

## MARKETING OF SELECTED SURPLUS FRUITS AND VEGETABLES OF DIR DISTRICT

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### ABSTRACT

This study was undertaken in 2005 to enquire into the efficiency of marketing system of selected surplus vegetables and fruits of Dir district. The study reveals that the existing marketing system is, generally speaking, capable of handling the surplus selected products-onion, tomato, okra, citrus, persimmon, peas, walnuts,-in a normal year, and is efficiencies-wise nearly at par with the corresponding system in the province. It has evolved over a long period and is largely compatible with the characteristics of the project area's agricultural sector. The scope for improvement, at every stage in the marketing system is, however, large. The pre-harvest sale-especially of fruits, the heavy dependence on Beoparies, the heavy post-harvest losses, and occasional scarcity of transport at peak seasons and when especially where there is bumper harvest, the poor physical conditions of wholesale market centers etc, are the major problem areas. Price information of small farmer is not good, and the surplus products is mostly marketed in a far market centers through old connections with Arthi (middleman), wholesalers, etc, which may not necessarily fetch the best possible price. Farmer's net revenue from their selected surplus produce can be improved by 15-20 % by undertaking marketing system improvements through public-private sector cooperation. Farmers Association need to be formed through the existing village organizations in the project area, so as to bring about efficiency in the farming sector, embracing all aspects of production and marketing.

### INTRODUCTION

Efficient management of marketing is of no less importance than efficient production management. Inefficiency in the sphere of marketing can – and is so frequently observed to, offset the advantages in production cost competitiveness. This applies to all segments of the commodity sector in general and the agricultural sector in particular. It would not be an exaggeration to contend that more than half the battle for agricultural development is won or lost on the marketing front. This is particularly true of the regions that are backward and far off from the main market centres. Most of these regions-- and there are many of them in Pakistan, have their peculiar marketing problems and similarly peculiar needs for problem solving approaches. This call for a continuous flow of micro-region specific agricultural marketing research to help solve the region specific marketing problems, and also to build data base for agricultural marketing improvement at provincial and national level. The present study focuses some aspects of marketing of selected surplus fruit and vegetables of Dir district. It is based on survey of selected villages that fall within the jurisdiction of Dir Area Support Project (DASP) which operates in seven tehsils of Dir District. Its findings and the resulting recommendations would, however, hold valid for the whole district and other regions with characteristics similar to those of the study area (Wali, 2000).

### Objective

The main objectives of the paper are:

- i. To investigate the main marketing channels of

the selected fruit (citrus, persimmon, apple, pear, walnut) and vegetables (onion, tomato, okra) in the project area;

- ii. To evaluate the role of middleman (arthi) in the marketing system/process and;

- iii. To suggest policy recommendation as to how the marketing of fruit and vegetables the marketing cost can be minimized/reduced in the study area.

The main purpose of the aforesaid exploration was to ascertain: i) can the marketing channels shortened; ii) are there new market/outlets for the products under study; iii) can the marketing cost be minimized; iv) are there prospects of better prices for the product concerned. The study attempts to answer all these questions in varying depth and breadth.

### MATERIALS AND METHODS

This study is based on secondary, as well as primary data – chiefly the latter. Estimate of surplus production of fruit and vegetables are taken from an earlier study undertake for the DASP in the year 2000 (Khan *et al.* 2001). The study of marketing practices, potential market, etc is based on sample survey, conducted in 2005 addressed to farmers and market functionaries. Besides, relevant information was collected through informal interview with informal persons and general observation made during survey and market visit. The sample survey, sample confined 360 growers of selected fruits and vegetables and 170 market functionaries.

All tehsils in the jurisdiction of the DASP, where the selected fruits and vegetables are in good surplus production, were covered by the survey. For each commodity an independent sample was selected. In each such tehsil, one village was selected purposively for the target commodity. In the sample village, 15%

of the target growers were selected subject to the minimum number of fifteen growers per village excepting citrus growers for whom the minimum limit was twenty growers per village. By this scheme; the sample came to be 182 fruit growers and 178 vegetable growers (Table I).

**Table I** *Product wise distribution of grower's sample*

Product	Citrus	Persimmon	Apple	Pear	Walnut	All fruit	Onion	Tomato	Obves	All veg	Grand total
Sample growers number	66	32	19	33	32	182	100	47	31	178	360

Source Survey (2005)

\* Grand total of fruit + Veg. grower

The sample of market functionaries was selected from different localities viz; Timergara market and the Beoparies – all of vegetable, operating at Dir-

Timergara road, Timergara Talash road, other places in the project area (Table II).

