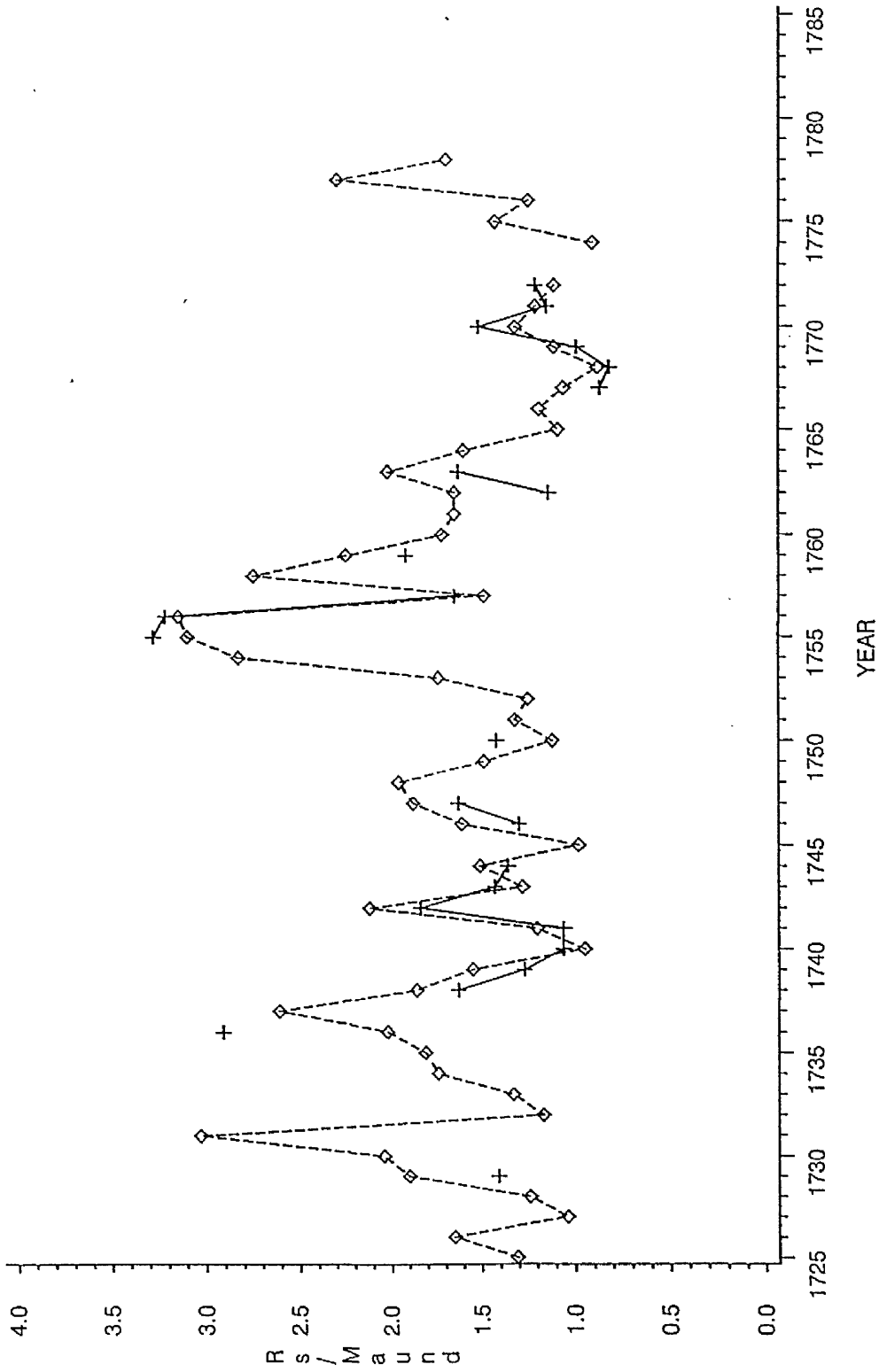
Symbols used: Actual Price = ——— Estimated Price = - - - -

FIG 2.S.4: PLOT OF ACTUAL AND ESTIMATED PRICES OF BARLEY. QASBA SANGANER



Symbols used: Actual Price = —◆— Estimated Price = - - - -

FIG 2.J.4: PLOT OF ACTUAL AND ESTIMATED PRICES OF BARLEY, QASBA JAIPUR



Symbols used: Actual Price = ---- Estimated Price = ----

Appendix 3. Regional Prices of Major Foodgrains and Agricultural

Price Index Eastern Rajasthan c.1710-1780

The average regional prices derived by the method described in Appendix 2 for the four foodcrops selected are presented along with their relative values indexed to the year 1716 in Table 3.1. The agricultural price index in the last column of the table is the geometric mean of the relative indices for the four crops. The year 1716 was chosen as the base year for the regional prices for two reasons. First, the prices in this year were not unusual indicating that it was a normal or at least not an abnormal year. Second, it was in this year alone that the average regional price for each of the crops selected was based upon actual prices recorded in the arhsattas for each of the qasbas (except qasba Jaipur whose price series begins only in 1728). Further, the price index calculated by this method can be readily compared to the weighted price index calculated by S.P. Gupta and Shireen Moosvifor the period 1665-1750 indexed to 1716.

As we had indicated in Appendix 2, there were nine years for which we had no data for wheat prices in the four qasbas, namely Malarna, Jaipur, Phagi and Sanganer, included in the calculation of the regional wheat price. In order to estimate the regional wheat price in these years, we used the average pargana price for wheat given by S.Nurul Hasan et.al. for 1700-1750 and Dilbagh Singh for 1750-80. (see. S.Nurul Hasan and S.P.Gupta,"Prices of Foodgrains", and Dilbagh Singh,"Revenue Administration", Chap. IV.) The pargana averages are marginally different from the qasba prices for the same year as the timing for the sale of the crops in the entire pargana, including the qasba, was generally the same. Thus for two of the missing years where the average price of wheat in pargana Malarna was cited in the above mentioned studies, these were taken to be the same as that

prevailing in qasba Malarna (1718, 1719). Having obtained a price value for qasba Malarna it was possible to estimate the wheat price in the other four qasbas and, subsequently, calculate the average regional wheat price for that year by the method described in Appendix 2. Average prices for six of the nine years for which we had missing data for wheat, however, were not available for pargana Malarna as well. These were therefore estimated using the pargana prices for Chatsu. Unlike qasba Chatsu where the wheat series is very incomplete as wheat was generally assessed in cash in the qasba, the average price series for pargana Chatsu is fairly complete. Thus the comparable observations for common years for the two series of wheat prices of parganas Chatsu and Malarna were taken and the average ratio determined in the same way as the price hierarchies had been calculated earlier.(see Appendix 1.) These price ratios were then used to estimate the price in qasba Malarna, then the other qasbas and finally the regional average price for the six years (1708,1724,1735,1761,1764,1773).

The regional prices for the four crops, bajra, moth, wheat and barley have been plotted on the same graph in Figure 3.1. Figure 3.2 is the graph of the agricultural price index for the period c.1710-1780.

TABLE 3.1: AVERAGE PRICES OF MAJOR FOODGRAINS AND INDEX OF AGRICULTURAL PRICES (1716=100) (E. RAJASTHAN C. 1716 - 1780)

YEAR	BAJRA PRICE	BAJRA INDEX	MOTH PRICE	MOTH INDEX	WHEAT PRICE	WHEAT INDEX	BARLEY PRICE	BARLEY INDEX	PRICE INDEX
1691	0.84	59.26	0.58	46.12	0.82	64.83	0.56	68.66	57.2
1697	0.96	67.69	1.00	79.87	1.20	92.46	0.75	80.56	79.8
1708	0.82	57.98	0.75	59.80	1.54	122.05			
1710	0.89	62.82	0.84	66.82	1.23	96.97	0.77	83.11	76.2
1711	0.89	62.68	0.88	69.90	1.71	135.03	1.26	131.93	94.0
1712	1.76	124.42	1.80	143.16	2.83	223.33	2.84	305.02	186.6
1713	2.87	202.28	2.52	200.16	1.63	123.75	1.80	187.80	153.9
1714	1.19	83.96	1.30	103.16	1.69	133.57	1.04	111.41	106.5
1715	1.69	119.81	1.62	128.66	1.46	115.25	0.96	103.38	116.2
1716	1.42	100.80	1.26	100.00	1.27	103.80	0.93	100.00	100.0
1717	2.88	202.87	2.95	234.48	2.98	235.34	2.12	228.15	224.8
1718	2.11	149.01	2.15	170.96	2.32	183.07	1.61	172.49	168.4
1719	1.74	122.99	1.11	88.25	1.67	131.69	0.89	96.13	108.2
1720	1.40	98.68	1.31	103.78	1.96	155.21	1.12	120.58	117.6
1721	1.37	96.62	1.31	104.33	2.10	166.25	1.34	143.56	124.5
1722	1.42	100.31	1.20	95.01	1.97	155.84	1.13	121.76	115.9
1723	1.41	99.42	1.44	114.59	1.85	146.00	1.16	124.91	120.0
1724	1.08	76.17	0.77	60.80	0.75	59.05	0.82	88.25	70.8
1725	1.31	92.07	1.21	95.85	1.35	107.00	0.93	99.93	98.5
1726	1.63	115.18	1.58	125.37	1.66	131.35	1.23	131.64	125.2
1727	0.91	64.53	0.80	63.91	1.29	102.30	0.80	85.65	77.4
1728	1.02	72.86	0.81	64.42	1.60	126.48	1.00	107.84	89.8
1729	1.51	106.82	1.32	105.15	1.87	147.89	1.38	148.57	125.3
1730	2.25	158.97	2.07	164.38	1.96	154.59	1.48	158.52	159.0
1731	4.36	307.39	4.96	394.45	3.73	292.77	2.32	248.94	306.6
1732	1.30	91.66	1.26	92.35	1.57	124.43	0.96	102.96	104.0
1733	1.27	89.38	1.46	92.35	1.91	151.17	1.06	114.36	109.1
1734	1.84	129.79	1.37	109.22	2.00	157.82	1.37	147.35	134.7
1735	2.81	141.98	1.54	122.51	1.94	153.35	1.43	153.47	142.2
1736	1.93	135.89	1.96	155.06	2.78	219.79	1.80	193.20	173.1
1737	2.21	155.91	1.96	155.81	2.60	205.34	1.93	207.03	179.1
1738	1.92	135.72	1.87	148.85	2.21	174.59	1.46	157.29	153.4
1739	1.61	113.59	1.64	130.61	1.78	140.31	1.16	124.96	127.0
1740	1.14	80.64	1.00	79.81	1.42	112.13	0.80	86.41	88.6
1741	1.31	92.04	1.05	83.55	1.51	119.60	0.94	100.62	97.1
1742	1.75	123.34	1.98	157.72	2.86	162.78	1.60	171.37	152.1
1743	1.22	86.22	1.36	108.09	1.74	137.61	1.15	123.78	112.4
1744	1.83	102.85	1.38	109.90	1.63	128.61	1.14	122.00	115.0
1745	1.83	102.46	1.38	109.93	1.28	101.52	0.82	88.32	83.1
1746	1.55	109.35	1.58	117.66	1.68	132.57	1.18	126.27	121.1
1747	1.27	85.98	1.19	94.48	1.88	148.25	1.43	153.86	116.0
1748	1.25	85.27	1.30	103.57	2.04	161.57	1.50	161.52	126.0
1749	1.19	84.16	1.18	93.80	1.60	126.25	1.16	124.22	105.1
1750	1.21	85.59	1.16	92.15	1.40	110.42	1.02	109.09	98.1
1751	1.37	96.52	1.12	88.80	1.31	103.70	1.01	108.96	99.1
1752	1.19	83.96	1.65	83.22			0.99	105.85	
1753	1.42	100.06	1.32	104.53	1.91	151.30	1.34	144.25	122.1
1754	2.17	152.98	2.66	163.98	2.99	236.62	2.22	238.27	193.3
1755	4.51	318.32	4.77	379.16	3.64	287.36	2.54	273.18	311.1
1756	3.40	240.02	3.62	287.54	2.86	226.05	2.48	266.47	253.1
1757	2.14	150.82	2.72	216.05	1.95	154.42	1.26	134.83	161.1
1758	1.68	118.24	1.71	136.22	3.08	243.32	2.07	221.86	171.1
1759	1.85	130.78	2.44	137.26	2.58	203.94	1.68	180.75	168.1
1760	2.23	157.15	2.81	194.12	2.15	170.25	1.35	144.65	165.0
1761	1.90	133.98	1.91	151.75	1.96	155.39	1.38	139.79	144.1
1762	1.49	105.24	1.39	110.49	1.78	140.44	1.18	126.80	119.1
1763	2.13	149.96	1.91	151.75	1.96	154.95	1.41	151.33	151.1
1764	2.84	143.65	1.81	143.95	1.79	141.33	1.26	135.33	141.1
1765	1.21	85.58	1.66	84.46	1.65	130.74	0.88	94.65	97.1
1766	0.82	57.83	0.82	65.35	1.50	118.80	0.90	96.24	81.1
1767	1.00	78.43	0.83	65.91	1.15	91.21	0.75	88.62	76.1
1768	0.78	55.28	0.67	53.31	1.04	82.45	0.67	72.23	64.1
1769	0.68	47.99	0.62	49.15	1.33	105.35	0.81	86.65	68.1
1770	1.11	78.16	0.96	76.21	1.54	121.82	1.00	115.72	95.1
1771	1.16	81.89	1.13	90.18	1.37	108.23	0.95	101.99	95.1
1772	1.30	91.73	0.82	64.81	1.29	102.33	0.89	95.87	87.1
1773	0.99	70.16	0.93	74.09	1.35	107.03			
1774			1.30	102.74	1.30	102.74	0.72	76.95	
1775	1.18	83.56	1.22	96.75	1.41	111.20	1.13	121.12	102.1
1776	0.98	63.72	1.05	83.27	1.32	104.66	0.98	105.69	87.1
1777	1.49	104.99	1.93	153.16	2.36	186.48	1.81	194.33	155.1
1778	1.53	108.18	1.63	129.28	1.60	142.60	1.32	141.87	129.1
1779	1.29	90.75	1.22	96.93					
1782	1.30	91.72	1.22	97.06					

TABLE 3.2: PRICES OF BAJRA, BARLEY AND WHEAT IN QASBA JAIPUR, 1728-1800

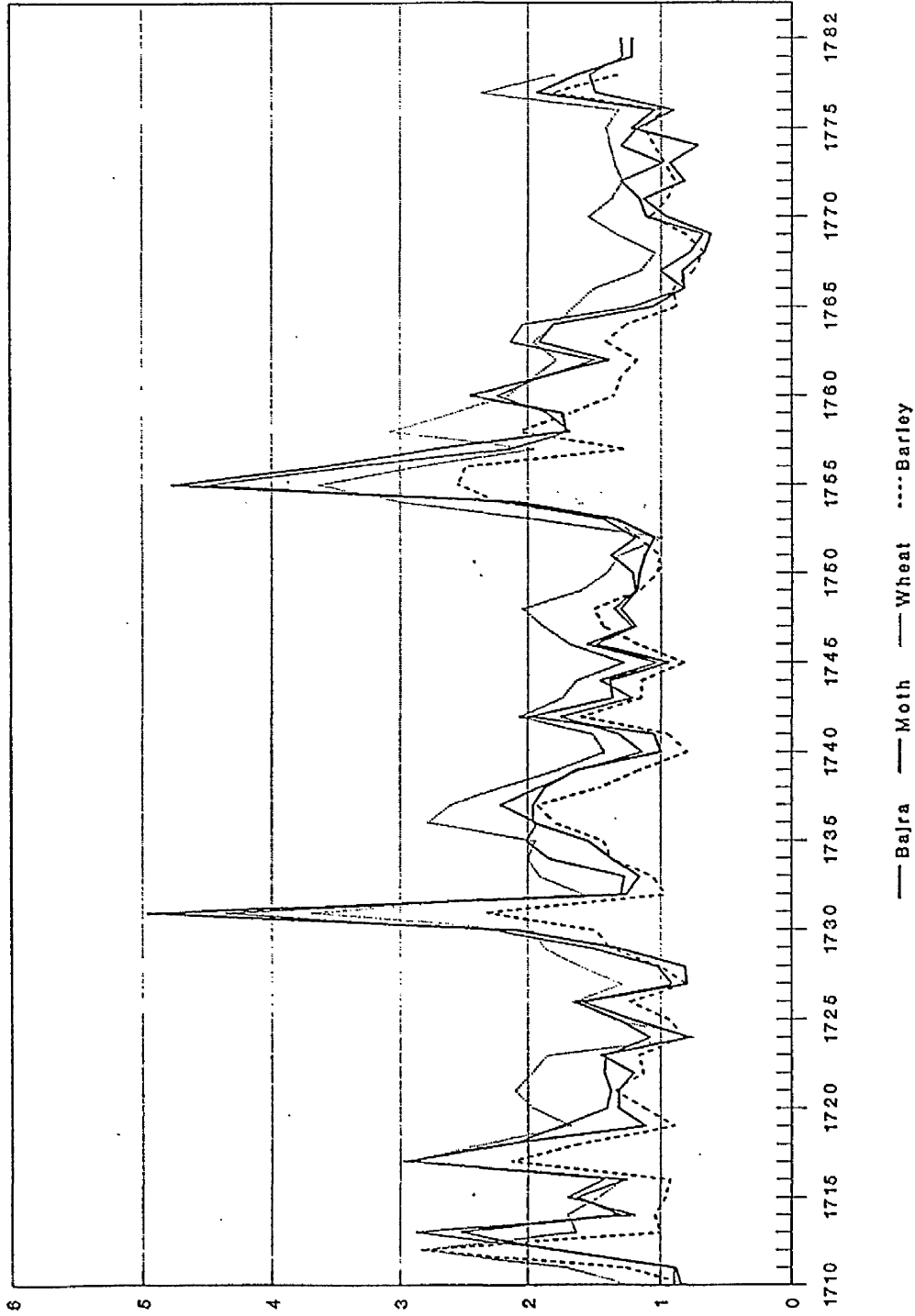
A=Arhsatta Prices H=Prices from Dr.Hendleys tables  
Prices from both series indexed to 1762=100

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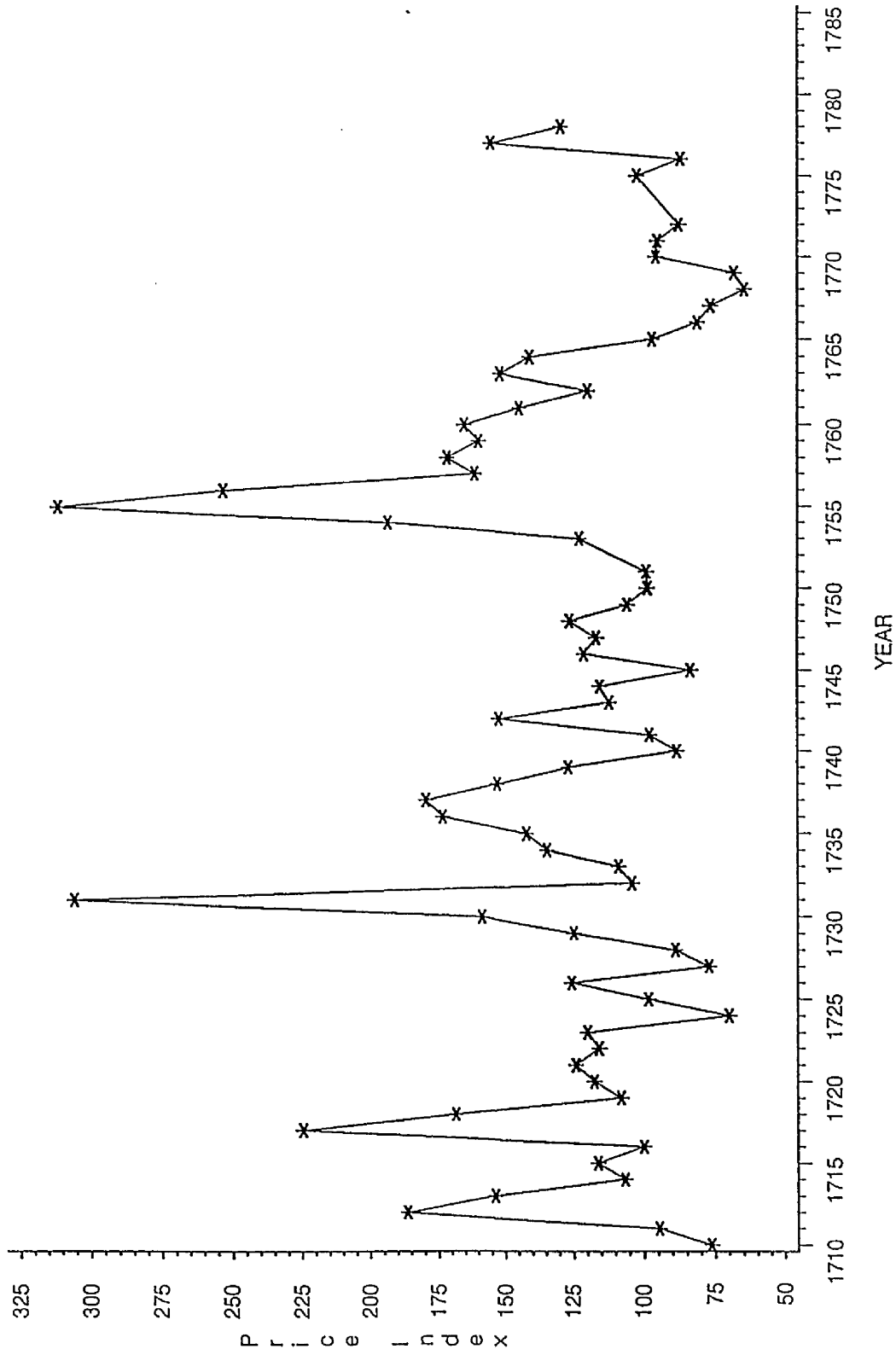
YEAR	BAJRA		BARLEY		WHEAT		BAJRA		BARLEY		WHEAT	
	A	INDEX	A	INDEX	A	INDEX	H	INDEX	H	INDEX	H	INDEX
1728	1.38	85	1.24	109	1.96	113	.	.	.	.	.	.
1729	1.45	89	1.41	124	1.81	105	.	.	.	.	.	.
1730	3.23	198	2.04	179	2.57	149	.	.	.	.	.	.
1731	5.64	346	3.03	266	4.18	242	.	.	.	.	.	.
1732	1.47	90	1.17	103	1.87	108	.	.	.	.	.	.
1733	1.37	84	1.33	116	2.30	133	.	.	.	.	.	.
1734	2.26	138	1.74	152	2.41	139	.	.	.	.	.	.
1735	2.43	149	1.81	159	.	.	.	.	.	.	.	.
1736	2.02	124	2.91	255	4.90	283	.	.	.	.	.	.
1737	2.64	162	2.61	229	2.93	169	.	.	.	.	.	.
1738	2.27	139	1.63	143	2.38	137	.	.	.	.	.	.
1739	1.66	102	1.27	111	1.84	107	.	.	.	.	.	.
1740	1.38	85	1.06	93	1.59	92	.	.	.	.	.	.
1741	1.23	75	1.06	93	1.79	103	.	.	.	.	.	.
1742	2.04	125	1.84	162	2.41	139	.	.	.	.	.	.
1743	1.59	97	1.43	125	1.97	114	.	.	.	.	.	.
1744	1.79	110	1.36	119	1.89	109	.	.	.	.	.	.
1745	1.19	73	0.98	86	1.55	89	.	.	.	.	.	.
1746	1.73	106	1.30	114	1.89	109	.	.	.	.	.	.
1747	1.43	88	1.63	143	2.24	130	.	.	.	.	.	.
1748	1.54	94	1.96	172	2.46	142	.	.	.	.	.	.
1749	1.36	84	1.49	131	1.94	112	.	.	.	.	.	.
1750	1.25	77	1.42	125	1.79	104	.	.	.	.	.	.
1751	1.54	94	1.32	115	1.52	88	.	.	.	.	.	.
1752	1.44	88	1.25	110	.	.	.	.	.	.	.	.
1753	1.75	107	1.74	152	2.31	133	.	.	.	.	.	.
1754	2.70	166	2.83	248	3.60	208	.	.	.	.	.	.
1755	4.66	286	3.28	287	4.31	249	.	.	.	.	.	.
1756	4.48	275	3.22	283	4.07	235	.	.	.	.	.	.
1757	4.23	260	1.65	145	2.27	131	.	.	.	.	.	.
1758	2.04	125	2.75	242	3.71	214	.	.	.	.	.	.
1759	2.20	135	1.92	168	2.66	154	.	.	.	.	.	.
1760	2.98	183	1.72	151	2.77	160	.	.	.	.	.	.
1761	2.16	132	1.65	145	.	.	2.08	140	1.74	135	2.22	126
1762	1.63	100	1.14	100	1.73	100	1.48	100	1.29	100	1.76	100
1763	2.29	140	1.63	143	2.13	123	2.13	144	1.48	115	2.00	114
1764	2.46	151	1.60	140	.	.	.	.	.	.	.	.
1765	1.53	94	1.09	96	1.99	115	.	.	.	.	.	.
1766	0.96	59	1.19	104	1.81	105	.	.	.	.	.	.
1767	1.05	64	0.87	76	1.29	75	.	.	.	.	.	.
1768	1.04	64	0.82	72	1.11	64	0.85	57	1.00	78	1.33	76
1769	0.95	58	0.99	87	1.49	86	0.73	49	0.73	57	1.11	63
1770	1.23	75	1.52	133	2.03	117	1.26	85	1.30	101	1.65	94
1771	1.43	88	1.15	101	1.57	91	1.37	92	1.60	124	2.13	121
1772	1.68	103	1.21	106	1.53	89	1.54	104	3.02	234	1.80	102
1773	1.20	74	.	.	.	.	1.25	84	1.45	113	1.84	104
1774	.	.	0.91	80	1.57	91	1.54	104	1.30	101	1.80	102
1775	1.43	88	1.43	126	1.70	98	.	.	.	.	.	.
1776	1.08	66	1.25	110	1.60	92	.	.	.	.	.	.
1777	1.80	110	2.30	202	2.84	164	1.90	129	1.10	86	1.58	90
1778	1.86	114	1.70	149	2.25	130	2.13	144	1.47	114	1.88	107
1779	1.55	95	.	.	.	.	2.27	150	1.67	129	2.08	118
1780	.	.	.	.	.	.	1.38	93	1.37	106	1.90	108
1781	.	.	.	.	.	.	0.97	66	1.05	82	1.67	95
1782	1.57	96	.	.	.	.	1.29	87	1.30	101	1.74	99
1783	.	.	.	.	.	.	2.62	177	1.39	108	1.74	99
1784	.	.	.	.	.	.	2.39	161	2.86	221	3.40	193
1785	.	.	.	.	.	.	0.95	64	1.07	83	1.54	87
1786	.	.	.	.	.	.	0.86	58	0.69	53	1.08	61
1787	.	.	.	.	.	.	0.98	66	1.09	84	1.55	88
1788	.	.	.	.	.	.	1.00	68	1.42	110	1.37	78
1789	.	.	.	.	.	.	1.05	71	0.88	60	1.15	65
1790	.	.	.	.	.	.	2.22	150	1.42	110	1.80	102
1791	.	.	.	.	.	.	2.03	137	2.13	165	2.54	144
1792	.	.	.	.	.	.	2.03	137	2.13	165	2.52	132
1793	.	.	.	.	.	.	1.08	73	2.00	155	2.62	149
1794	.	.	.	.	.	.	1.18	79	1.25	97	1.76	100
1795	.	.	.	.	.	.	0.80	54	1.09	84	1.45	83
1796	.	.	.	.	.	.	0.86	58	0.88	68	1.33	76
1797	.	.	.	.	.	.	0.63	42	0.78	61	1.19	68
1798	.	.	.	.	.	.	0.63	43	0.67	52	1.00	57
1799	.	.	.	.	.	.	0.73	49	0.67	52	1.00	57
1800	.	.	.	.	.	.	1.76	119	0.81	63	1.11	63



FIG. 3.1: TRENDS IN REGIONAL PRICES OF  
MAJOR FOODGRAINS



**FIG 3.2: REGIONAL TRENDS IN AGRICULTURAL PRICES**  
**EASTERN RAJASTHAN 1710-1780 [Index 1716=100]**



Appendix 4: Price Relatives

TABLE 4.C: ANNUAL PRICE RELATIVES : INDEX= BAJRA PRICE

## QASBA CHATSU

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YEAR	BAJRA PRICE	BAJRA INDEX	MOTH	MUNG	URAD	TIL	JUWAR	BARLEY	GRAM	BAIJHARI
1710	0.9	100	100	127	139	249	95	92	92	92
1711	0.9	100	105	141	129	379	89	138	130	134
1712	2.0	100	95	118	115	154	88	174	200	.
1714	1.2	100	106	179	172	223	86	88	114	92
1715	1.5	100	102	162	130	237	95	.	.	.
1716	1.2	100	76	139	110	231	.	107	76	79
1717	2.7	100	140	186	119	.	.	93	.	.
1721	1.4	100	98	127	110	183	94	102	117	.
1723	1.4	100	110	139	132	179	86	96	138	.
1724	1.0	100	83	130	112	224	98	92	99	96
1730	1.8	100	90	96	91	.	105	92	100	94
1731	3.3	100	133	120	.	.	100	.	.	.
1732	1.2	100	114	144	126	266	88	80	98	85
1733	1.3	100	89	110	93	160	84	84	98	89
1734	1.8	100	71	94	75	196	78	78	84	79
1735	1.9	100	77	91	81	.	92	76	75	76
1737	2.3	100	85	111	98	133	81	79	114	89
1738	2.0	100	92	120	110	140	90	73	94	.
1740	1.1	100	86	127	95	203	82	70	80	73
1741	1.3	100	80	125	92	.	79	72	87	76
1742	1.7	100	124	164	192	236	85	97	139	.
1743	1.1	100	119	175	146	188	84	92	130	97
1744	1.7	100	89	126	115	198	77	68	86	71
1745	1.0	100	96	147	137	237	75	.	.	.
1748	1.4	100	94	106	103	213	103	95	125	116
1749	1.2	100	102	139	120	212	95	94	74	96
1750	1.2	100	101	109	103	.	118	88	96	90
1751	1.4	100	81	95	90	97	90	65	75	68
1752	1.1	100	89	109	90	231	101	88	101	94
1753	1.4	100	94	121	.	.	97	100	111	103
1755	4.7	100	103	117	.	94	.	52	87	.
1757	2.0	100	99	108	118	175	65	72	102	76
1758	1.5	100	108	148	152	195	.	111	.	.
1760	1.8	100	115	135	117	193	.	75	79	.
1761	1.9	100	93	101	98	181	.	70	101	.
1762	1.3	100	94	136	114	244	94	92	98	87
1763	1.9	100	94	120	122	244	99	69	95	75
1764	1.9	100	90	129	124	156	87	66	79	69
1765	0.9	100	125	184	.	230	96	113	144	.
1766	0.8	100	96	180	153	288	90	93	107	99
1767	0.8	100	102	152	128	294	88	76	78	79
1768	0.6	100	88	179	125	297	88	101	105	.
1769	0.4	100	127	280	352	.	89	149	155	140
1771	1.1	100	101	139	115	168	95	88	85	87

TABLE 4.M: ANNUAL PRICE RELATIVES : INDEX=BAJRA PRICE

QASBA MALARNA

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YEAR	BAJRA PRICE	BAJRA INDEX	MOTH	URAD	TIL	JUWAR	BARLEY	WHEAT	GRAM	BAIJHARI
1713	2.7	100	90	99	137	95	.	.	.	.
1714	1.1	100	112	138	191	94	97	148	145	99
1715	1.6	100	99	116	198	93	57	84	56	52
1716	1.3	100	100	100	202	.	72	96	73	72
1717	2.6	100	95	.	126	83	72	.	71	.
1718	2.0	100	99	.	153	91	81	.	.	83
1719	1.6	100	65	80	91	76	55	.	.	.
1720	1.3	100	102	.	147	89	88	149	103	.
1721	1.2	100	102	123	145	93	.	.	.	.
1722	1.3	100	87	103	180	90	88	148	.	88
1723	1.2	100	107	148	187	84	86	144	106	88
1725	1.2	100	98	99	249	100	79	111	74	.
1726	1.4	100	100	109	217	83	83	107	84	83
1727	0.8	100	97	132	219	81	96	157	95	96
1728	0.7	100	88	125	221	83	123	197	123	123
1729	1.4	100	93	105	133	105	100	133	100	100
1730	2.3	100	92	94	141	98	65	83	63	65
1731	4.0	100	121	.	.	95	.	.	.	.
1732	1.0	100	101	117	329	84	82	132	113	84
1736	1.7	100	102	.	210	93	88	110	114	91
1737	1.8	100	93	100	135	85	107	140	142	114
1738	1.6	100	102	110	129	90	.	.	.	.
1743	0.9	100	122	193	211	73	105	151	131	113
1744	1.1	100	102	164	224	89	98	122	105	.
1745	0.8	100	99	135	204	74	92	148	102	96
1746	1.2	100	101	162	150	80	96	120	125	99
1747	1.0	100	108	146	159	110	.	.	.	.
1748	1.1	100	102	122	194	123	130	166	122	134
1749	1.0	100	102	107	185	77	112	148	123	.
1751	1.1	100	82	98	137	83	87	103	95	91
1754	1.9	100	105	121	130	96	107	138	117	115
1756	2.9	100	107	.	136	.	79	82	106	.
1757	1.3	100	96	135	179	92	83	131	126	84
1758	1.5	100	105	.	164	94	138	188	.	.
1759	1.6	100	108	100	150	90	105	162	121	.
1760	2.1	100	108	110	150	107	.	96	68	76
1761	1.7	100	124	108	172	96	.	.	.	.
1762	1.3	100	102	115	228	85	90	128	105	.
1763	1.9	100	98	.	177	79	77	100	104	77
1765	1.1	100	81	121	144	64	73	135	88	65
1766	0.7	100	108	185	258	99	127	196	130	123
1767	0.9	100	77	102	200	92	84	115	65	77
1768	0.7	100	88	109	259	80	91	139	93	91
1769	0.6	100	.	.	220	.	135	204	149	136
1775	1.0	100	106	109	156	91	102	123	120	.
1776	0.8	100	121	146	169	108	118	153	131	120
1777	1.3	100	140	140	140	141	131	164	.	.
1778	1.3	100	114	113	144	112	93	125	95	.
1779	1.1	100	98	123	144	82	.	.	.	.
1782	1.1	100	97	116	166	78	.	.	.	.

TABLE 4.P: ANNUAL PRICE RELATIVES : INDEX=BAJRA PRICE

QASBA PHAGI

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YEAR	BAJRA PRICE	BAJRA INDEX	MOTH	TIL	JUWAR.	PADDY	BARLEY	WHEAT	GRAM	GOJAI	BAIJHARI
1691	0.8	100	74	148	79	105	56	102	35	.	.
1697	0.9	100	111	176	113	174	65	130	120	.	.
1715	1.4	100	86	233	102	98	.	.	.	.	.
1716	1.2	100	98	200	94	119	50	96	62	.	65
1717	2.4	100	102	169	94	.	75	115	129	.	.
1718	1.8	100	133	187	119	120	.	.	.	.	.
1720	1.2	100	92	148	86	119	.	.	.	.	.
1723	1.6	100	103	172	88	112	68	123	113	97	98
1725	1.0	100	113	288	96	126	60	117	76	.	78
1726	1.5	100	115	249	94	.	63	107	86	91	.
1727	1.0	100	85	220	92	148	73	.	95	112	96
1728	1.1	100	.	185	83	132	.	.	.	.	.
1729	1.3	100	98	140	86	100	73	129	95	.	96
1730	1.7	100	94	168	111	91	53	98	70	.	70
1732	1.3	100	86	232	86	159	56	121	78	.	76
1733	1.1	100	105	263	91	127	78	157	106	.	105
1734	1.6	100	73	207	73	96	62	112	85	.	84
1736	1.9	100	114	219	84	.	66	110	.	97	.
1741	1.1	100	93	213	88	132	60	116	83	87	.
1742	1.3	100	138	289	103	124	88	139	133	126	.
1743	1.1	100	127	223	85	125	73	146	122	105	105
1744	1.3	100	118	222	88	101	57	110	85	83	81
1745	1.1	100	100	202	71	.	.	.	.	.	.
1746	1.6	100	.	176	94	.	53	97	.	79	.
1749	1.3	100	93	168	89	163	66	107	89	95	92
1750	0.9	100	103	.	.	.	85	145	122	121	121
1751	1.4	100	87	128	89	.	51	90	70	70	70
1753	1.1	100	102	205	96	111	78	157	102	114	103
1754	1.5	100	103	167	84	.	99	174	140	140	130
1755	2.9	100	.	148	103	.	55	109	.	88	.
1757	2.1	100	93	.	86	.	40	89	84	58	59
1759	1.8	100	88	156	78	.	62	123	.	.	.
1760	1.7	100	114	163	103	117	49	111	71	69	69
1778	1.3	100	90	167	94	139	66	110	100	97	92

TABLE 4.S: ANNUAL PRICE RELATIVES : INDEX=BAJRA PRICE

QASBA SANGANER

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YEAR	BAJRA PRICE	BAJRA INDEX	MOTH	URAD	MUNG-	BARLEY	WHEAT	GRAM	GOJAI	GOCHANI	BAIJHARI
1708	0.9	100	134	170	168	.	.	.	.	.	.
1711	1.0	100	234	151	275	.	.	.	.	.	.
1712	1.6	100	143	140	.	145	197	190	172	.	.
1713	3.1	100	131	58	.	38	57	40	45	.	.
1715	1.8	100	183	149	146	65	93	60	70	.	.
1716	1.5	100	191	122	155	59	88	57	74	74	57
1724	1.6	100	123	154	.	.	.	.	.	.	.
1728	1.2	100	125	134	141	94	127	101	108	..	97
1730	1.6	100	142	165	146	77	101	81	.	.	80
1732	1.5	100	190	109	140	71	103	93	83	90	.
1736	2.1	100	148	200	180	84	110	112	93	.	93
1737	2.5	100	116	113	174	77	103	.	.	.	.
1739	1.8	100	144	144	146	75	108	103	89	.	86
1740	1.2	100	194	202	183	82	124	92	.	.	117
1742	1.9	100	178	144	.	92	118	.	104	.	.
1743	1.5	100	148	216	.	101	133	135	116	.	113
1745	1.2	100	112	.	125	89	.	.	.	.	.
1746	1.8	100	144	.	.	70	98	.	82	.	.
1747	1.5	100	115	137	.	109	129	.	.	.	.
1748	1.6	100	159	184	156	107	.	.	100	120	111
1760	2.1	100	93	101	99	73	89	.	78	.	76
1761	1.8	100	86	96	96	.	.	.	.	.	.
1766	1.0	100	109	139	138	.	.	.	.	.	.
1768	0.8	100	97	178	.	.	.	.	.	.	.
1770	1.2	100	94	142	.	94	126	84	117	117	93
1771	1.2	100	96	119	126	90	119	86	98	99	87
1772	1.4	100	90	115	.	70	98	70	81	84	72
1773	1.1	100	131	156	.	.	.	.	.	.	.

TABLE 4.L: ANNUAL PRICE RELATIVES : INDEX=MOTH PRICE

QASBA LALSOT

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YEAR	MOTH PRICE	MOTH INDEX	BAJRA	URAD	MUNG	TIL	BARLEY	GRAM	BAIJHARI
1712	1.8	100	90	111	111	187	.	.	.
1713	2.5	100	108	140	150	191	.	.	.
1714	1.5	100	82	127	132	169	.	89	70
1715	2.1	100	100	121	127	193	.	.	.
1716	1.6	100	114	110	132	313	.	65	68
1717	3.0	100	109	109	125	150	71	109	.
1718	2.2	100	100	109	133	170	80	107	.
1719	1.2	100	141	129	133	168	89	99	94
1720	1.4	100	.	119	131	178	91	115	99
1721	1.5	100	107	101	111	188	104	111	104
1722	1.4	100	112	119	101	193	102	116	102
1730	1.8	100	.	100	101	.	.	.	.
1731	4.1	100	100	101	.	181	.	80	.
1733	1.1	100	126	125	133	.	.	.	100
1734	1.6	100	117	106	117	237	.	87	81
1737	2.0	100	118	129	159	205	91	135	104
1740	1.1	100	.	.	147	.	75	83	79
1741	1.2	100	.	112	123	196	.	105	100
1745	0.9	100	.	157	.	246	102	120	110
1746	1.6	100	100	125	145	147	.	.	.
1747	1.2	100	102	132	141	166	.	139	.
1748	1.3	100	.	125	132	.	.	.	.
1753	1.2	100	.	103	108	.	.	.	.
1754	1.5	100	.	113	.	.	.	.	.
1756	3.4	100	100	.	.	123	60	.	.
1757	1.8	100	.	146	.	.	.	.	.
1758	1.6	100	.	135	137	.	.	.	.
1759	1.4	100	.	131	.	142	.	.	.
1761	1.7	100	.	105	.	.	.	.	.
1762	1.3	100	.	124	155	.	.	.	.
1763	1.7	100	.	136	.	155	.	.	.
1764	1.7	100	.	133	132	.	.	.	.
1765	1.1	100	.	145	170	.	.	.	.
1767	0.8	100	.	152	208	.	.	.	.
1768	0.6	100	.	153	169	291	.	.	.
1770	1.3	100	.	117	142	.	.	102	.
1777	1.4	100	.	.	.	.	.	.	.



TABLE 4.J: ANNUAL PRICE RELATIVES : INDEX=BAJRA PRICE

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## QASBA JAIPUR

YEAR	BAJRA PRICE	BAJRA INDEX	MOTH	BARLEY	WHEAT	GOJAI
1728	1.4	100	99	.	.	.
1729	1.4	100	89	98	125	110
1733	1.4	100	107	.	.	.
1736	2.0	100	116	144	243	106
1737	2.6	100	99	.	111	.
1739	1.7	100	117	77	111	91
1741	1.2	100	84	86	145	107
1742	2.0	100	95	90	118	102
1743	1.6	100	116	90	124	106
1744	1.8	100	85	76	106	.
1745	1.2	100	92	.	.	.
1746	1.7	100	120	75	109	92
1747	1.4	100	96	114	157	132
1750	1.3	100	99	114	143	126
1755	4.7	100	114	70	92	78
1756	4.5	100	116	72	91	.
1757	4.2	100	156	39	54	45
1759	2.2	100	98	87	121	100
1761	2.2	100	89	.	.	.
1762	1.6	100	103	70	106	84
1763	2.3	100	101	71	93	83
1767	1.0	100	109	83	123	101
1768	1.0	100	93	79	107	88
1769	1.0	100	100	104	157	125
1770	1.2	100	117	124	165	136
1771	1.4	100	100	81	110	131
1772	1.7	100	.	72	91	74

#### Appendix 5: Limitations of the Quantitative Data in the Arhsattas.

The statistical figures used in the study have been extracted from the revenue records or arhsattas compiled annually by the Jaipur state's revenue authorities. As the revenue was calculated as a proportion of the agricultural product it fluctuated seasonally and annually depending upon the quality of the harvest and the type of crop grown. The internal logic of the tax system therefore necessitated a very precise form of statistical data collection and monitoring of agricultural production. While the revenue records provide us with a sensitive indicator of the pattern of agricultural production and changes in it during the course of the eighteenth century, there are a number of problems in the utilisation of the quantitative data that they record.

Firstly, continuous annual series of the arhsattas are not available for any of the six qasbas under study. The availability of the most complete set of records determined both the choice of the qasbas to be analysed as well as the period of study. Of the six qasbas chosen, reasonably continuous series are available from 1710-70. Within this period short gaps of one to three years are common in all the six qasbas under study. Longer gaps of 11 years between 1717-27 in the records of qasba Sanganer, 1723-31 in the case of qasba Lalsot and between 1761-70 for qasba Phagi are however more serious. In addition, for none of the years in the period do we have arhsattas for all six of the qasbas.

The second and more serious methodological problem arises, however, from the nature of the statistical information recorded. In conformity with the two distinct forms of taxation - the crop-sharing or batai jinsi method and the cash or zabti method- each arhsatta records two types of figures:

i) Where a physical division of the grain in a predetermined proportion was the method of revenue appropriation, the revenue accounts provide us with the aggregate quantity of each crop taken in lieu of tax from the qasba as a whole, the date of its sale, the sale price and the monetary value of the revenue thus obtained from each crop. This mode of taxation was known as jinsi batai or crop-sharing. As a rule, revenue on food grains was collected by the crop-sharing method.

ii) On the other hand, high value crops or cash crops were invariably taxed on the basis of a cash rate per unit of land. In the formulation of the cash rates, the concept of differential taxation based on the relative value of the crop, varying productivity and level of investment in capital and labour is clearly discernible. The revenue accounts for crops assessed by the zabti method provide details of the acreage of each crop, the rate of taxation per unit of land, and the revenue so obtained for each cash assessed crop.

The statistics associated with the zabti and jinsi forms of assessment are however not strictly comparable. In the case of the jinsi crops, we get no information on the area sown, yield, or the demand per unit of area. On the other hand, for the zabti crops there are no figures for the gross produce, the current price of the crop or the proportion of the crop that the revenue rate represents. In short, the physical components of the quantitative data, i.e., the area statistics for the zabti crops and the quantity figures for the batai crops cannot be compared. However, in theory, the cash rate per bigha and the proportion of the produce taken in kind both represented the same share of the gross produce. It should therefore be feasible to use the revenue figures for each type of assessment as a proxy for the relative value of output in order to make comparisons at different levels. However, the lag in the adjustment of the cash rates of revenue to the

annual price variations continues to distort the apparent approximation of product value to the revenue derived.

The use of the revenue figures therefore necessitates certain adjustments to take into account variations in its component elements. Variation in the annual revenue may arise from changes in the extent of production, the composition of the crops cultivated, the sale prices of those assessed by the method of crop sharing (jinsi) or the rate of taxation per bigha for crops assessed in cash. Where such adjustments have been made to compute values, the method used has been explained below.

Method used for deflation of revenue figures to determine comparative production.

(Table 22 and Table 23)

Table 22:

The table was constructed in three stages and by way of illustration we have given below the calculations for the year 1728.

i) In the first stage, the revenue figures for the qasba and the mean revenue values for the eight neighbouring villages under the head of 'average village' were compared (col.1-3). These were then expressed in relative ratios with the revenue for the average village being 100 for each category (cols. 4-5. Col. 4= col.1 / col.3 \* 100). The last two columns in the calculations below give the relative percentage distribution of revenue by harvest and method of appropriation, that is zabti or cash and jinsi or in-kind, the percentage distribution of the average village being used as the base statistic (col.6= col.4 / 100 \* Col.7).

	Qasba 1	Tot.Vill 2	Av.Vill 3	Qasba 4	Av.Vill 5	Qasba 6	Av.Vill 7
Kh.Zabti	3739.21	1848.35	231.04	1618.42	100	384.70	23.77
Kh.Jinsi	288.97	1074.63	134.33	215.12	100	29.73	13.82
Rb.Zabti	846.38	14.16	1.77	47818.08	100	86.07	0.18
Rb.Jinsi	3467.22	4838.27	604.78	573.30	100	356.76	62.23
Totals	8341.78	7775.91	971.92	-	-	857.26	100.00

While these preliminary calculations give us the relative revenue collection and hence an indication of the difference in the cropped area of the qasba and the average village, the distortion in the revenue relatives due to the variation in the crop composition of the two units still remains.

ii) In the second stage the multipliers or the average rate of taxation per bigha and the average price of sale per maund of grain were calculated for the qasba and the average village. These were then expressed in relative ratios, the multipliers for the village being 100.

	Qasba	Av.Vill	Qasba	Av.Vill
Kh.Zabti	1.54	1.02	150.98	100
Kh.Jinsi	1.24	1.31	94.66	100
Rb.Zabti	1.35	1.00	135.00	100
Rb.Jinsi	1.22	1.28	95.31	100

iii) Lastly, the relative revenues derived earlier (cols. 6 and 7 in the first set of figures) were adjusted to take into account the variation in crop composition expressed through the variation in the multipliers for each unit. The qasba revenues for each category making up the total collections were deflated by the corresponding multiplier value (col.10) to obtain a notional revenue value (col.12). Thus such a notional relative index provides a measure of the relative revenues of the two units had their cropping pattern, rates of taxation and price at which grain was sold been identical. It thus gives us an index which can be used as a proxy for determining relative output or gross cropped area of each unit ( (A) below).

	Qasba	Av.Vill.
Kh.Zabti	254.80	23.77
Kh.Jinsi	31.41	13.82
Rb.Zabti	63.76	0.18
Rb.Jinsi	374.32	62.23
Total (A)	724.29	100.00

Using the method above, similar relative notional indices were calculated for 1747 and 1760 also which are indicated by (B) and (C) in Section I, Table 22 for the years 1747 and 1760 respectively. These three indices indicate that the relative output of qasba Sanganer was approximately seven to eight and a half times that of an average village. The revenues for each crop grown in the qasba were then scaled down by the relative notional index for the corresponding year to take into account the difference in the cropped area of the qasba and the average village. For example, in 1728 cotton production in the qasba yielded a revenue of Rs.2023.84 as compared with Rs.137.71 in the average village. However, as the approximate difference in the relative cropped area of the qasba and the village, as given by the relative notional index, was a little over seven times, the qasba cotton revenue was scaled down by the same magnitude to give a figure of Rs.279.42. Cotton production in the qasba can therefore be said to have been twice that in the average village.

Table 23:

Table 23 has been constructed on the same principles as Table 22. In comparing the relative agricultural production in the six qasbas, we were initially faced with the problem that we did not have data for all of the six qasbas for any year in the period 1710-70. To overcome this, one of the six qasba's series was

chosen as the base and then the years for which we had data for the base series and each of the five other qasbas in turn were selected. We then had values for common years in each pair of parallel series with one series in each pair having been selected from the base series. Each such set of parallel series differed from any other in the number of observations and the years selected due to the random nature of the gaps in the data. The averages for each set of figures being compared were calculated and expressed in ratios relative to the base value. In the calculations, qasba Chatsu was chosen as the base for the comparison. The choice of qasba Chatsu as the base was because its revenue series was most complete.

Relative ratios were hence calculated for the area assessed in cash (in bighas) and the quantity of in-kind revenue (in maunds) for each of the six qasbas (Section I and II, Table 23). These were, however, inversely related and as the figures are not comparable, the revenue values for each type of assessment were used to approximate relative production (Section III, Table 23 ). Due to the inter-qasba variation in rates of taxation and prices, relative multipliers were calculated in the same way as in Table 22 above. These are given in Section IV, Table 23. These multipliers were then used to deflate the relative revenue figures (Section V, Table 23), to give the relative values of revenue that would have been obtained from each qasba had the cropping pattern, prices and rates of taxation been identical to that in qasba Chatsu. This index then takes into account the figures for the physical units, that is the relative area and quantity figures for each qasba and gives us a notional relative revenue value. In other words, the notional index provides a proxy for the relative difference in the output or cropped area of each qasba.

Appendix 6 : Tables and Figures Relating to Cropping Trends.

A common set of tables and figures have been compiled for each qasba prefixed by the initial of that qasba in each case. The initials ( [X] ) used are J for Jaipur, P for qasba Phagi, S for qasba Sanganer, M for qasba Malarna, L for qasba Lalsot and C for qasba Chatsu. The tables and figures are ordered in the sequence Chatsu, Malarna, Phagi, Sanganer, Lalsot, and Jaipur.

Tables 6.[X].1 to 6.[X].5

Table 6.[X].1 shows the percentage distribution of the annual revenue by harvest and mode of assessment. Table 6.[X].2 shows the percentage distribution of acreage and quantity of kharif crops. In the table, the area of each zabti crop has been calculated as a percentage of the aggregate kharif cash cropped area for that year, while for the crops assessed by crop-sharing the quantity of each such crop as a percentage of the aggregate produce quantity has been given. The selection of major crops was based on the criteria of continuity in production and significance in terms of relative acreage, quantity and revenue derived. The major crops thus selected account for over 90 per cent of the seasonal zabti area cropped and jinsi quantity produced as well as revenue obtained. Table 6.[X].3 provides similar information for the rabi crops. Tables 6.[X].4 and 6.[X].5 show the revenue derived from the major kharif and rabi crops, respectively, as a percentage of the total seasonal revenue.



**Figures 6.[X].1 to 6.[X].7**

The bar charts arranged from 6.[X].1 to 6.[X].7 for each qasba show the annual aggregate values for each of the following statistic : Figure 6.[X].1 and 6.[X].2 show the aggregate values of the zabti assessed area and jinsi quantity in the kharif harvest, while Figures 6.[X].3 and 6.[X].4 are for respective aggregates in the rabi harvest. Figure 6.[X].5 and 6.[X].6 give the total revenue obtained in the kharif and rabi harvests, respectively. Lastly, Figure 6.[X].7 charts the total annual revenue derived in a fiscal year incorporating both the harvest seasons. In the last chart, only those years have been retained where we had information for both the kharif and rabi harvests.

TABLE 6.C.1: PERCENTAGE DISTRIBUTION OF ANNUAL REVENUE

YEAR	QASBA CHATSU						ANNUAL REVENUE		TOTAL RUPEES
	KHARIF HARVEST			RABI HARVEST			%IN CASH	%IN KIND	
	%IN CASH	%IN KIND	%KHARIF	%IN CASH	%IN KIND	%RABI			
1710	15.46	84.54	52.52	72.94	27.06	47.48	42.75	57.25	3756.01
1711	34.02	65.98	40.14	52.80	47.20	59.86	45.26	54.74	3289.30
1712	30.13	69.87	27.58	90.24	9.76	72.42	73.66	26.34	10618.02
1714	46.57	53.43	49.94	87.69	12.31	50.06	67.15	32.85	3822.82
1715	37.26	62.74	100.00	.	.	.	37.26	62.74	1320.84
1716	56.95	43.05	30.77	68.39	31.61	69.23	64.87	35.13	3880.40
1717	57.11	42.89	22.37	98.82	1.18	77.63	89.49	10.51	1863.77
1721	23.45	76.55	57.93	90.81	9.19	42.07	51.79	48.21	3853.87
1723	39.90	60.10	64.78	97.51	2.49	35.22	60.19	39.81	4904.80
1724	29.30	70.70	38.91	81.64	18.36	61.09	61.27	38.73	4880.96
1726	97.02	2.98	12.65	100.00	0.00	87.35	99.62	0.38	6123.75
1730	73.07	26.93	20.57	94.86	5.14	79.43	90.38	9.62	6617.88
1731	92.76	7.24	28.54	100.00	0.00	71.46	97.93	2.07	5490.64
1732	74.09	25.91	26.41	93.36	6.64	73.59	88.27	11.73	7164.00
1733	65.46	34.54	34.06	97.94	2.06	65.94	86.88	13.12	6263.67
1734	66.27	33.73	38.35	97.23	2.77	61.65	85.36	14.64	7182.28
1735	57.56	42.44	26.66	88.86	11.14	73.34	80.52	19.48	7696.16
1737	73.21	26.79	39.76	99.35	0.65	60.24	88.96	11.04	7359.37
1738	52.88	47.12	32.03	99.09	0.91	67.97	84.29	15.71	7947.84
1740	56.04	43.96	26.98	96.67	3.33	73.02	85.70	14.30	6178.55
1741	65.76	34.24	26.67	96.70	3.30	73.33	88.45	11.55	4376.42
1742	84.27	15.73	19.05	99.50	0.50	80.95	96.60	3.40	4225.99
1743	52.38	47.62	22.24	96.25	3.75	77.76	86.49	13.51	5788.03
1744	54.74	45.26	18.09	91.09	8.91	81.91	84.51	15.49	5410.06
1745	44.79	55.21	21.52	100.00	0.00	78.48	88.12	11.88	5214.14
1748	56.31	43.69	34.40	97.45	2.55	65.60	83.29	16.71	4898.84
1749	62.90	37.10	24.50	95.65	4.35	75.50	87.63	12.37	5434.84
1750	53.20	46.80	28.62	95.85	4.15	71.38	83.65	16.35	5329.10
1751	31.23	68.77	23.57	93.13	6.87	76.43	78.54	21.46	5129.69
1752	52.77	47.23	26.22	96.34	3.66	73.78	84.92	15.08	4830.39
1753	84.53	15.47	36.59	93.84	6.16	63.41	90.43	9.57	5008.78
1755	82.90	17.10	33.54	99.59	0.41	66.46	93.99	6.01	4478.76
1756	100.00	0.00	15.78	90.88	9.12	84.22	92.32	7.68	2068.95
1757	86.79	13.21	9.43	94.41	5.59	90.57	93.69	6.31	1676.98
1758	61.37	38.63	39.07	98.96	1.04	60.93	84.28	15.72	2349.49
1760	23.40	76.60	42.57	89.77	10.23	57.43	61.52	38.48	2771.31
1761	49.13	50.87	30.07	96.73	3.27	69.93	82.42	17.58	2654.79
1762	57.34	42.66	24.63	96.79	3.21	75.37	87.08	12.92	3211.90
1763	61.48	38.52	24.59	97.77	2.23	75.41	88.84	11.16	2514.47
1764	66.08	33.92	19.98	98.64	1.36	80.02	92.13	7.87	2963.48
1765	57.95	42.05	19.82	99.04	0.96	80.18	90.89	9.11	2789.06
1766	41.71	58.29	25.47	89.76	10.24	74.53	77.52	22.48	2823.97
1767	44.91	55.09	22.72	94.39	5.61	77.28	83.15	16.85	3392.38
1768	35.23	64.77	16.93	96.38	3.62	83.07	86.03	13.97	2709.08
1769	61.43	38.57	25.43	89.36	10.64	74.57	82.25	17.75	3124.10
1771	39.88	60.12	27.45	88.43	11.57	72.55	75.10	24.90	3700.82

Source: Arhsattas Pargana Chatsu

TABLE 6.C.2: PERCENTAGE AREA/QUANTITY OF MAJOR KHARIF CROPS

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ASSESSED IN CASH/KIND : QASBA CHATSU

YEAR	% AREA (ZABTI CROPS)						% QUANTITY (JINSI CROPS)			
	COTTON	INDIGO	GARDEN PRODUCE	MAKKA	KODON	RALO	MOTH	MUNG	BAJRA	JUHAR
1710	11.67	10.35	30.79	0.00	11.24	24.87	29.59	0.50	63.02	3.82
1711	27.54	21.01	21.88	2.07	12.81	11.12	14.45	0.31	79.77	4.65
1712	36.41	13.57	16.38	4.69	17.35	9.72	20.92	0.65	75.67	0.26
1714	9.91	16.02	24.17	9.36	23.08	15.15	35.00	1.03	56.06	1.52
1715	5.24	14.16	48.72	3.50	10.02	12.35	55.95	1.66	35.42	4.96
1716	21.77	12.99	26.68	5.33	24.66	6.72	33.89	0.60	58.54	0.00
1717	30.14	0.00	48.54	5.81	2.99	8.80	3.12	0.13	73.48	0.00
1721	22.10	7.81	24.88	9.61	9.11	18.86	30.51	1.75	58.93	1.71
1723	43.91	6.57	13.69	14.86	9.05	10.14	15.87	0.64	72.81	8.83
1724	12.72	15.28	42.43	11.43	4.40	6.61	70.19	1.60	13.13	8.66
1726	59.84	1.80	23.67	9.16	1.31	3.83	29.73	1.93	5.11	14.88
1730	42.80	4.62	21.64	14.21	4.96	9.06	36.65	14.26	32.64	0.82
1731	67.70	0.00	10.64	15.47	0.34	0.00	4.98	0.06	9.36	10.75
1732	39.08	2.95	16.00	19.28	6.92	0.00	36.80	7.87	44.34	1.98
1733	32.83	6.28	22.76	12.43	9.03	11.50	54.87	23.00	4.11	0.15
1734	48.71	3.92	15.83	9.76	7.88	0.00	59.98	14.14	12.98	0.03
1735	34.77	6.02	22.52	12.27	5.30	7.02	66.99	10.70	6.82	0.25
1737	38.69	1.67	12.68	25.11	6.22	2.64	49.16	13.63	12.06	5.09
1738	12.04	2.70	15.72	27.34	9.27	7.10	34.54	8.61	30.84	3.33
1740	25.15	4.41	24.39	20.81	7.02	12.08	61.67	9.56	11.24	2.26
1741	37.58	1.98	24.42	22.30	5.08	6.62	33.04	8.56	47.23	1.64
1742	44.26	0.48	24.49	16.92	4.58	0.00	12.03	2.21	80.38	2.53
1743	11.00	0.00	31.82	30.40	3.63	16.38	36.56	1.43	46.14	9.99
1744	13.92	0.00	42.31	18.34	5.28	15.10	42.80	2.79	20.01	15.28
1745	10.03	0.00	50.64	18.17	5.74	10.89	40.93	7.19	33.17	11.53
1748	34.50	0.00	24.41	23.83	3.85	0.00	25.08	6.09	42.93	4.74
1749	18.07	0.00	29.05	37.16	3.17	0.00	23.50	4.21	39.41	13.19
1750	32.84	0.00	25.80	29.95	1.70	0.00	27.97	5.85	41.27	21.38
1751	28.22	0.00	44.73	12.03	2.23	0.00	50.94	10.15	12.66	0.25
1752	32.60	0.00	34.70	21.47	3.69	7.04	44.04	6.75	17.57	0.85
1753	53.38	0.00	25.11	17.49	3.38	0.00	16.84	2.47	59.77	1.13
1755	37.32	4.07	9.34	33.93	4.40	10.00	14.76	3.30	62.32	0.00
1756	0.00	18.62	13.27	46.14	1.70	19.79	.	.	.	.
1757	0.00	23.76	10.53	45.11	1.68	0.00	59.39	1.66	17.03	12.09
1758	58.49	0.08	12.85	19.81	1.57	0.00	53.44	8.36	37.30	0.00
1760	28.25	1.78	22.37	7.59	1.47	0.00	17.38	4.04	72.37	0.00
1761	36.57	2.86	19.65	18.66	3.36	0.00	38.17	18.16	35.05	0.00
1762	56.97	4.25	12.13	14.42	0.64	0.00	47.45	6.21	33.94	0.08
1763	45.61	5.11	25.44	11.04	0.62	0.00	61.83	2.61	19.53	0.08
1764	56.76	4.20	18.88	8.07	0.54	0.00	43.84	2.56	29.73	4.30
1765	41.05	3.14	23.50	23.90	1.85	6.15	25.61	1.03	54.01	3.33
1766	42.80	7.26	24.98	14.24	0.86	0.00	44.90	3.16	36.28	7.96
1767	43.92	5.40	26.96	19.91	0.00	0.00	49.95	4.90	16.78	16.04
1768	10.41	14.38	48.58	14.50	0.00	10.38	64.09	2.32	15.72	12.23
1769	61.61	4.54	24.16	6.57	0.27	0.00	36.36	0.56	26.38	31.89
1771	21.61	1.33	43.93	23.58	1.39	0.00	27.42	2.62	54.89	6.47

TABLE 6.C.3: PERCENTAGE AREA/QUANTITY OF MAJOR RABI CROPS

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ASSESED IN CASH/KIND : QASBA CHATSU

YEAR	% AREA (ZABTI CROPS)			% QUANTITY (JINSI CROPS)		
	CHOMLI	GARDEN PRODUCE	TOBACCO	BARLEY	GRAM	BAIJHARI
1710	86.29	12.61	1.11	48.25	41.86	9.73
1711	80.86	18.31	0.83	30.03	62.48	7.39
1712	92.25	7.32	0.40	55.54	44.37	0.00
1714	89.95	9.91	0.14	46.47	35.62	16.71
1716	88.10	11.66	0.12	27.25	59.61	11.54
1717	88.65	10.78	0.37	100.00	0.00	0.00
1721	85.40	13.91	0.69	22.93	76.98	0.00
1723	92.24	7.32	0.44	96.42	3.58	0.00
1724	91.61	7.75	0.64	50.62	35.30	14.08
1726	91.35	8.38	0.27	39.03	22.32	38.39
1730	87.75	11.82	0.35	28.28	66.16	5.57
1731	84.39	15.30	0.00	.	.	.
1732	89.41	9.92	0.64	47.75	34.65	16.86
1733	85.01	13.65	1.33	51.87	40.82	6.00
1734	85.60	13.47	0.94	36.12	54.98	8.56
1735	88.69	10.65	0.66	29.16	32.14	38.70
1737	89.57	10.19	0.25	56.68	29.83	13.49
1738	91.26	8.57	0.16	55.61	44.22	0.00
1740	81.93	17.49	0.58	63.19	18.15	18.59
1741	84.02	15.39	0.59	40.02	40.32	19.66
1742	86.89	12.80	0.30	81.99	18.01	0.00
1743	86.22	12.91	0.87	66.44	14.76	18.74
1744	86.03	13.56	0.41	38.65	40.84	20.48
1745	85.83	13.95	0.22	71.61	10.75	17.50
1748	86.13	13.26	0.62	61.48	27.84	10.59
1749	87.19	12.50	0.31	33.89	45.27	20.39
1750	86.01	13.15	0.84	41.76	50.06	7.10
1751	88.43	11.19	0.38	55.49	29.81	14.50
1752	92.18	7.65	0.16	38.03	48.09	13.82
1753	88.52	10.83	0.19	49.84	30.44	19.70
1755	89.19	10.72	0.08	97.94	2.06	0.00
1756	90.18	9.82	0.00	96.12	0.00	0.00
1757	93.41	6.59	0.00	71.88	20.74	6.78
1758	91.41	8.39	0.19	94.89	0.00	0.00
1760	91.77	8.23	0.00	79.59	19.78	0.00
1761	92.80	6.76	0.07	86.08	8.14	0.00
1762	93.32	6.53	0.14	41.93	57.23	0.62
1763	92.30	7.52	0.18	44.79	23.97	22.72
1764	94.24	5.76	0.00	50.04	41.94	6.40
1765	94.45	5.34	0.21	81.34	12.44	0.00
1766	91.94	7.78	0.27	47.99	44.04	7.49
1767	92.51	7.32	0.17	49.45	37.84	7.97
1768	93.12	6.87	0.01	67.59	32.29	0.00
1769	90.79	8.94	0.27	48.27	45.88	5.34
1771	91.13	8.04	0.83	57.73	27.20	13.48

TABLE 6.C.4: REVENUE FROM MAJOR KHARIF CROPS AS A PERCENTAGE

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OF TOTAL KHARIF REVENUE : QASBA CHATSU

YEAR	COTTON	INDIGO	GARDEN PRODUCE	MAKKA	KODON	RALO	MOTH	MUNG	BAJRA	JUWAR
1710	2.36	2.02	5.40	0.00	1.41	1.88	24.03	0.51	51.18	2.94
1711	9.75	7.07	6.61	0.54	2.79	1.46	9.82	0.28	51.82	2.70
1712	9.82	4.30	3.74	0.93	2.86	0.96	14.04	0.54	53.32	0.16
1714	5.25	9.70	10.38	2.40	7.14	2.91	18.62	0.92	28.06	0.66
1715	2.02	6.64	15.02	0.98	2.29	1.74	35.02	1.65	21.75	2.88
1716	13.13	7.62	13.44	2.44	9.34	1.54	11.74	0.38	26.84	0.00
1717	21.42	0.00	26.09	2.86	1.09	2.16	2.17	0.12	36.41	0.00
1721	6.70	2.85	6.41	2.14	1.74	2.21	22.71	1.69	44.99	1.23
1723	18.25	2.92	4.74	4.48	2.36	1.62	10.37	0.53	43.30	4.50
1724	4.25	6.18	12.84	3.02	0.97	0.91	45.90	1.63	10.34	6.71
1726	65.01	2.20	20.29	6.73	0.80	1.41	.	.	.	.
1730	37.73	3.84	15.51	8.56	2.55	2.80	9.49	3.93	9.41	0.25
1731	69.98	0.00	8.60	10.56	0.19	0.00	0.66	0.01	0.93	1.07
1732	38.20	2.30	12.33	12.48	3.70	0.00	9.79	2.64	10.32	0.41
1733	27.98	4.74	15.59	7.29	4.47	3.43	16.67	8.68	1.40	0.04
1734	34.88	3.43	9.06	4.76	3.19	0.00	18.14	5.70	5.56	0.01
1735	21.80	4.48	11.48	5.36	1.97	1.57	27.19	5.12	3.57	0.12
1737	35.98	1.18	9.67	17.33	3.43	0.88	12.66	4.61	3.67	1.25
1738	9.72	2.89	10.40	15.73	4.55	2.10	14.59	4.74	14.18	1.37
1740	17.95	3.95	14.59	10.56	2.45	3.12	24.40	5.61	5.18	0.85
1741	29.69	1.35	15.74	12.33	2.34	1.80	9.52	3.85	17.00	0.47
1742	37.58	0.24	17.19	10.03	2.17	0.00	2.26	0.55	12.19	0.33
1743	8.56	0.00	19.56	15.72	1.54	3.91	19.07	1.10	20.29	3.70
1744	9.45	0.00	22.65	8.35	1.89	3.48	18.77	1.74	9.90	5.86
1745	6.25	0.00	24.60	7.44	2.35	2.03	20.64	5.57	17.43	4.55
1748	21.06	0.00	12.38	10.86	1.60	0.00	10.00	2.74	18.20	2.07
1749	12.24	0.00	15.48	19.06	1.42	0.00	7.98	1.94	13.06	4.14
1750	21.98	0.00	14.15	14.02	0.66	0.00	12.63	2.85	18.44	11.26
1751	10.93	0.00	14.06	3.24	0.48	0.00	32.20	7.56	9.92	0.18
1752	21.79	0.00	17.92	9.63	1.36	1.56	18.15	3.42	8.14	0.40
1753	43.21	0.00	27.06	8.76	2.44	0.00	2.35	0.44	8.86	0.16
1755	36.02	2.75	7.53	22.79	2.56	3.33	2.82	0.72	11.54	0.00
1756	0.00	21.56	16.22	47.46	1.44	10.44	0.00	0.00	0.00	0.00
1757	0.00	32.36	9.82	33.77	1.14	0.00	7.88	0.24	2.29	1.13
1758	37.96	0.07	7.27	8.95	0.54	0.00	20.58	4.43	13.31	0.00
1760	7.18	0.33	4.81	1.41	0.22	0.00	14.74	4.01	53.28	0.00
1761	22.77	1.59	9.86	8.03	1.14	0.00	18.74	9.66	18.42	0.00
1762	38.48	1.93	6.72	6.84	0.23	0.00	19.19	3.64	14.65	0.03
1763	33.16	3.03	15.85	5.71	0.24	0.00	22.15	1.19	7.45	0.03
1764	28.61	2.39	8.38	3.15	0.14	0.00	15.21	1.28	11.43	1.44
1765	27.83	2.12	13.40	11.95	0.70	1.49	10.38	0.62	17.57	1.04
1766	21.17	2.75	10.02	5.48	0.23	0.00	24.55	3.25	20.65	4.08
1767	22.26	3.03	11.20	7.43	0.00	0.00	26.43	3.87	8.72	7.36
1768	4.33	6.06	15.25	3.84	0.00	1.32	38.72	2.84	10.77	7.39
1769	37.60	2.90	12.55	3.07	0.18	0.00	16.04	0.54	9.16	9.83
1771	9.57	0.71	15.72	7.13	0.36	0.00	16.41	2.16	32.57	3.65

TABLE 6.C.5: REVENUE FROM MAJOR RABI CROPS AS A PERCENTAGE OF

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## TOTAL RABI REVENUE : QASBA CHATSU

YEAR	CHOMLI	GARDEN PRODUCE	TOBACCO	BARLEY	GRAM	BAIJHARI
1710	62.68	8.91	1.34	13.04	11.31	2.63
1711	43.01	9.07	0.72	14.73	28.90	3.52
1712	87.42	2.68	0.14	5.08	4.67	0.00
1714	79.12	8.37	0.21	5.13	5.07	1.92
1716	60.53	7.69	0.14	10.70	16.72	3.33
1717	87.84	10.28	0.60	1.18	0.00	0.00
1721	78.34	12.01	0.47	1.88	7.28	0.00
1723	89.72	7.08	0.71	2.37	0.13	0.00
1724	74.59	6.18	0.87	9.02	6.74	2.60
1726	96.46	3.35	0.19	.	.	.
1730	89.97	4.64	0.23	1.37	3.50	0.28
1731	93.39	6.55	0.00	0.00	0.00	0.00
1732	89.32	3.62	0.41	2.90	2.59	1.08
1733	91.27	5.70	0.97	0.99	0.91	0.12
1734	90.85	5.69	0.69	0.96	1.57	0.23
1735	84.39	4.04	0.43	3.26	3.56	4.32
1737	94.71	4.45	0.18	0.32	0.24	0.09
1738	95.27	3.70	0.12	0.45	0.46	0.00
1740	87.92	8.26	0.48	2.03	0.67	0.63
1741	89.69	6.50	0.51	1.20	1.47	0.63
1742	93.78	5.46	0.26	0.38	0.12	0.00
1743	89.43	6.11	0.71	2.33	0.73	0.69
1744	84.63	6.14	0.32	3.07	4.12	1.72
1745	93.22	6.59	0.19	.	.	.
1748	89.80	7.07	0.58	1.41	0.84	0.30
1749	88.46	6.92	0.27	1.62	1.70	1.00
1750	90.08	5.06	0.71	1.65	2.15	0.29
1751	87.31	5.49	0.33	3.61	2.25	0.99
1752	92.35	3.85	0.14	1.29	1.87	0.50
1753	87.87	5.64	0.18	2.96	2.00	1.20
1755	94.32	5.21	0.05	0.39	0.01	0.00
1756	85.53	5.35	0.00	8.76	0.00	0.00
1757	90.76	3.65	0.00	3.68	1.51	0.37
1758	93.82	5.01	0.13	0.97	0.00	0.00
1760	85.27	4.50	0.00	8.05	2.11	0.00
1761	92.67	3.83	0.11	2.53	0.35	0.00
1762	92.99	3.67	0.13	1.30	1.88	0.02
1763	93.75	3.84	0.19	0.83	0.61	0.46
1764	95.39	3.24	0.00	0.63	0.63	0.08
1765	95.87	2.95	0.22	0.75	0.15	0.00
1766	85.47	4.04	0.25	4.56	4.83	0.76
1767	90.23	4.01	0.16	2.65	2.09	0.44
1768	92.59	3.78	0.01	2.41	1.20	0.00
1769	84.65	4.47	0.24	5.04	4.98	0.52
1771	83.62	4.16	0.65	6.74	3.07	1.55

TABLE 6.M.1: PERCENTAGE DISTRIBUTION OF ANNUAL REVENUE

## QASBA MALARNA

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YEAR	KHARIF HARVEST			RABI HARVEST			ANNUAL REVENUE		TOTAL RUPEES
	₹IN CASH	₹IN KIND	₹KHARIF	₹IN CASH	₹IN KIND	₹RABI	₹IN CASH	₹IN KIND	
1711	.	.	0.00	2.18	97.82	100.00	2.18	97.82	1636.27
1713	13.28	86.72	52.08	100.00	0.00	47.92	54.84	45.16	7326.64
1714	41.69	58.31	10.57	2.49	97.51	89.43	6.63	93.37	3321.27
1715	40.20	59.80	31.51	4.45	95.55	68.49	15.72	84.28	2842.50
1716	36.41	63.59	48.39	3.52	96.48	51.61	19.43	80.57	2618.16
1717	51.10	48.90	25.40	3.70	96.30	74.60	15.74	84.26	2913.37
1718	21.79	78.21	61.16	5.92	94.08	38.84	15.63	84.37	3764.85
1719	16.10	83.90	70.47	8.74	91.26	29.53	13.93	86.07	3838.59
1720	13.69	86.31	68.83	5.58	94.42	31.17	11.16	88.84	4001.80
1721	7.78	92.22	100.00	.	.	.	7.78	92.22	3976.09
1722	5.65	94.35	73.60	4.98	95.02	26.40	5.48	94.52	7058.81
1723	3.78	96.22	79.59	5.50	94.50	20.41	4.13	95.87	7115.23
1725	21.09	78.91	49.24	1.87	98.13	50.76	11.34	88.66	7359.73
1726	37.23	62.77	36.57	2.35	97.65	63.43	15.10	84.90	5802.79
1727	24.40	75.60	56.36	5.30	94.70	43.64	16.06	83.94	4754.36
1728	25.48	74.52	56.60	0.88	99.12	43.40	14.80	85.20	4931.69
1729	26.36	73.64	59.12	7.06	92.94	40.88	18.47	81.53	5379.90
1730	36.02	63.98	43.78	4.53	95.47	56.22	18.31	81.69	5998.58
1731	50.86	49.14	100.00	.	.	.	50.86	49.14	1272.67
1732	16.22	83.78	52.17	8.30	91.70	47.83	12.44	87.56	3090.95
1736	43.09	56.91	38.56	7.00	93.00	61.44	20.92	79.08	2743.44
1737	16.52	83.48	36.84	4.02	95.98	63.16	8.63	91.37	7149.25
1738	6.84	93.16	95.86	100.00	0.00	4.14	10.69	89.31	3532.26
1743	9.47	90.53	40.10	6.01	93.99	59.90	7.40	92.60	4514.93
1744	17.90	82.10	24.35	2.15	97.85	75.65	5.98	94.02	6225.90
1745	11.05	88.95	64.23	1.84	98.16	35.77	7.75	92.25	5387.17
1746	28.09	71.91	46.14	3.17	96.83	53.86	14.67	85.33	4036.82
1747	21.04	78.96	100.00	.	.	.	21.04	78.96	3087.81
1748	21.28	78.72	29.23	0.89	99.11	70.77	6.85	93.15	6194.27
1749	16.54	83.46	51.70	1.43	98.57	48.30	9.24	90.76	4741.89
1750	100.00	0.00	13.59	0.81	99.19	86.41	14.29	85.71	2564.22
1751	11.34	88.66	34.08	2.11	97.89	65.92	5.26	94.74	5555.98
1754	35.00	65.00	29.77	0.67	99.33	70.23	10.89	89.11	7245.43
1756	11.50	88.50	35.21	0.11	99.89	64.79	4.12	95.88	5623.98
1757	16.59	83.41	29.59	0.71	99.29	70.41	5.41	94.59	2992.50
1758	18.74	81.26	44.55	1.71	98.29	55.45	9.30	90.70	2626.17
1759	15.47	84.53	60.46	2.03	97.97	39.54	10.16	89.84	3493.23
1760	24.67	75.33	26.49	0.99	99.01	73.51	7.26	92.74	3891.62
1761	23.97	76.03	100.00	.	.	.	23.97	76.03	1595.69
1762	19.52	80.48	37.53	0.89	99.11	62.47	7.88	92.12	4655.63
1763	17.62	82.38	40.09	1.64	98.36	59.91	8.05	91.95	3699.44
1765	16.39	83.61	64.59	1.94	98.06	35.41	11.27	88.73	3046.28
1766	15.84	84.16	50.44	.	100.00	49.56	7.99	92.01	4313.81
1767	20.97	79.03	47.69	1.37	98.63	52.31	10.72	89.28	5395.35
1768	17.99	82.01	63.22	2.00	98.00	36.78	12.10	87.90	3346.37
1769	24.10	75.90	59.62	0.83	99.17	40.38	14.70	85.30	3212.76
1774	.	.	.	4.54	95.46	100.00	4.54	95.46	775.68
1775	13.28	86.72	44.51	2.08	97.92	55.49	7.07	92.93	3459.57
1776	13.36	86.64	49.93	1.73	98.27	50.07	7.53	92.47	2996.49
1777	12.33	87.67	79.56	6.34	93.66	20.44	11.10	88.90	2485.48
1778	27.16	72.84	28.87	2.41	97.59	71.13	9.55	90.45	3526.14
1779	10.45	89.55	100.00	.	.	.	10.45	89.55	1561.49
1782	14.03	85.97	100.00	.	.	.	14.03	85.97	1506.33

TABLE 6.M.2: PERCENTAGE AREA/QUANTITY OF MAJOR KHARIF CROPS

ASSESSED IN CASH/KIND : QASBA MALARNA

401

YEAR	% AREA (ZABTI CROPS)						% QUANTITY (JINSI CROPS)			
	COTTON	INDIGO	GARDEN PRODUCE	SUGAR- CANE	MAKKA	TOBACCO	MOTH	TIL	BAJRA	JUWAR
1713	1.56	0.00	3.14	78.49	0.00	0.00	15.63	5.53	72.98	5.46
1714	11.45	0.00	3.13	49.62	3.13	0.00	9.55	16.16	67.42	5.14
1715	19.28	3.02	1.66	68.72	0.00	0.00	71.36	8.40	9.01	7.81
1716	2.52	5.24	2.30	62.95	1.00	0.00	28.92	10.81	44.52	0.00
1717	34.13	0.00	1.45	60.88	0.00	0.00	10.10	6.12	66.07	17.26
1718	29.77	0.00	1.05	18.91	0.00	0.00	3.78	9.04	44.92	42.11
1719	1.74	0.00	2.49	39.65	1.13	0.00	27.78	16.35	18.87	36.50
1720	2.77	0.00	4.25	82.39	1.19	0.00	5.01	7.49	34.83	52.58
1721	2.89	0.00	2.48	87.80	0.00	0.00	15.06	4.66	52.45	27.44
1722	1.90	0.00	4.32	90.61	0.00	0.00	19.07	2.80	51.19	26.45
1723	8.93	0.00	5.86	78.89	0.00	0.00	17.34	5.79	45.93	30.53
1725	5.20	3.63	4.13	63.53	0.00	0.00	14.97	4.73	73.00	5.26
1726	9.19	5.46	3.67	72.20	0.38	0.00	5.37	0.40	16.63	77.13
1727	6.61	5.99	3.79	44.75	0.55	0.00	14.15	2.00	25.29	57.54
1728	21.86	2.71	8.69	24.66	3.11	5.07	21.23	14.11	29.55	33.06
1729	39.11	1.03	2.81	23.45	1.81	0.00	15.56	14.76	42.00	26.12
1730	14.47	0.00	3.09	44.58	1.35	0.00	24.43	9.85	58.73	2.43
1731	15.98	0.00	5.69	53.18	5.94	0.00	0.46	0.00	85.95	13.43
1732	13.62	1.96	5.38	16.04	14.68	0.00	9.22	0.44	44.88	44.68
1736	24.98	1.39	4.48	60.82	0.00	0.00	0.71	2.63	23.58	73.08
1737	11.51	6.33	6.97	45.49	4.70	0.00	10.89	4.66	21.41	62.44
1738	12.53	6.46	15.02	55.78	6.63	0.00	10.41	3.83	36.74	48.26
1743	4.62	12.87	17.31	52.57	2.42	0.00	2.35	1.27	30.34	65.95
1744	1.85	9.29	10.55	36.48	11.15	13.63	24.26	7.76	46.98	20.60
1745	7.73	5.31	25.50	35.54	2.06	4.77	7.86	5.70	35.50	50.34
1746	6.48	6.93	12.98	53.10	0.35	4.88	2.97	4.97	76.33	15.50
1747	10.47	7.07	13.19	49.26	0.00	9.03	11.68	5.73	60.39	21.57
1748	21.63	6.07	9.84	25.54	11.96	3.95	8.63	9.41	43.25	38.49
1749	8.28	4.00	11.70	13.61	8.92	5.48	6.35	5.18	32.43	55.36
1750	20.34	1.51	11.40	33.72	3.19	9.87	2.73	3.22	72.47	21.53
1751	11.34	3.93	23.79	24.82	4.08	14.08	15.29	17.22	26.34	40.02
1754	32.44	0.00	10.59	36.05	0.28	3.91	3.71	2.71	49.26	44.25
1756	5.32	0.00	28.15	0.00	21.70	5.99	1.42	4.28	94.22	0.00
1757	5.14	0.00	24.03	0.00	14.90	8.20	8.71	9.40	45.43	36.15
1758	44.61	0.00	18.81	0.00	13.88	4.90	3.75	1.70	56.23	38.32
1759	23.45	4.55	15.46	20.01	16.27	5.10	7.27	6.28	30.17	55.27
1760	2.58	9.08	21.86	26.83	25.14	6.63	16.58	9.16	64.00	3.10
1761	12.99	3.49	12.50	34.75	21.51	1.90	1.60	3.33	46.09	47.80
1762	22.24	0.00	12.36	28.50	27.18	3.87	8.11	3.36	41.53	45.45
1763	3.17	1.87	24.28	21.16	22.69	14.91	1.17	0.36	54.29	44.17
1765	4.06	5.32	22.31	43.22	13.46	6.34	2.06	3.23	30.13	64.44
1766	12.36	16.03	16.43	37.72	2.29	8.58	4.41	5.37	43.41	46.73
1767	7.53	20.34	13.51	42.44	3.87	4.55	15.99	20.57	48.75	12.11
1768	0.76	23.97	20.96	46.75	0.00	6.42	2.49	2.65	39.81	54.43
1769	21.92	14.31	15.60	35.62	0.40	6.95	0.00	11.85	88.15	0.00
1775	10.46	8.81	27.52	36.65	3.03	9.72	1.38	1.32	84.13	13.08
1776	5.19	9.50	34.17	39.07	0.00	10.53	8.54	4.94	64.08	21.53
1777	8.06	0.00	25.69	45.64	5.19	8.14	11.86	8.88	55.89	18.22
1778	12.16	0.00	16.66	35.64	19.10	2.23	3.52	2.37	59.52	31.46
1779	0.00	0.00	25.16	33.28	2.14	8.23	2.31	10.73	24.90	61.26
1782	0.00	0.00	23.48	50.60	.	14.08	0.11	0.26	14.30	85.29