**Table II** *Sample of market functionaries*

S. No.	Particulars/type of functionaries	Number	Per cent
1	Arthis/Wholesalers of vegetables fruit produced in Dir district (located in Timergara)	13	7.6
2	Arthis/Wholesalers (in Timergara) dealing in vegetables/fruit of off-Dir origin	16	9.4
3	Beoparies of onion operating along Dir-Timergara road	116	68.2
4	Beoparies of onion operating along Dir-Timergara Talash road	10	5.9
5	Operated in other places	15	8.9
	Total	170	100

Source: Survey

As can be seen in the above table that a big majority (68.2%) of the marketing takes place on Dir, Timergarah road. It is so because most of the cultivated area of the district falls on this road and as a result most of the products come for sale on this road where a number of marketing centers are functioning. The questionnaires based surveys were supplemented by informal interviews with a number of growers, traders and other knowledgeable person.

## RESULTS AND DISCUSSION

The marketing practices i.e. mode of sale followed by vegetable growers are distinctly different from those of fruit growers. In the case of fruit excepting walnut, the dominant practice is to sell the crop (orchard) to contractor will before harvesting. While pre-harvest sale are rare in the case of vegetable, and the latter; marketing process involves a number of intermediaries

more or less similar to that of Mian (1963), and Khatoon (1967). Thus there is not much in common between the two groups of the products under study, and therefore it is appropriate to desirable and discusses this relevant marketing aspects separate starting with vegetable marketing.

## MARKETING OF VEGETABLE

### *Special Distribution of Sales*

The special distribution pattern of sales has significant bearing on farmer's net return. The more enterprising farmers would normally be found distributing their sales over more than one location so as to get the best of the deals which may not be possible of most sales were made right on the farm gates. The sample farmers were found fairly well aware of the advantages of diversification of sale points are indicated by Table III in which spatial distribution of sales is given:

**Table III** *Spatial distribution of vegetable sale*

Place where Sold	Percent of Sales		
	Onion	Tomato	Okra
Farmer own village	32	15	29
Other rural area in Dir	8	7	11
Town in Dir	36	30	60
Other places in NWFP	7	31	-
Punjab Province	10	17	-
Sindh Province	7	-	-
All Places	100	100	100

Source: Survey, 2005.

**Mode of Sales**

The modes of sale of the three selected vegetables were found to be quite dissimilar. The explanation

perhaps lies in their different sheep life as well as demand situation. The different modes adopted by the sample farmers are given in Table IV.

**Table IV** *Mode of Sale of Vegetables*

Mode of sale	Onion	Tomato	Obves
Direct to consumer	2	26	2
Sold to retailers	14	46	42
Sold to beoparies on farm	25	2	-
Sold to wholesalers in urban centre	6	2	-
Sold through Arthies	53	24	56
All Modes	100	100	100

Source: Survey ,2005.

It is noteworthy that the sample farmers sold a substantial part of tomato (46%) and Okra (42%) to retailers which are preferable to selling the products through Beopaires and Arthis. However, it may be clarified that the retailers under reference operate also as beoparies and sell on bulk basis. Though there is not much difference between retailers and beoparies, the direct sales to retailers should be bringing better to farmers than selling through the Arthis and wholesalers.

The marketing channels for sales in rural areas are distinctly different as compared with urban areas. The Arthis are found about in the channels in rural areas, while he is the principal intermediary in the urban market, as is clear from the data pertaining the three selected vegetables taken as a whole as given in Table V.

**Table V** *Marketing channels used by sample farmers in different market places for sale of all selected vegetables (figures in percent)*

S.No.	Marketing Channels/ Modes of sale	Rural Areas in Dir Distt.	Towns in Dir Distt	Outside Dir	All Places
1	Direct sale to consumers	18	0.5	-	6.22
2	Sold to retailers/petty bulk purchasers	41	18.0	-	20.37
3	Sole to beoparis in rural area/farm gate	41	-	-	14.15
4	Sold to wholesalers in urban centres	-	10.0	24	10.63
5	Sold through Arthis (by auction)	-	71.5	76	48.63
	Total (all channels)	100	100	100	100

The channels are charted in Fig 1. The farmers dealt with three types of clients in rural markets, four types in urban Dir, and two outlets in off Dir market places.