TABLE 6.M.3: PERCENTAGE AREA/QUANTITY OF MAJOR RABI CROPS

402

ASSESSED IN CASH/KIND : QASBA MALARNA

YEAR	% AREA (ZABTI CROPS)					% QUANTITY (JINSI CROPS)		
	POPPY	TOBACCO	GARDEN PRODUCE	ONIONS	KHATLI	BARLEY	WHEAT	GRAM
1711	14.51	8.55	38.97	21.47	0.00	41.51	6.41	2.60
1713	0.00	1.24	1.80	1.09	93.99	.	.	.
1714	8.29	19.45	43.65	17.02	0.00	91.90	2.04	4.49
1715	1.85	44.07	31.34	13.49	0.00	63.93	3.95	22.84
1716	2.00	27.62	35.27	26.62	0.00	63.34	3.38	5.77
1717	2.36	24.90	40.85	20.37	0.00	87.52	0.00	12.48
1718	3.32	33.79	40.14	11.23	0.00	97.89	0.00	0.00
1719	0.00	43.18	31.64	8.00	0.00	100.00	0.00	0.00
1720	7.57	33.87	28.16	18.24	0.00	95.81	1.00	3.19
1722	0.00	32.76	34.83	16.47	0.00	95.53	1.89	0.00
1723	2.13	28.34	44.74	10.73	0.00	86.38	6.66	2.85
1725	2.85	16.76	44.36	26.62	0.00	54.41	28.74	15.40
1726	0.00	17.49	34.64	19.28	13.40	72.99	4.84	9.07
1727	0.00	24.01	35.90	19.51	14.86	75.83	4.38	6.52
1728	0.00	0.00	26.84	51.12	0.00	64.29	11.33	7.99
1729	0.00	24.22	34.81	12.83	19.80	66.58	0.76	2.57
1730	2.59	3.72	24.07	8.64	44.61	44.22	11.54	14.52
1732	9.03	12.43	40.97	9.44	21.16	82.67	7.02	1.72
1736	1.71	9.50	32.54	7.68	41.62	83.83	1.29	3.01
1737	0.50	7.77	33.18	4.19	44.00	75.64	5.96	11.42
1738	0.00	20.18	47.36	8.78	0.00	73.79	4.50	11.82
1743	0.00	24.48	51.81	9.64	6.17	77.18	17.56	0.41
1744	0.00	0.00	40.66	10.15	40.55	68.59	22.46	7.77
1745	2.31	0.00	53.71	23.56	0.00	72.89	13.29	6.71
1746	1.99	0.43	61.25	17.39	5.62	89.00	5.08	1.77
1748	0.00	0.00	31.15	11.60	22.57	71.16	20.03	4.73
1749	0.00	0.00	57.34	21.85	0.00	79.45	12.20	8.26
1750	0.00	0.00	17.96	46.11	0.00	41.70	42.92	10.88
1751	0.00	0.00	8.09	5.25	77.43	63.16	28.17	3.87
1754	0.00	0.00	15.75	38.63	0.00	71.67	8.51	6.73
1756	0.00	0.00	0.00	0.00	0.00	98.89	0.77	0.28
1757	0.00	0.00	14.43	39.26	0.00	71.77	25.92	0.14
1758	0.00	0.00	20.63	39.16	0.00	85.70	12.73	0.00
1759	0.00	0.00	32.81	31.64	9.96	63.01	15.16	21.78
1760	0.00	0.00	6.62	28.92	39.02	0.00	23.19	32.29
1762	0.00	0.00	14.95	41.98	26.59	70.99	17.19	6.41
1763	0.00	0.00	39.67	41.46	0.00	86.54	6.31	1.25
1765	0.00	0.00	22.63	50.53	0.00	82.10	15.22	1.43
1766	.	.	.	.	.	45.34	40.75	7.21
1767	0.00	0.00	10.15	26.86	51.80	6.57	27.84	36.81
1768	0.00	0.00	7.06	70.32	0.00	30.35	47.59	0.96
1769	0.00	0.00	0.00	36.97	0.00	36.46	59.46	3.02
1774	2.50	0.00	13.11	22.53	43.59	63.56	17.52	17.85
1775	16.76	0.00	6.11	23.44	33.52	81.44	16.90	1.47
1776	0.00	3.07	31.70	36.61	0.00	44.34	32.60	13.31
1777	0.00	1.07	30.02	33.54	0.00	60.83	35.12	0.00
1778	0.75	0.00	22.62	7.79	39.78	49.41	20.57	23.29

TABLE 6.M.4: REVENUE FROM MAJOR KHARIF CROPS AS A PERCENTAGE

OF TOTAL KHARIF REVENUE : QASBA MALARNA

403

YEAR	COTTON	INDIGO	GARDEN PRODUCE	SUGAR- CANE	MAKKA	TOBACCO	MOTH	TIL	BAJRA	JUWAR
1713	0.09	0.00	0.15	12.23	0.00	0.00	12.20	6.55	63.15	4.46
1714	2.61	0.00	0.89	31.04	0.62	0.00	5.38	15.48	33.83	2.42
1715	3.56	0.70	0.29	34.49	0.00	0.00	39.22	9.28	5.02	4.06
1716	0.45	1.28	0.41	30.09	0.16	0.00	16.42	12.43	25.33	0.00
1717	8.45	0.00	0.45	41.44	0.00	0.00	4.53	3.62	31.07	6.77
1718	4.79	0.00	0.21	8.37	0.00	0.00	2.89	10.65	34.68	29.47
1719	0.15	0.00	0.27	9.43	0.09	0.00	19.10	15.56	19.80	28.98
1720	0.16	0.00	0.30	12.73	0.06	0.00	4.53	9.72	30.77	41.20
1721	0.09	0.00	0.08	7.44	0.00	0.00	14.04	6.21	48.13	23.40
1722	0.04	0.00	0.12	5.44	0.00	0.00	16.07	4.90	49.83	23.06
1723	0.14	0.00	0.12	3.43	0.00	0.00	17.57	10.24	43.49	24.34
1725	0.55	0.47	0.43	17.59	0.00	0.00	10.84	8.72	53.97	3.89
1726	1.56	1.37	0.62	31.78	0.05	0.00	3.87	0.62	11.97	45.94
1727	0.92	1.34	0.53	16.18	0.06	0.00	11.36	3.62	20.88	38.67
1728	3.30	0.64	1.42	10.47	0.41	2.15	12.76	21.17	20.10	18.72
1729	6.84	0.22	0.52	11.19	0.27	0.00	10.15	13.76	29.35	19.18
1730	2.85	0.00	0.61	22.12	0.21	0.00	14.13	8.72	36.86	1.49
1731	4.36	0.00	1.55	37.50	1.30	0.00	0.28	0.00	42.41	6.30
1732	1.83	0.32	0.72	5.61	1.58	0.00	8.27	1.28	39.84	33.32
1736	5.20	0.43	1.14	34.79	0.00	0.00	0.43	3.22	13.77	39.49
1737	1.06	0.84	0.80	11.51	0.38	0.00	9.29	5.76	19.55	48.32
1738	0.37	0.30	0.63	5.19	0.23	0.00	10.25	4.76	35.53	41.79
1743	0.22	0.77	1.04	6.92	0.10	0.00	3.08	2.89	32.66	51.73
1744	0.18	1.17	1.25	9.47	0.92	3.51	18.80	13.21	35.69	13.93
1745	0.50	0.47	1.81	6.25	0.11	0.84	7.42	11.12	33.95	35.61
1746	0.89	1.15	2.23	20.09	0.04	1.85	2.15	5.40	55.10	8.99
1747	1.08	1.00	1.47	14.02	0.00	2.47	9.34	6.74	44.62	17.58
1748	3.04	1.26	1.73	9.87	1.47	1.53	5.87	12.20	28.89	31.57
1749	1.08	0.73	1.65	4.89	1.02	1.97	5.91	8.72	29.53	38.61
1750	11.62	1.29	7.81	52.20	1.60	15.51	.	.	.	.
1751	0.76	0.39	1.77	4.55	0.24	2.58	11.40	21.65	24.08	30.52
1754	6.72	0.00	2.54	20.52	0.05	2.23	2.56	2.31	32.30	27.77
1756	0.61	0.00	3.46	0.00	2.17	1.67	1.33	5.07	82.03	0.00
1757	0.78	0.00	4.38	0.00	1.98	3.42	6.70	13.48	36.37	26.53
1758	7.81	0.00	3.99	0.00	2.13	2.36	3.22	2.29	46.14	29.62
1759	2.54	0.62	2.02	5.96	1.54	1.52	6.77	8.10	25.96	42.83
1760	0.39	1.89	4.16	11.07	3.36	2.78	12.62	9.69	45.11	2.35
1761	1.90	0.77	2.29	13.90	2.76	0.77	1.49	4.32	34.73	34.53
1762	2.80	0.00	1.94	9.85	2.99	1.34	6.83	6.30	34.12	31.72
1763	0.35	0.25	3.05	6.30	2.14	4.42	1.04	0.58	49.18	31.59
1765	0.35	0.61	2.20	10.27	1.03	1.52	1.79	4.98	32.26	44.40
1766	1.05	1.68	1.66	8.40	0.17	2.38	3.70	10.77	33.75	35.83
1767	0.84	2.84	1.81	12.96	0.38	1.39	8.44	27.98	33.23	7.55
1768	0.07	2.86	2.25	11.18	0.00	1.54	1.92	6.04	35.02	38.44
1769	2.78	2.82	2.42	12.80	0.05	2.51	0.00	17.30	58.60	0.00
1775	0.74	0.76	2.39	7.07	0.19	1.90	1.27	1.79	73.24	10.33
1776	0.35	0.96	2.78	7.21	0.00	1.96	8.32	6.74	51.72	18.79
1777	0.50	0.00	1.95	7.76	0.32	1.38	12.34	9.22	41.58	19.09
1778	2.00	0.00	3.38	16.17	2.76	1.01	2.75	2.34	41.02	24.28
1779	0.00	0.00	1.89	5.49	0.11	1.36	2.17	14.82	23.82	47.80
1782	0.00	0.00	1.81	9.23	.	2.35	0.12	0.46	15.15	70.20

TABLE 6.M.5: REVENUE FROM MAJOR RABI CROPS AS A PERCENTAGE

404

OF TOTAL RABI REVENUE : QASBA MALARNA

YEAR	OPIUM	TOBACCO	GARDEN PRODUCE	ONIONS	KHATLI	BARLEY	WHEAT	GRAM
1711	0.39	0.43	0.75	0.45	0.00	39.69	7.74	2.55
1713	0.00	1.42	0.76	0.52	96.95	0.00	0.00	0.00
1714	0.22	0.96	0.83	0.36	0.00	86.71	2.95	6.34
1715	0.08	2.86	0.92	0.44	0.00	60.81	5.48	21.22
1716	0.08	1.59	0.89	0.81	0.00	60.33	4.31	5.61
1717	0.10	1.60	1.18	0.66	0.00	84.46	0.00	11.84
1718	0.21	3.16	1.76	0.54	0.00	92.04	0.00	0.00
1719	0.00	5.76	1.92	0.53	0.00	91.26	0.00	0.00
1720	0.43	2.96	1.14	0.81	0.00	89.36	1.58	3.48
1722	0.00	2.69	1.29	0.68	0.00	89.61	2.98	0.00
1723	0.13	2.65	1.90	0.50	0.00	77.62	9.93	3.14
1725	0.06	0.61	0.68	0.45	0.00	48.08	35.85	12.74
1726	0.00	0.90	0.68	0.42	0.19	70.08	6.02	8.80
1727	0.00	2.47	1.40	0.85	0.47	69.88	6.61	5.96
1728	0.00	0.00	0.25	0.51	0.00	59.66	16.84	7.41
1729	0.00	3.27	1.84	0.75	0.95	61.69	0.94	2.38
1730	0.18	0.48	1.19	0.47	1.82	40.95	13.66	13.17
1732	0.91	2.24	2.97	0.75	1.15	72.04	9.87	2.07
1736	0.17	1.27	2.32	0.60	2.38	76.39	1.47	3.56
1737	0.03	0.75	1.26	0.20	1.55	68.44	7.04	13.69
1738	0.00	40.63	39.68	8.85	0.00	.	.	.
1743	0.00	2.58	2.48	0.52	0.24	67.02	21.97	0.45
1744	0.00	0.00	0.99	0.27	0.77	63.29	25.75	7.65
1745	0.07	0.00	1.06	0.51	0.00	65.62	19.19	6.66
1746	0.09	0.03	2.04	0.64	0.15	84.50	6.02	2.20
1748	0.00	0.00	0.35	0.15	0.19	66.82	24.07	4.18
1749	0.00	0.00	0.90	0.38	0.00	74.73	15.17	8.53
1750	0.00	0.00	0.17	0.48	0.00	34.73	49.95	10.67
1751	0.00	0.00	0.23	0.16	1.59	58.61	30.72	3.91
1754	0.00	0.00	0.13	0.35	0.00	68.41	10.49	7.02
1756	0.00	0.00	0.00	0.00	0.00	98.63	0.79	0.37
1757	0.00	0.00	0.12	0.38	0.00	61.74	35.18	0.19
1758	0.00	0.00	0.42	0.88	0.00	80.16	16.30	0.00
1759	0.00	0.00	0.76	0.81	0.16	55.40	20.55	21.98
1760	0.00	0.00	0.08	0.40	0.35	0.00	28.40	27.68
1762	0.00	0.00	0.15	0.45	0.21	64.07	22.19	6.77
1763	0.00	0.00	0.69	0.79	0.00	82.63	7.80	1.61
1765	0.00	0.00	0.42	1.23	0.00	70.94	24.44	1.49
1767	0.00	0.00	0.14	0.51	0.63	6.25	36.28	27.27
1768	0.00	0.00	0.15	1.62	0.00	23.66	56.47	0.76
1769	0.00	0.00	0.00	0.46	0.00	27.63	68.20	2.54
1774	0.20	0.00	0.58	1.36	1.91	51.61	24.90	17.67
1775	0.50	0.00	0.14	0.59	0.62	76.91	19.21	1.62
1776	0.00	0.09	0.53	0.82	0.00	38.76	37.00	12.94
1777	0.00	0.12	1.98	2.96	0.00	52.06	37.80	0.00
1778	0.04	0.00	0.58	0.33	1.02	44.27	24.72	21.33

TABLE 6.P.1: PERCENTAGE DISTRIBUTION OF ANNUAL REVENUE

## QASBA PHAGI

YEAR	KHARIF HARVEST			RABI HARVEST			ANNUAL REVENUE		TOTAL RUPEES
	%IN CASH	%IN KIND	%KHARIF	%IN CASH	%IN KIND	%RABI	%IN CASH	%IN KIND	
1691	58.08	41.92	45.75	1.28	98.72	54.25	27.27	72.73	7305.07
1697	21.93	78.07	59.72	8.10	91.90	40.28	16.36	83.64	2393.50
1715	31.56	68.44	100.00	.	.	.	31.56	68.44	7119.68
1716	78.30	21.70	28.28	2.81	97.19	71.72	24.16	75.84	9167.82
1717	37.18	62.82	44.18	9.80	90.20	55.82	21.89	78.11	1869.55
1718	22.41	77.59	100.00	.	.	.	22.41	77.59	8761.46
1720	30.51	69.49	100.00	.	.	.	30.51	69.49	3953.19
1721	.	.	0.00	9.58	90.42	100.00	9.58	90.42	1467.52
1723	34.19	65.81	87.83	10.96	89.04	12.17	31.37	68.63	7589.08
1724	.	.	0.00	68.99	31.01	100.00	68.99	31.01	138.98
1725	64.10	35.90	13.52	0.63	99.37	86.48	9.21	90.79	14172.99
1726	94.26	5.74	53.94	6.26	93.74	46.06	53.73	46.27	2252.00
1727	15.36	84.64	40.96	1.82	98.18	59.04	7.37	92.63	13418.18
1728	47.14	52.86	100.00	.	.	.	47.14	52.86	5595.22
1729	54.05	45.95	48.35	1.50	98.50	51.65	26.91	73.09	13273.85
1730	79.07	20.93	20.34	0.70	99.30	79.66	16.64	83.36	17101.85
1731	32.13	67.87	63.93	3.38	96.62	36.07	21.76	78.24	4656.12
1732	68.26	31.74	41.43	1.31	98.69	58.57	29.05	70.95	12692.03
1733	78.42	21.58	41.56	1.31	98.69	58.44	33.35	66.65	8547.11
1734	56.69	43.31	33.65	1.77	98.23	66.35	20.25	79.75	12291.80
1736	66.74	33.26	50.52	4.19	95.81	49.48	35.79	64.21	3706.17
1741	69.38	30.62	66.38	5.20	94.80	33.62	47.81	52.19	3379.81
1742	50.88	49.12	44.31	3.73	96.27	55.69	24.62	75.38	4595.80
1743	18.52	81.48	57.30	3.83	96.17	42.70	12.24	87.76	9610.38
1744	54.64	45.36	28.14	1.78	98.22	71.86	16.66	83.34	8469.74
1745	19.90	80.10	100.00	.	.	.	19.90	80.10	3135.71
1746	89.54	10.46	29.19	11.45	88.55	70.81	34.24	65.76	693.94
1749	68.05	31.95	28.92	7.08	92.92	71.08	24.71	75.29	3299.30
1750	73.05	26.95	29.87	10.04	89.96	70.13	28.86	71.14	2320.61
1751	34.95	65.05	21.49	4.40	95.60	78.51	10.96	89.04	4912.06
1753	61.85	38.15	36.98	3.54	96.46	63.02	25.10	74.90	5415.33
1754	28.12	71.88	30.99	2.92	97.08	69.01	10.73	89.27	7689.05
1755	47.16	52.84	21.58	14.07	85.93	78.42	21.21	78.79	524.01
1757	77.51	22.49	11.53	8.79	91.21	88.47	16.71	83.29	1814.94
1759	57.32	42.68	69.36	7.37	92.63	30.64	42.02	57.98	2096.68
1760	48.55	51.45	29.07	4.49	95.51	70.93	17.30	82.70	4126.13
1778	29.39	70.61	33.29	2.22	97.78	66.71	11.27	88.73	7100.09

Source: Arhsattas Pargana Phagi

TABLE 6.P.2: PERCENTAGE AREA/QUANTITY OF MAJOR KHARIF CROPS

ASSESSED IN CASH/KIND: QASBA PHAGI

YEAR	% AREA					% QUANTITY			
	COTTON	INDIGO	KODON	MAKKA	KACANI	MOTH	TIL	BAJRA	JUHAR
1715	73.15	1.44	23.41	1.21	0.24	10.39	0.09	5.79	82.18
1716	54.56	2.08	38.83	2.02	0.92	46.61	21.43	7.74	8.12
1717	82.26	0.00	3.40	3.18	0.50	1.27	2.29	44.97	51.43
1718	47.68	1.61	39.66	3.46	0.00	2.06	2.17	11.83	83.68
1720	36.58	2.40	49.72	5.26	0.00	5.27	9.06	6.56	76.10
1723	57.47	1.50	31.93	3.29	4.27	3.68	4.33	5.97	85.48
1725	54.48	2.67	35.67	3.34	2.19	3.65	3.45	11.49	79.31
1726	94.56	2.49	0.00	1.94	0.12	15.94	1.06	3.82	79.18
1727	45.46	3.67	34.39	5.29	5.35	4.11	0.54	0.16	95.03
1728	63.18	2.80	29.74	0.86	2.10	4.21	1.93	3.40	89.84
1729	65.04	1.84	28.41	2.23	1.67	4.00	2.55	0.73	89.96
1730	47.88	1.54	44.19	3.36	2.03	32.45	4.08	54.67	4.06
1731	75.57	1.45	18.20	3.64	0.00	0.73	0.02	0.00	98.72
1732	48.23	0.52	43.58	4.15	2.45	4.89	0.16	4.95	88.49
1733	40.03	1.37	53.25	2.63	1.76	19.02	1.28	11.21	57.98
1734	41.03	2.50	50.62	2.44	0.00	11.78	0.49	0.43	85.46
1736	65.35	3.44	24.64	4.33	0.18	4.50	1.05	12.61	81.72
1741	50.06	6.64	36.38	3.60	2.48	21.65	5.00	8.89	60.53
1742	63.56	7.48	20.83	4.75	1.98	4.58	0.09	5.96	86.94
1743	22.97	4.24	45.32	9.49	15.30	1.27	0.09	3.31	95.28
1744	38.49	3.66	47.67	3.34	5.53	6.94	0.32	1.63	90.41
1745	23.40	9.32	39.19	7.94	15.41	1.05	1.01	3.44	94.48
1746	34.35	23.13	21.04	6.46	8.76	0.00	5.20	84.57	10.23
1749	37.70	7.00	19.00	15.47	18.29	32.12	6.73	34.16	19.57
1750	44.09	5.77	26.40	11.40	9.87	17.98	2.57	12.38	65.07
1751	49.59	7.49	20.86	7.91	9.40	45.90	9.04	3.45	36.71
1753	44.72	1.71	42.87	5.65	3.85	26.77	4.16	7.37	54.43
1754	68.07	3.94	9.21	15.42	1.82	2.49	1.14	2.95	93.42
1755	12.50	0.00	0.00	76.63	6.83	0.00	0.18	60.67	39.15
1757	30.76	2.29	28.63	12.27	20.60	14.43	0.00	69.45	15.31
1759	63.11	2.08	14.23	9.22	9.14	21.56	0.76	22.05	53.02
1760	36.34	5.10	22.32	11.40	19.64	42.75	8.59	18.46	22.28
1778	19.51	6.58	36.03	26.36	8.59	9.39	6.83	1.90	80.16

TABLE 6.P.3: PERCENTAGE AREA/QUANTITY OF MAJOR RABI CROPS

ASSESSED IN CASH/KIND: QASBA PHAGI

YEAR	% AREA (ZABTI CROPS)				% QUANTITY (JINSI CROPS)			
	POPPY	TOBACCO	GARDEN PRODUCE	KYARI	BARLEY	WHEAT	GRAM	GOJAI
1716	7.08	3.42	9.58	79.92	16.61	16.05	65.55	0.00
1717	0.14	0.68	14.58	84.59	98.27	0.94	0.80	0.00
1721	8.45	38.40	53.15	0.00	77.18	4.11	16.71	0.00
1723	14.03	41.86	44.12	0.00	63.52	0.55	15.13	16.35
1724	4.97	37.18	57.85	0.00	18.51	17.43	63.59	0.00
1725	31.29	4.05	64.66	0.00	9.89	5.37	83.47	0.00
1726	18.52	4.66	76.82	0.00	83.36	10.93	0.39	4.91
1727	16.93	29.94	53.13	0.00	16.18	0.00	79.43	1.45
1729	0.00	31.24	68.76	0.00	24.25	7.05	66.69	0.00
1730	4.65	17.21	78.14	0.00	15.72	6.48	69.37	0.00
1731	0.93	1.86	91.37	0.00	99.88	0.12	0.00	0.00
1732	5.13	33.60	61.28	0.00	22.00	2.15	69.65	0.00
1733	5.23	29.41	65.36	0.00	29.37	2.16	65.10	0.00
1734	0.00	12.89	21.82	65.29	20.92	10.35	64.22	0.00
1736	0.00	0.96	35.78	63.26	84.02	1.69	12.18	2.01
1741	0.00	0.00	24.15	55.27	75.08	1.38	18.89	4.28
1742	0.00	5.58	28.12	66.29	78.17	1.95	15.02	4.75
1743	0.00	8.00	20.36	71.64	48.71	3.77	43.25	2.82
1744	0.00	4.17	20.87	74.36	31.32	5.20	56.31	1.42
1746	0.00	0.00	30.86	69.14	94.54	0.56	0.00	4.91
1749	0.00	0.58	13.32	86.10	57.87	6.61	22.08	11.07
1750	0.00	7.03	13.79	79.18	56.74	5.29	19.97	15.75
1751	1.82	15.60	10.90	71.68	36.73	14.44	29.04	14.49
1753	0.00	1.06	16.24	82.69	31.53	5.05	60.85	1.04
1754	0.34	1.67	14.20	81.46	52.97	7.22	31.09	5.10
1755	0.00	0.00	17.22	82.78	94.18	1.70	0.00	4.12
1757	0.00	0.00	5.91	94.09	71.07	13.81	4.54	9.56
1759	0.00	4.54	40.98	45.29	92.64	7.36	0.00	0.00
1760	0.00	1.75	9.14	76.97	62.41	4.25	28.27	3.04
1778	0.00	4.03	20.42	75.55	27.73	8.08	59.13	3.97

TABLE 6.P.4: REVENUE FROM MAJOR KHARIF CROPS AS A PERCENTAGE

OF TOTAL KHARIF REVENUE: QASBA PHAGI

YEAR	COTTON	INDIGO	KODON	MAKKA	KAGANI	MOTH	TIL	BAJRA	JUWAR
1715	23.01	0.74	6.83	0.60	0.06	6.15	0.15	3.96	57.27
1716	42.71	2.64	28.76	2.38	0.51	8.13	7.66	1.38	1.36
1717	31.65	0.00	0.64	1.51	0.07	0.83	2.48	28.74	30.77
1718	10.85	0.53	8.42	1.26	0.00	1.80	2.66	7.75	65.18
1720	11.85	1.28	13.54	2.49	0.00	3.61	9.96	4.88	48.49
1723	20.03	0.82	10.03	1.87	0.96	2.69	5.27	4.22	53.27
1725	34.77	2.58	21.05	4.00	0.89	1.31	3.15	3.65	24.27
1726	86.92	3.45	0.00	3.16	0.08	1.07	0.15	0.22	4.30
1727	6.77	0.82	4.79	1.53	0.54	3.19	1.09	0.15	79.98
1728	30.24	1.86	13.05	0.79	0.67	.	2.28	2.17	47.86
1729	34.53	1.63	14.62	2.26	0.63	2.03	1.86	0.38	40.20
1730	36.51	1.90	33.33	5.20	1.26	5.90	1.32	10.58	0.87
1731	23.14	0.67	5.74	2.24	0.00	0.64	0.07	0.00	66.66
1732	33.00	0.61	27.28	5.51	1.06	1.52	0.13	1.79	27.46
1733	31.43	1.52	39.57	4.09	1.01	4.26	0.71	2.38	11.21
1734	23.65	2.18	26.96	2.52	0.00	5.07	0.59	0.25	36.38
1736	42.61	3.39	14.80	4.58	0.08	1.93	0.86	4.73	25.68
1741	33.58	7.19	22.39	4.69	1.12	6.25	3.32	2.77	16.55
1742	30.58	5.41	9.82	3.89	0.64	2.95	0.13	2.79	41.65
1743	4.18	1.18	7.95	2.69	2.05	1.53	0.19	3.12	76.59
1744	21.95	3.11	23.54	3.10	2.33	4.06	0.35	0.81	39.70
1745	4.87	2.72	6.90	2.39	2.11	1.15	2.24	3.76	72.93
1746	25.67	29.05	15.43	8.89	4.65	0.00	0.93	8.56	0.97
1749	24.70	6.63	10.71	16.64	7.99	9.32	3.51	10.63	5.44
1750	31.15	6.31	17.01	12.42	4.56	15.41	.	10.27	.
1751	16.79	4.28	6.02	4.40	2.28	28.07	8.10	2.42	23.00
1753	27.45	1.83	24.31	5.70	1.81	10.06	3.13	2.71	19.26
1754	17.18	1.60	1.97	6.66	0.34	2.14	1.59	2.46	65.69
1755	3.73	0.00	0.00	41.40	1.27	0.00	0.14	31.70	21.00
1757	25.11	3.08	19.28	15.13	11.51	3.11	0.00	16.10	3.06
1759	36.43	1.60	7.14	7.70	3.59	9.32	0.58	10.88	20.30
1760	17.72	3.70	9.69	7.94	7.18	22.01	6.34	8.36	10.43
1778	4.96	2.67	8.90	10.60	1.68	5.98	8.11	1.35	53.16

TABLE 6.P.5: REVENUE FROM MAJOR RABI CROPS AS A PERCENTAGE

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OF TOTAL RABI REVENUE: QASBA PHAGI

YEAR	POPPY	TOBACCO	GARDEN PRODUCE	KYARI	BARLEY	WHEAT	GOJAI	GRAM
1716	0.56	0.36	0.44	1.44	15.58	21.69	0.00	57.64
1717	0.05	0.31	2.69	6.75	88.31	0.97	0.00	0.93
1721	0.89	5.59	3.10	0.00	66.67	4.84	0.00	15.53
1723	1.41	6.68	2.87	0.00	52.94	0.62	14.58	15.82
1724	3.87	39.57	25.54	0.00	.	.	0.00	.
1725	0.26	0.05	0.32	0.00	9.90	7.94	0.00	80.00
1726	1.63	0.58	4.05	0.00	75.28	12.58	4.83	0.36
1727	0.34	0.84	0.64	0.00	13.76	14.15	1.42	65.78
1729	0.00	0.77	0.73	0.00	23.71	9.11	0.00	63.64
1730	0.04	0.22	0.43	0.00	15.48	8.81	0.00	66.79
1731	0.05	0.15	3.07	0.00	96.45	0.16	0.00	0.00
1732	0.08	0.69	0.54	0.00	20.88	3.28	0.00	68.52
1733	0.08	0.63	0.60	0.00	28.26	3.13	0.00	63.99
1734	0.00	0.72	0.46	0.59	19.53	13.00	0.00	61.33
1736	0.00	0.14	1.92	2.13	90.91	2.30	2.39	.
1741	0.00	0.00	1.93	2.05	69.46	1.87	4.34	18.35
1742	0.00	0.65	1.22	1.86	73.23	2.15	4.75	15.97
1743	0.00	0.88	0.92	2.02	41.20	4.81	2.59	46.18
1744	0.00	0.21	0.54	1.00	27.92	6.76	1.40	56.62
1746	0.00	0.00	3.99	7.46	83.05	0.68	4.82	0.00
1749	0.00	0.16	1.46	5.46	52.15	7.29	10.89	20.35
1750	0.00	2.11	1.90	6.03	48.97	5.82	14.44	18.50
1751	0.13	1.89	0.50	1.88	33.04	17.30	13.50	26.84
1753	0.00	0.15	0.93	2.46	29.97	7.24	1.08	56.65
1754	0.01	0.17	0.63	2.08	49.10	8.86	5.04	30.68
1755	0.00	0.00	3.99	10.08	79.65	2.13	4.15	0.00
1757	0.00	0.00	0.90	7.89	57.56	18.55	8.42	5.76
1759	0.00	0.97	3.87	2.10	82.84	9.79	0.00	0.00
1760	0.00	0.31	0.69	3.10	56.26	6.52	2.92	27.83
1778	0.00	0.31	0.64	1.27	24.49	8.92	3.87	59.39



TABLE 6.S.1: PERCENTAGE DISTRIBUTION OF ANNUAL REVENUE

## QASBA SANGANER

YEAR	KHARIF HARVEST			RABI HARVEST			ANNUAL REVENUE		TOTAL RUPEE
	₹IN CASH	₹IN KIND	₹KHARIF	₹IN CASH	₹IN KIND	₹RABI	₹IN CASH	₹IN KIND	
1708	59.44	40.56	100.00	.	.	0.00	59.44	40.56	3719.43
1710	.	.	0.00	23.82	76.18	100.00	23.82	76.18	3657.38
1711	70.35	29.65	100.00	.	.	0.00	70.35	29.65	4234.87
1712	88.82	11.18	39.33	8.11	91.89	60.67	39.85	60.15	11897.85
1713	86.91	13.09	54.64	11.87	88.13	45.36	52.87	47.13	10297.12
1715	75.84	24.16	81.11	54.18	45.82	18.89	71.75	28.25	7902.91
1716	67.75	32.25	62.46	25.84	74.16	37.54	52.01	47.99	10201.88
1724	74.66	25.34	100.00	.	.	0.00	74.66	25.34	3500.94
1728	92.83	7.17	48.29	19.62	80.38	51.71	54.97	45.03	8341.78
1730	91.71	8.29	36.62	13.65	86.35	63.38	42.23	57.77	10021.53
1731	97.52	2.48	27.41	10.60	89.40	72.59	34.42	65.58	10606.80
1732	88.97	11.03	44.16	16.73	83.27	55.84	48.63	51.37	9138.93
1733	95.34	4.66	100.00	.	.	.	95.34	4.66	3345.97
1736	96.39	3.61	46.94	14.91	85.09	53.06	53.16	46.84	9811.36
1737	81.00	19.00	44.28	15.87	84.13	55.72	44.71	55.29	11268.26
1738	.	.	0.00	13.84	86.16	100.00	13.84	86.16	5643.28
1739	94.46	5.54	37.38	15.35	84.65	62.62	44.92	55.08	11703.63
1740	94.24	5.76	43.02	26.99	73.01	56.98	55.92	44.08	9379.70
1741	97.03	2.97	45.45	24.14	75.86	54.55	57.27	42.73	10105.00
1742	96.39	3.61	44.34	25.11	74.89	55.66	56.71	43.29	10209.85
1743	93.05	6.95	28.79	22.02	77.98	71.21	42.46	57.54	11137.30
1744	99.23	0.77	17.72	18.18	81.82	82.28	32.55	67.45	11219.74
1745	95.93	4.07	49.78	40.75	59.25	50.22	68.22	31.78	6605.15
1746	95.00	5.00	49.71	26.48	73.52	50.29	60.54	39.46	7451.42
1747	92.93	7.07	52.66	38.24	61.76	47.34	67.04	32.96	8677.30
1748	94.26	5.74	32.76	22.14	77.86	67.24	45.77	54.23	8893.30
1755	95.94	4.06	33.32	14.60	85.40	66.68	41.70	58.30	8821.12
1756	100.00	0.00	100.00	.	.	.	100.00	0.00	814.20
1760	74.61	25.39	32.58	19.48	80.52	67.42	37.45	62.55	5464.28
1761	91.51	8.49	100.00	.	.	.	91.51	8.49	1061.28
1763	94.17	5.83	28.24	18.33	81.67	71.76	39.74	60.26	6347.40
1764	100.00	0.00	100.00	.	.	.	100.00	0.00	1281.64
1766	95.79	4.21	100.00	.	.	.	95.79	4.21	2199.84
1767	98.86	1.14	100.00	.	.	.	98.86	1.14	1859.58
1768	96.56	3.44	100.00	.	.	.	96.56	3.44	1990.45
1770	94.06	5.94	43.93	21.04	78.96	56.07	53.12	46.88	6444.24
1771	94.63	5.37	37.51	12.89	87.11	62.49	43.55	56.45	7414.30
1772	97.28	2.72	31.85	19.51	80.49	68.15	44.28	55.72	5882.93
1773	96.62	3.38	100.00	.	.	.	96.62	3.38	2287.82

Source: Arhsattas Qasba Sanganer

TABLE 6.S.2: PERCENTAGE AREA/QUANTITY OF MAJOR KHARIF CROPS

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ASSESSED IN CASH/KIND : QASBA SANGANER

YEAR	% AREA (ZABTI CROPS)							% QUANTITY (JINSI CROPS)		
	COTTON	MAKKA	GARDEN PRODUCE	SUGAR- CANE	MADWA	SWEET POTATO	GUNAR	MOTH	URAD	BAJRA
1708	37.55	17.14	27.09	1.89	10.05	5.98	0.00	1.17	0.23	90.31
1711	33.33	15.11	34.07	2.08	2.35	12.86	0.00	1.24	2.65	51.84
1712	44.01	18.81	5.73	11.37	6.01	14.06	0.00	42.83	1.87	40.33
1713	16.93	29.44	8.59	19.19	21.45	4.22	0.00	37.18	1.30	24.18
1715	38.55	13.02	10.71	21.90	11.05	4.77	0.00	35.18	10.81	28.96
1716	29.24	15.78	10.80	22.11	18.64	3.43	0.00	36.75	16.98	0.79
1724	27.60	24.52	14.45	5.34	23.30	4.78	0.00	22.19	19.45	23.29
1728	51.72	16.00	12.11	2.66	6.45	11.05	0.00	37.35	10.59	2.01
1730	39.48	16.93	8.53	3.09	18.57	13.40	0.00	51.73	13.15	0.06
1731	53.96	15.13	10.48	5.45	11.57	3.41	0.00	12.36	0.00	0.00
1732	29.12	25.46	11.68	0.90	29.93	2.90	0.00	30.70	19.55	23.91
1733	22.56	26.19	12.25	3.64	23.49	11.54	0.32	50.06	22.53	0.00
1736	32.98	25.50	12.47	13.34	12.56	2.99	0.16	57.01	6.42	0.66
1737	39.38	28.64	18.29	1.68	6.11	1.61	4.30	73.90	19.85	0.16
1739	33.66	27.00	19.92	1.79	14.60	1.14	1.90	77.53	12.02	1.29
1740	28.32	21.89	18.80	6.30	16.56	5.10	3.03	51.71	19.73	16.40
1741	32.54	21.44	15.01	12.12	8.68	4.72	5.48	93.00	2.85	0.00
1742	26.00	23.91	19.65	12.42	6.35	3.41	8.27	53.93	2.95	42.59
1743	7.35	33.29	25.90	0.99	18.02	3.46	10.97	76.70	6.46	16.84
1744	5.14	24.48	14.82	2.56	38.58	10.80	3.61	100.00	0.00	0.00
1745	11.96	24.16	16.04	4.97	23.17	10.82	8.89	80.92	0.00	17.77
1746	38.49	18.03	11.16	6.72	11.27	9.02	5.31	91.96	0.00	8.04
1747	36.77	16.04	14.91	0.99	15.00	7.93	8.36	81.85	7.77	10.21
1748	29.02	22.22	13.50	1.51	11.33	15.45	6.97	58.00	9.25	16.91
1755	14.26	39.07	12.07	8.50	14.06	4.54	7.50	100.00	0.00	0.00
1756	2.19	61.17	16.80	2.29	0.57	0.65	16.21	.	.	.
1760	22.98	10.71	27.15	3.35	14.60	2.29	15.61	69.84	13.53	9.83
1761	33.04	5.12	23.81	6.75	20.41	0.00	10.87	72.10	16.37	2.09
1763	44.65	10.19	22.72	0.34	6.42	0.00	6.59	66.78	33.22	0.00
1764	37.39	4.19	25.27	2.18	4.53	0.91	7.53	100.00	0.00	0.00
1766	17.90	7.54	13.29	1.81	3.09	6.09	6.55	83.56	6.10	6.63
1767	11.62	11.76	19.75	7.83	3.85	14.01	7.64	83.66	15.68	0.00
1768	17.23	5.31	23.88	13.32	2.10	20.93	9.77	95.21	2.44	2.36
1770	35.50	6.17	13.56	16.79	3.47	15.38	8.33	44.71	15.52	39.76
1771	4.24	12.21	13.77	18.03	6.00	30.60	14.54	75.76	10.91	10.42
1772	2.28	10.09	16.23	20.77	13.51	23.03	10.77	67.71	27.30	4.99
1773	23.78	10.12	14.06	14.38	6.66	16.66	13.15	41.96	11.53	46.52

TABLE 6.S.3: PERCENTAGE AREA/QUANTITY OF MAJOR RABI CROPS

ASSESSED IN CASH/KIND : QASBA SANGANER

YEAR	% AREA (ZABTI CROPS)					% QUANTITY (JINSI CROPS)				
	POPPY	TOBACCO	GARDEN PRODUCE	MAKKA	CONDIMENTS	BARLEY	WHEAT	GRAM	GOJAI	BAIJHAR:
1710	27.90	0.00	68.24	3.33	0.00	52.40	11.22	34.98	.	1.04
1712	2.33	0.10	93.52	4.06	0.00	58.68	32.52	0.43	8.37	0.00
1713	0.00	0.00	96.24	3.76	0.00	48.06	28.60	7.30	16.05	0.00
1715	4.53	0.24	93.03	2.19	0.00	78.19	20.19	0.80	0.82	0.00
1716	7.50	0.01	90.63	1.86	0.00	48.85	23.14	9.00	12.52	5.98
1728	13.90	0.87	82.69	2.55	0.00	63.14	5.31	13.19	11.73	6.63
1730	3.63	0.48	85.95	6.51	3.23	66.39	4.50	13.41	0.00	15.70
1731	0.99	0.58	94.96	0.00	3.14	93.28	1.39	0.00	4.28	1.05
1732	2.48	0.83	94.52	2.17	0.00	70.62	5.71	13.06	10.49	0.00
1736	1.70	1.12	94.19	2.25	0.43	50.87	6.50	0.67	37.05	4.91
1737	0.84	0.97	94.21	2.29	1.29	88.58	3.29	0.31	7.25	0.00
1738	2.16	1.64	93.48	1.18	1.54	74.59	7.91	2.27	10.96	3.25
1739	4.56	2.73	89.37	1.43	1.29	65.31	16.79	0.82	13.50	3.57
1740	4.24	2.54	86.05	1.58	5.58	46.32	24.45	8.45	5.52	8.38
1741	4.24	2.92	88.41	1.94	2.49	38.16	18.46	5.41	14.24	16.79
1742	0.00	2.41	94.69	1.97	0.93	72.60	15.94	0.00	11.47	0.00
1743	1.26	3.71	93.08	1.14	0.82	69.07	19.55	0.35	10.52	0.50
1744	1.40	2.72	92.63	1.49	1.77	47.82	26.19	2.07	10.83	9.85
1745	2.50	0.81	90.02	1.50	5.17	59.89	27.48	0.00	6.65	5.97
1746	4.05	0.84	93.05	0.00	2.06	77.20	12.08	0.00	10.72	0.00
1747	4.31	3.36	84.63	5.85	1.82	70.67	29.33	0.00	0.00	0.00
1748	3.74	1.51	83.66	6.19	4.90	58.51	0.00	0.00	8.44	2.47
1755	0.13	0.31	90.09	7.35	1.94	66.05	11.85	0.00	22.10	0.00
1760	0.00	0.18	96.16	2.93	0.72	49.61	16.14	0.00	27.15	7.09
1763	3.98	0.00	84.92	1.43	9.68	51.86	19.04	0.00	29.09	0.00
1770	0.00	0.00	79.12	9.38	11.50	29.07	14.15	34.08	12.78	7.78
1771	0.00	0.00	85.81	7.48	6.72	24.12	11.42	8.54	19.19	30.64
1772	0.00	0.19	92.51	1.99	5.31	28.28	9.14	11.51	20.89	26.14

TABLE 6.S.4: REVENUE FROM MAJOR KHARIF CROPS AS A PERCENTAGE

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## OF TOTAL KHARIF REVENUE : QASBA SANGANER

YEAR	COTTON	MAKKA	GARDEN PRODUCE	SUGAR- CANE	MADHA	SWEET POTATO	GUWAR	MOTH	URAD	BAJRA
1708	26.46	11.22	10.45	3.54	4.60	2.82	0.00	0.36	0.09	20.40
1711	26.72	13.08	16.41	4.77	1.39	7.79	0.00	0.16	0.22	2.90
1712	32.69	15.85	3.06	25.36	3.56	8.30	0.00	2.68	0.11	1.77
1713	10.71	21.23	3.72	37.88	10.89	2.18	0.00	2.50	0.04	1.24
1715	20.48	7.92	4.06	36.55	4.74	2.09	0.00	3.58	0.90	1.61
1716	15.86	8.90	3.71	30.33	7.55	1.40	0.00	1.78	0.52	0.02
1724	21.95	19.95	7.39	8.90	13.62	2.84	0.00	1.19	1.31	1.02
1728	50.24	16.16	7.48	6.36	4.68	7.90	0.00	3.34	1.02	0.14
1730	38.86	16.74	5.31	8.33	13.05	9.41	0.00	5.11	1.51	0.00
1731	50.59	15.72	7.64	12.37	8.63	2.56	0.00	0.72	0.00	0.00
1732	27.60	26.32	8.22	2.37	22.29	2.16	0.00	3.61	1.32	1.48
1733	20.07	27.96	9.89	8.73	17.91	10.60	0.17	2.16	0.72	0.00
1736	27.53	21.84	7.88	29.54	7.71	1.83	0.05	2.25	0.34	0.02
1737	34.02	25.57	11.42	3.67	3.90	1.03	1.39	14.02	3.68	0.03
1739	34.95	28.14	14.39	4.25	11.14	0.87	0.73	4.35	0.68	0.05
1740	27.53	21.78	13.71	14.66	11.92	3.53	1.10	3.25	1.29	0.53
1741	28.95	19.72	10.93	26.89	5.74	3.01	1.80	2.86	0.05	0.00
1742	22.08	22.04	14.53	28.42	4.26	2.26	2.81	2.41	0.11	1.07
1743	7.40	37.58	23.08	3.16	14.56	2.82	4.43	5.47	0.67	0.81
1744	6.22	28.46	14.05	8.47	31.62	8.90	1.52	0.77	0.00	0.00
1745	13.00	25.76	13.83	14.12	17.67	8.35	3.22	3.35	0.00	0.66
1746	37.25	17.44	9.18	15.46	7.65	6.24	1.79	4.71	0.00	0.29
1747	39.00	17.14	13.37	2.73	11.41	6.11	3.16	5.77	0.65	0.63
1748	28.71	24.18	13.40	4.22	8.83	12.19	2.72	3.51	0.65	0.64
1755	13.00	36.62	9.91	21.50	9.48	2.95	2.49	4.06	0.00	0.00
1756	2.69	67.67	15.84	6.20	0.46	0.46	6.56	0.00	0.00	0.00
1760	19.03	10.04	20.00	7.01	9.74	1.64	5.37	17.30	3.66	2.63
1761	31.90	5.17	20.72	15.58	14.53	0.00	3.62	5.92	1.50	0.20
1763	46.77	10.75	20.45	1.31	4.68	0.00	2.31	3.83	2.00	0.00
1764	42.41	4.73	24.87	4.50	3.63	0.73	2.84	0.00	0.00	0.00
1766	18.85	8.94	15.56	4.50	2.62	5.04	2.77	2.27	0.21	0.17
1767	11.97	12.58	19.70	18.62	2.86	10.42	2.85	0.86	0.26	0.00
1768	18.65	4.88	21.28	27.80	1.36	13.50	3.21	3.21	0.15	0.08
1770	29.12	5.80	12.41	31.15	2.33	10.01	2.71	2.40	1.26	2.28
1771	3.90	11.05	12.27	37.34	4.16	20.55	4.90	3.91	0.70	0.56
1772	2.07	10.51	15.19	36.93	9.90	16.64	3.86	1.70	0.88	0.14
1773	22.30	9.95	13.38	29.13	4.68	11.73	4.58	1.56	0.51	1.31

TABLE 6.S.5: REVENUE FROM MAJOR RABI CROPS AS A PERCENTAGE

OF TOTAL RABI REVENUE : QASBA SANGANER

YEAR	POPPY	TOBACCO	GARDEN PRODUCE	MAKKA	CONDIMENTS	BARLEY	WHEAT	GRAM	GOJAI	BAIJHARI
1710	9.14	0.00	13.52	0.99	0.00	39.18	11.50	24.08	0.00	0.84
1712	0.29	0.03	7.34	0.45	0.00	47.55	35.81	0.46	8.07	0.00
1713	0.00	0.00	11.22	0.65	0.00	35.74	32.30	5.79	14.30	0.00
1715	4.24	0.56	47.39	1.98	0.00	33.04	12.09	0.31	0.37	0.00
1716	3.26	0.01	21.85	0.72	0.00	31.64	22.45	5.66	10.23	3.77
1728	3.97	0.54	14.45	0.65	0.00	48.44	5.50	10.88	10.31	5.25
1730	0.76	0.22	10.81	1.18	0.67	55.78	4.97	11.88	0.00	13.72
1731	0.16	0.22	9.72	0.00	0.45	82.16	2.42	0.00	3.77	1.05
1732	0.71	0.53	14.96	0.54	0.00	54.24	6.34	13.11	9.44	0.00
1736	0.41	0.61	13.25	0.48	0.10	40.62	6.78	0.71	32.65	4.32
1737	0.22	0.58	14.15	0.53	0.34	80.17	3.96	.	.	0.00
1738	0.47	0.80	12.00	0.22	0.34	61.07	8.42	2.39	10.20	2.98
1739	1.09	1.47	12.04	0.30	0.31	49.92	18.52	0.86	12.20	3.14
1740	1.71	2.40	19.96	0.58	2.34	32.29	25.72	6.63	.	8.37
1741	1.53	2.42	18.64	0.63	0.92	24.47	17.57	4.53	10.91	12.20
1742	0.00	2.23	21.79	0.71	0.38	51.35	14.43	0.00	9.11	0.00
1743	0.44	2.94	17.99	0.35	0.29	49.83	18.68	0.34	8.72	0.41
1744	0.41	1.81	15.07	0.38	0.51	35.28	25.00	1.82	8.95	7.76
1745	1.66	1.21	33.69	0.87	3.32	59.25	.	0.00	.	.
1746	1.68	0.78	23.17	0.00	0.85	53.27	11.62	0.00	8.63	0.00
1747	2.39	4.27	27.72	2.89	0.97	41.37	20.39	0.00	0.00	0.00
1748	1.21	1.10	16.48	1.76	1.58	44.10	0.00	0.00	5.95	1.94
1755	0.03	0.17	12.35	1.55	0.47	53.82	11.95	0.00	19.62	0.00
1760	0.00	0.15	18.15	0.93	0.26	37.76	15.03	0.00	22.12	5.61
1763	1.20	0.00	14.05	0.37	2.70	39.31	18.64	0.00	23.73	0.00
1770	0.00	0.00	14.91	2.55	3.58	21.97	14.27	22.87	12.05	5.79
1771	0.00	0.00	10.21	1.32	1.36	20.00	12.55	6.83	17.38	24.79
1772	0.00	0.11	17.24	0.55	1.61	21.04	9.51	8.55	17.91	19.92

TABLE 6.L.1: PERCENTAGE DISTRIBUTION OF ANNUAL REVENUE

## QASBA LALSOT

YEAR	KHARIF HARVEST			RABI HARVEST			ANNUAL REVENUE		TOTAL RUPEES
	%IN CASH	%IN KIND	%KHARIF	%IN CASH	%IN KIND	%RABI	%IN CASH	%IN KIND	
1712	63.58	36.42	67.02	100.00	0.00	32.98	75.59	24.41	5399.73
1713	39.04	60.96	57.45	100.00	0.00	42.55	64.98	35.02	7639.32
1714	74.93	25.07	54.36	99.51	0.49	45.64	86.15	13.85	5271.82
1715	74.14	25.86	100.00	.	.	0.00	74.14	25.86	3256.24
1716	85.70	14.30	48.62	78.43	21.57	51.38	81.96	18.04	5890.49
1717	79.72	20.28	63.90	99.51	0.49	36.10	86.86	13.14	6089.98
1718	54.11	45.89	62.89	98.93	1.07	37.11	70.74	29.26	7434.36
1719	67.63	32.37	45.54	85.98	14.02	54.46	77.62	22.38	5426.45
1720	85.67	14.33	53.10	94.63	5.37	46.90	89.88	10.12	5426.03
1721	72.90	27.10	52.25	87.82	12.18	47.75	80.02	19.98	4963.97
1722	62.69	37.31	56.55	99.51	0.49	43.45	78.69	21.31	5946.36
1730	93.66	6.34	100.00	.	.	.	93.66	6.34	3816.46
1731	78.49	21.51	51.67	99.93	0.07	48.33	88.85	11.15	8601.17
1733	91.00	9.00	45.66	98.30	1.70	54.34	94.97	5.03	7050.50
1734	87.85	12.15	40.74	88.96	11.04	59.26	88.51	11.49	8035.81
1737	82.04	17.96	46.74	98.82	1.18	53.26	90.98	9.02	9308.51
1739	89.64	10.36	40.75	99.58	0.42	59.25	95.53	4.47	9477.13
1740	96.20	3.80	38.33	99.03	0.97	61.67	97.95	2.05	9116.60
1741	94.81	5.19	49.04	98.62	1.38	50.96	96.75	3.25	8230.77
1742	92.30	7.70	100.00	.	.	.	92.30	7.70	3518.60
1745	92.34	7.66	34.63	98.44	1.56	65.37	96.33	3.67	8388.74
1746	87.14	12.86	100.00	.	.	.	87.14	12.86	2566.57
1747	79.44	20.56	47.40	99.97	0.03	52.60	90.24	9.76	8106.80
1748	95.80	4.20	44.21	100.00	0.00	55.79	98.14	1.86	6821.79
1753	92.65	7.35	42.91	100.00	0.00	57.09	96.84	3.16	6536.32
1754	93.04	6.96	44.74	100.00	0.00	55.26	96.88	3.12	7148.33
1756	85.64	14.36	35.56	99.84	0.16	64.44	94.79	5.21	6765.15
1757	95.18	4.82	37.14	100.00	0.00	62.86	98.21	1.79	7121.14
1758	88.93	11.07	45.41	100.00	0.00	54.59	94.97	5.03	5812.69
1759	91.43	8.57	100.00	.	.	0.00	91.43	8.57	2963.34
1761	97.20	2.80	44.54	100.00	0.00	55.46	98.75	1.25	6187.51
1762	91.54	8.46	40.23	100.00	0.00	59.77	96.60	3.40	7415.52
1763	90.94	9.06	100.00	.	.	.	90.94	9.06	2445.38
1764	87.76	12.24	100.00	.	.	0.00	87.76	12.24	2515.91
1765	95.12	4.88	37.72	100.00	0.00	62.28	98.16	1.84	6577.29
1767	93.87	6.13	32.07	100.00	0.00	67.93	98.04	1.96	5327.94
1768	95.34	4.66	48.54	100.00	0.00	51.46	97.74	2.26	5201.64
1770	95.87	4.13	50.32	95.60	4.40	49.68	95.74	4.26	4208.53
1775	.	.	.	99.83	0.17	100.00	99.83	0.17	2242.10
1777	98.56	1.44	47.43	100.00	0.00	52.57	99.32	0.68	3512.27

Source: Arhsattas Pargana Lalsot

TABLE 6.L.2: PERCENTAGE AREA/QUANTITY OF MAJOR KHARIF CROPS

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ASSESSED BY CASH/KIND: QASBA LALSOT

YEAR	% AREA (ZABTI CROPS)								% QUANTITY (JINSI CROPS)	
	COTTON	MAKKA	GARDEN PRODUCE	SUGAR-CANE	CHOLA	KAGANI	GUHAR	BAJRA	MOTH	BAJRA
1712	64.20	1.09	4.94	17.99	0.73	8.87	0.00	0.00	52.68	37.76
1713	29.11	17.71	9.17	17.33	3.26	0.00	0.00	0.00	54.63	32.33
1714	51.97	1.24	6.47	15.28	8.64	0.00	0.00	0.00	33.15	54.77
1715	65.90	0.00	4.14	17.40	1.02	0.00	1.35	0.00	47.17	41.17
1716	61.12	0.16	3.32	19.23	5.97	4.72	2.03	0.00	77.73	2.12
1717	61.63	0.00	5.00	24.48	1.73	0.00	1.76	0.00	79.58	8.70
1718	45.39	0.59	4.46	12.63	7.76	0.00	3.89	0.00	54.03	37.99
1719	14.42	0.60	6.82	22.43	8.70	40.94	3.29	0.00	63.38	22.86
1720	51.47	0.16	1.91	17.43	4.85	5.12	1.86	15.47	82.23	0.00
1721	53.52	0.00	4.00	19.74	4.12	10.63	3.54	0.00	41.00	39.79
1722	46.82	0.00	5.02	23.48	4.63	9.64	7.89	0.00	29.55	54.03
1730	50.62	0.25	4.68	20.97	3.81	4.18	3.85	9.40	87.61	0.00
1731	61.41	0.29	3.29	20.73	1.09	5.86	4.85	0.00	34.07	65.47
1733	61.97	0.22	4.90	14.79	2.86	5.24	4.88	0.00	81.72	7.02
1734	53.35	0.66	3.33	20.83	3.79	6.47	6.08	0.00	92.48	3.30
1737	56.18	9.50	3.17	13.17	3.36	5.52	5.83	0.00	93.73	0.14
1739	56.07	12.33	4.42	6.28	4.16	0.00	11.74	0.42	.	.
1740	49.66	8.67	3.76	15.77	2.59	0.00	17.19	0.57	98.69	0.00
1741	47.30	1.08	3.78	21.11	0.70	0.11	16.11	7.51	97.65	0.00
1742	47.66	6.37	6.11	20.87	0.46	0.31	13.43	3.62	.	.
1745	33.82	0.29	4.34	12.18	0.00	2.07	10.47	31.58	93.07	0.00
1746	61.88	0.00	4.99	17.43	1.03	0.57	13.01	0.00	72.88	16.21
1747	58.84	3.40	3.80	14.56	1.40	2.95	12.31	0.00	51.97	45.77
1748	28.03	8.29	2.56	7.74	1.76	2.23	3.34	44.44	93.94	0.00
1753	52.80	8.91	3.13	11.62	2.89	1.19	8.41	9.91	96.68	0.00
1754	42.52	7.24	3.83	13.23	4.60	1.52	9.11	16.66	97.78	0.00
1756	42.64	16.31	5.64	6.57	3.87	10.49	9.38	0.00	73.32	26.15
1757	12.40	8.47	3.31	4.38	1.67	8.03	5.79	49.34	97.43	0.00
1758	43.15	3.05	2.54	5.86	2.87	1.49	7.04	31.03	78.89	0.00
1759	23.98	4.54	3.35	9.81	8.25	3.45	10.11	33.83	96.21	0.00
1761	38.24	1.24	4.28	9.71	3.95	0.00	10.51	25.66	99.27	0.00
1762	43.87	3.87	3.12	9.86	8.31	1.25	9.87	17.88	97.73	0.00
1763	38.53	1.65	4.59	8.86	9.25	1.00	14.40	18.27	93.65	0.00
1764	38.03	2.18	4.91	8.76	9.50	1.35	13.66	17.33	95.39	0.00
1765	35.71	3.63	3.78	10.31	6.20	0.82	13.77	19.74	84.57	0.00
1767	33.93	0.00	5.45	16.14	3.43	0.48	14.08	15.75	93.17	0.00
1768	26.28	0.73	4.56	12.07	1.56	0.20	13.12	38.32	98.60	0.00
1770	20.08	3.81	3.67	2.26	1.65	1.04	6.91	54.55	49.50	0.00
1777	48.63	1.78	5.72	7.05	2.39	1.66	4.20	21.72	100.00	0.00

TABLE 6.L.3: PERCENTAGE AREA/QUANTITY OF MAJOR RABI CROPS

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ASSESSED IN CASH/KIND: QASBA LALSOT

YEAR	% AREA (ZABTI CROPS)			% QUANTITY (JINSI CROPS)		
	POPPY	GARDEN PRODUCE	KYARI	BARLEY	GRAM	BAIJHARI
1712	1.16	2.86	94.75	.	.	.
1713	0.35	1.34	91.46	.	.	.
1714	3.31	1.11	95.58	0.00	38.24	61.76
1716	3.46	1.61	92.41	0.00	41.96	57.64
1717	0.36	1.24	98.28	1.83	98.17	0.00
1718	2.40	1.69	95.90	5.80	94.20	0.00
1719	0.20	0.65	99.03	50.19	7.69	42.12
1720	1.33	1.51	97.00	8.11	67.53	24.37
1721	0.66	1.26	97.95	1.60	48.18	49.91
1722	0.86	1.67	97.44	17.79	55.47	26.73
1731	1.47	2.37	91.07	0.00	100.00	0.00
1733	3.92	1.62	94.13	0.00	0.00	100.00
1734	0.00	1.57	97.97	0.00	32.58	61.68
1737	0.20	2.41	96.76	38.12	26.55	33.32
1739	0.65	1.64	97.66	0.00	100.00	0.00
1740	0.70	1.29	97.88	39.46	34.60	25.94
1741	0.57	1.33	97.90	0.00	62.47	37.25
1745	1.20	1.24	97.56	3.09	25.83	18.17
1747	0.85	1.18	97.95	0.00	100.00	0.00
1748	1.49	1.65	90.55	.	.	.
1753	0.75	1.86	73.10	.	.	.
1754	0.41	2.43	78.22	.	.	.
1756	0.23	1.35	98.25	100.00	0.00	0.00
1757	0.04	1.14	88.11	.	.	.
1758	0.34	1.62	97.11	.	.	.
1761	0.10	1.30	94.03	.	.	.
1762	0.06	1.26	87.00	.	.	.
1765	0.31	1.96	97.66	.	.	.
1767	0.16	1.89	50.22	.	.	.
1768	0.43	2.15	85.05	.	.	.
1770	0.00	2.80	95.27	0.00	100.00	0.00
1775	0.00	1.79	96.24	0.00	100.00	0.00
1777	0.13	1.97	38.65	.	.	.



TABLE 6.L.4: REVENUE FROM MAJOR KHARIF CROPS AS A PERCENTAGE

OF TOTAL KHARIF REVENUE: QASBA LALSOT

YEAR	COTTON	MAKKA	GARDEN PRODUCE	SUGAR- CANE	CHOLA	KAGANI	GUWAR	BAJRA	MOTH	BAJRA
1712	32.45	0.82	3.32	20.97	0.26	3.72	0.00	0.00	19.83	12.73
1713	9.30	7.65	3.33	11.53	0.66	0.00	0.00	0.00	32.51	20.85
1714	33.25	1.33	5.09	20.92	3.89	0.00	0.00	0.00	9.11	12.29
1715	39.98	0.00	3.04	22.55	0.44	0.00	0.32	0.00	12.35	10.78
1716	44.91	0.19	2.80	28.19	2.52	2.61	0.57	0.00	11.65	0.36
1717	40.22	0.00	3.62	31.58	0.78	0.00	0.45	0.00	16.05	1.92
1718	22.77	0.41	2.78	13.53	2.63	0.00	0.71	0.00	24.96	17.58
1719	8.23	0.57	4.82	27.69	3.60	19.90	0.63	0.00	18.55	9.41
1720	36.83	0.19	1.65	25.40	2.44	3.11	0.54	13.65	11.90	0.00
1721	32.85	0.00	2.92	24.31	1.65	5.44	0.86	0.00	10.93	11.40
1722	24.80	0.00	3.42	24.39	1.62	4.09	1.75	0.00	10.33	21.16
1730	40.11	0.22	3.71	29.35	2.36	2.44	1.07	6.91	5.53	0.00
1731	41.99	0.24	2.40	25.52	0.49	3.08	1.19	0.00	7.33	14.08
1733	49.59	0.23	4.23	21.99	1.50	3.25	1.41	0.00	7.11	0.77
1734	39.83	0.52	2.68	28.01	1.81	3.70	1.63	0.00	11.10	0.46
1737	40.89	8.54	2.53	18.24	1.63	3.17	1.55	0.00	16.42	0.03
1739	47.80	13.66	4.23	10.04	2.43	0.00	3.74	0.30	10.36	0.00
1740	43.72	10.53	3.54	25.37	1.49	0.00	5.39	0.47	3.72	0.00
1741	39.68	1.30	3.38	32.58	0.39	0.07	4.86	6.10	5.04	0.00
1742	39.21	6.29	5.42	32.47	0.25	0.20	3.98	3.05	7.70	0.00
1745	30.41	0.36	4.15	20.58	0.00	1.40	3.38	27.30	6.86	0.00
1746	51.12	0.00	4.33	25.94	0.56	0.26	3.79	0.00	9.60	2.14
1747	44.49	2.87	3.11	20.22	0.70	1.81	3.35	0.00	10.53	9.48
1748	30.11	8.23	2.78	8.67	1.07	1.64	1.25	37.77	3.88	0.00
1753	46.46	8.41	3.18	17.82	1.77	0.75	2.86	8.20	7.10	0.00
1754	37.99	7.37	4.03	21.50	2.87	0.95	3.29	13.55	6.79	0.00
1756	35.17	18.22	5.24	10.67	2.14	7.06	2.88	0.00	10.54	3.76
1757	12.12	10.02	3.48	7.83	1.06	5.74	2.01	45.22	4.64	0.00
1758	38.31	3.34	2.49	9.41	1.67	1.01	2.29	26.06	8.93	0.00
1759	21.27	4.90	3.24	16.35	4.80	2.43	3.23	29.54	8.15	0.00
1761	36.49	1.47	4.50	17.53	2.36	0.00	3.68	22.16	2.77	0.00
1762	38.95	4.27	3.04	16.36	4.78	0.89	3.22	15.29	8.19	0.09
1763	36.65	1.85	4.70	15.39	5.50	0.73	4.92	16.45	8.60	0.00
1764	33.58	2.74	4.77	14.51	5.44	0.96	4.45	15.16	11.77	0.00
1765	33.58	3.83	3.85	18.39	3.60	0.62	4.73	17.34	4.03	0.00
1767	28.20	0.00	5.20	24.79	1.75	0.31	4.46	11.98	5.50	0.00
1768	24.87	0.75	4.63	20.87	0.96	0.15	4.47	34.60	4.56	9.00
1770	20.82	4.46	4.00	3.36	1.09	0.82	2.96	48.39	2.30	0.00
1777	44.72	2.00	6.00	11.51	1.44	1.19	1.50	18.98	1.44	0.00

TABLE 6.L.5: REVENUE FROM MAJOR RABI CROPS AS A PERCENTAGE

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## OF TOTAL RABI REVENUE: QASBA LALSOT

YEAR	POPPY	GARDEN PRODUCE	KYARI	BARLEY	GRAM	BAIJHARI
1712	1.36	2.98	94.92	0.00	0.00	0.00
1713	0.45	1.34	89.93	0.00	0.00	0.00
1714	4.28	1.09	94.13	0.00	0.22	0.27
1716	3.49	1.17	71.16	0.00	8.87	12.59
1717	0.51	1.31	97.51	0.01	0.49	0.00
1718	3.22	1.67	94.02	0.05	1.03	0.00
1719	0.22	0.55	85.04	6.83	1.17	6.03
1720	1.76	1.52	91.09	0.36	3.82	1.18
1721	0.82	1.23	85.57	0.19	6.05	5.90
1722	1.28	1.81	96.39	0.08	0.29	0.12
1731	1.21	1.47	95.42	0.00	0.07	0.00
1733	2.76	0.97	94.33	0.00	0.00	1.70
1734	0.00	0.83	87.84	0.00	3.75	6.60
1737	0.14	1.46	96.85	0.38	0.39	0.38
1739	0.53	1.00	98.01	0.00	0.42	0.00
1740	0.51	0.76	97.69	0.36	0.35	0.25
1741	0.45	0.78	97.32	0.00	0.88	0.50
1745	0.94	0.73	96.77	0.04	0.41	0.26
1747	0.60	0.74	98.62	0.00	0.03	0.00
1748	1.10	1.07	93.70	0.00	0.00	0.00
1753	0.63	1.27	82.86	0.00	0.00	0.00
1754	0.36	1.60	87.38	0.00	0.00	0.00
1756	0.17	0.83	98.73	0.16	0.00	0.00
1757	0.03	0.72	93.34	0.00	0.00	0.00
1758	0.24	0.98	98.22	0.00	0.00	0.00
1761	0.09	0.83	97.48	0.00	0.00	0.00
1762	0.05	0.80	93.74	0.00	0.00	0.00
1765	0.23	1.18	98.53	0.00	0.00	0.00
1767	0.16	1.60	71.57	0.00	0.00	0.00
1768	0.33	1.42	93.90	0.00	0.00	0.00
1770	0.00	1.64	93.32	0.00	4.40	0.00
1775	0.00	1.10	97.87	0.00	0.17	0.00
1777	0.14	1.78	59.28	0.00	0.00	0.00

TABLE 6.J.1: PERCENTAGE DISTRIBUTION OF ANNUAL REVENUE

## QASBA JAIPUR

YEAR	KHARIF HARVEST			RABI HARVEST			ANNUAL REVENUE		TOTAL RUPEES
	%IN CASH	%IN KIND	%KHARIF	%IN CASH	%IN KIND	%RABI	%IN CASH	%IN KIND	
1728	30.33	69.67	62.89	100.00	0.00	37.11	56.19	43.81	213.89
1729	34.02	65.98	9.65	11.91	88.09	90.35	14.05	85.95	1293.26
1733	43.19	56.81	100.00	.	.	.	43.19	56.81	942.02
1736	54.16	45.84	54.18	20.24	79.76	45.82	38.62	61.38	5507.24
1737	72.18	27.82	61.51	47.12	52.88	38.49	62.53	37.47	2994.52
1738	.	.	.	32.07	67.93	100.00	32.07	67.93	1370.64
1739	52.95	47.05	63.52	34.46	65.54	36.48	46.21	53.79	2679.64
1740	.	.	.	31.84	68.16	100.00	31.84	68.16	1361.85
1741	54.98	45.02	60.81	35.05	64.95	39.19	47.17	52.83	2998.14
1742	45.34	54.66	53.38	31.68	68.32	46.62	38.97	61.03	4348.84
1743	72.21	27.79	50.12	44.60	55.40	49.88	58.44	41.56	3211.66
1744	85.25	14.75	38.65	34.02	65.98	61.35	53.82	46.18	3382.72
1745	57.90	42.10	74.09	100.00	0.00	25.91	68.81	31.19	2685.53
1746	64.27	35.73	37.03	26.35	73.65	62.97	40.40	59.60	3765.50
1747	56.61	43.39	54.07	21.56	78.44	45.93	40.51	59.49	3140.91
1750	58.16	41.84	62.32	37.49	62.51	37.68	50.37	49.63	4110.37
1755	62.17	37.83	32.92	17.26	82.74	67.08	32.04	67.96	9197.56
1756	24.11	75.89	52.42	20.42	79.58	47.58	22.35	77.65	10007.03
1757	61.30	38.70	36.81	32.89	67.11	63.19	43.35	56.65	5086.74
1759	75.88	24.12	37.43	29.27	70.73	62.57	46.71	53.29	4230.30
1761	84.81	15.19	100.00	.	.	.	84.81	15.19	1437.48
1762	92.53	7.47	36.57	47.31	52.69	63.43	63.85	36.15	2523.95
1763	93.37	6.63	29.46	26.09	73.91	70.54	45.91	54.09	4640.01
1767	93.09	6.91	45.55	30.24	69.76	54.45	58.87	41.13	4201.03
1768	92.40	7.60	47.84	38.49	61.51	52.16	64.28	35.72	4130.98
1769	78.56	21.44	41.79	42.95	57.05	58.21	57.83	42.17	4182.47
1770	80.11	19.89	38.84	29.68	70.32	61.16	49.26	50.74	4663.59
1771	88.52	11.48	36.52	23.72	76.28	63.48	47.39	52.61	5123.23
1772	93.73	6.27	29.81	25.62	74.38	70.19	45.93	54.07	4606.99

Source: Arhsattas Qasba Sawai Jaipur

TABLE 6.J.2: PERCENTAGE AREA/QUANTITY OF MAJOR KHARIF CROPS

ASSESSED IN CASH/KIND: QASBA JAIPUR

YEAR	% AREA (ZABTI CROPS)						% QUANTITY (JINSI CROPS)	
	GARDEN PRODUCE	MAKKA	SUGAR- CANE	COTTON	SHEET POTATO	MADWA	MOTH	BAJRA
1728	52.79	7.38	0.00	27.54	0.00	12.30	3.25	84.08
1729	11.78	5.24	3.40	41.62	1.05	14.01	2.98	97.02
1733	16.98	7.11	5.81	11.10	2.12	4.29	12.64	87.10
1736	19.88	19.59	39.43	5.78	3.07	1.77	7.17	91.70
1737	21.58	25.93	28.31	2.30	2.00	0.67	18.81	81.04
1739	31.96	30.07	12.18	0.81	1.67	1.33	3.40	96.58
1741	31.51	22.69	15.76	1.70	1.02	0.56	4.50	95.49
1742	29.25	22.67	18.00	0.25	0.28	1.08	5.16	94.75
1743	30.31	30.97	14.19	0.21	0.36	2.79	1.89	98.11
1744	28.79	34.76	9.01	0.33	0.37	13.51	2.43	84.68
1745	29.74	27.65	13.52	0.11	0.36	7.62	11.25	88.17
1746	34.74	28.29	6.51	1.31	0.73	10.47	16.25	83.50
1747	26.97	34.18	2.72	3.48	1.04	8.95	4.40	95.28
1750	34.06	22.79	5.48	1.91	3.58	7.70	3.98	96.02
1755	35.26	38.60	11.21	0.68	2.34	3.25	3.78	96.22
1756	46.74	33.85	1.77	0.68	0.11	7.62	1.34	98.62
1757	43.70	37.93	1.54	0.00	0.42	3.70	4.28	95.72
1759	41.68	36.63	2.50	5.45	1.86	2.68	3.08	96.86
1761	44.06	26.62	8.78	1.89	3.43	5.20	7.43	89.59
1762	37.37	27.47	4.44	6.73	5.16	6.85	5.49	92.64
1763	44.21	30.55	7.91	1.92	3.58	0.69	3.89	95.65
1767	42.71	37.60	9.52	0.39	1.77	0.31	5.72	94.00
1768	48.24	36.24	10.28	0.03	0.66	0.13	1.64	98.36
1769	41.68	35.52	7.14	4.62	1.26	0.35	3.47	96.23
1770	42.20	41.74	5.84	1.74	2.71	0.69	0.45	99.55
1771	39.72	44.92	4.60	0.48	4.06	1.83	2.47	97.37
1772	37.76	46.15	3.50	0.36	4.93	2.05	0.00	99.45

TABLE 6.J.3 : PERCENTAGE AREA/QUANTITY OF MAJOR RABI CROPS

ASSESSED IN CASH/KIND: QASBA JAIPUR

YEAR	% AREA (ZABTI CROPS)		% QUANTITY (JINSI CROPS)	
	POPPY	GARDEN PRODUCE	BARLEY	WHEAT
1728	0.00	100.00	38.80	61.20
1729	0.00	100.00	54.47	33.43
1736	0.07	99.57	34.67	54.17
1737	0.00	100.00	54.61	45.39
1738	0.40	99.60	41.77	49.97
1739	0.00	100.00	33.75	58.32
1740	0.44	99.21	27.87	66.65
1741	0.13	99.40	30.63	69.04
1742	0.11	99.08	47.99	48.72
1743	0.58	98.75	55.32	41.31
1744	1.45	98.37	58.71	41.29
1745	1.07	98.31	59.37	38.82
1746	0.23	98.94	58.06	39.81
1747	0.66	99.34	42.66	54.56
1750	1.40	97.76	11.52	86.41
1755	0.10	98.24	8.19	88.57
1756	0.59	99.18	15.44	82.88
1757	2.41	97.48	20.18	68.61
1759	2.14	97.59	26.71	66.39
1762	2.55	96.71	42.80	52.29
1763	0.92	97.96	13.79	83.80
1767	2.75	96.74	15.71	78.00
1768	0.07	99.77	9.03	87.89
1769	0.79	98.49	14.71	76.38
1770	0.30	99.32	24.41	65.33
1771	0.05	97.79	34.72	54.56
1772	0.05	98.93	29.91	54.77

TABLE 6.J.4: REVENUE FROM MAJOR KHARIF CROPS AS A PERCENTAGE  
OF TOTAL KHARIF REVENUE: QASBA JAIPUR

YEAR	GARDEN PRODUCE	MAKKA	SUGAR- CANE	COTTON	SWEET POTATO	MADWA	MOTH	BAJRA
1728	15.69	3.35	0.00	7.81	0.00	3.49	2.27	59.19
1729	3.85	3.20	3.13	15.82	0.30	5.36	1.75	64.22
1733	7.43	4.67	10.17	5.15	1.39	2.35	7.57	48.93
1736	4.68	6.01	38.64	1.43	1.46	0.40	3.76	41.44
1737	7.27	12.03	46.35	0.78	1.36	0.23	5.19	22.58
1739	14.03	16.81	14.52	0.40	1.29	0.58	1.86	45.18
1741	12.43	12.30	23.03	0.78	0.75	0.20	1.71	43.30
1742	8.66	9.84	22.04	0.09	0.12	0.24	2.68	51.92
1743	14.27	20.89	29.17	0.12	0.34	1.37	0.61	27.18
1744	16.17	26.86	28.38	0.18	0.40	8.93	0.32	12.94
1745	10.77	13.49	26.04	0.05	0.26	3.01	4.41	37.43
1746	16.25	18.87	16.80	0.73	0.61	5.85	6.72	28.84
1747	12.45	22.70	7.72	1.97	0.89	4.96	1.84	41.29
1750	14.90	14.45	11.66	1.06	3.03	4.11	1.65	40.19
1755	13.32	20.44	22.57	0.30	1.73	1.43	1.62	36.21
1756	9.05	9.10	2.51	0.16	0.04	1.79	1.18	74.68
1757	21.87	26.91	5.46	0.00	0.44	2.34	2.53	36.17
1759	24.46	31.73	8.55	3.84	1.96	1.95	0.73	23.37
1761	25.19	23.69	23.94	1.21	3.49	3.63	1.02	13.86
1762	24.34	27.74	18.07	5.22	6.49	5.63	0.42	6.92
1763	23.82	27.93	30.98	1.49	4.41	0.52	0.26	6.31
1767	23.10	30.21	34.77	0.27	1.93	0.22	0.43	6.44
1768	27.30	29.56	33.20	0.01	0.71	0.10	0.12	7.48
1769	23.55	28.48	18.70	3.10	1.35	0.23	0.74	20.53
1770	23.79	33.60	16.55	1.15	2.83	0.49	0.11	19.79
1771	25.62	40.67	14.08	0.38	4.61	1.37	0.28	11.17
1772	26.56	45.51	11.49	0.31	6.03	1.62	0.00	6.24

TABLE 6.J.5: REVENUE FROM MAJOR RABI CROPS AS A PERCENTAGE

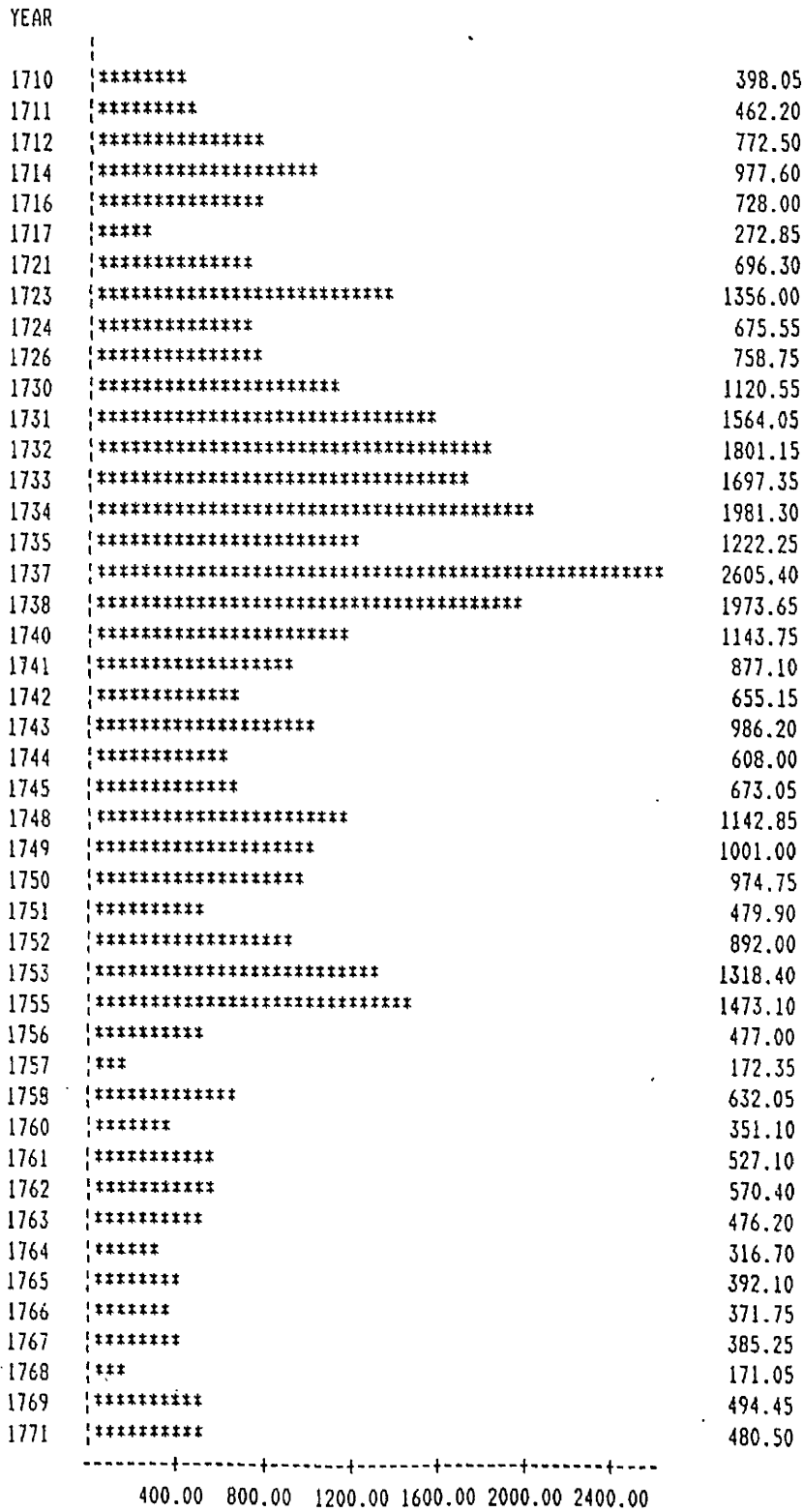
424

OF TOTAL RABI REVENUE: QASBA JAIPUR

YEAR	POPPY	GARDEN PRODUCE	BARLEY	WHEAT
1728	0.00	100.00	.	.
1729	0.00	11.91	43.21	34.10
1736	0.02	20.16	20.63	54.25
1737	0.00	47.12	.	52.88
1738	0.23	31.84	22.83	39.72
1739	0.00	34.46	17.31	43.41
1740	0.23	31.47	14.13	50.70
1741	0.07	34.79	13.48	51.28
1742	0.06	31.31	28.43	37.68
1743	0.41	43.89	26.36	27.15
1744	0.85	33.11	33.38	32.60
1745	1.80	97.47	.	.
1746	0.11	26.00	36.04	35.99
1747	0.25	21.31	27.71	48.64
1750	0.77	36.38	5.87	55.47
1755	0.03	16.98	5.28	75.13
1756	0.19	20.19	10.22	69.32
1757	1.27	31.61	10.65	49.64
1759	0.99	28.22	14.92	51.40
1762	2.05	45.04	17.63	32.63
1763	0.33	25.60	8.09	64.18
1767	1.31	28.39	7.86	58.05
1768	0.03	38.24	4.24	55.67
1769	0.52	41.80	6.00	46.71
1770	0.13	29.17	13.95	49.89
1771	0.02	22.50	20.90	44.88
1772	0.02	25.06	19.34	44.85

FIGURE 6.C.1: ZABTI ASSESSED AREA IN THE KHARIF HARVEST

QASBA CHATSU



BIGHAS



FIGURE 6.C.2: JINSI ASSESSED QUANTITY IN THE KHARIF HARVEST

QASBA CHATSU

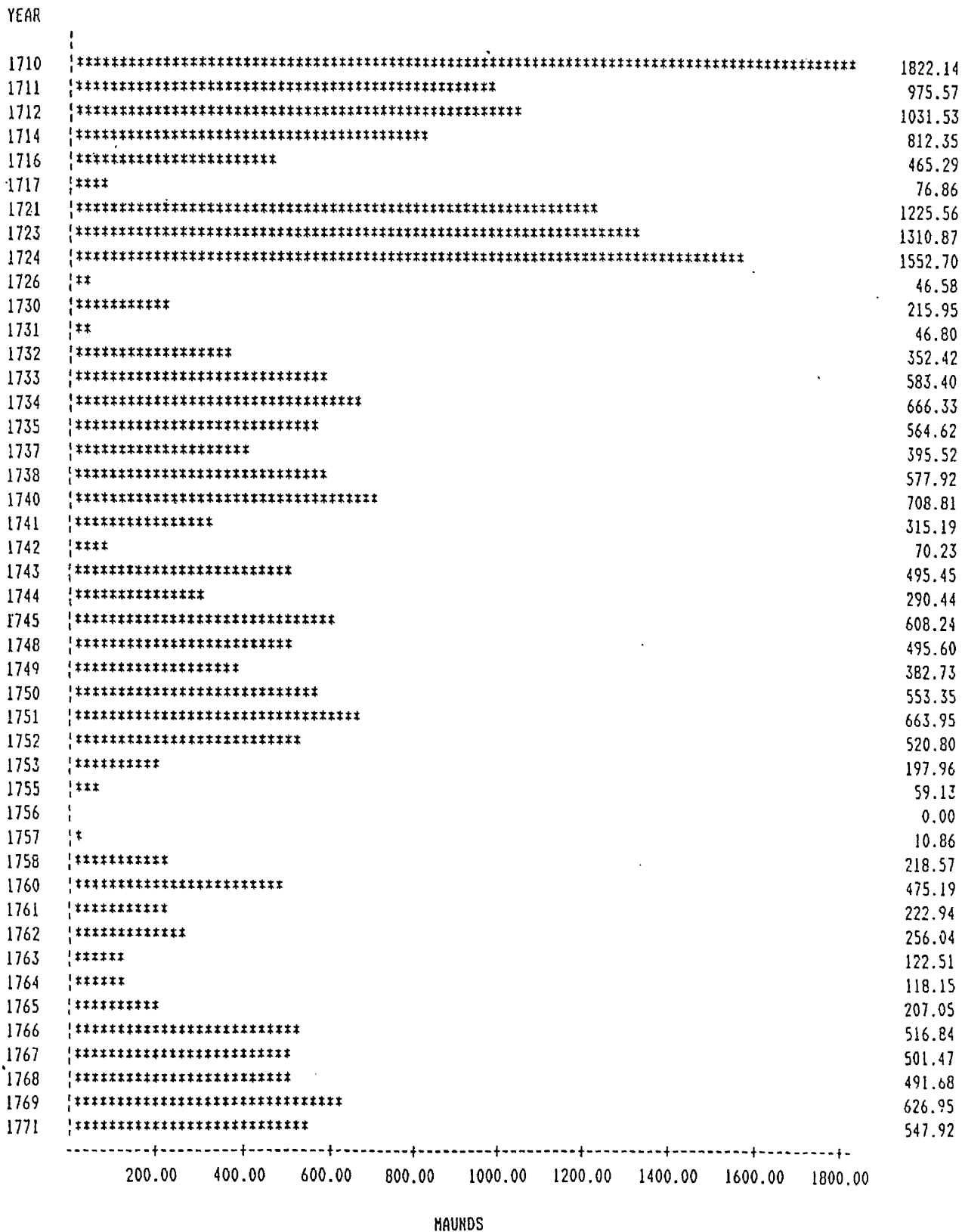


FIGURE 6.C.3: ZABTI ASSESSED AREA IN THE RABI HARVEST

QASBA CHATSU

YEAR	ASSESSED AREA (BIGHAS)
1710	1440.30
1711	1149.40
1712	1845.80
1714	1902.35
1716	2122.25
1717	1702.30
1721	1699.40
1723	1961.55
1724	2828.25
1726	2534.80
1730	2356.25
1731	1920.65
1732	2250.75
1733	1992.80
1734	2162.45
1735	2458.65
1737	2223.00
1738	2689.55
1740	2487.70
1741	1821.35
1742	1970.70
1743	2443.10
1744	2285.00
1745	2386.30
1748	1997.70
1749	2644.33
1750	2519.95
1751	2317.40
1752	2097.00
1753	2031.05
1755	1947.05
1756	1111.35
1757	978.30
1758	979.90
1760	994.00
1761	1229.75
1762	1596.65
1763	1299.40
1764	1607.25
1765	1499.50
1766	1277.20
1767	1683.35
1768	1483.55
1769	1464.45
1771	1642.20

400.00 800.00 1200.00 1600.00 2000.00 2400.00 2800.00

BIGHAS

FIGURE 6.C.4: JINSI ASSESSED QUANTITY IN THE RABI HARVEST

QASBA CHATSU

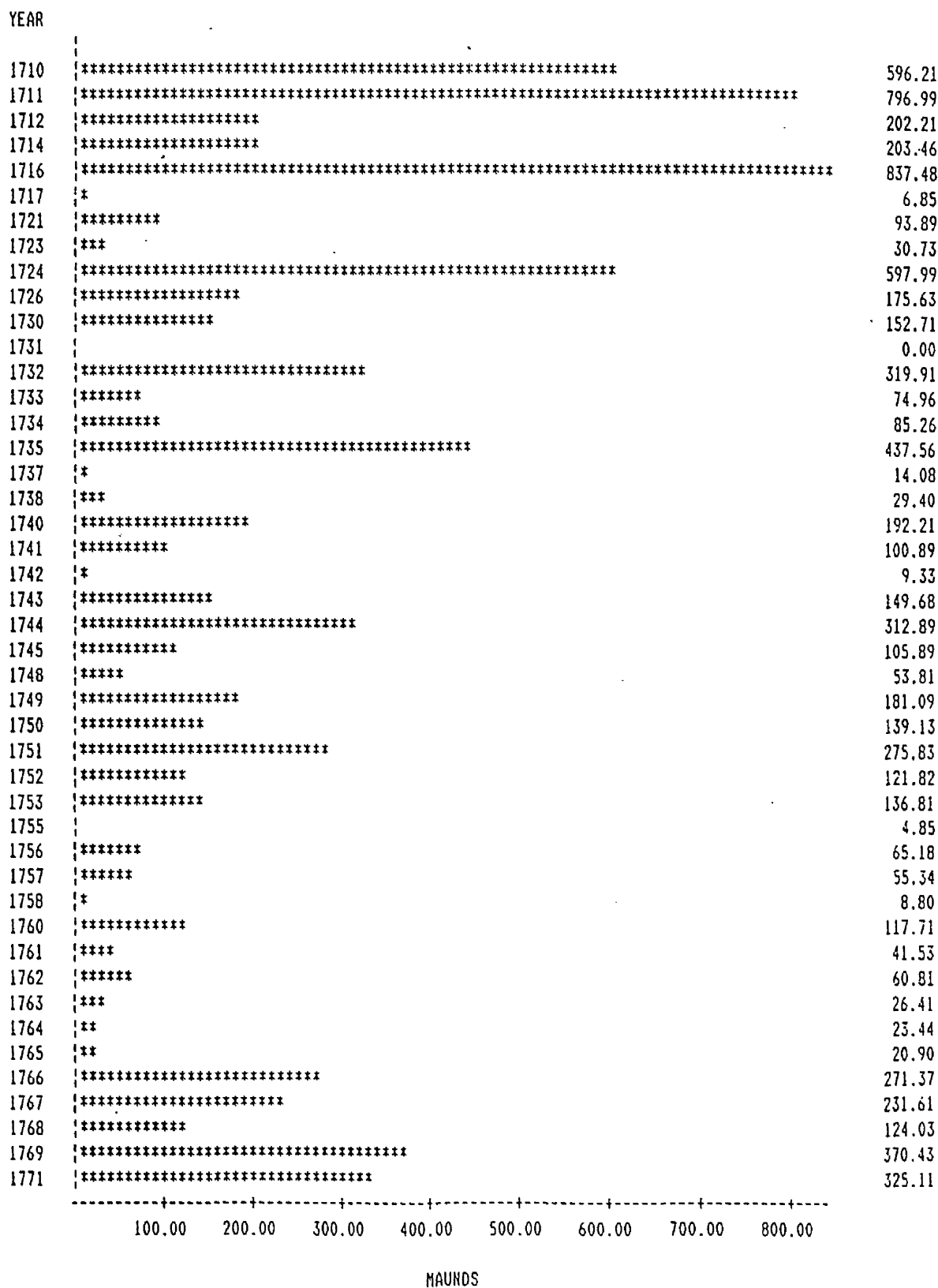


FIGURE 6.C.5: KHARIF REVENUE

QASBA CHATSU

YEAR	REVENUE (RUPEES)
1710	1972.68
1711	1320.24
1712	2928.29
1714	1909.28
1716	1193.96
1717	416.89
1721	2232.56
1723	3177.39
1724	1899.17
1726	774.54
1730	1361.56
1731	1567.02
1732	1892.12
1733	2133.35
1734	2754.05
1735	2051.60
1737	2925.74
1738	2545.46
1740	1667.13
1741	1167.13
1742	805.12
1743	1287.45
1744	978.65
1745	1122.08
1748	1685.40
1749	1331.78
1750	1525.06
1751	1209.24
1752	1266.47
1753	1832.50
1755	1502.15
1756	326.48
1757	158.17
1758	917.85
1760	1179.61
1761	798.31
1762	791.08
1763	618.41
1764	592.25
1765	552.86
1766	719.26
1767	770.68
1768	458.61
1769	794.60
1771	1015.71

400.00 800.00 1200.00 1600.00 2000.00 2400.00 2800.00 3200.00

RUPEES

FIGURE 6.C.6: RABI REVENUE

QASBA CHATSU

430

YEAR	RUPEES
1710	1783.33
1711	1969.06
1712	7689.73
1714	1913.54
1716	2686.44
1717	1446.88
1721	1621.31
1723	1727.41
1724	2981.79
1726	5349.21
1730	5256.32
1731	3923.62
1732	5271.88
1733	4130.32
1734	4428.23
1735	5644.56
1737	4433.63
1738	5402.38
1740	4511.42
1741	3209.29
1742	3420.87
1743	4500.58
1744	4431.41
1745	4092.06
1748	3213.44
1749	4103.06
1750	3804.04
1751	3920.45
1752	3563.92
1753	3176.28
1755	2976.61
1756	1742.47
1757	1518.81
1758	1431.64
1760	1591.70
1761	1856.48
1762	2420.82
1763	1896.06
1764	2371.23
1765	2236.20
1766	2104.71
1767	2621.70
1768	2250.47
1769	2329.50
1771	2685.11

1000.00 2000.00 3000.00 4000.00 5000.00 6000.00 7000.00

RUPEES

FIGURE 6.C.7: ANNUAL REVENUE

QASBA CHATSU

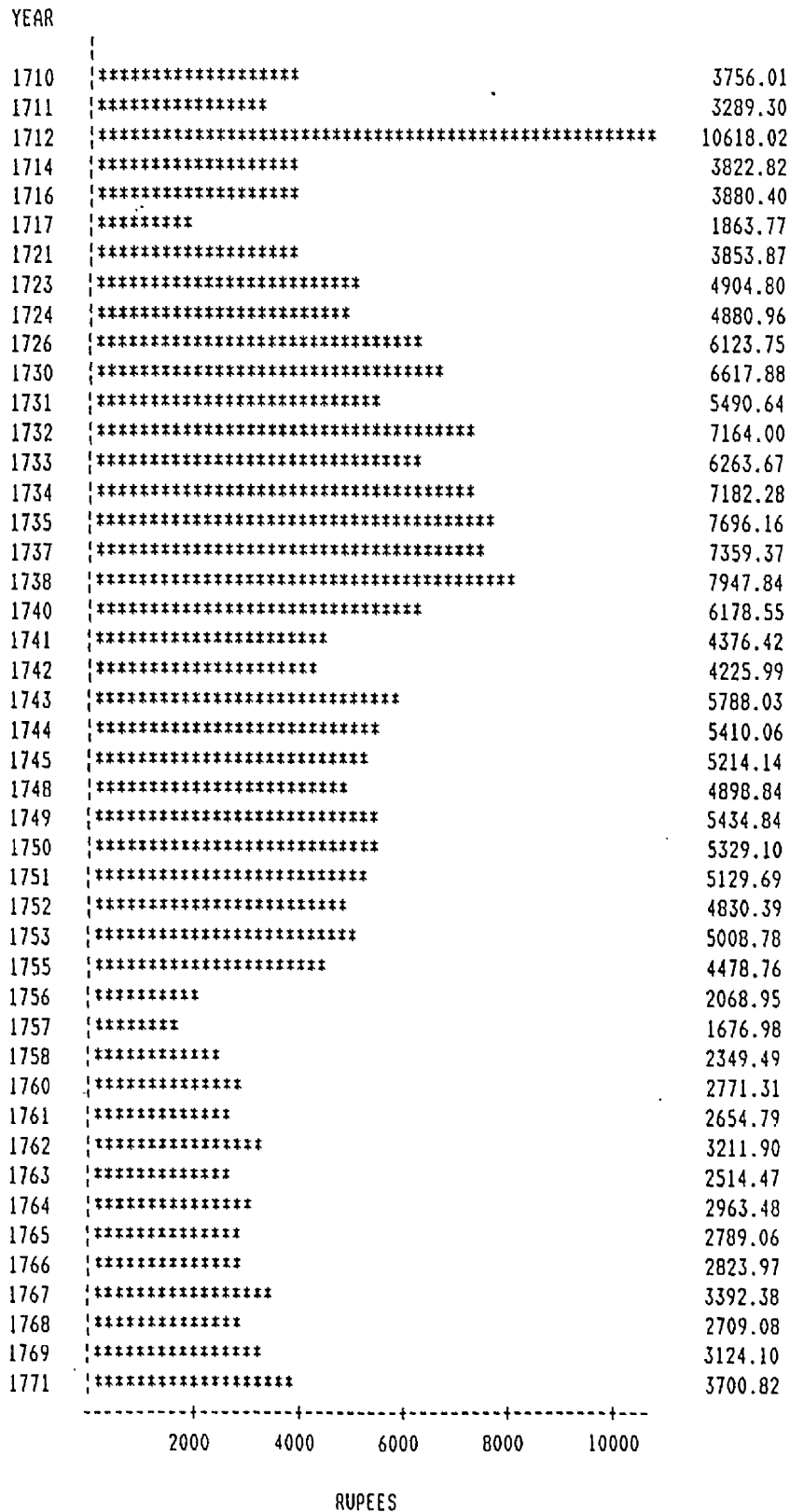


FIGURE 6.M.1: ZABTI ASSESSED AREA IN THE KHARIF HARVEST

QASBA MALARNA

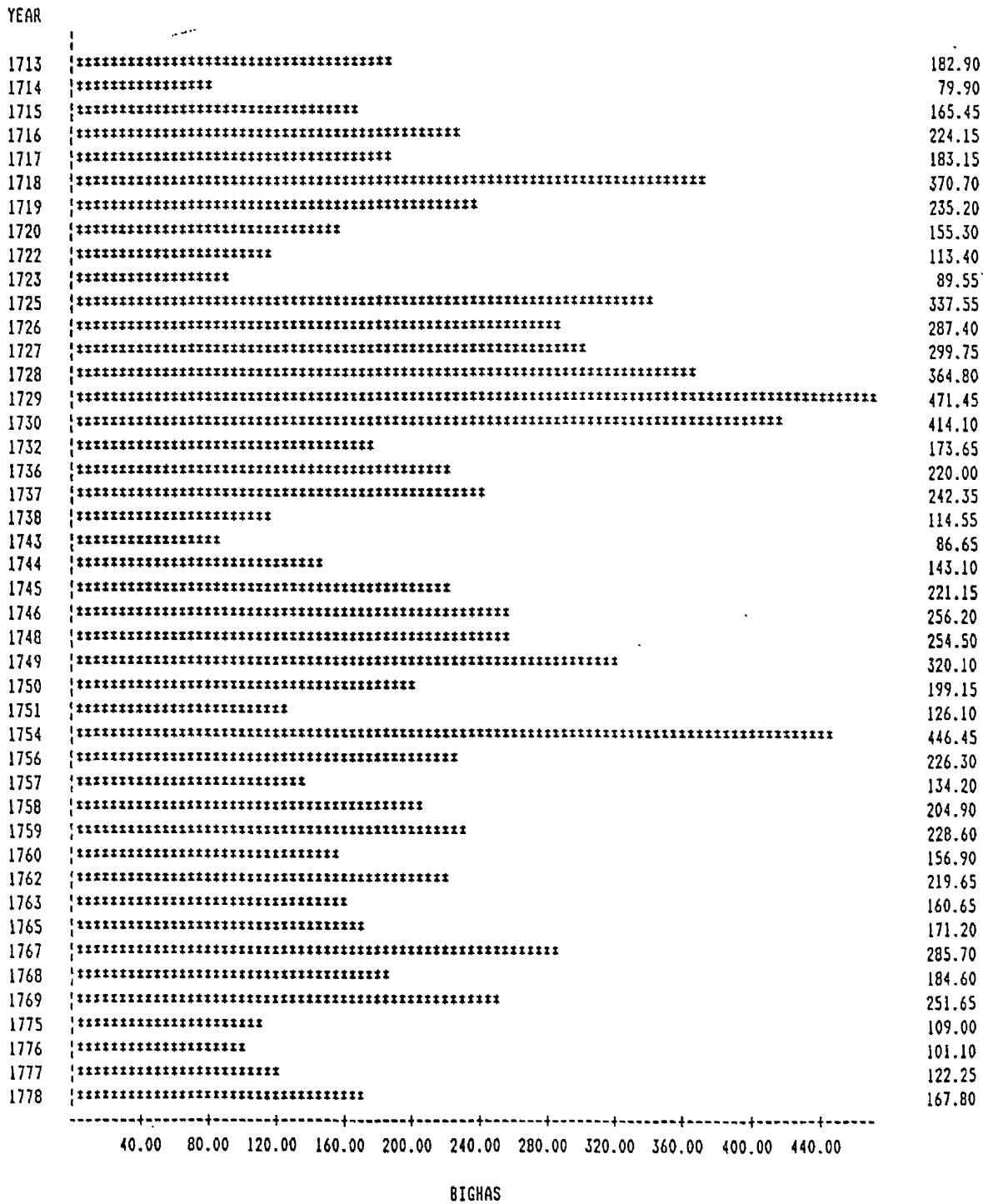


FIGURE 6.N.2: JINSI ASSESSED QUANTITY IN THE KHARIF HARVEST

QASBA MALARNA

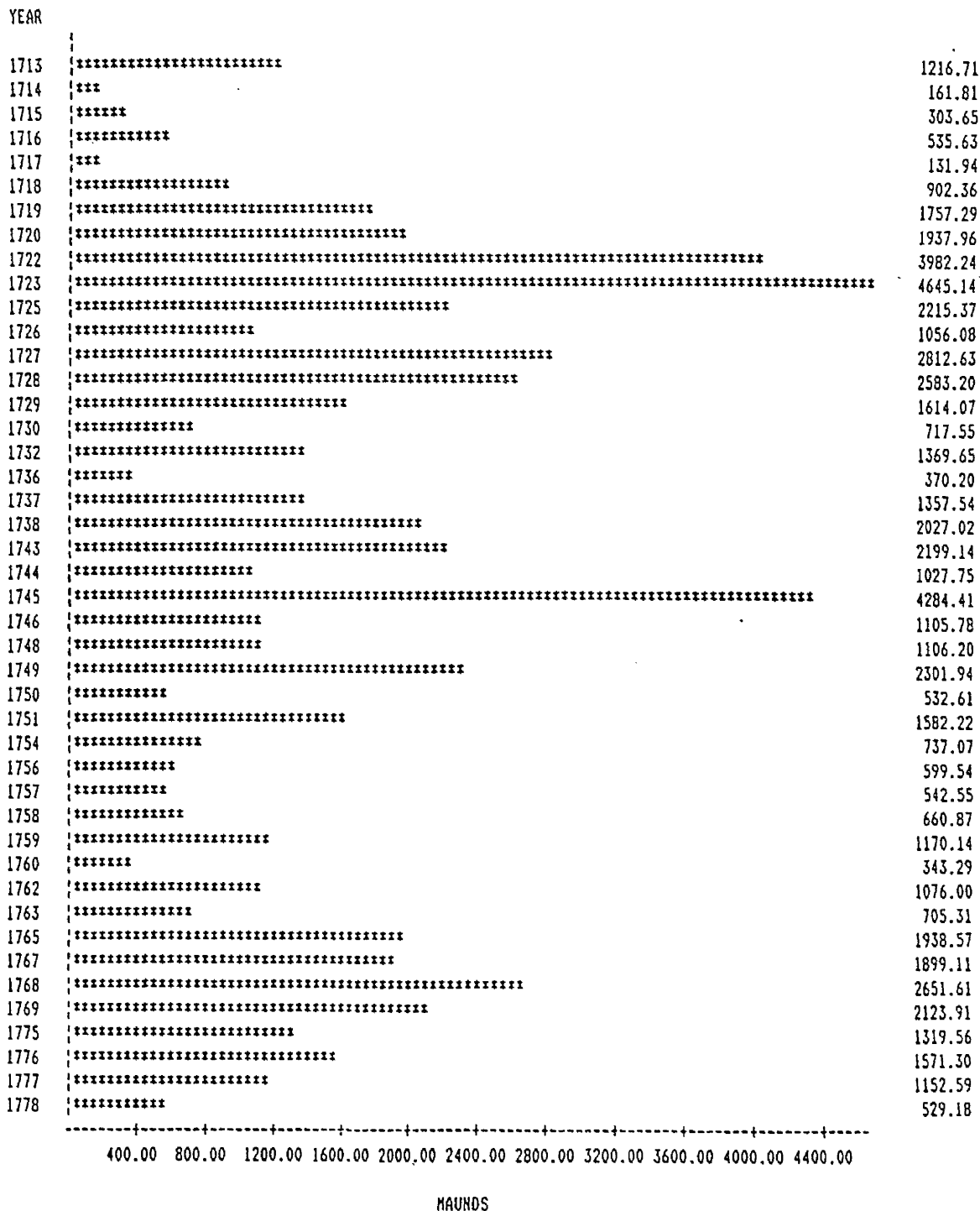




FIGURE 6.M.3: ZABTI ASSESSED AREA IN THE RABI HARVEST

QASBA MALARNA

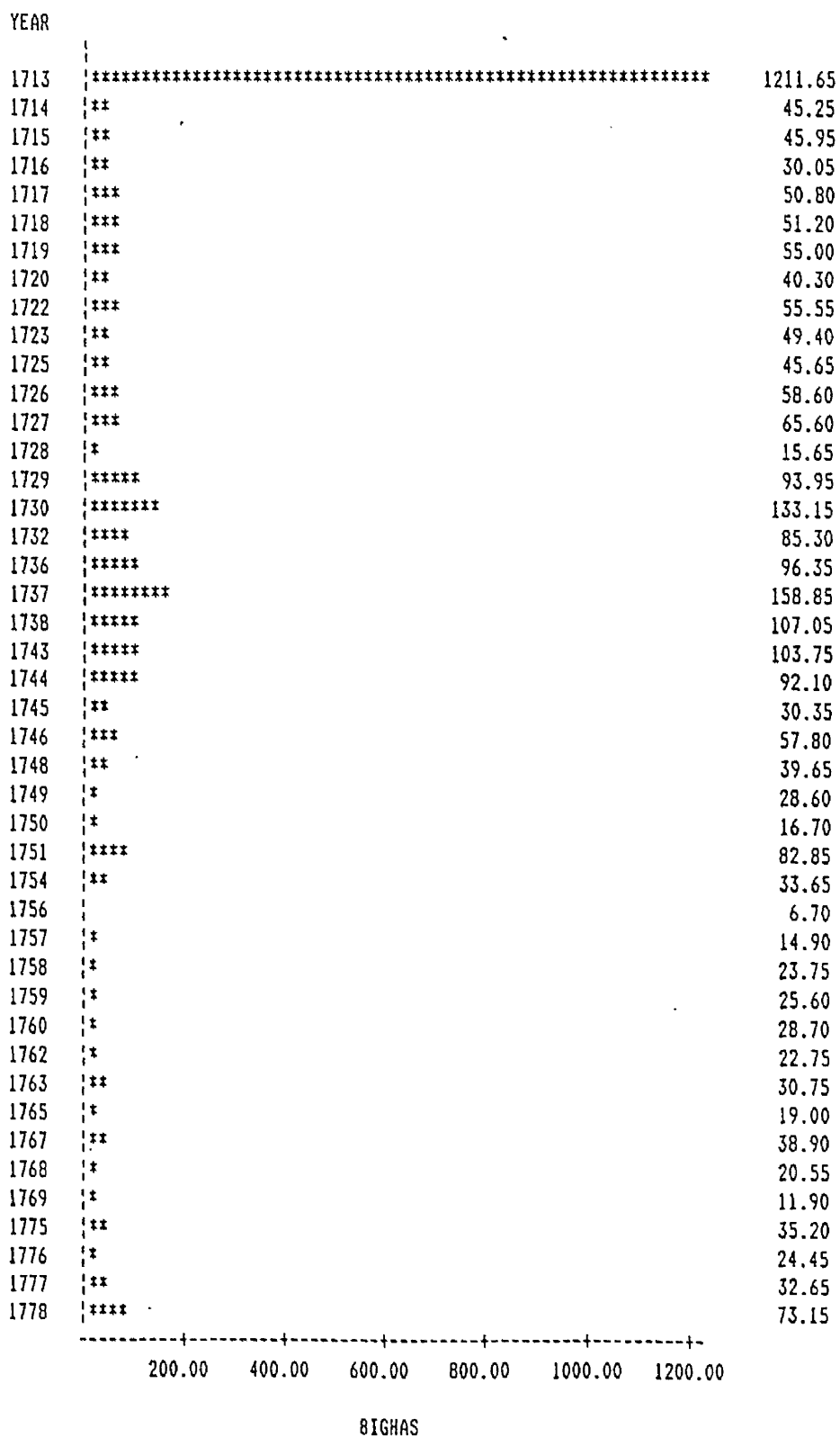
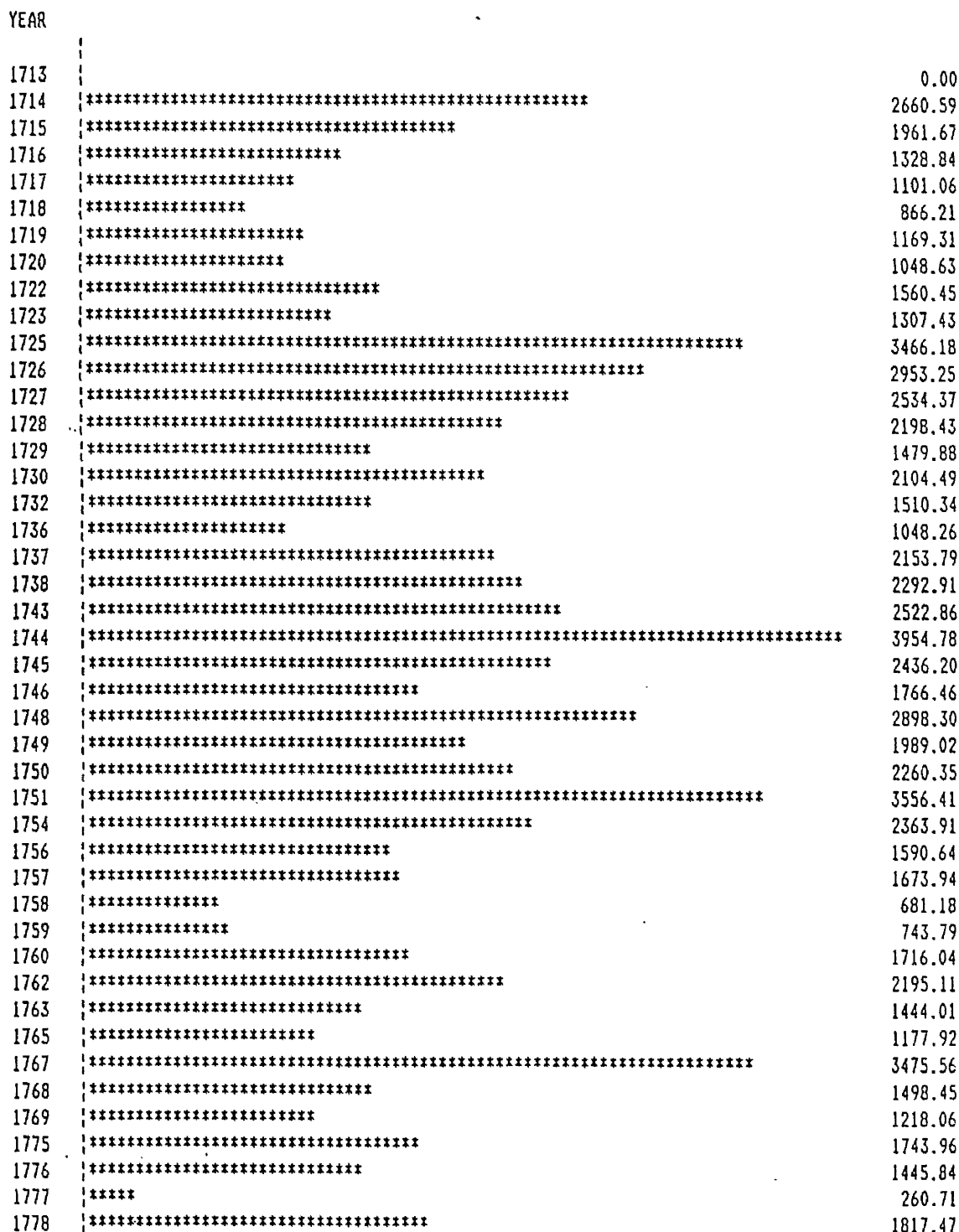


FIGURE 6.M.4: JINSI ASSESSED QUANTITY IN THE RABI HARVEST

QASBA MALARNA



400.00 800.00 1200.00 1600.00 2000.00 2400.00 2800.00 3200.00 3600.00

MAUNDS

FIGURE 6.M.5: KHARIF REVENUE

QASBA MALARNA

YEAR	REVENUE (RUPEES)
1713	3815.39
1714	351.02
1715	895.59
1716	1267.04
1717	739.97
1718	2302.59
1719	2705.15
1720	2754.26
1722	5195.02
1723	5662.94
1725	3623.97
1726	2121.82
1727	2679.74
1728	2791.38
1729	3180.53
1730	2626.18
1732	1612.62
1736	1057.76
1737	2634.03
1738	3386.10
1743	1810.28
1744	1515.99
1745	3460.31
1746	1862.41
1748	1810.52
1749	2451.56
1750	348.50
1751	1893.25
1754	2156.98
1756	1979.94
1757	885.53
1758	1169.98
1759	2111.92
1760	1030.73
1762	1747.34
1763	1483.27
1765	1967.52
1767	2573.27
1768	2115.44
1769	1915.52
1775	1539.98
1776	1496.25
1777	1977.48
1778	1018.00

600.00 1200.00 1800.00 2400.00 3000.00 3600.00 4200.00 4800.00 5400.00

RUPEES

FIGURE 6.M.6: RABI REVENUE

QASBA MALARNA

YEAR	REVENUE (RUPEES)
1713	3511.25
1714	2970.25
1715	1946.91
1716	1351.12
1717	2173.40
1718	1462.26
1719	1133.44
1720	1247.54
1722	1863.79
1723	1452.29
1725	3735.76
1726	3680.97
1727	2074.62
1728	2140.31
1729	2199.37
1730	3372.40
1732	1478.33
1736	1685.68
1737	4515.22
1738	** 146.16
1743	2704.65
1744	4709.91
1745	1926.86
1746	2174.41
1748	4383.75
1749	2290.33
1750	2215.72
1751	3662.73
1754	5088.45
1756	3644.04
1757	2106.97
1758	1456.19
1759	1381.31
1760	2860.89
1762	2908.29
1763	2216.17
1765	1078.76
1767	2822.08
1768	1230.93
1769	1297.24
1775	1919.59
1776	1500.24
1777	508.00
1778	2508.14

600.00 1200.00 1800.00 2400.00 3000.00 3600.00 4200.00 4800.00

RUPEES

FIGURE 6.M.7: ANNUAL REVENUE

QASBA MALARNA

YEAR

1713	7326.640
1714	3321.270
1715	2842.500
1716	2618.160
1717	2913.370
1718	3764.850
1719	3838.590
1720	4001.800
1722	7058.810
1723	7115.230
1725	7359.730
1726	5802.790
1727	4754.360
1728	4931.690
1729	5379.900
1730	5998.580
1732	3090.950
1736	2743.440
1737	7149.250
1738	3532.260
1743	4514.930
1744	6225.900
1745	5387.170
1746	4036.820
1748	6194.270
1749	4741.890
1750	2564.220
1751	5555.980
1754	7245.430
1756	5623.980
1757	2992.500
1758	2626.170
1759	3493.230
1760	3891.620
1762	4655.630
1763	3699.440
1765	3046.280
1767	5395.350
1768	3346.370
1769	3212.760
1775	3459.570
1776	2996.490
1777	2485.480
1778	3526.140

500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000

RUPEES

FIGURE 6.P.1: ZABTI ASSESSED AREA IN THE KHARIF HARVEST

QASBA PHAGI

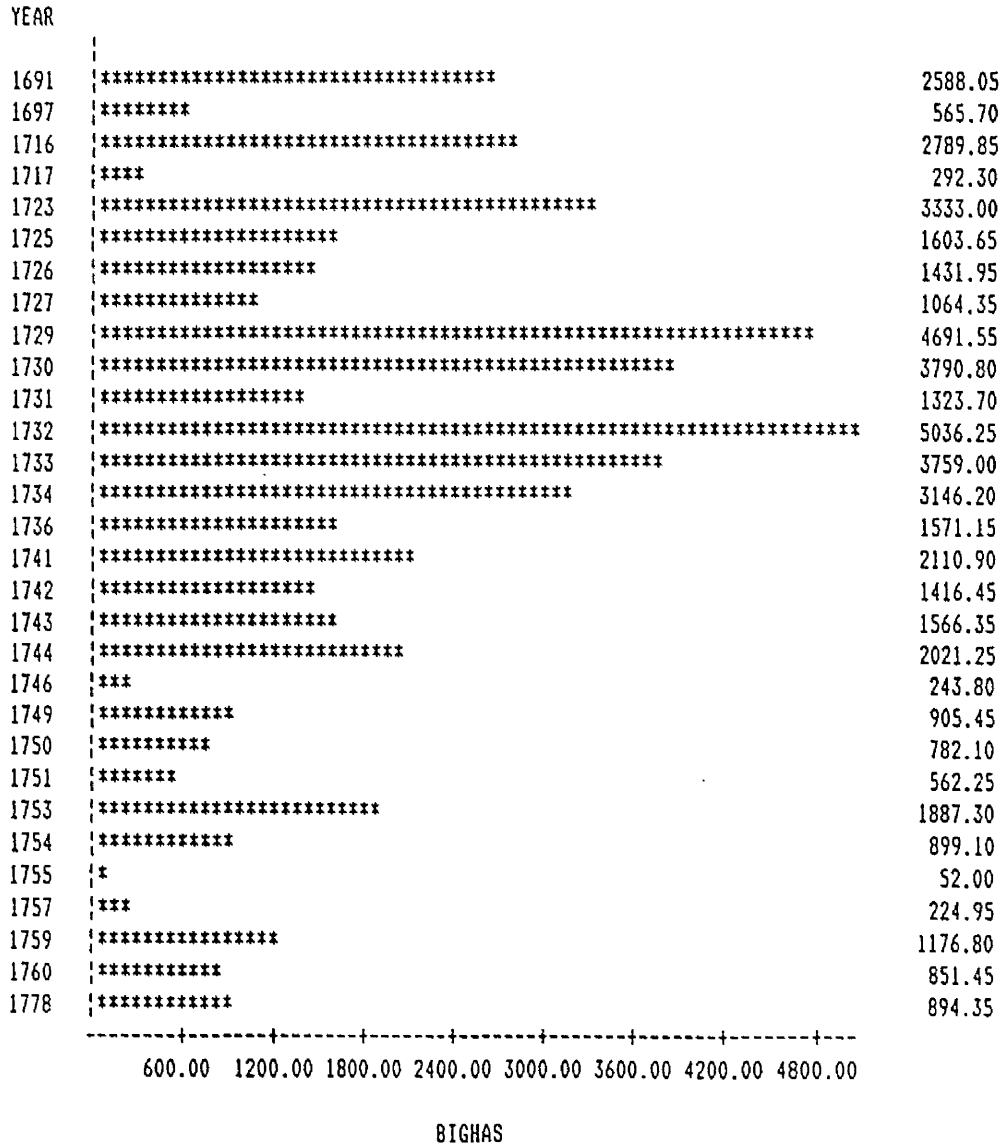
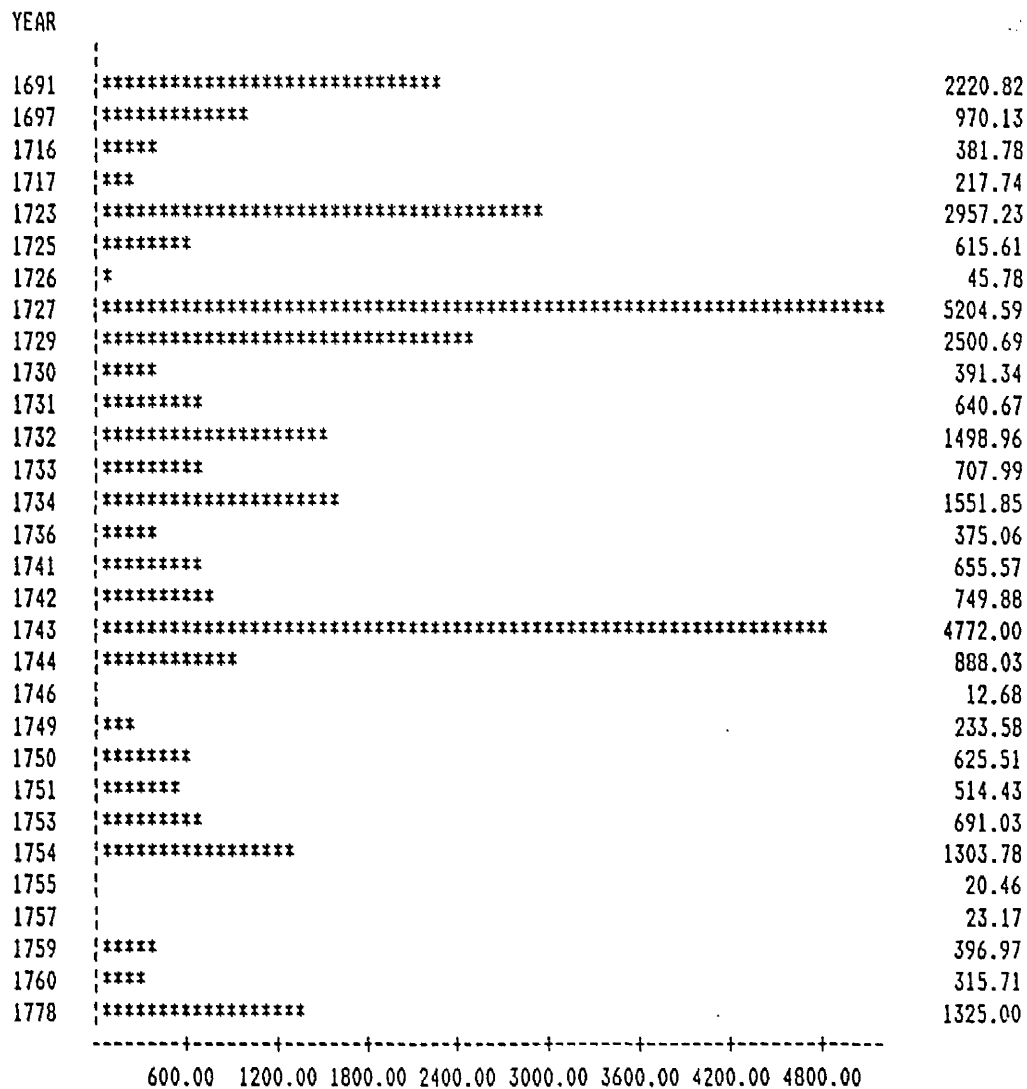


FIGURE 6.P.2: JINSI ASSESSED QUANTITY IN THE KHARIF HARVEST

QASBA PHAGI



MAUNDS

FIGURE 6.P.3: ZABTI ASSESSED AREA IN THE RABI HARVEST

QASBA PHAGI

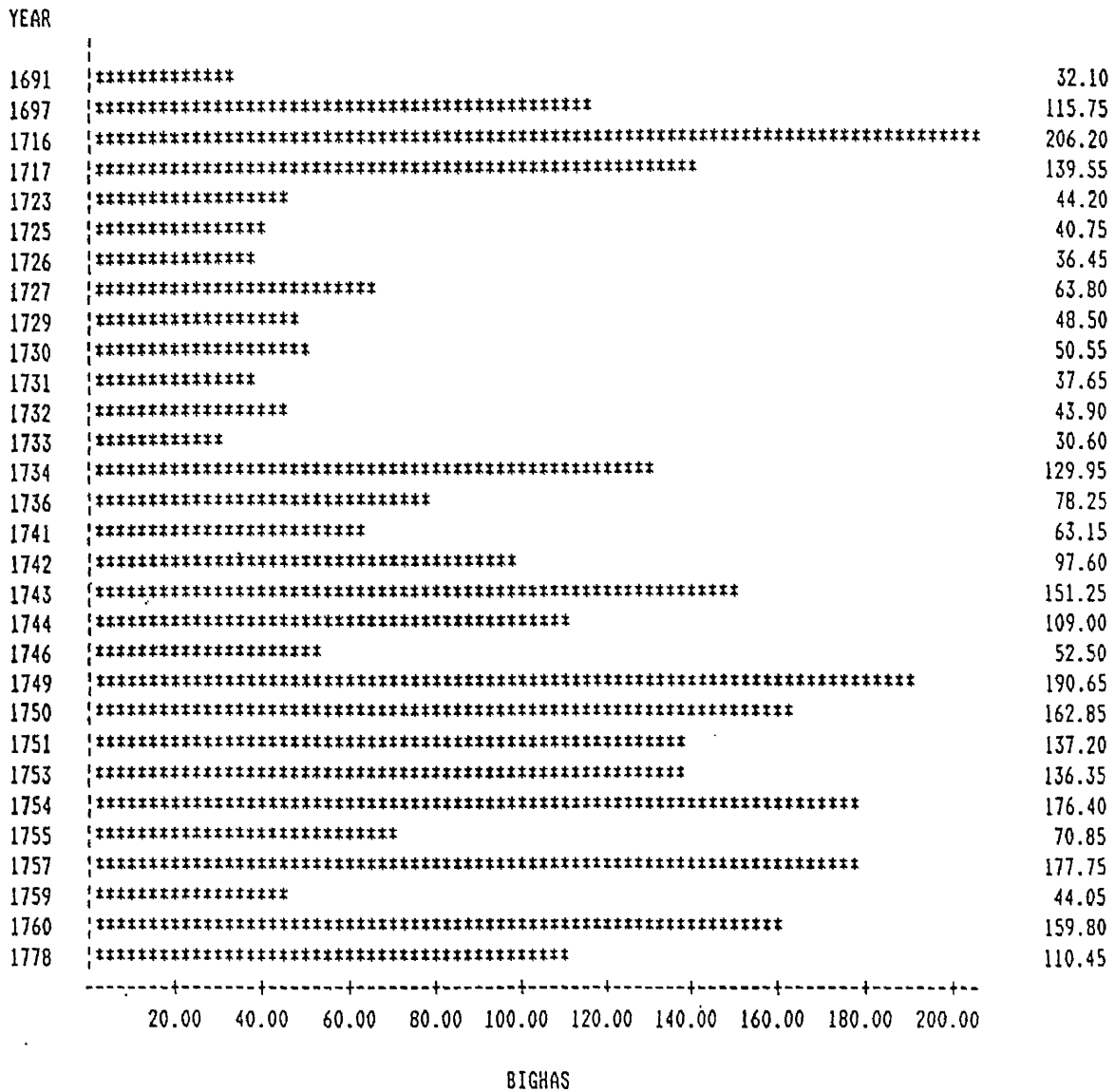






FIGURE 6.P.5: KHARIF REVENUE

QASBA PHAGI

YEAR

1691	*****	3341.86
1697	*****	1429.39
1716	*****	2592.75
1717	*****	825.98
1723	*****	6665.13
1725	*****	1916.06
1726	*****	1214.81
1727	*****	5496.61
1729	*****	6418.28
1730	*****	3477.72
1731	*****	2976.77
1732	*****	5258.23
1733	*****	3551.85
1734	*****	4135.91
1736	*****	1872.22
1741	*****	2243.64
1742	*****	2036.35
1743	*****	5506.62
1744	*****	2383.76
1746	***	202.57
1749	*****	954.04
1750	*****	693.25
1751	*****	1055.60
1753	*****	2002.72
1754	*****	2382.95
1755	**	113.07
1757	***	209.28
1759	*****	1454.36
1760	*****	1199.60
1778	*****	2363.51

600.00 1200.00 1800.00 2400.00 3000.00 3600.00 4200.00 4800.00 5400.00 6000.00 6600.00

RUPEES

FIGURE 6.P.6: RABI REVENUE

QASBA PHAGI

YEAR		
1691	*****	3963.21
1697	*****	964.11
1716	*****	6575.07
1717	*****	1043.57
1723	*****	923.95
1725	*****	12256.93
1726	*****	1037.19
1727	*****	7921.57
1729	*****	6855.57
1730	*****	13624.13
1731	*****	1679.35
1732	*****	7433.80
1733	*****	4995.26
1734	*****	8155.89
1736	*****	1833.95
1741	*****	1136.17
1742	*****	2559.45
1743	*****	4103.76
1744	*****	6085.98
1746	**	491.37
1749	*****	2345.26
1750	*****	1627.36
1751	*****	3856.46
1753	*****	3412.61
1754	*****	5306.10
1755	**	410.94
1757	*****	1605.66
1759	***	642.32
1760	*****	2926.53
1778	*****	4736.58

2000.00 4000.00 6000.00 8000.00 10000.00 12000.00

RUPEES

FIGURE 6.P.7: ANNUAL REVENUE

QASBA PHAGI

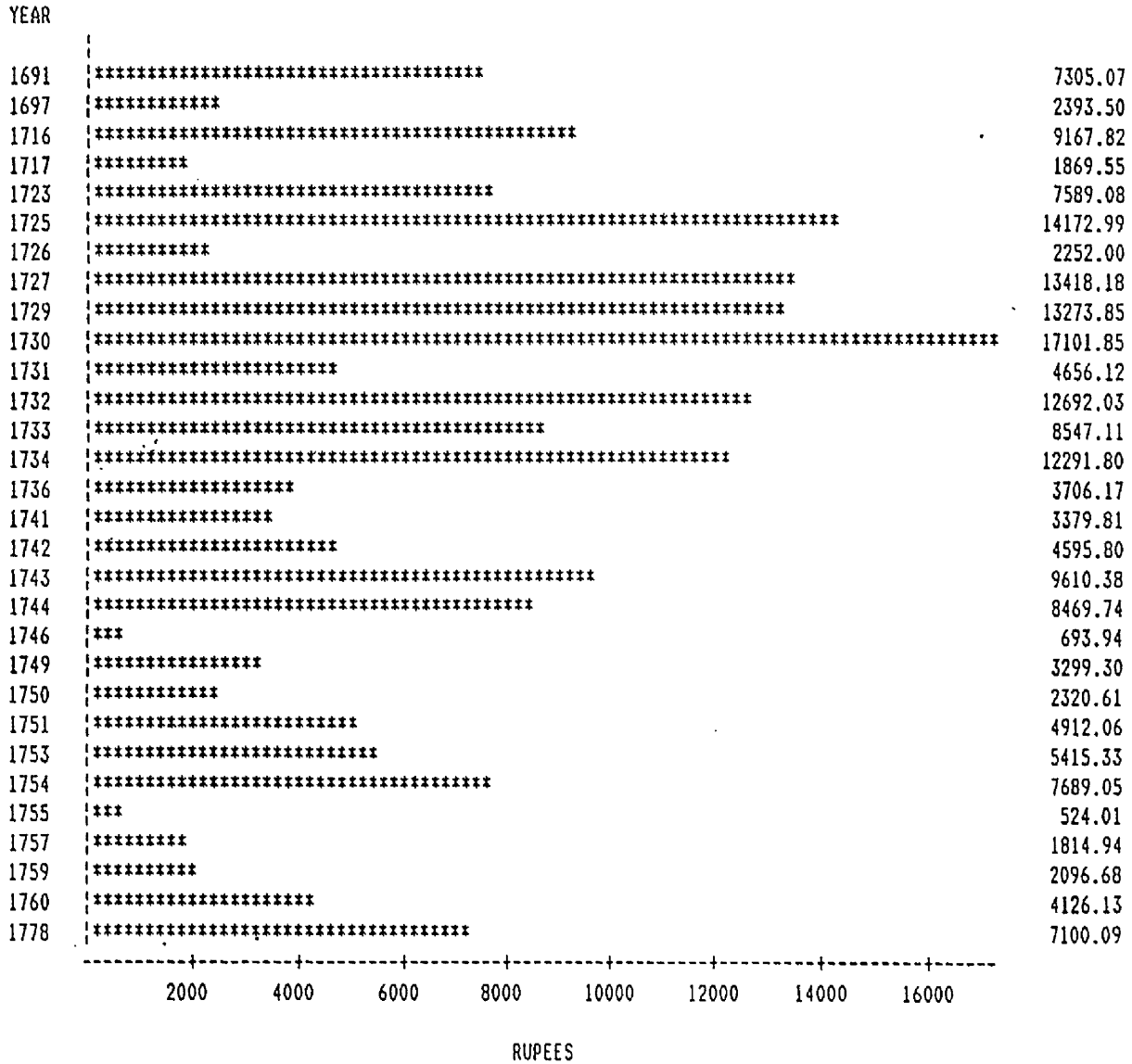


FIGURE 6.S.1: ZABTI ASSESSED AREA IN THE KHARIF HARVEST

QASBA SANGANER

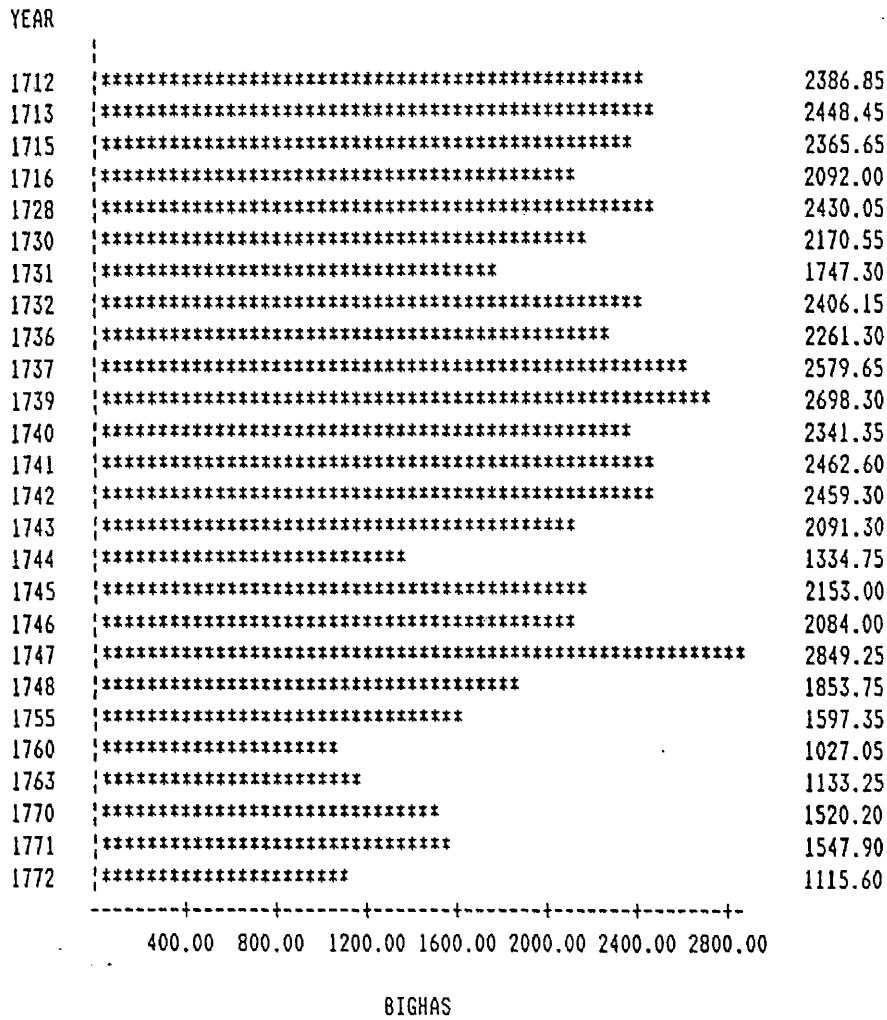


FIGURE 6.S.2: JINSI ASSESSED QUANTITY IN THE KHARIF HARVEST

QASBA SANGANER

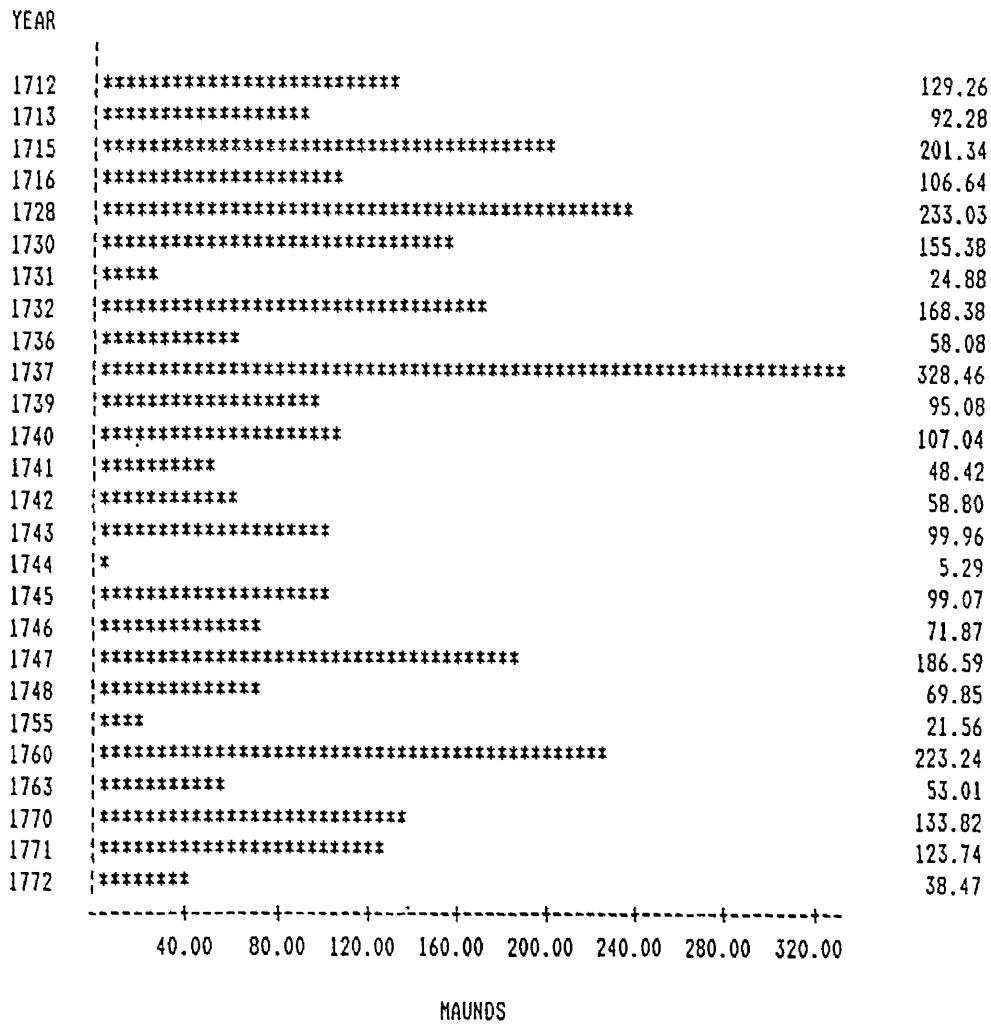


FIGURE 6.S.3: ZABTI ASSESSED AREA IN THE RABI HARVEST

QASBA SANGANER

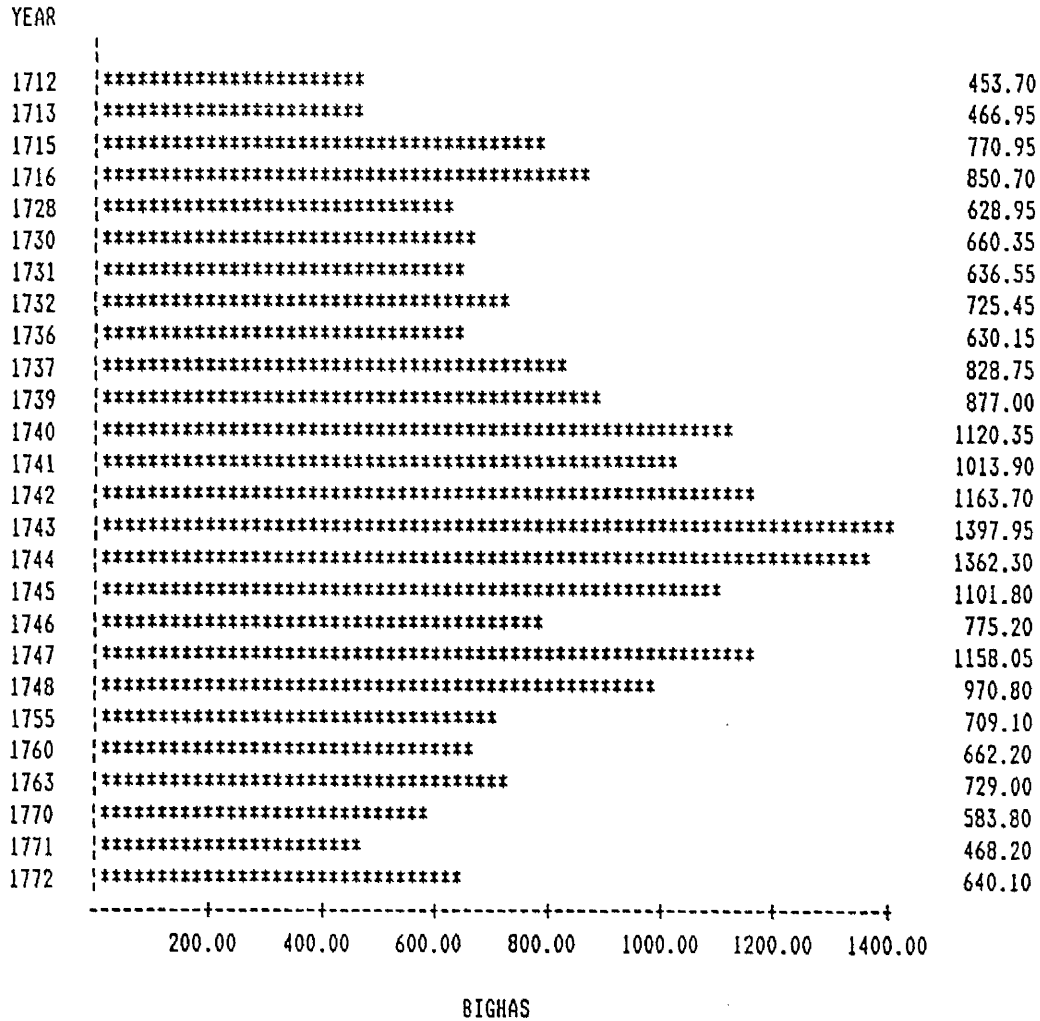


FIGURE 6.S.4: JINSI ASSESSED QUANTITY IN THE RABI HARVEST

QASBA SANGANER

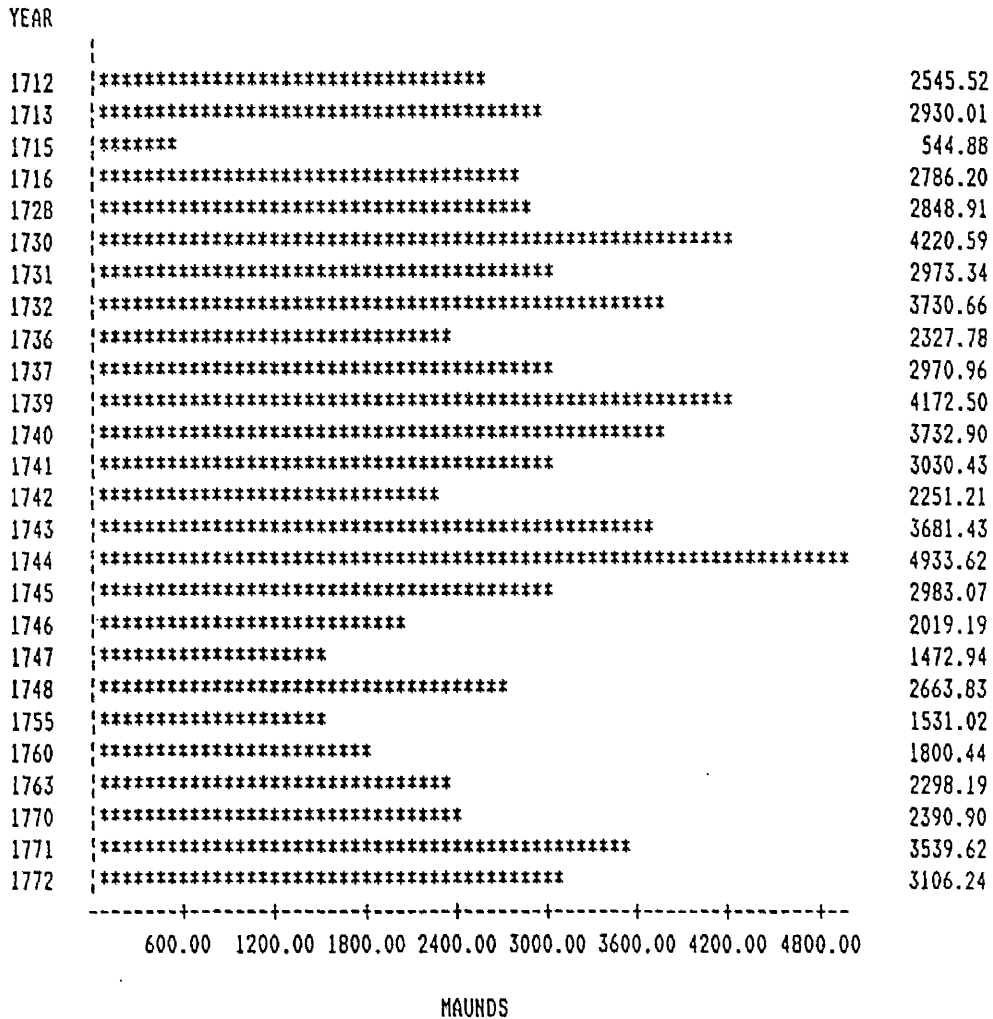




FIGURE 6.S.5: KHARIF REVENUE

QASBA SANGANER

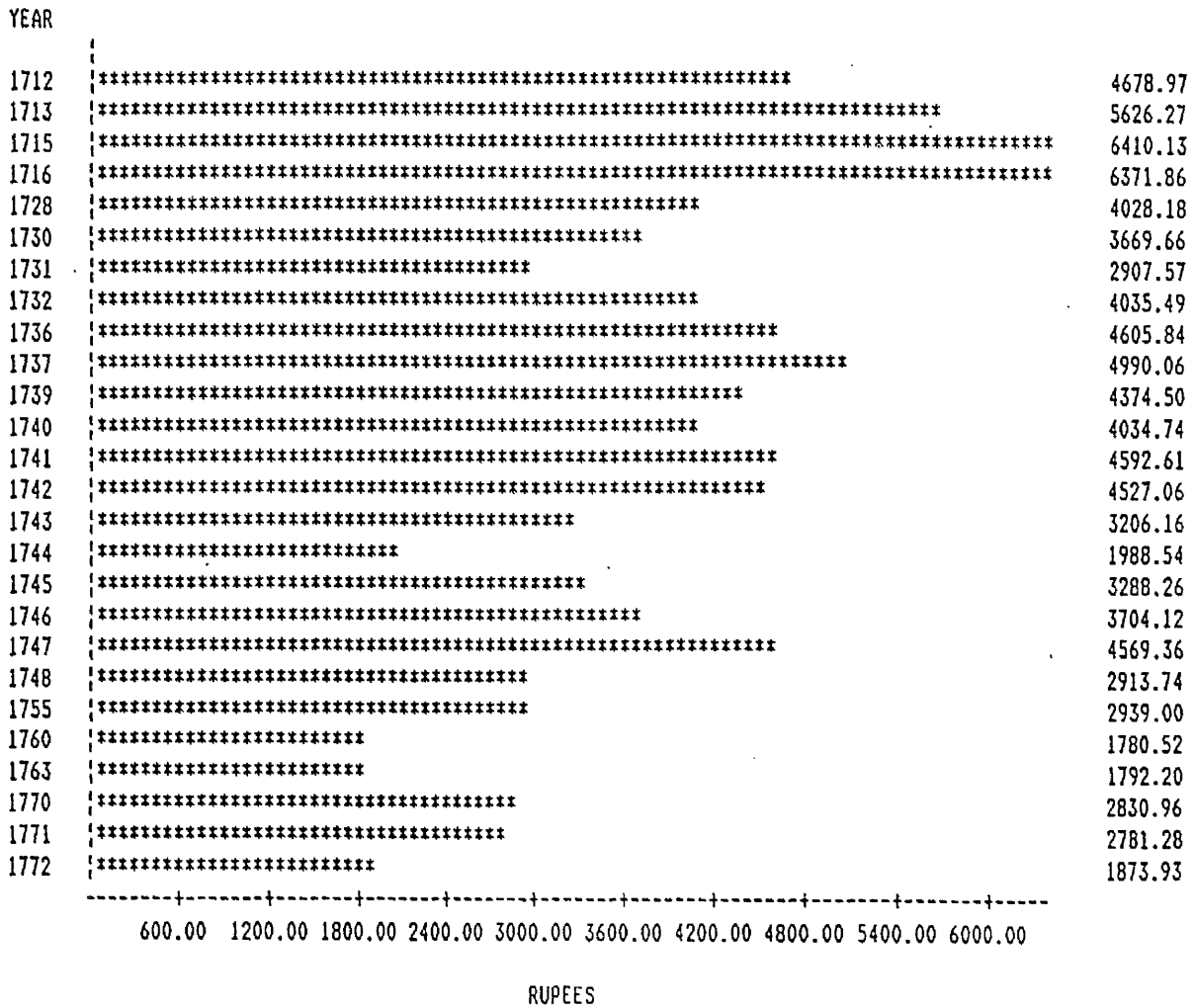


FIGURE 6.S.6: RABI REVENUE

## QASBA SANGANER

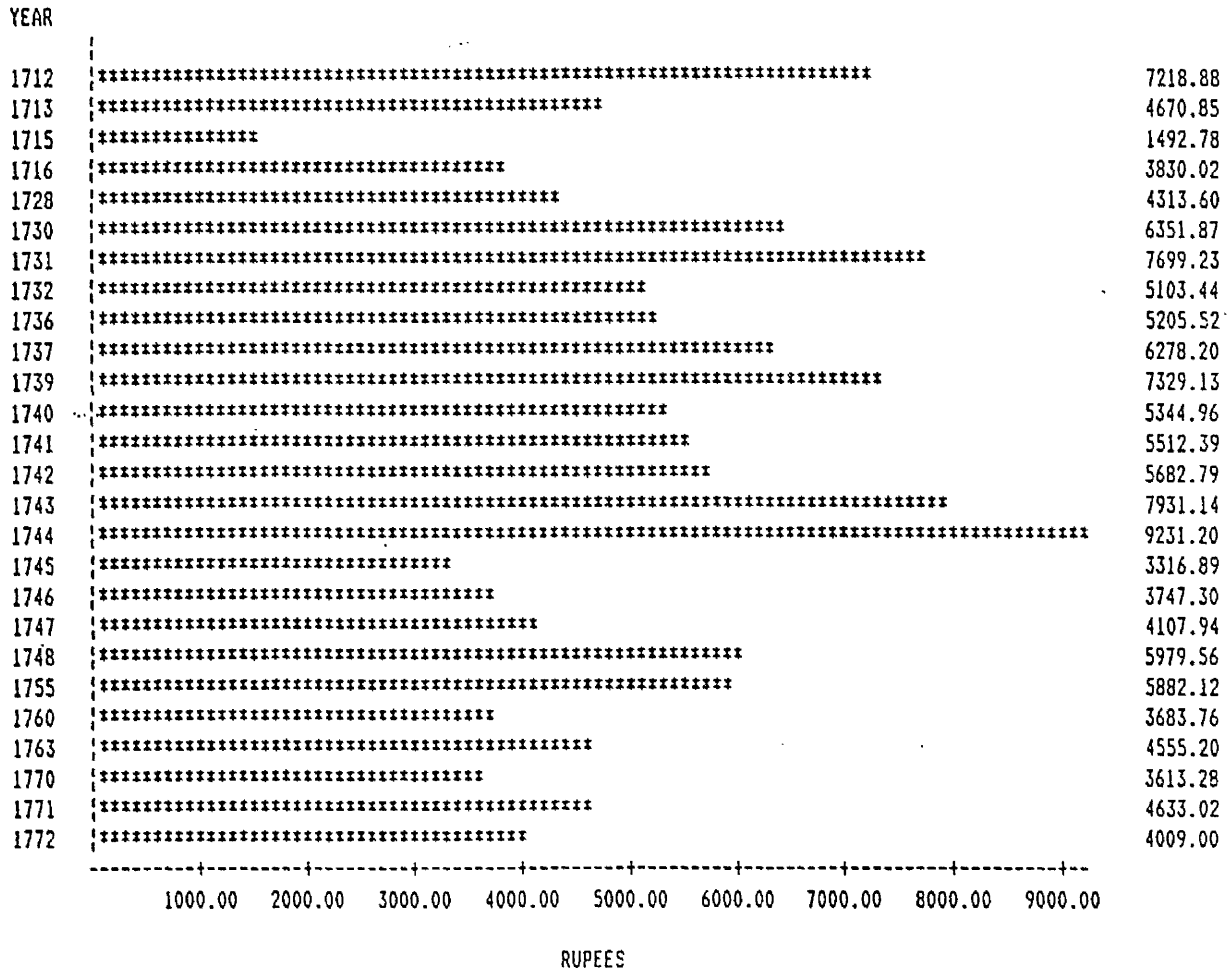


FIGURE 6.S.7: ANNUAL REVENUE

QASBA SANGANER

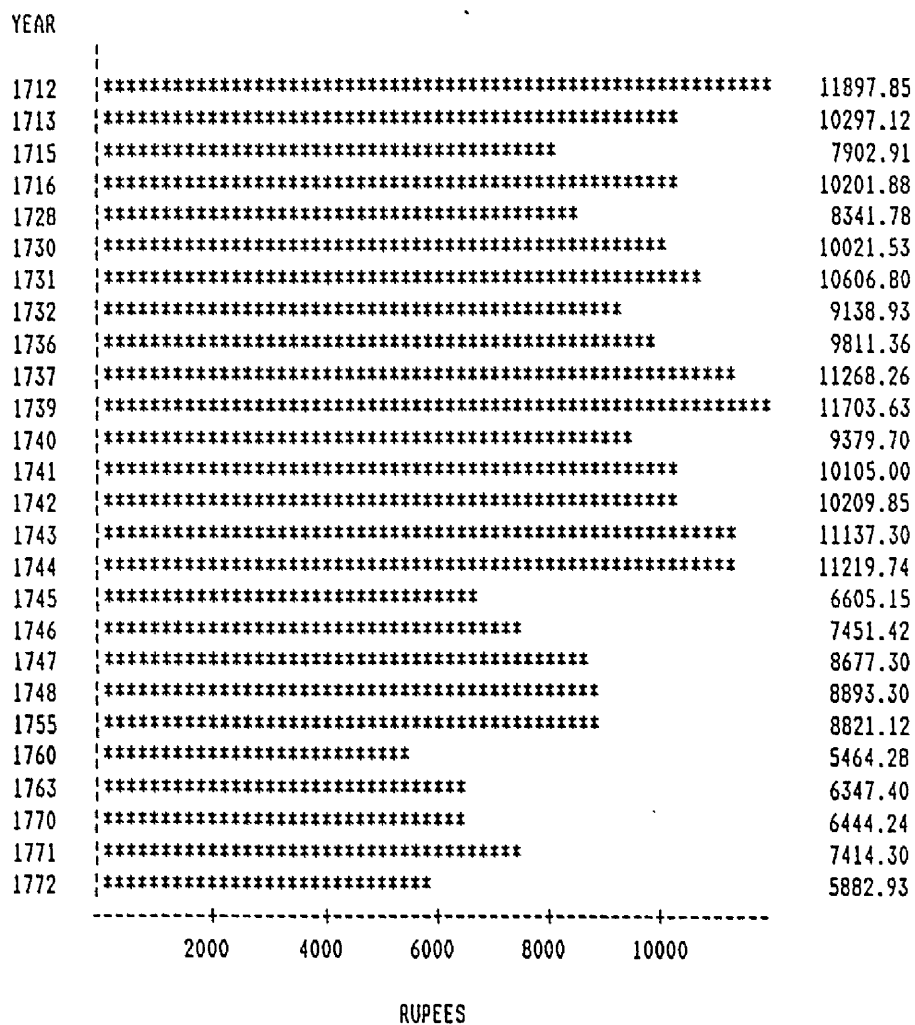
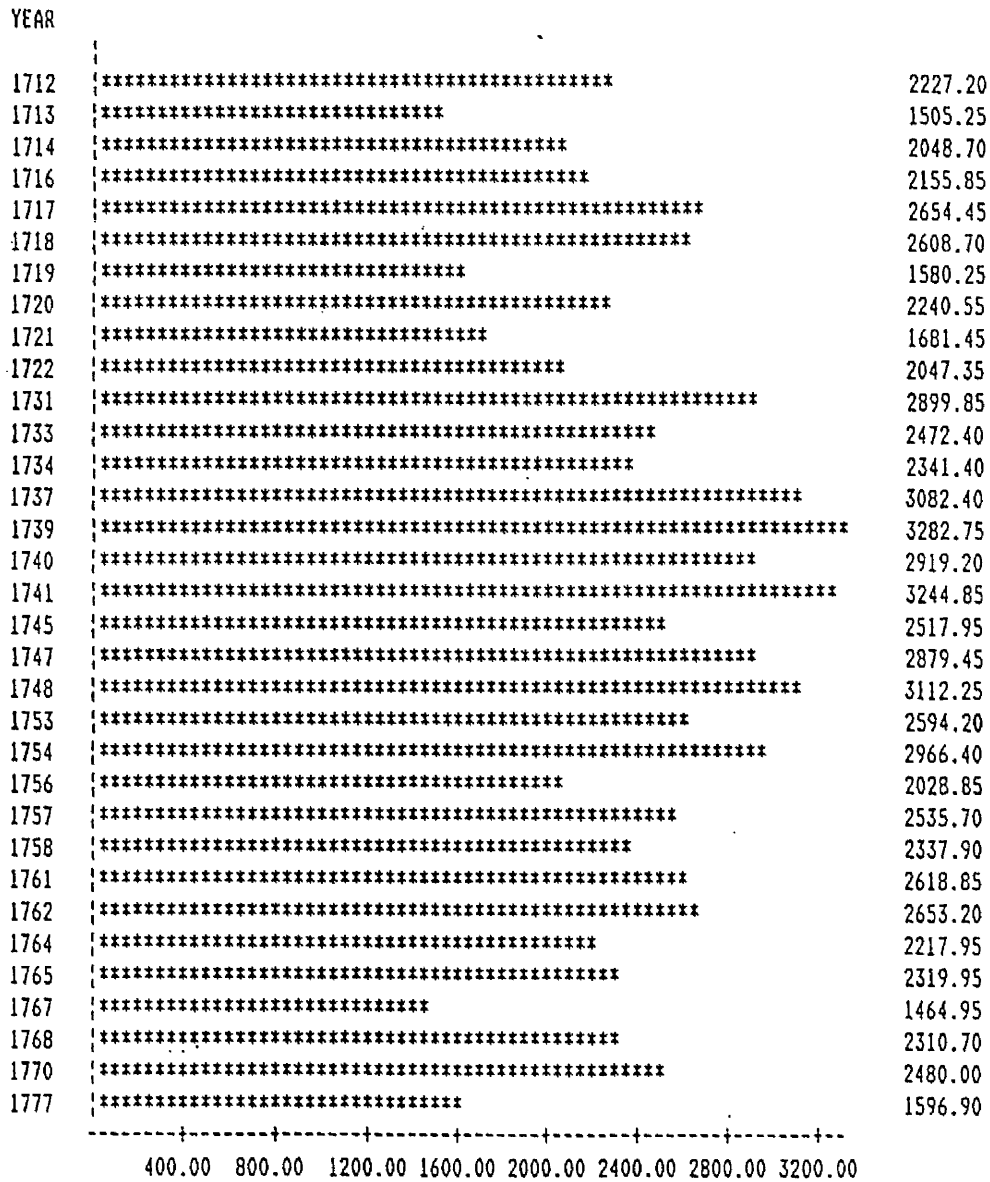


FIGURE 6.L.1: ZABTI ASSESSED AREA IN THE KHARIF HARVEST

QASBA LALSOT



BIGHAS

FIGURE 6.L.2: JINSI ASSESSED QUANTITY IN THE KHARIF HARVEST

QASBA LALSOT

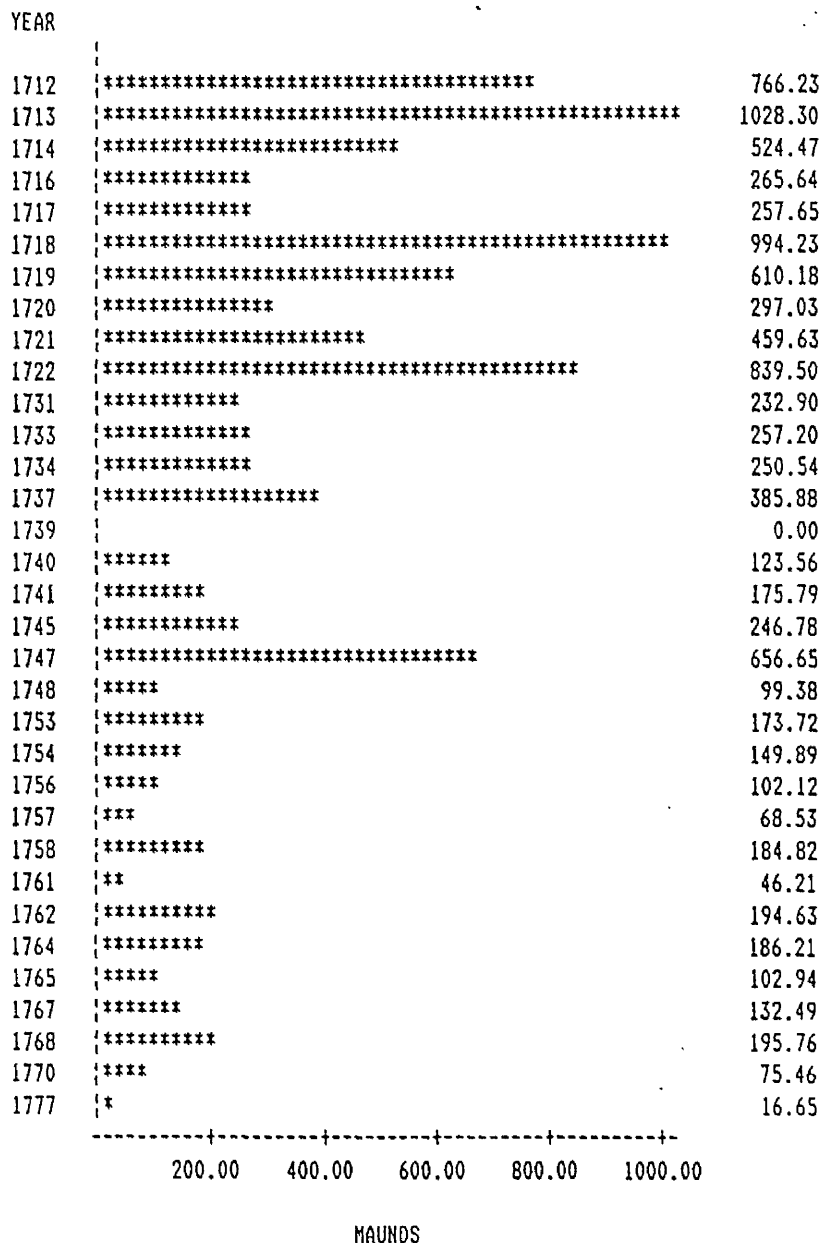
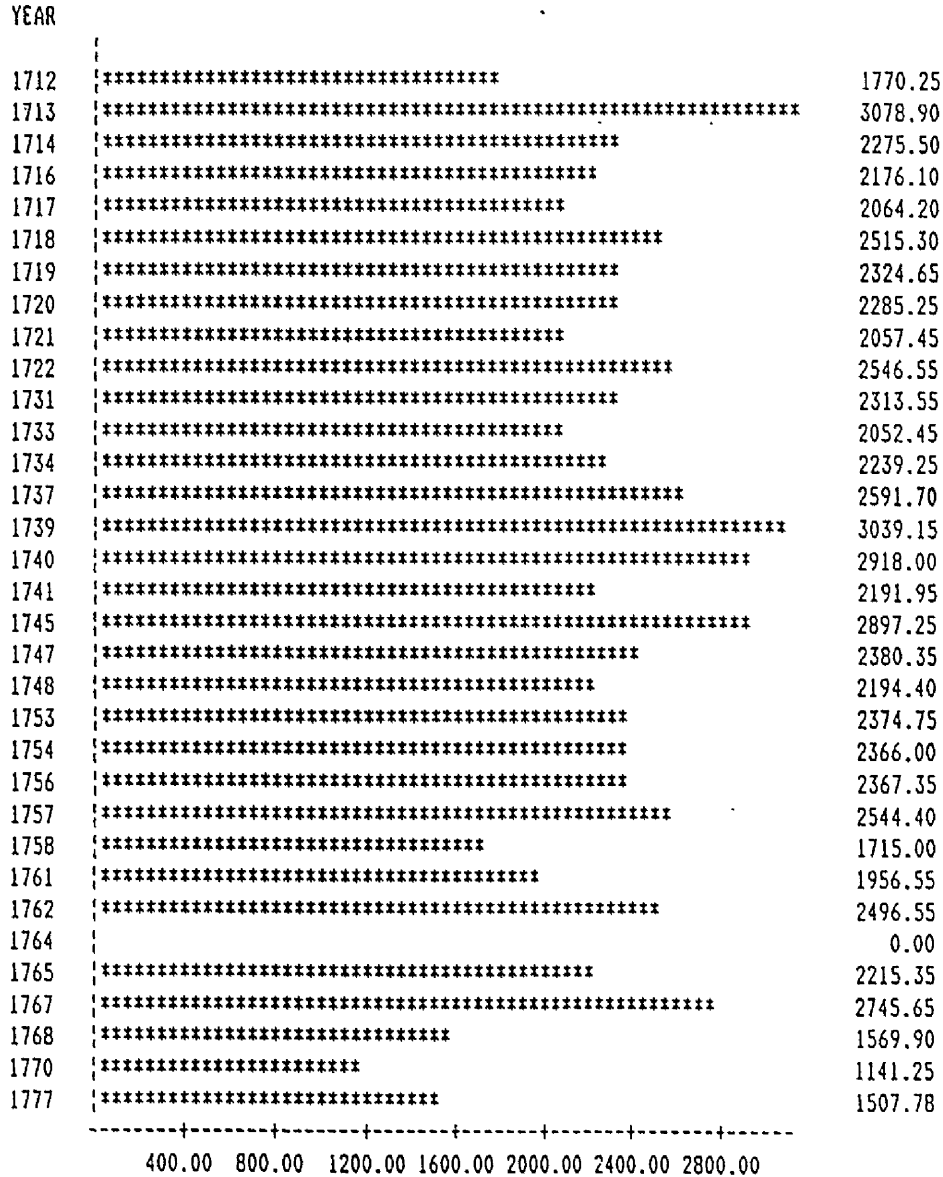


FIGURE 6.L.3: ZABTI ASSESSED AREA IN THE RABI HARVEST

QASBA LALSOT



BIGHAS

FIGURE 6.L.4: JINSI ASSESSED QUANTITY IN THE RABI HARVEST

QASBA LALSOT

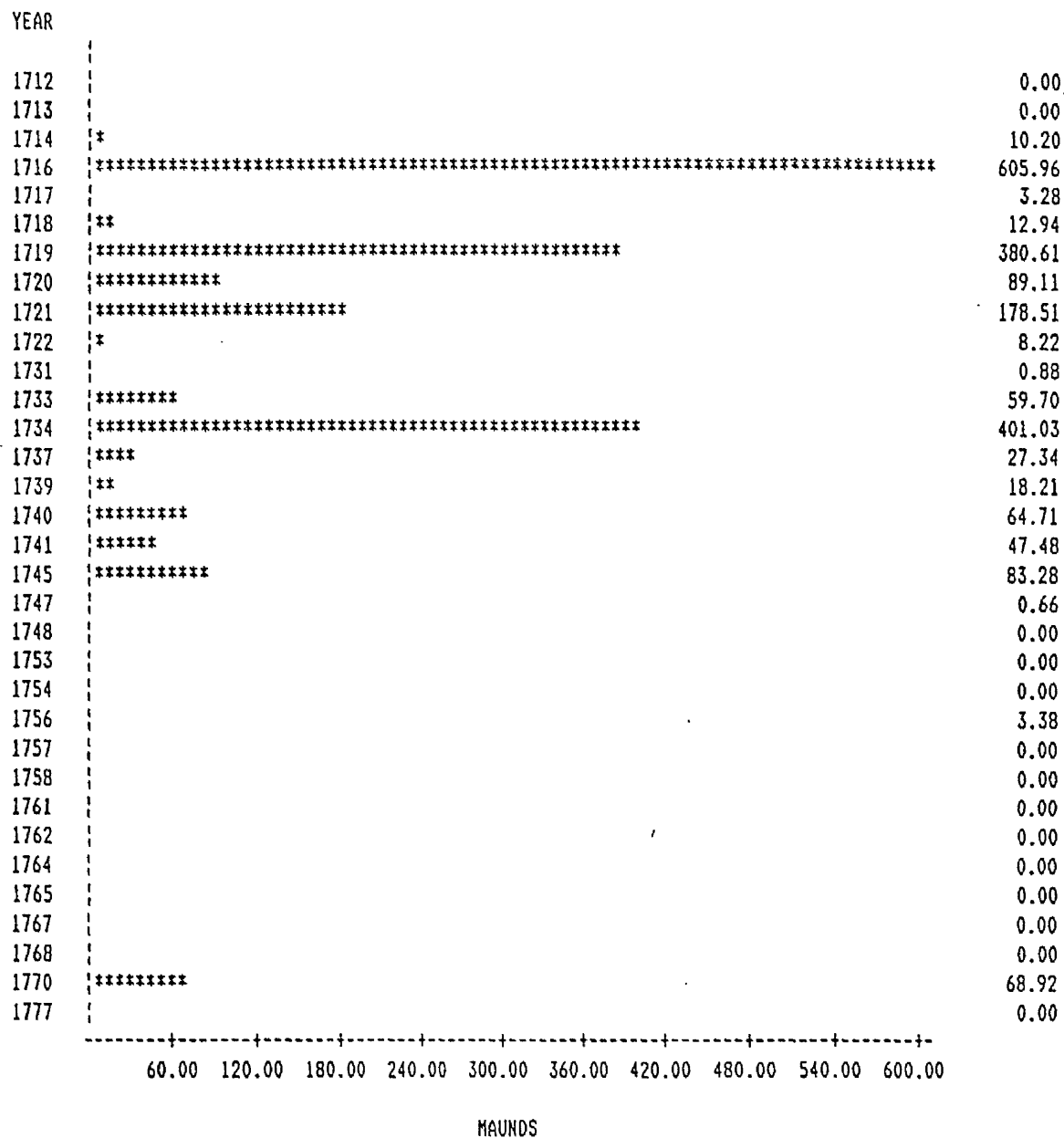


FIGURE 6.L.5: KHARIF REVENUE

QASBA LALSOT

YEAR	RUPEES
1712	3618.91
1713	4388.66
1714	2865.89
1716	2863.96
1717	3891.69
1718	4675.83
1719	2471.43
1720	2881.15
1721	2593.50
1722	3362.60
1731	4444.32
1733	3219.28
1734	3273.80
1737	4350.79
1739	3861.53
1740	3494.07
1741	4036.46
1745	2905.20
1747	3842.70
1748	3015.82
1753	2804.43
1754	3198.26
1756	2405.84
1757	2645.04
1758	2639.79
1761	2756.22
1762	2983.58
1764	2515.91
1765	2480.66
1767	1708.51
1768	2525.01
1770	2117.87
1777	1665.83

400.00 800.00 1200.00 1600.00 2000.00 2400.00 2800.00 3200.00 3600.00 4000.00 4400.00

RUPEES



FIGURE 6.L.6: RASI REVENUE

QASBA LALSOT

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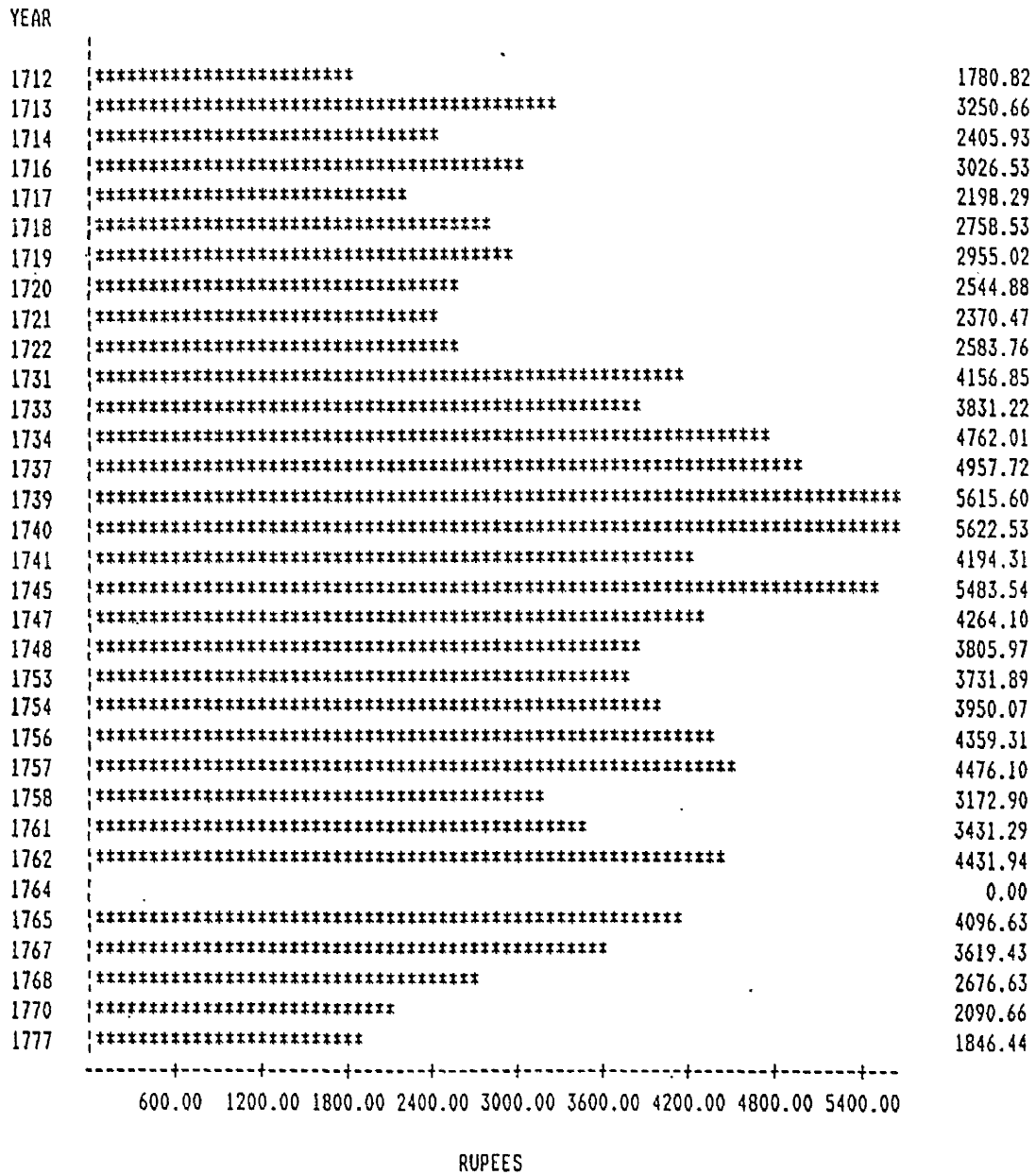


FIGURE 6.L.7: ANNUAL REVENUE

QASBA LALSOT

YEAR

1712	5399.730
1713	7639.320
1714	5271.820
1716	5890.490
1717	6089.980
1718	7434.360
1719	5426.450
1720	5426.030
1721	4963.970
1722	5946.360
1731	8601.170
1733	7050.500
1734	8035.810
1737	9308.510
1739	9477.130
1740	9116.600
1741	8230.770
1745	8388.740
1747	8106.800
1748	6821.790
1753	6536.320
1754	7148.330
1756	6765.150
1757	7121.140
1758	5812.690
1761	6187.510
1762	7415.520
1764	2515.910
1765	6577.290
1767	5327.940
1768	5201.640
1770	4208.530
1777	3512.270

500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000 8500 9000 9500

RUPEES

FIGURE 6.J.1: ZABTI ASSESSED AREA IN THE KHARIF HARVEST

QASBA JAIPUR

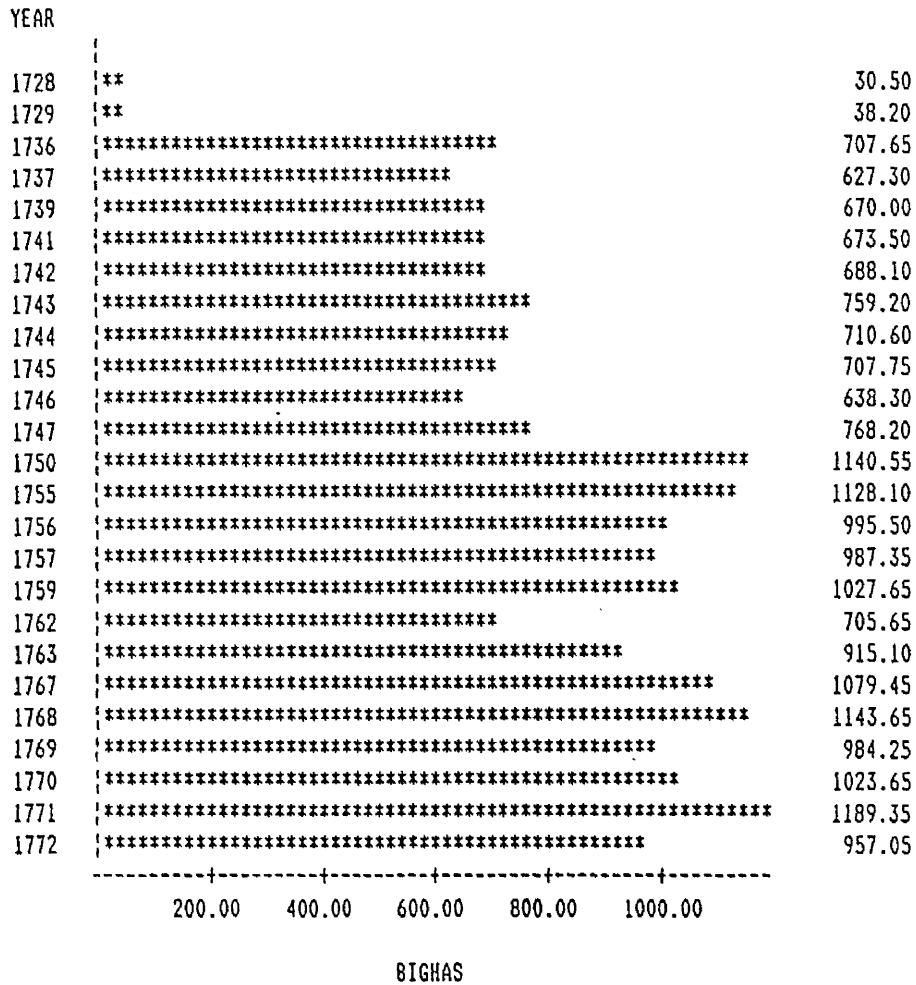


FIGURE 6.J.2: JINSI ASSESSED QUANTITY IN THE KHARIF HARVEST

QASBA JAIPUR

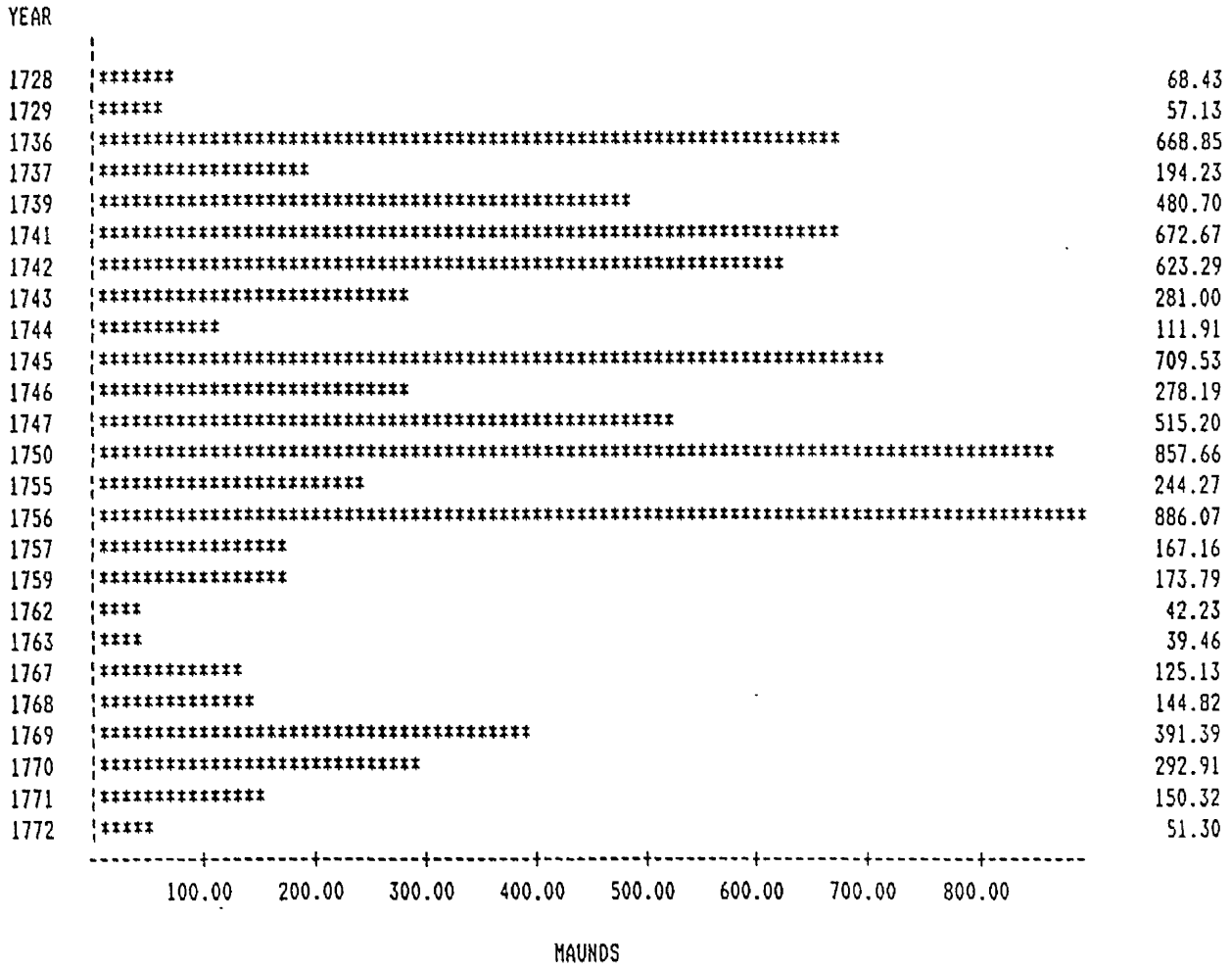


FIGURE 6.J.3: ZABTI ASSESSED AREA IN THE RABI HARVEST

QASBA JAIPUR

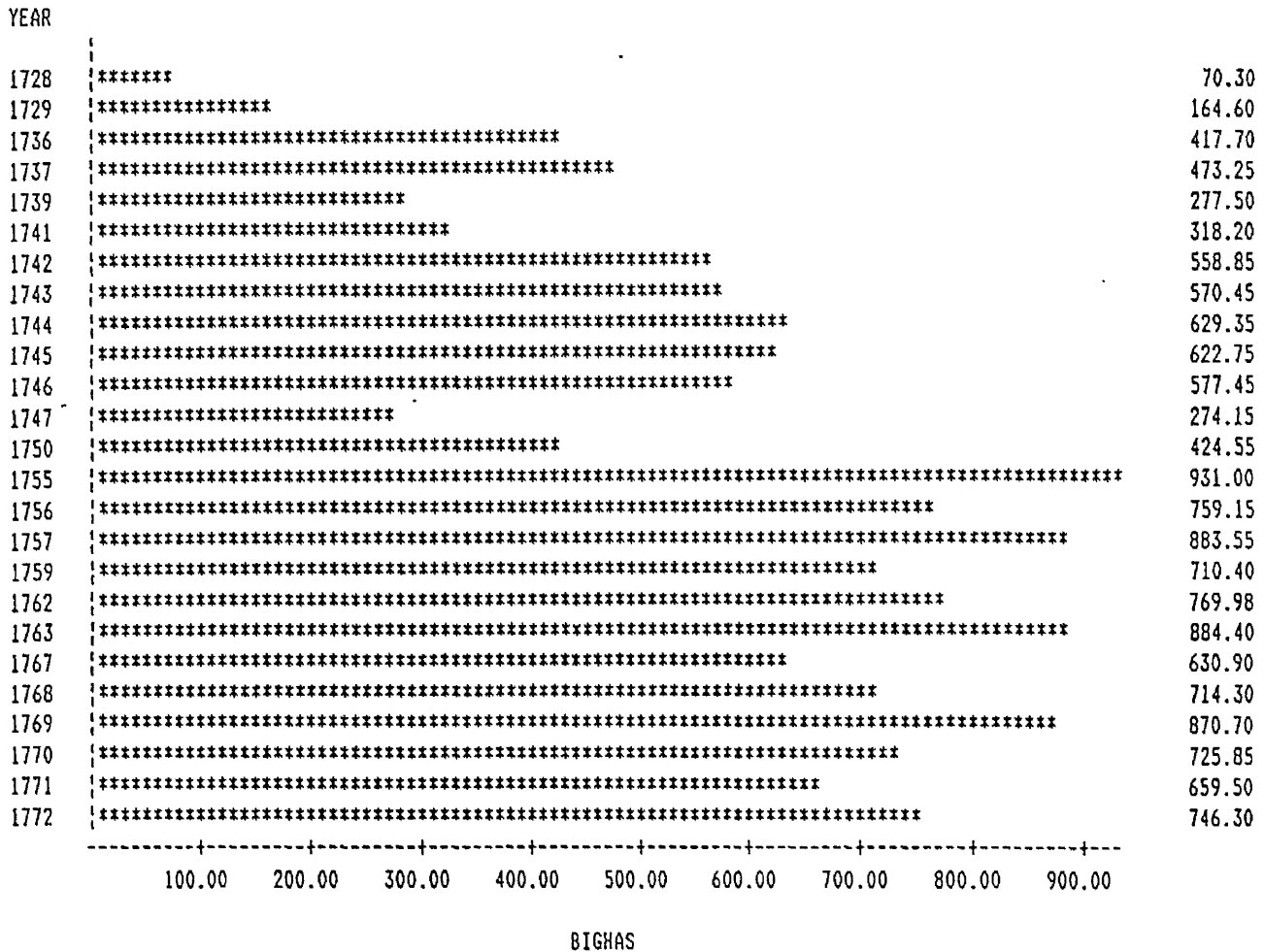


FIGURE 6.J.4: JINSI ASSESSED QUANTITY IN THE RABI HARVEST

QASBA JAIPUR

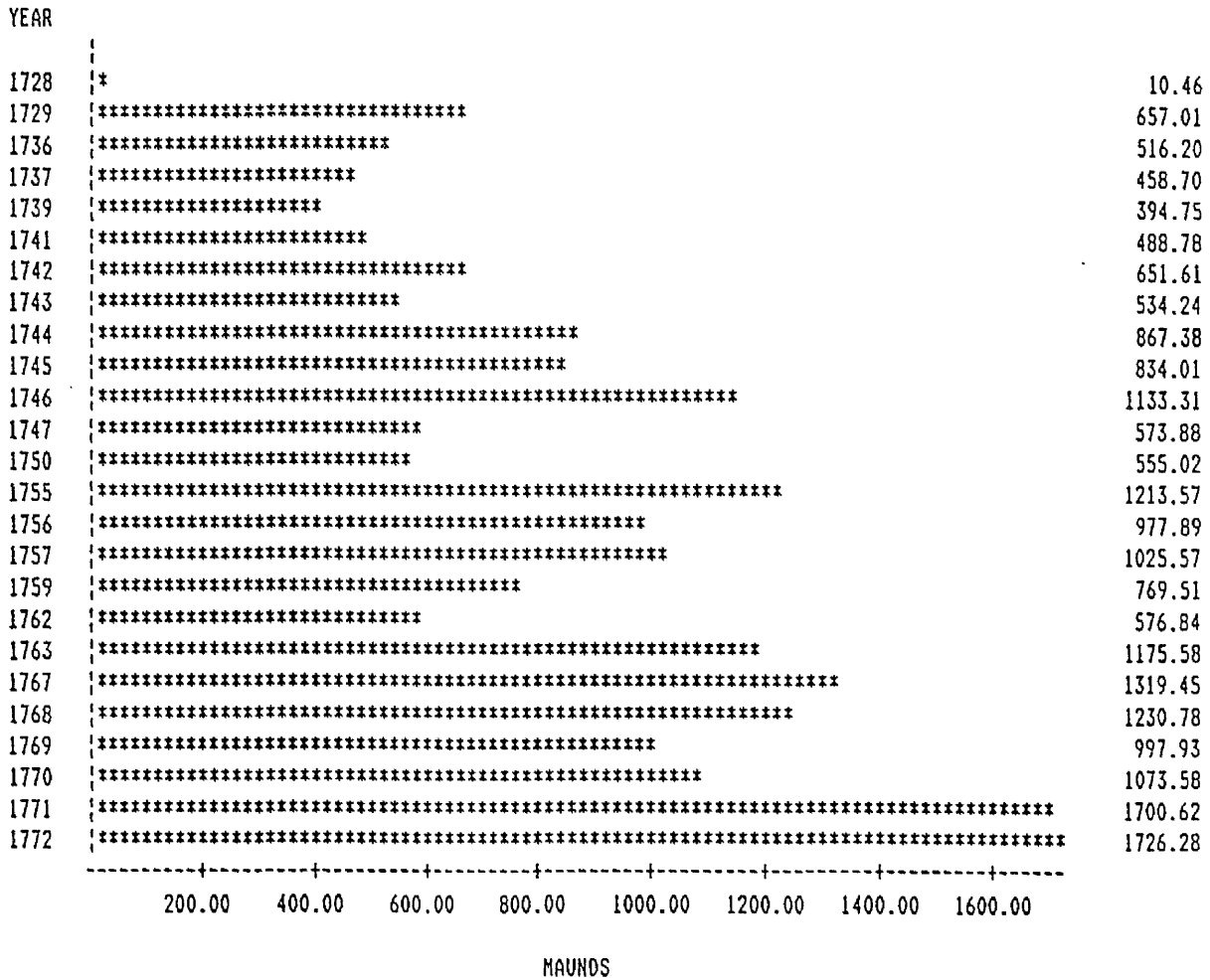


FIGURE 6.J.5: KHARIF REVENUE

QASBA JAIPUR

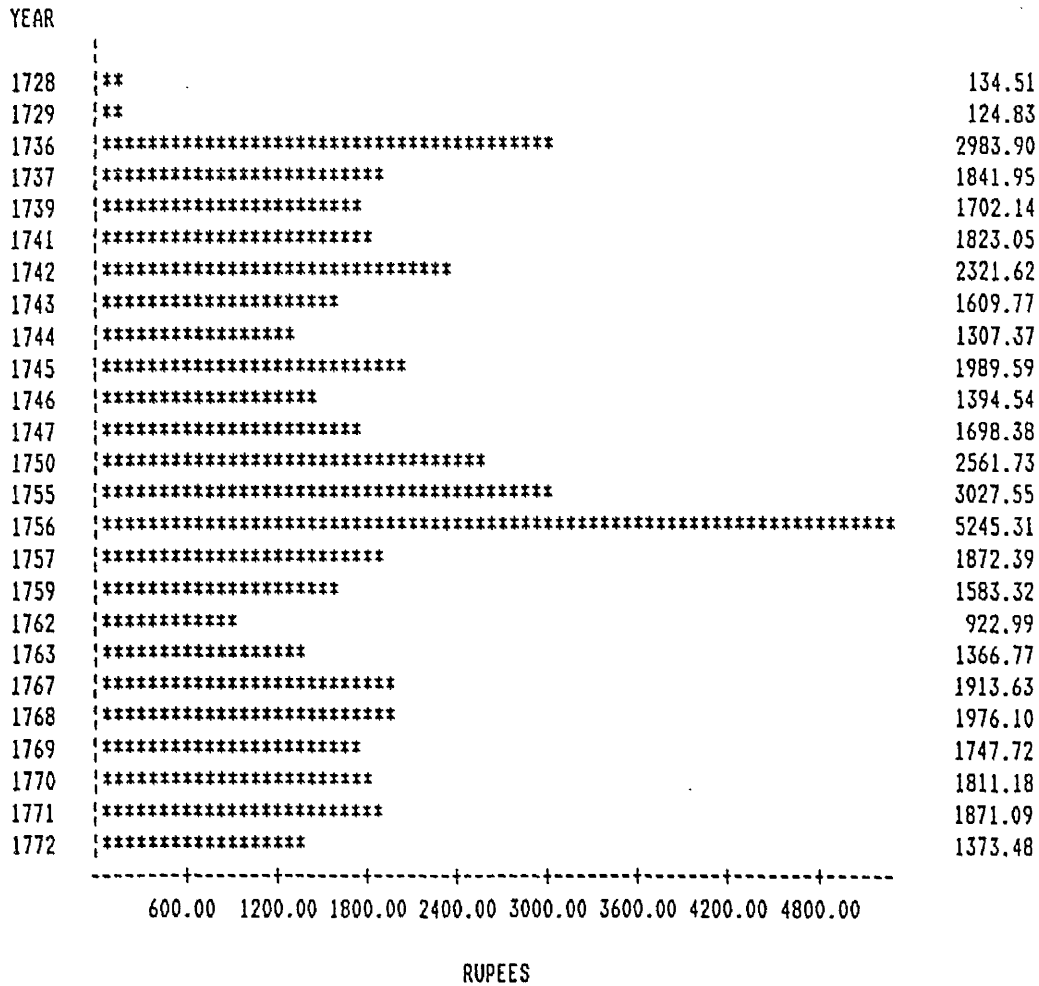


FIGURE 6.J.6: RABI REVENUE

QASBA JAIPUR

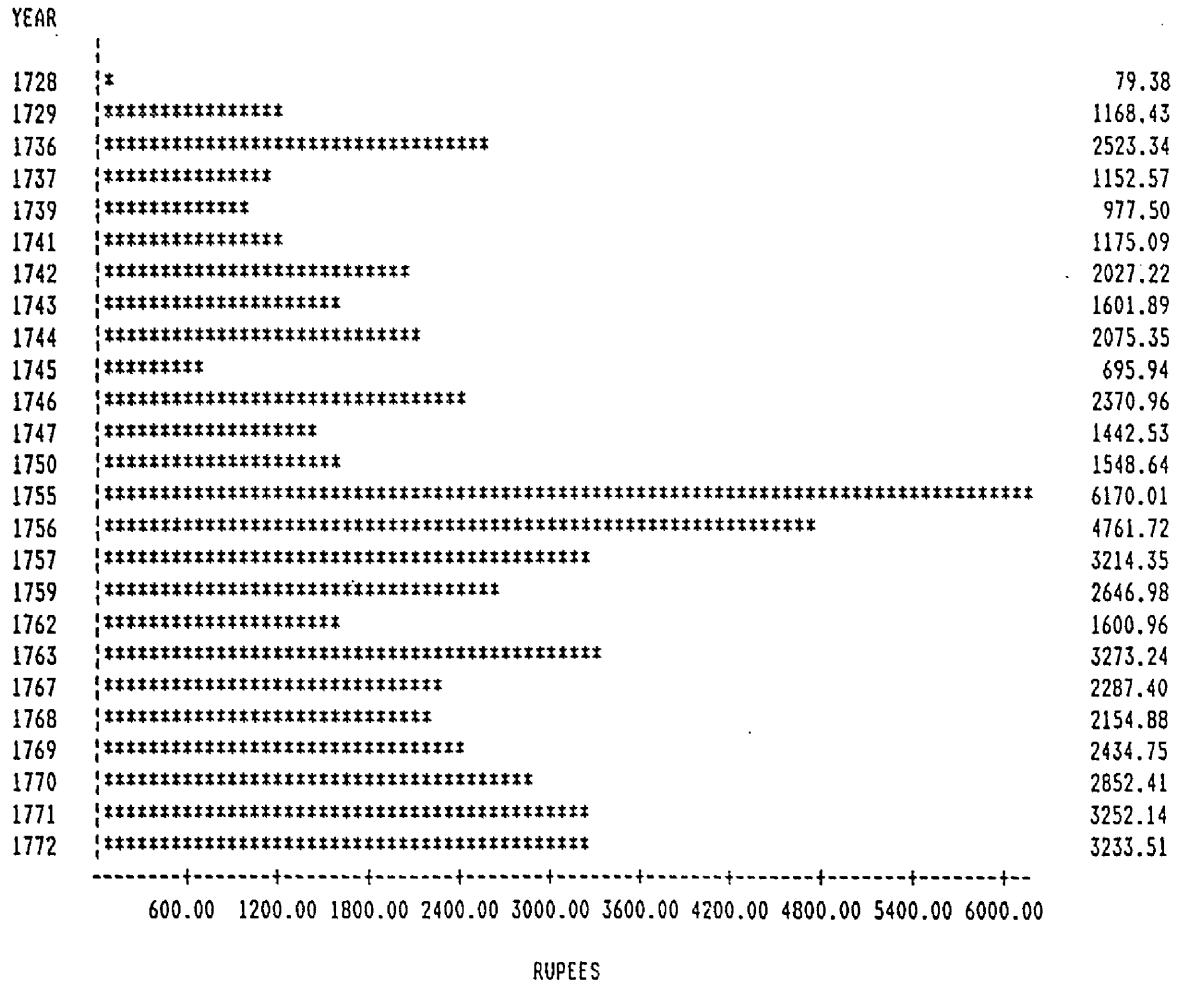
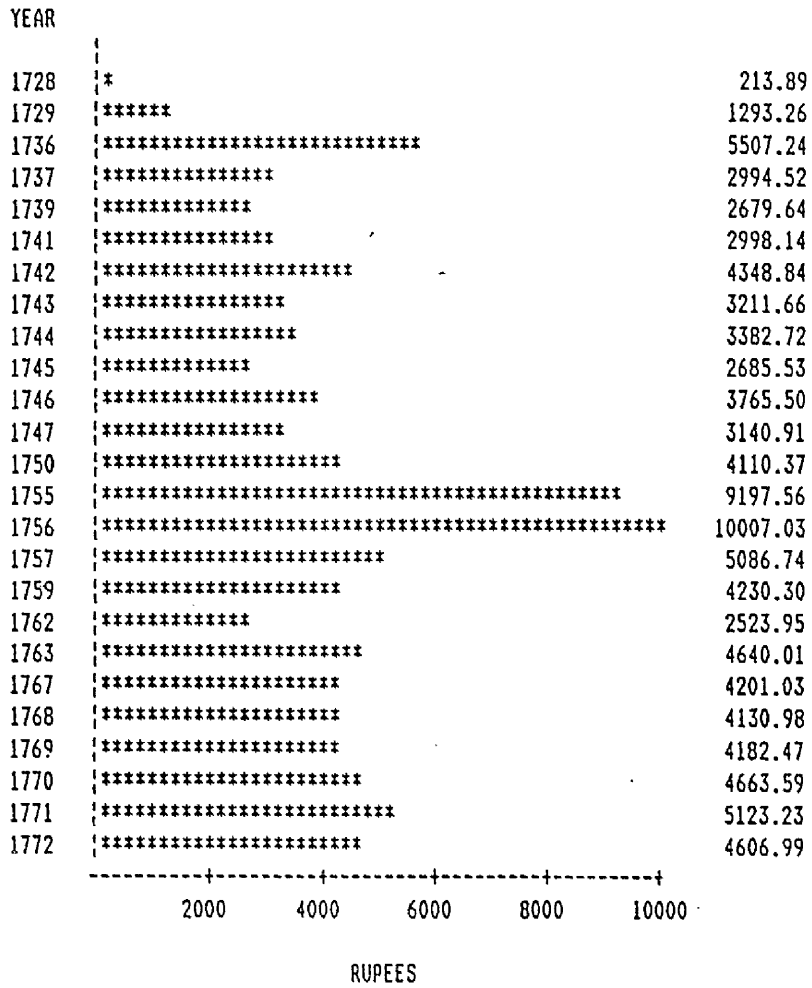




FIGURE 6.J.7: ANNUAL REVENUE

QASBA JAIPUR



Appendix 7: Khasra of Mauza Naelo: Rabi Harvest, 1734.

The khasras were an essential part of the body of information which provided the basis for the compilation of the revenue liability of individual taxpayers. The compilation of khasra papers seems to have been a regular part of the Mughal revenue administrative practice.<sup>1</sup> The compilation of the khasra was the first step towards ascertaining the individual liability of each revenue payer. They were prepared separately for each primary fiscal unit – the village or qasba – and record the crop areas sown or quantity of each crop produced by each assessee. The arhsatta figures were abstracts drawn from the khasras for each fiscal unit which record only the gross totals for each crop without reference to the taxpayer. The value of the khasras lie in that they provide us with an insight into the cropping pattern of individual agriculturists in the village. Unfortunately, there are few khasras that have been found for the eighteenth century and the majority of these are incomplete.

A khasra was prepared separately for each agricultural season and gave the exact date of compilation along with the likhtang or deed of agreement signed by the patel and patwari of the village, verifying the details of the measurement as well as accepting responsibility for any subsequent shortfalls. In accordance with the two distinct modes of revenue assessment, batai jinsi and zabti, two sets of figures under these heads were recorded in the khasra.

The format for crops assessed according to the zabti system is uniform. The length, breadth, and area of each plot is given along with the name of the assessee and the crop grown. Occasionally, the area of plots affected by crop failure were

also entered under the head of "nabud". In the khasras examined, in no case was there a uniform proportional deduction made for each plot indicating that nabud was the actual or estimated area of crop destroyed in the affected plot rather than a proxy for the condition of the harvest. The area figures are expressed in bighas measured by a jarib or dori (measuring chain or rope) of 20 ganthas or knots. One bigha was equal to 400 sq. ganthas but the dimensions of the dori differed in various parganas.<sup>2</sup> Often, there are two or more entries for an individual for a single crop suggesting that the khasra was a plot survey rather than a record of the aggregated area under each crop cultivated by the individual. It also suggests the possibility of dispersed holdings.

The crop-sharing or batai jinsi account appears to be organised in two distinct ways. In the majority of khasras seen, each jinsi crop was subdivided into the varying schedule of tax rates applicable - i.e., a half-share, a third, a fourth or two-fifths share. Then for each such division, the khasra records: the name of the taxpayer, the total amount of crop produced by him, the amount accruing to the state and the amount left with the agriculturist in accordance with a specified tax rate, the additional grain amount, or "seri", charged as a percentage of the state share, and lastly, the total grain amount due to the state - i.e. basic revenue plus seri. This exercise was repeated in turn for each crop assessed according to the crop-sharing method. Immediately below the name of the taxpayer one or more figures (generally three and never more than three) are listed which add up to the figure under the head of total quantity produced by the assessee. Invariably, the first of these figures is the largest. This fact, along with the observation that there were never more than three figures in any case, lead us to suggest that they were the amounts of harvested grain weighed at three different dates during the harvest

period. It is unlikely that the figures bear any relationship to the three revenue instalments or qists as the date of compilation of the khasras examined so far is before that of the first instalment date.<sup>3</sup> Alternatively, the figures could refer to grain heaps on the threshing floor as was the standard practice in the second method of recording jinsi values in the khasra. The format for the crop-sharing khasra discussed above has been described as "khusa batai" or where the unthreshed grain sheaves were weighed and divided between the state and the peasant.

The second form of batai khasra was very different and probably represents a different procedure for crop-sharing. In this, the number of grain heaps or "dheris" were recorded against the name of each assessee for each crop. Next, the quantity of grain in each dheri was given and this multiplied with the number of dheris gave the amount of crop taken in revenue. Finally, a small charge under the head of "thanpo" - literally a mud or dung mark affixed on the grain heap on the threshing floor to safeguard against theft - was added on to give the total revenue amount demanded. Hence, the gross amount produced or the respective shares of the peasant and the state in accordance with a specified proportion was not stated. The number of heaps varied and in some cases more than a hundred heaps of a single crop have been recorded for one assessee. The heaps were of uniform weight for each entry made in the khasra and may perhaps be the quantity measured by a earthen measuring pot. The weight of the dheri varied for each tax payer indicating that it was not a standardised measure instituted by the revenue authorities but fluctuated with the size of the pot provided by the assessee. In the khasra examined, the weight of a dheri varied widely ranging from two maunds to as little as two and a quarter sers with the average being approximately one and a

quarter maunds (or fifty sers) for bajra and five sers for the pulses moth, mung, and urad. This form of khasra papers indicate that crop-sharing was based on actual physical division of the threshed grain described as "ghalla batai" or "ghalla bakshi".

In the khasras, the name of the individual has been recorded under the general heading of asami. This term should, in this context be understood to mean taxpayer rather than cultivator, although the two may coincide in the majority of cases. This distinction is especially applicable to the zamindar or bhomia account in the khasra of village Naelo analysed below. In this, when the land was not tilled under the personal supervision of the bhomia, either by vavidars or bonded labourers, halis or agricultural labourers or in gharuhala, the name of the actual cultivator was explicitly stated. While this feature is very clear in the case of the bhomias, we cannot assume that it does not apply to the other agriculturists. The entries for the patels, for instance, may include the obligation to remit revenue on land cultivated by seasonal migrant peasants or pahis within his jurisdiction. Secondly, there are an inexplicably large number of entries where no name has been recorded. These have been entered under "awjan" which has been translated to mean unidentified by S.P. Gupta.<sup>4</sup> It occurs in all khasras for every crop but there is no systematic pattern in its occurrence. Where the records have been prepared in such detail, this lack of precision appears illogical. It may perhaps mean 'ditto' as in one instance the entry following Roop Brahman is awjan Roop and in the bhomia account of the khasra of village Naelo, awjan gharu follows Bahu Jodhpuri's account. However, until we obtain corroborative evidence and can be reasonably certain of its correct meaning, awjan entries have been separately catalogued in the table appended.

The khasra examined in detail is of village Naelo for the rabi harvest of 1734. The larger administrative unit of which the village was a part - a tappa or pargana - has not been mentioned. The total number of asami's recorded are 102 or 91 if we exclude the kamins. With an insignificant area assessed under zabti (3.75 bighas), devoted entirely to small vegetable plots cultivated by Malis, this khasra provides details of the foodgrains - barley, wheat, and mixed grains - on which revenue was levied by crop-sharing. Of the foodgrains, wheat has been accounted for separately while all the other grains have been included in a general undifferentiated category. These two categories are then broken down into the various dasturs or customary proportions in which the gross produce was shared between the state and the assessee. Interestingly, we notice that a taxpayer may be assessed at more than one rate for the same crop as well as occasionally there are several entries under one name for a single tax category.

There are a number of entries where two names have been recorded. Both taxpayers in these cases were invariably of the privileged strata in terms of social status belonging either to the higher castes or the patels of the village. This seems to indicate joint liability or perhaps an arrangement for cultivation in partnership. We are at present unclear as to the nature of or reason for these partnerships. As the parties are of a different caste in some cases, we cannot explain it in terms of family members cultivating individually and in partnership. These entries differ from those in the big zamindars or bhomia account discussed below where the names of the tenants are identified by the prefix of "jota" or "jot" meaning 'cultivated by'.

The account of the big zamindars, or bhomias (Sl.Nos. 1-4 in Table 7.1), is interesting in that although they are the largest producers, they produced only barley and not the higher value wheat crop. Further, only when they cultivated their land in gharuhala with the help of halis, were they taxed at the rate of a quarter of the taxable produce. However, they leased out a large portion of their land to tenants which was taxed at the rate of a third. The produce from the leased out portion of the two highest revenue payers in the village - Bahu Jodhpuri and Bahu Tavri - was over three-quarters of their total taxable produce. The tenants were either the patels or agriculturists with a substantial tax liability of their own. The leasing in of land by substantial cultivators suggests that the terms offered by the landlord must have been mutually advantageous to attract these 'rich' peasants.

The kamin account comprising six barbers, a carpenter, ironsmith, potter and two menials, was taxed at a concessional rate of a third of the produce. In each case the amount recorded against their name was very small - ranging from as little as three sers to thirty sers. This feature along with the element of regular gradation in the amounts recorded for each kamin suggests that the tax was levied on the customary share of grain received by the kamins.<sup>5</sup>

In accordance with the principle stated in the dastur amals, or schedule of revenue rates, we would have expected that the patels, Brahmans and members of the higher castes were taxed at rates lower than those applicable to the general agriculturist castes, i.e. the Mali's, Gujars, Jats, and Ahirs. However, we note no such caste based distinction in the rate of taxation. From the table appended, it can be seen that for the highest proportions of two-fifths (40%) and a third

(33.33%) of the produce being levied as revenue, the majority of the entries are for patels, Brahmans and Pancholis (kayasthas).

References:

1. Irfan Habib, Agrarian System, p.213; N.A.Siddiqi, Land Revenue System under the Mughals 1700-1750, pp50-54; Chhatar Mal, Diwan-i-Pasand, trans. L. Dacosta, pp.9-10.
2. The jarib was always divided into 20 ganthas and the standard jarib was equal to 60 *gaz*. Although the jarib in use in eastern Rajasthan was also divided into 20 ganthas, the length of the jarib, and hence the area of the bigha, varied from one pargana to another (see discussion in note of Chapter VI)
3. Chitti dt. Vaisakh sudi 9 VS 1783/ AD 1726 [No. 362]. The letter quotes the dates for three kharif instalments or qists as mid-November, mid-December, and early February. The rabi season had two qists; one in mid-June and the second in July. These dates differ slightly from the dates of revenue instalments for Punjab quoted in Indu Banga, Agrarian System of the Sikhs, p.95.
- 4 S P Gupta, "Khasra Documents in Rajasthan", Medieval India-A Miscellany, vol. IV, pp. 168-176.
- 5 Also see discussion on the status and tax liabilities of agriculturist and non-agriculturist kamins in Chapter III on Agrarian Relations.



Notes to Table 7.1

The figures under Total revenue (col.3) include the basic land revenue (col.2) as well as an additional levy termed seri that was charged over and above the basic revenue. The rate at which seri was levied varies slightly between different asami accounts and is about 4.40 per cent of the basic revenue. Seri appears to be a levy under jihat or collection charges.

Asami's Share in col.4 has been derived by subtracting Total Revenue (col.3) from Taxable Produce (col. 5). This is the only derived figure in the table. The figures in the other columns have been entered as given in the khasra. The Asami's Share gives the amount of grain left with the cultivator after the land revenue had been deducted.

With the exception of entries numbered 1 to 4, the figures listed against barley include the mixed crops baijhari and gojara. No distinction has been made in the khasras with regard to these lower value crops. Wheat, on the other hand has been entered separately in the khasra for each producer. Entries 1 to 4 form a sub-section in the khasra recording the revenues from the Rau or substantial zamindar-bhomas cultivating land with the help of their vasisdars and halis or agricultural labourers. In this sub-section it is stated that the figures entered under barley are for that crop alone.

**Table 7.1****Foodgrain Production in village Naelo : Rabi harvest 1734 A.D.**

Sl. No.	Name of Asami	Crop	Rate (1)	Basic Revenue (2)	Total Revenue (3)	Asamis Share (4)	Taxable Produce (5)
1.	Bahu Jodhpuri	Barley	1/4	14.38	15.25	42.25	57.50
	-- [Isar Narnaul]	--	1/4	16.00	17.00	47.00	64.00
	-- [Dalpati Brahman]	--	1/3	29.00	30.25	56.75	87.00
	-- [Chitar Patel]	--	1/3	41.00	42.75	80.25	123.00
2.	Bahu Tavri	Barley	1/4	28.75	30.50	84.50	115.00
	-- [Lalo Patel]	--	1/3	29.00	30.25	56.75	87.00
	-- [Hiro]	--	1/3	39.00	40.70	76.30	117.00
	-- [Pemu Patel]	--	1/3.5	45.00	47.00	110.50	157.50
3.	Bai ka	Barley	1/4	7.50	7.56	22.44	30.00
4.	Km Kilyan Singh	Barley	1/4	51.50	54.00	152.00	206.00
	--	--	1/4	5.50	5.83	16.17	22.00
	-- [Gharu]	--	1/4	1.75	1.85	5.15	7.00
5.	Bhojraj Kachhawa	Barley	1/4	5.00	5.06	14.94	20.00
6.	Bhanu Chauhan	Barley	1/4	1.25	1.33	3.67	5.00
	--	Wheat	1/4	3.25	3.45	9.55	13.00
7.	Mayaram Chauhan	Barley	1/4	10.63	11.28	31.22	42.50
	--	--	1/4	12.00	12.50	35.50	48.00
	--	--	1/4	2.25	2.38	5.62	8.00
	-- & Pemu Patel	--	1/3	19.00	19.80	37.20	57.00
	-- & Gangaram Ptl	Wheat	1/3	2.00	2.09	3.91	6.00
	--	--	1/3	7.00	7.22	13.78	21.00
8.	Nir Singh Chauhan	Barley	2/5	17.00	17.75	24.75	42.50
	--	--	1/3	8.42	8.80	16.45	25.25
	--	Wheat	1/3	16.00	16.70	31.30	48.00
9.	Sadaram Kachhawa	Barley	1/3	3.60	3.80	6.95	10.75
	--	--	1/4	9.06	9.46	26.79	36.25
	--	Wheat	1/3	2.50	2.61	4.89	7.50
10.	Surat Singh Rathor	Barley	1/4	45.00	47.00	133.00	180.00
	--	Wheat	1/4	15.00	15.50	44.50	60.00
11.	Parasram Rawat	Barley	1/4	22.13	23.13	65.37	88.50
	--	--	1/4	17.51	18.28	51.76	70.04
	--	Wheat	1/4	2.04	2.13	6.03	8.16
	--	--	1/3	8.00	8.35	15.65	24.00

continued Table 7.1

12. Bino Patel	Barley	1/3	9.50	9.93	18.57	28.50
--	Wheat	2/5	6.50	6.80	9.45	16.25
--	--	1/3	8.50	8.88	16.62	25.50
13. Chitar Patel	Barley	2/5	18.00	18.80	26.20	45.00
--	--	2/5	32.50	33.95	47.30	81.25
-- & Dedo Patel	--	1/3	70.00	73.13	136.87	210.00
-- & Dedo Patel	--	1/3	34.00	35.50	66.50	102.00
--	Wheat	1/3	17.00	17.75	33.25	51.00
14. Dedo Patel	Barley	2/5	2.00	2.09	2.91	5.00
-- & Chitar Patel	--	1/3	70.00	73.13	136.87	210.00
-- & Chitar Patel	--	1/3	34.00	35.50	66.50	102.00
--	--	1/4	24.25	25.30	71.70	97.00
--	Wheat	1/4	17.00	17.75	50.25	68.00
15. Gangaram Patel	Barley	2/5	19.50	20.38	28.37	48.75
--	--	1/3	6.50	6.78	12.72	19.50
--	--	1/3	1.88	1.96	3.67	5.63
--	Wheat	2/5	4.00	4.18	5.82	10.00
-- & Kheto B'man	--	1/3	24.00	25.00	47.00	72.00
-- & My'ram Ch'han	--	1/3	2.00	2.09	3.91	6.00
16. Jagrup Patel	Barley	2/5	5.50	5.75	8.00	13.75
--	--	2/5	16.00	16.70	31.30	48.00
--	--	1/4	27.50	28.73	81.27	110.00
--	Wheat	1/3	10.50	10.98	20.52	31.50
17. Lalo Patel	Barley	2/5	14.25	15.15	21.10	36.25
--	--	1/3	15.50	16.20	30.30	46.50
--	Wheat	1/3	10.00	10.45	19.55	30.00
18. Malu Patel	Barley	2/5	3.00	3.13	4.37	7.50
--	--	1/3	6.50	6.80	12.70	19.50
19. Pemu Patel	Barley	1/3	0.50	0.53	0.97	1.50
--	--	1/3	7.00	7.40	13.60	21.00
-- & My'ram Ch'han	--	1/3	19.00	19.80	37.20	57.00
--	Wheat	1/3	4.50	4.70	8.80	13.50
20. Patwari	Barley	1/3	5.50	5.50	11.00	16.50
--	Wheat	1/3	2.00	2.00	4.00	6.00
21. Bakso Pancholi	Barley	2/5	9.50	9.93	13.82	23.75
22. Kanu Pancholi	Barley	2/5	5.50	5.75	8.00	13.75
-- & Kheto B'man	--	2/5	8.00	8.35	11.65	20.00
--	--	1/3	20.00	20.88	39.12	60.00
--	Wheat	2/5	4.00	4.18	5.82	10.00

continued Table 7.1

23. Lakho Pancholi	Barley	2/5	8.50	8.88	12.37	21.25
--	--	1/3	43.00	44.88	84.12	129.00
--	--	1/3.5	5.00	5.23	12.27	17.50
--	Wheat	1/3	19.00	19.85	37.15	57.00
24. Madhur Pancholi	Barley	2/5	7.00	7.30	10.20	17.50
--	--	1/3.5	30.40	31.63	74.37	106.00
--	Wheat	1/3	22.50	23.50	44.00	67.50
25. Ravdo Pancholi	Wheat	1/3	6.25	6.50	12.25	18.75
26. Khetsi Kayastha	Barley	2/5	1.00	1.05	1.45	2.50
--	--	1/3	8.50	8.88	16.62	25.50
-- & Gordhan B'man	--	1/3	1.75	1.83	3.42	5.25
--do--	Wheat	1/3	9.25	9.75	18.00	27.75
27. Mohan Kayastha	Barley	1/3.5	28.5	29.75	70.00	99.75
28. Chatro Brahman	Barley	2/5	2.25	2.36	3.27	5.63
--	--	2/5	4.50	4.73	6.52	11.25
--	Wheat	2/5	10.00	10.45	14.55	25.00
29. Dolo Brahman	Wheat	2/5	27.00	28.13	39.37	67.50
30. Dalpati Brahman	Barley	1/3	2.00	2.09	3.91	6.00
--	Wheat	2/5	7.00	7.30	10.20	17.50
--	--	1/3	29.00	30.28	56.72	87.00
31. Dhanu Brahman	Wheat	2/5	9.60	10.05	13.95	24.00
32. Dungo Brahman	Barley	2/5	5.50	5.75	8.00	13.75
33. Gordhan Brahman	Barley	2/5	1.25	1.30	1.83	3.13
-- & Kheto B'man	--	2/5	10.50	10.98	15.27	26.25
-- & Khetsi Ky'stha	--	1/3	1.75	1.83	3.42	5.25
34. Govindo Brahman	Barley	2/5	0.50	0.53	0.72	1.25
35. Hardo Brahman	Barley	2/5	2.25	2.35	3.28	5.63
-- & Kuslo B'man	--	1/3	1.50	1.56	2.94	4.50
36. Harji Joshi	Barley	2/5	4.00	4.18	5.82	10.00
--	--	1/3	23.35	24.35	45.65	70.00
37. Kheto Brahman	Barley	1/4	25.00	26.10	73.90	100.00
-- & Gordhan B'man	--	2/5	10.50	10.98	15.27	26.25
-- & Kanu Pancholi	--	2/5	8.00	8.35	11.65	20.00
-- & G'gram Ptl	Wheat	1/3	24.00	25.00	47.00	72.00

continued Table 7.1

38. Kuslo Pande	Barley	1/3	5.50	5.75	10.75	16.50
-- & Harda	--	1/3	1.50	1.56	2.94	4.50
-- & Prahakaro	--	1/3	21.50	22.45	42.05	64.50
-- & Prahakaro	--	2/5	5.50	5.75	8.00	13.75
39. Nathu Pande	Barley	1/3	11.00	11.50	21.50	33.00
40. Nando Pande	Barley	2/5	6.00	6.28	8.72	15.00
--	Wheat	2/5	5.50	5.75	8.00	13.75
41. Mohan Pande	Barley	2/5	2.50	2.61	3.64	6.25
42. Mado Pande	Barley	2/5	8.50	8.88	12.37	21.25
43. Prahakaro Pradhan	Barley	2/5	7.50	7.83	11.92	19.75
-- & Kuslo Pande	--	2/5	5.50	5.75	8.00	13.75
--	--	1/3	14.18	14.78	27.72	42.50
-- & Kuslo Pande	--	1/3	21.50	22.45	42.05	64.50
44. Ramchand Brahman	Barley	2/5	13.50	14.03	19.72	33.75
45. Roop Brahman	Barley	2/5	9.00	9.40	13.10	22.50
46. Ramdas Pande	Barley	1/3	1.85	1.93	3.57	5.50
--	--	1/3	2.60	2.73	5.11	7.84
--	Wheat	1/3	2.00	2.09	3.91	6.00
47. Revad Brahman	Barley	1/3	10.00	10.45	19.55	30.00
48. Ramsingh Joshi	Wheat	2/5	22.80	23.80	33.20	57.00
49. Swami Ramkisan	Barley	1/4	1.13	1.18	3.45	4.63
50. Uday Joshi	Barley	2/5	7.00	7.23	10.27	17.50
--	--	1/3	18.00	18.80	35.20	54.00
51. Lal Khan Miya	Barley	1/4	27.00	27.68	80.32	108.00
52. Fakira Mali	Barley	1/3	1.00	1.04	1.96	3.00
53. Ramsingh Mali	Barley	2/5	6.50	6.78	9.47	16.25
54. Samlo Mali	Barley	2/5	2.00	2.09	2.91	5.00
--	--	1/3	9.20	9.63	18.87	28.50
55. Lakho Mali	Barley	2/5	4.00	4.18	5.82	10.00
56. Manohar Mali	Barley	2/5	3.10	3.23	5.52	7.75
57. Mohan Mali	Barley	1/3	55.00	57.40	107.60	165.00

continued Table 7.1

58. Palado Mali	Wheat	2/5	2.00	2.09	2.91	5.00
59. Dhormu Gujar	Barley	2/5	2.50	2.61	3.64	6.25
--"	Wheat	2/5	9.00	9.43	13.07	22.50
60. Mehwalo Meena	Barley	2/5	1.70	1.78	2.47	4.25
--"	--"	1/3	1.50	1.56	2.94	4.50
--"	Wheat	2/5	4.00	4.18	5.82	10.00
61. Narayan Meena	Barley	1/3	19.75	20.63	38.62	59.25
--"	Wheat	2/5	8.75	9.15	13.73	22.88
62. Ramsingh Meena	Wheat	2/5	7.50	7.83	10.92	18.75
63. Tulsi Meena	Wheat	2/5	5.50	5.75	7.26	13.01
--"	--"	2/5	3.26	3.40	4.77	8.17
64. Hariyo Jat	Barley	1/3	0.67	0.72	1.28	2.00
65. Hemraj Rajori	Barley	2/5	5.25	5.48	7.65	13.13
--"	Wheat	2/5	4.50	4.68	6.57	11.25
66. Keso Rajori	Barley	2/5	0.35	0.38	0.50	0.88
67. Sukho Rajori	Barley	2/5	10.00	10.43	14.57	25.00
68. Aso Vedhlo	Barley	1/3	1.38	1.44	2.69	4.13
69. Dhan Vedhlo	Barley	1/3	37.50	39.18	73.32	112.50
70. Hira Vedhlo	Wheat	2/5	8.50	8.88	12.37	21.25
71. Harram Vedhlo	Barley	2/5	2.71	2.83	3.95	6.78
--"	Wheat	2/5	10.00	10.45	14.55	25.00
72. Govindo	Barley	1/3	16.00	16.70	31.30	48.00
73. Govindo Vav	Wheat	1/3	2.25	2.36	4.39	6.75
74. Bhansingh Vav	Barley	2/5	12.00	12.55	17.45	30.00
75. Bharmal Vav	Barley	2/5	3.00	3.13	4.37	7.50
76. Abharam Ch.	Barley	1/3	26.50	27.68	51.82	79.50
77. Banila Kuslo	Barley	1/3	11.50	12.00	22.50	34.50
78. Ghasiram	Barley	1/4	19.40	20.28	57.35	77.63
79. Hattiram ki Vasir	Wheat	1/3	13.00	13.81	25.19	39.00

continued Table 7.1

80. Isar Narnaul	Barley	2/5	13.00	13.58	18.92	32.50
--	--	2/5	1.00	1.04	1.46	2.50
--	--	1/3	1.00	1.04	1.96	3.00
--	Wheat	1/3	6.50	6.80	12.70	19.50
81. Jodho Bagri	Barley	2/5	1.00	1.05	1.45	2.50
--	Wheat	2/5	14.33	14.93	20.82	35.75
82. Jasram (ka vasi?)	Barley	1/4	27.50	28.73	81.27	110.00
83. Jairamu	Wheat	2/5	3.50	3.65	5.10	8.75
84. Kanjodo	Barley	2/5	4.30	4.50	6.25	10.75
--	Wheat	2/5	3.00	3.13	4.37	7.50
85. Keso	Barley	1/4	3.81	3.45	9.80	13.25
86. Kesoramso	Barley	2/5	7.00	7.30	10.20	17.50
--	--	1/3	24.35	25.43	47.57	73.00
87. Karmu Dekati	Barley	1/3	1.50	1.56	2.94	4.50
88. Likhmu	Wheat	2/5	8.90	9.30	12.95	22.25
89. Sitaram Sede	Barley	1/3	2.87	3.00	5.60	8.60
90. Sahibram	Barley	1/4	11.25	11.73	33.27	45.00
91. Sahjuk Vasir	Barley	1/3	1.42	1.50	2.75	4.25
92. Dayaram Nai	Barley	1/3	0.13	0.13	0.25	0.38
93. Thakro Nai	Barley	1/3	0.25	0.25	0.50	0.75
94. Godho Nai	Barley	1/3	0.13	0.13	0.25	0.38
95. Ganglo Nai	Barley	1/3	0.13	0.13	0.25	0.38
96. Revado Nai	Barley	1/3	0.13	0.13	0.25	0.38
97. Harram Nai	Barley	1/3	0.03	0.03	0.05	0.08
98. Chando Khati	Barley	1/3	0.08	0.08	0.15	0.23
99. Deepo Kumhar	Barley	1/3	0.25	0.25	0.50	0.75
100. Luhar	Barley	1/3	0.08	0.08	0.15	0.23
101. Kuslo Chamar	Barley	1/3	0.25	0.25	0.50	0.75
102. Balahi	Barley	1/3	1.25	1.25	2.50	3.75

continued Table 7.1

Awjan (7 entries)	Barley	2/5	41.50	43.35	60.40	103.75
_"_	1/3	100.35	104.81	196.19	301.00	
_"_	1/4	25.50	27.07	74.93	102.00	

Source: Khasra mauza Naelo for the rabi harvest of 1734 A.D./ 1791 V.S. dated Jeth. Sudi 2



GLOSSARY

<i>Aal</i>	the dried roots of this biannual field crop were used to produce a red dye; <i>Morinda tinctoria</i>
<i>Abadi</i>	settlement; village site; population
<i>Aghori</i>	lit. half a hide; <i>hasil aghori</i> was a cess levied on the leather workers in a qasba
<i>Ajwain</i>	lovage or bishops weed; <i>Caryota copticum</i>
<i>Alsi</i>	linseed; <i>Linium usitalissium</i>
<i>Ambar</i>	storehouse; granary; <i>khasa ambar</i> was the royal granary
<i>Amil</i>	the head of administration at the pargana level whose primary function was the collection of revenue
<i>Asami</i>	taxpayer, cultivator
<i>Asamiwar</i>	according to name; account showing the revenue payable by each taxpayer
<i>Asli</i>	primary, original; <i>asli mauza</i> was the original village as opposed to a later settlement or <i>dakhili</i> (q.v.) village
<i>Bahat</i>	gross cropped land
<i>Baijhari</i>	mixed crop of wheat, barley and gram sown in the winter or rabi harvest
<i>Bajra</i>	bulrush, spiked or cumboo millet grown in the autumn harvest; <i>Pennisetum typhoideum</i>
<i>Balahi</i>	Hindu caste of leather-workers
<i>Banjar</i>	cultivable waste; land that was potentially cultivable but required considerable effort to clear as it had lain fallow for a long period or had never been tilled
<i>Baqaya</i>	revenue arrears
<i>Baqi</i>	remainder; balance of account
<i>Barani</i>	unirrigated or rain-fed land
<i>Barti/Varti</i>	a low value, early ripening kharif millet consumed chiefly by the poor; <i>Panicum crusgalli</i>
<i>Batai</i>	crop-sharing; the division of the grain heap between the agriculturist and the revenue appropriator

<i>Batta</i>	difference or rate of exchange; a charge imposed to make up for any probable deficiency in the value of non-standard or short-weight coin
<i>Bechiragi</i>	lit. without light; used to denote deserted village as in <i>bechiragi gaon</i> .
<i>Bhadvadh/ Bhadvar</i>	land prepared for the planting of sugarcane; or land repeatedly ploughed during the kharif harvest and allowed to lie fallow before sowing in the rabi season
<i>Bhakho/Bhakhi</i>	a person who kept count; a counter; a revenue functionary who assisted in the process of crop-sharing or <i>batai</i>
<i>Bhara</i>	carriage hire; cost of conveyance; rent.
<i>Bhent</i>	offerings presented to the revenue officials; generally commuted into a fixed cash levy per village
<i>Bhomia</i>	<i>zamindar</i> ; landholder
<i>Bhomi</i>	cess paid to the <i>bhomia</i> (q.v.) in recognition of the <i>zamindari</i> right
<i>Bigha</i>	measure of land which varied from a square of 75 cubits or <i>haths</i> (q.v.) to 95 cubits in eastern Rajasthan. Most common was the bigha of 75 cubits which was equivalent to the standard Mughal <i>bigha-i-daftari</i> or approximately two-fifths of an acre
<i>Bighori</i>	fixed cash levy per unit of land irrespective of produce
<i>Bij-khaj/ -khad</i>	advance of seed and food to cultivators; consumption loan
<i>Bisondh</i>	lit. five per cent; remuneration paid to patel
<i>Bor</i>	a term used in the tax records to denote unirrigated land producing winter wheat, barley or gram
<i>Buzurg</i>	suffix following the name of a village that denoted a parent or older village and distinguished it from a similarly named off-shoot village (cf. <i>khurd</i> )
<i>Chahi</i>	well-irrigated land
<i>Chhaili rasi</i>	cess on sheep and goats
<i>Charas</i>	leather bucket for drawing water from a well
<i>Chari</i>	green fodder
<i>Chaudhuri</i>	holder of superior hereditary rights to land who was also a <i>pargana</i> (q.v.) level revenue official; also a headman of a profession or trade

<i>Chhadami</i>	six <i>dams</i> (q.v.); cess levied at that rate per rupee of revenue paid
<i>Chino</i>	common millet; <i>Panicum miliaceum</i>
<i>Chitti</i>	letter
<i>Chomli</i>	tax category in pargana Chatsu which referred to irrigated land sown with wheat or barley that was taxed at the standard cash rate per unit of land irrespective of which of the two crops was grown
<i>Chola</i>	cowpea or <i>lobhia</i> ; the green pods of this kharif legume could be consumed as vegetable or the ripe seeds used as a pulse; <i>Dolichos sinensis</i>
<i>Dakhili mauza</i>	a village whose revenue returns were included in the returns of an <i>asli</i> (q.v.) village; an off-shoot of a parent village which was not recognised as an independent revenue unit in the administrative records
<i>Dam</i>	fractional piece of a <i>taka</i> (q.v.) or copper coin; fifty <i>dams</i> made one <i>taka</i> and twenty five <i>dams</i> one <i>paisa</i> (q.v.). The <i>taka</i> and <i>dam</i> in the Hindu scale of copper currency were not the same as the Mughal <i>dam</i> which was also a copper coin
<i>Dangro bigha</i>	land located on a hillside or the bank of a river; from <i>dang</i> : a hill or precipice
<i>Dastur</i>	custom; in revenue usage denoted customary rates of taxation; the <i>dastur amal</i> or <i>dastur-ul-amal</i> recorded the official tax schedules
<i>Daul</i>	a pre-harvest estimated assesment of revenue by the <i>qanungo</i> ; <i>daulnama</i> was a extract from the general particulars of the statement for the information of each taxpayer
<i>Dehnimi</i>	lit. five per cent; the share of the village headman of the revenue collected (cf. <i>bison dh</i> )
<i>Desawar</i>	outside the <i>desh</i> or territory within the administrative bounds of the Jaipur state
<i>Dhani</i>	a cluster of homesteads or a hamlet within the bounds of the village but at a distance from the main habitational site.
<i>Dhenkali</i>	a shallow pit-well
<i>Dher</i>	an unlined, earthen or <i>kuccha</i> well
<i>Diwan</i>	title of the chief civil administrator and head of the revenue and finance departments; the highest rank in the state bureaucracy

<i>Dofasli</i>	double-cropped land
<i>Dori</i>	lit. rope; in revenue usage, a hempen rope used to measure land and also called <i>saan dori</i> or <i>sina dori</i>
<i>Doriya</i>	a member of the official land measuring party
<i>Ek harfi</i>	lit. changing, altering, or turning; <i>arhsatta ek harfi</i> was the term used for the provisional annual revenue statement
<i>Gaon</i>	village
<i>Gariwan</i>	professional carterer, driver of a cart
<i>Gau shumari</i>	a tax on livestock
<i>Ghani teli</i>	tax levied per wooden oil-press or <i>ghani</i> (cf. <i>khali ghani</i> )
<i>Gharuhala</i>	a privileged tenure extended to proprietors belonging to the upper castes and the hereditary village officials which entitled them to concessionary rates of land revenue taxation and various exemptions
<i>Ghi</i>	clarified butter
<i>Ghughari</i>	lit. grain boiled in the husk; cess imposed in lieu of the grain traditionally presented to the <i>sehna</i> (q.v.) on the ripening of the crop
<i>Gochani</i>	mixed crop of wheat and gram grown in the rabi harvest
<i>Gojara/Gojai</i>	mixed crop of wheat and barley grown in the rabi harvest
<i>Goshwar</i>	a concise statement of income and expenditure under each accounting head; a monthly compilation of accounts; also referred to as <i>goswaro</i>
<i>Gundgari</i>	ground full of hollows; a soil abounding in moisture.
<i>Gur</i>	unrefined sugar
<i>Guwar</i>	cluster-bean; a hardy kharif crop cultivated as a vegetable, a pulse or green cattle fodder. <i>Cyamopsis psoralioides</i>
<i>Habubati</i>	imposts in addition to the land revenue levied on the revenue unit as a whole; denoted exactions in kind of articles of use but the dues were collected in cash after commutation
<i>Hakikat nawis</i>	newswriter; a state appointed official responsible for reporting on events in the parganas independently of the regular official dispatches sent by the pargana administrator or <i>amil</i> (q.v.)
<i>Haljota</i>	cultivator or agriculturist as opposed to <i>kamin</i> (q.v.)

<i>Har ka bigha</i>	land at a distance from the village site and extending to its boundary
<i>Hath</i>	lit. hand; a cubit measure of approximately twenty-one inches in eastern Rajasthan
<i>Himayati</i>	patron, protector, defender or guardian
Holi	popular Hindu festival to celebrate the onset of spring
<i>Ijaradar</i>	revenue farmer; a person who took over the management and collection of the revenue and contracted to pay an agreed cash sum to the state
<i>Inam</i>	grant of revenue-free land for service (cf. <i>udik</i> )
<i>Incch tarkari</i>	a tax in addition to the basic land revenue levied on the cultivation of vegetables
<i>Jagir</i>	the assignment of the land revenue of specified areas as remuneration for military or civil service; a <i>jagirdar</i> was the recipient of such a prebendal tenure
<i>Jari</i>	the produce of the second or third cutting of the indigo plant (cf. <i>nyoti</i> )
<i>Jinsi</i>	derived from <i>jins</i> or grain; mode of revenue collection in kind
<i>Jot</i>	cultivation
Juwar	Indian millet; major kharif crop in semi-arid regions of India and an important food crop. <i>Sorghum vulgare</i>
Kachra	a vegetable very like cucumber except larger and mottled yellow and green
Kaguni	Italian or foxtail millet; also called kagani, kangni and kanguni; the straw-yellow variety of <i>Panicum italicum</i> (cf. <i>ralo</i> )
<i>Kamin</i>	generic term for the service castes such as the village artisans and menials
<i>Kankar</i>	gravel
Kasumbho	safflower or bastard saffron; the flowers of this rabi crop are used to produce a red dye and the seeds yield valuable oil; <i>Carthamus tinctorius</i>
<i>Kasur batta</i>	discount on the payment of revenue in coin other than the standard currency
<i>Katla</i>	wholesale market

<i>Khaee</i>	grain pit
<i>Khali</i>	oil cake; <i>khali ghani</i> was the tax levied per oil press (cf. <i>ghani teli</i> )
<i>Khalisa</i>	territories that were directly administered by the state, or the crown lands; in fiscal accounts the term was used to denote the sum that was deposited directly in the state treasury and which had not been either assigned in <i>jagir</i> or alienated in revenue-free grants
<i>Khari khaklo</i>	hay, dry fodder; the straw and chaff of barley and wheat
<i>Kharif</i>	the autumn harvest
<i>Khasa</i>	grain-pits in which the state's share of the revenue collected in-kind was stored (cf. <i>khaee</i> , <i>khata</i> )
<i>Khasra</i>	a document compiled by the <i>qanungo</i> and the village headman and accountant which recorded the area cultivated and the crops produced by each taxpayer in the village during the current agricultural season
<i>Khata</i>	grain-pit, possibly bigger than a <i>khaee</i>
<i>Khatli</i>	a crop raised on the dried sandy bed of a river made productive by the application of manure or <i>khat</i>
<i>Kholri</i>	hearth tax on artisans and occupational castes resident in the <i>qasba</i> ; also called <i>jhupri</i>
<i>Khurak</i>	a fixed daily allowance of food; rations provided by the village to the revenue officials during their stay in the village
<i>Khurd</i>	small, little; a suffix used to designate an off-shoot village which had the same name as an older <i>kalan</i> or <i>buzurg</i> (q.v.) village
<i>Khush khariid</i>	spot sales of grain by the state to traders (cf. <i>satta</i> )
<i>Khudkasht</i>	lit. self-cultivated; a <i>khudkashta</i> cultivator was a resident peasant proprietor cultivating his own land
<i>Kodon</i>	small-grain millet grown in the <i>kharif</i> harvest; <i>Paspalum scrobiculatum</i>
<i>Kos</i>	a measure of distance a little over two and a quarter miles (2.27 miles)
<i>Kothi kua</i>	a brick-lined well
<i>Kotri</i>	a mud fort, the residence of the local zamindar or <i>bhomia</i>

Kuri	a coarse grain millet generally eaten by the poor; also grown as one of the best green fodders for horses and cattle; <i>Panicum helopus</i>
Kyari	in general the term refers to small plots of land that have been carefully prepared in order to obtain a firm, retentive soil; in the revenue records, the term is sometimes used synonymously with <i>seko</i> (q.v.)
Lalharo	rabi crop cultivated in parganas Malarna and Hindaun; possibly a type of gourd or melon
Langar	a kitchen for the distribution of cooked meals to the poor; an almshouse maintained by public revenue
Lawazima	a surcharge imposed in addition to the standard cash or zabti levy to defray the costs of assessment
Laik zarrati	the total cultivable land which included the land cultivated, the current fallow and the lea (cf. <i>banjar</i> )
Lih	land that was annually flooded
Machil	irrigated land; specific term used in qasba Sanganer to differentiate between irrigated land planted with a new sugarcane crop and land that produced a ratoon crop which was also watered (cf. <i>peri</i> )
Mahajan	a generic term for a merchant, trader or dealer. Mahajan was also a specific caste whose members were privileged agriculturists
Makka	Indian corn or maize; cultivated as a kharif and a rabi crop and can be consumed as a green vegetable or the ripe grains are ground to produce a flour; <i>Zea mays</i>
Malba	village fiscal pool to which the peasants contributed in order to pay taxes levied on the village as a whole and to meet communal expenses
Mali	Hindu caste of specialist market gardeners
Maljihat	the basic land revenue ( <i>mal</i> ) and the other charges on agricultural production levied to defray expenses of assessment and collection (cf. <i>sair jihat</i> )
Mandwa	finger millet; also called <i>ragi</i> in west and south India where it is cultivated extensively; <i>Eleusine coracana</i>
Maund ( <i>man</i> )	a unit of weight with varying values in our region and period ranging from about 52 lbs. to the standard <i>man-i-Shahjahani</i> or <i>pukka man</i> of about 73.76 lbs.; in modern usage, more commonly referred to as <i>maund</i>

<i>Mauza</i>	village
<i>Moth</i>	brown gram; a leguminous kharif crop exceptionally suited to rain-fed cultivation on poor quality soil; a popular and widely consumed lentil in Rajasthan; occasionally also grown as green fodder; <i>Phaseolus aconitifolius</i>
<i>Mung</i>	green gram; <i>Phaseolus radiatus</i>
<i>Nadar</i>	impoverished
<i>Nankar</i>	allowance paid to the zamindar for assistance in the collection of revenue
<i>Nalvat</i>	rent payable on the use of a well to the proprietor
<i>Nirakh</i>	price, rate; <i>nirakh bazar</i> was the current market price
<i>Nirni</i>	fodder; a cash levy imposed on the cultivation of lentils in lieu of the dry fodder retained by the peasant
<i>Nyoti</i>	the first cutting from the indigo plant
<i>Padat</i>	fallow land; current fallow and lea (cf. <i>bahat</i> )
<i>Pahi</i>	a migrant or non-resident cultivator
<i>Palti</i>	a cultivator who was not entitled to a privileged tenure, and generally belonged to the agriculturist castes
<i>Panchayat</i>	a court of arbitration; each caste group had its own <i>panchayat</i> which exercised a general supervisory function over the behaviour of its members
<i>Panchotreh</i>	tax levied at five per cent (cf. <i>dehnimi</i> , <i>bisondh</i> )
<i>Pargana</i>	the effective unit of revenue administration; a subordinate unit hierarchically linked to the wider administrative area such as the district ( <i>sarkar</i> ) and province ( <i>suba</i> )
<i>Paimali</i>	destruction of crops caused by warfare
<i>Paisa</i>	small coin; sixty four <i>paisas</i> made a silver <i>rupaiya</i> (q.v.) or rupee
<i>Parna</i>	the contractual sale of grain by the state to the traders
<i>Parwana</i>	a royal order
<i>Patel</i>	village headman
<i>Patwari</i>	village accountant



<i>Pauni</i>	collective name for the low castes or menials
<i>Pedi</i>	the ratoon crop of sugarcane
<i>Phutkar</i>	sundry, separated, or incurred at different places (as debts); <i>futkar asami</i> : miscellaneous persons
<i>Piwal</i>	irrigated land; good quality irrigated cotton land was termed <i>piwal paheli</i> while poorer land situated at a distance from the village was classed as <i>piwal pacheli</i>
<i>Potadar</i>	treasurer; pargana level official treasurer and moneychanger
<i>Pukka</i>	sturdy or long-lasting as in <i>pukka kua</i> or brick-lined well; standard as in <i>pukka man</i> or the official maund weight; fixed as in <i>pakki zabti</i> or crops invariably assessed in cash
<i>Qanungo</i>	<i>pargana</i> level official who primarily maintained records relating to revenue assessment and oversaw the working of the village accountant or <i>patwari</i> ; member of the hereditary rural elite
<i>Qasba</i>	administrative centre of the <i>pargana</i> or the subordinate part of a <i>pargana</i> , the <i>tappa</i> ; country town
<i>Rabi</i>	winter harvest
<i>Rahat</i>	Persian wheel
<i>Raiyat</i>	cultivator; in its widest sense the term included all revenue payers but most often used interchangeably with <i>palti</i> to denote unprivileged resident peasant
<i>Raiyati</i>	pertaining to the <i>raiyyat</i> ; <i>raiyyati dastur</i> was the standard rate of taxation, as opposed to the <i>riyyati</i> or concessional tax schedule; <i>raiyyati bigha</i> , or land cultivated by the <i>raiyyat</i>
<i>Raj</i>	kingdom
<i>Ralo</i>	millet; reddish variety of Kaguni; <i>Panicum italicum</i>
<i>Rama ka bigha</i>	annually flooded land or land situated along the river
<i>Reh</i>	barren land unfit for cultivation, (cf. <i>usar</i> )
<i>Rozina</i>	daily wage; <i>rozindar</i> was a worker paid a fixed daily wage
<i>Rupee (rupaiya)</i>	silver coin equivalent to sixteen annas or sixty four paisas in the traditional Indian scale of silver currency
<i>Sahukar</i>	banker, dealer in money, merchant in general

<i>Sair-jihat</i>	a variety of regular cesses which were imposed on the primary revenue unit, the village or <i>qasba</i> in addition to the land revenue
Sakarkandi	sweet potato; <i>Ipomoea batatas</i>
<i>Sakimi (shikmi)</i>	a dependent, a subordinate cultivator
Sali	rice; <i>Oryza sativa</i>
<i>Sanad</i>	grant; an official document containing the particulars of the emoluments, titles and privileges to which the grantee was entitled
<i>Sandhya Gayatri Mantra</i>	the inaudible recitation of the <i>Gayatri mantra</i> , verse from the Vedas of particular sanctity, during the prescribed periods of daily religious worship by the Brahmans, namely, sunrise, noon and sunset, of which the evening service was specially important
<i>Sanjha</i>	share-cropping
Sarda	the finest variety of melon; <i>Cucumis melo</i>
<i>sarf-i-sicca</i>	a cess to make up for any loss that may occur between the value of the coins in which revenue was paid and the standard currency (cf <i>kasur batta</i> )
<i>Sarikat/shrikat</i>	partnership; co-parcenary or joint occupancy
Sarson	rapeseed; a plant of the same genus as mustard grown in the rabi harvest for its seeds which yield an oil used for cooking and lighting, and the oilcake a valuable cattle fodder; <i>Brassica campestris</i>
<i>Satta</i>	a contractual arrangement between the state and the traders for the sale of grain that had been collected as revenue in kind
<i>Sawai Jamabandhi</i>	a sub-category in the annual statement of revenue accounts which included all non-agricultural taxes; taxes on commerce and the transit of goods formed more than eighty per cent of the proceeds under this head
<i>Sawanu</i>	relating to the period of the monsoon
<i>Sehna</i>	village watchman appointed to prevent the pilferage of the standing crop or the threshed grain and to supervise the division of the grain heap between the cultivator and the state
<i>Seko</i>	wheat or barley fields watered by wells
<i>Ser (seer)</i>	unit of weight one-fortieth of a <i>man</i> (q.v.); the weight of the <i>ser</i> varied locally

<i>Siyalu</i>	the local term for the autumn or <i>kharif</i> harvest
<i>Singhara</i>	water chestnut; <i>Trapa bispinosa</i>
<i>Suji</i>	a grainy flour made from hard wheat
<i>Syaha</i>	corruption of <i>shahi</i> or royal, relating to the king
<i>Tagai</i>	advances of money made by the state to the cultivators
<i>Taka</i>	copper coin equal to fifty dams or two <i>paisas</i> (q.v.)
<i>Tappa</i>	an administrative sub-division of a <i>pargana</i> ; each such cluster contained one or more villages and a <i>qasba</i> ; the <i>qasba</i> which was the administrative centre of the whole <i>pargana</i> was always located in <i>tappa haveli</i>
<i>Tappadar</i>	subordinate of the <i>amil</i> responsible for the fiscal and revenue management of the <i>tappa</i>
<i>Taqmina</i>	a statement giving a detailed estimate of the revenue obtainable in the current harvest based on a survey of crops grown and estimated yields
<i>Tarbuz</i>	watermelon
<i>Tehsil</i>	collection, revenue collected; in modern usage a sub-district revenue division
<i>Tehvil potadar</i>	cash in the keeping of a person appointed to take care of it; pargana treasury
<i>Teniya</i>	a member of the official land measuring party
<i>Thirma</i>	a type of cloth of superior quality
<i>Til</i>	sesame; generally sown as an autumn crop for its seeds which yield oil while the oil-cake is used as fodder and manure; <i>Sesamum indicum</i>
<i>Tisala</i>	the third cutting from the tri-annual indigo plant
<i>Tola</i>	a standard <i>tola</i> was equal to the weight of a silver rupee of 179.66 troy grains and eighty <i>tolas</i> made one standard seer (q.v.). The weight of the <i>tola</i> , and hence that of the seer and maund, varied locally.
<i>Udik</i>	grant of revenue free land for charitable and religious purposes
<i>Ujar</i>	deserted, uncultivated or uninhabited; opposite of <i>abad</i> (q.v.)
<i>Unhalu</i>	winter or <i>rabi</i> harvest

<i>Urad</i>	black gram; <i>Phaseolus mungo</i>
<i>Usar</i>	land rendered unfit for cultivation due to the efflorescence of alkaline carbonates
<i>Vas</i>	dwelling, habitation
<i>Viran</i>	deserted, uninhabited
<i>Virotra</i>	lit. two per cent; charge in qasba Phagi to remunerate the patel
<i>Vyapari</i>	trader, dealer; also called <i>vyopari</i> , <i>beopari</i>
<i>Waqaiā Nawis</i>	news writer, recorder of events, collector of official intelligence
<i>Yaddashti</i>	memorandum
<i>Zabti</i>	land revenue assessment in money per unit of land
<i>Zaid rabi</i>	summer crop of melons, gourds and vegetables sown after the <i>rabi</i> harvest

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VS/AD	C	P	J	S	L	M	VS/AD	C	P	J	S	L	M
1748/1691	-	A	-	-	-	-	1801/1744	A	A	A	A	-	A
1754/1697	-	A	-	-	-	-	1802/1745	A	K	A	A	A	A
1765/1708	-	-	-	A	-	-	1803/1746	-	A	A	A	A	A
1767/1710	A	-	-	R	-	-	1804/1747	-	-	A	A	A	K
1768/1711	A	-	-	K	-	R	1806/1748	A	-	-	A	A	A
1769/1712	A	-	-	A	A	-	1806/1749	A	A	-	-	-	A
1770/1713	-	-	-	A	A	A	1807/1750	A	A	A	-	-	A
1771/1714	A	-	-	-	A	A	1808/1751	A	A	-	-	-	A
1772/1715	K	K	-	A	K	A	1809/1752	A	-	-	-	-	-
1773/1716	A	A	-	A	A	A	1810/1753	A	A	-	-	A	-
1774/1717	A	A	-	-	A	A	1811/1754	-	A	-	-	A	A
1775/1718	-	K	-	-	A	A	1812/1755	A	A	A	A	-	-
1776/1719	-	-	-	-	A	A	1813/1756	A	-	A	K	A	A
1777/1720	-	A	-	-	A	A	1814/1757	A	A	A	-	A	A
1778/1721	A	R	-	-	A	K	1815/1758	A	-	-	-	A	A
1779/1722	-	-	-	-	A	A	1816/1759	-	A	A	-	K	A
1780/1723	A	A	-	-	-	A	1817/1760	A	A	-	A	-	A
1781/1724	A	R	-	K	-	-	1818/1761	A	-	K	K	A	K
1782/1725	-	A	-	-	-	A	1819/1762	A	-	A	-	A	A
1783/1726	A	A	-	-	-	A	1820/1763	A	-	A	A	A	A
1784/1727	-	A	-	-	-	A	1821/1764	A	-	-	K	K	-
1785/1728	-	K	A	A	-	A	1822/1765	A	-	-	-	A	A
1786/1729	-	A	A	-	-	A	1823/1766	A	-	-	K	-	A
1787/1730	A	A	-	A	K	A	1824/1767	A	-	A	K	A	A
1788/1731	A	A	-	A	A	K	1825/1768	A	-	A	K	A	A
1789/1732	A	A	-	A	-	A	1826/1769	A	-	A	-	-	A
1790/1733	A	A	K	K	A	-	1827/1770	-	-	A	A	A	-
1791/1734	A	A	-	-	A	-	1828/1771	A	-	A	A	-	-
1792/1735	A	-	-	-	-	-	1829/1772	-	-	A	A	-	-
1793/1736	-	A	A	A	-	A	1830/1773	-	-	-	K	-	-
1794/1737	A	-	A	A	A	A	1831/1774	-	-	-	-	-	A
1795/1738	A	-	R	R	-	A	1832/1775	-	-	-	-	R	A
1796/1739	-	-	A	A	A	-	1833/1776	-	-	-	-	-	A
1797/1740	A	-	R	A	A	-	1834/1777	-	-	-	-	A	A
1798/1741	A	A	A	A	A	-	1835/1778	-	A	-	-	-	A
1799/1742	A	A	A	A	A	-	1836/1779	-	-	-	-	-	K
1800/1743	A	A	A	A	-	A	1839/1782	-	-	-	-	-	A

The table above shows the revenue records consulted for each of the six qasbas studied - Chatsu (C), Phagi (P), Sawaii Jaipur (J), Sanganer (S), Lalsot (L), and Malarna (M). Symbols A, K, and R indicate whether the complete annual series is available (A) or only the record of the kharif (K) or rabi (R) harvest. In the original

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