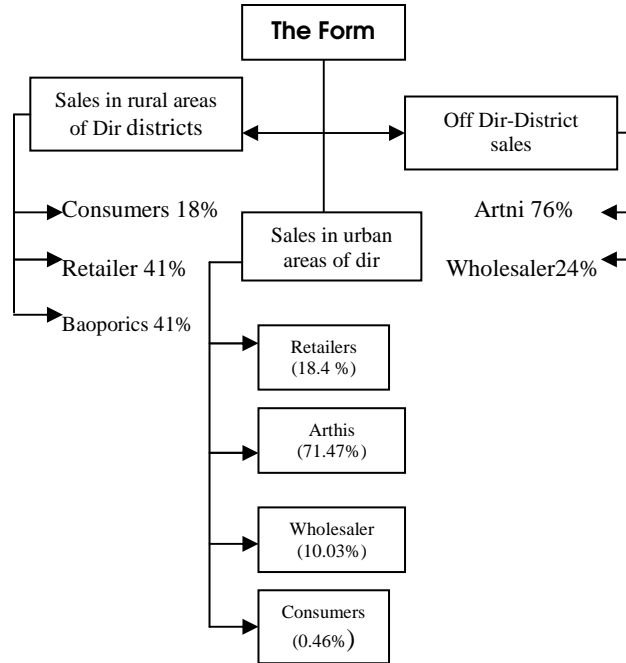


Fig 1. The marketing channels of selected vegetable as a whole as used by sample farmer

Note: Figures outside the boxes represent sales in the given market concerned as a percentage of totals, sale in all markets, while figures in parenthesis represent percentage of the total quantity sold in the given market. For example read: the total quantity sold in urban areas of Dir district accounted for 36% of total sales in all markets, and of this quantity (18.04%) was sold to retailers (71.47%) through Arthis.

**Marketing Management**

Most of the sample farmers (63%) handled marketing of their product themselves. However, a good (33%) of them managed it jointly with fellow farmers which is both convenient and cost efficient. This was found

to be the overall situation. In the case of onion (65%) farmers managed marketing sight, which the corresponding figures tomato and okra are (63%) and (80%) respectively (Thompson and Wilson 1997).

**Distance of Sale Point**

Taking the three vegetables as a whole most of the sample farmers (53%) sold these within five kilometer distance from their farms. All (100%) sale of okra were made within this distance while the corresponding figure for onion and tomato are 37% and 44% respectively the detail can be seen in Table VI below:

**Table VI Distance of market centers from sample farmers villages**

Distance from village (Km)	(Percentages)			
	Onion	Tomato	Okra	All Vegetables
Up to 5	36.92	44.20	100	53.24
5 – 10	18.46	2.33	-	9.35
10 – 15	3.00	13.95	-	5.75
15 – 20	7.70	2.32	-	4.32
20 – 30	9.23	4.65	-	5.75
30 – 40	7.69	30.23	-	12.96
Over 40	16.92	2.32	-	8.63
Total	100	100	100	100



Dir district's onion has a country-wide market – as far as Karachi, Outside Dir district its main outlet are Mardan, Rawalpendi, Lahore, Karachi. In the case of tomato the major sale points outside Dir are Mardan, Peshawar and Rawalpendi.

#### **Mode and Cost of Transport**

For transportation of vegetables within the Dir district, pick ups are the most widely used means. For off Dir transportation both pick ups and truck are used.

Transport availability was found to be satisfactory excepting period short duration scarcity in the peak of the reason period. Transportation cost expressed as price per mound of the product was (1.91%) for onion, (5.34%) for tomato and (1.16%) for Okra. The growers were of the view that transportation cost was very high and main reason was that of poor road condition.

#### **Price Information**

The beoparies were the leading source of price information for onion growers (55%) and okra grower (74%). Most of the tomato grower (60%) got it form market centres directly themselves. This

source –market centre, was the second most important source for onion grower (28%) and okra grower (26%), on the whole, the sample growers were found fairly will aware of price trend, but the problem of delayed communication of price information did exist in the project area.

It was gratifying to find that most of the sample farmers were able to secure the price on expected by them for their produce. Those reporting so accounted for (72%) of onion grower, (94%) of tomato grower, and (77%) of okra grower.

#### **Marketing of Selected Fruit**

The major surplus fruits of the project area are Citrus, Persimmon, Apple, Pear and Walnut. All these five fruits are sent from the project area to other parts of the province. Citrus is the most important among them.

#### **Mode of Sale of Fruit**

Barring Walnut farmers, almost all the fruit growers sold their fruit crop in the field on contract basis. This is a case of pre-harvest sale; which is a common practice in most part of NWFP (Mian 1963 and Khatoon 1967).

**Table VII Sample farmer who sold fruit crop in field**

S.No.	Particulars	Unit	Citrus	Persimmon	Apple	Pear	Walnut
1	Total sample farmers	#	66	32	19	33	32
2	Farmers who sold crop in field	#	66	31	17	30	01
3	Sr. 2 as % of Sr.1	%	100	96.8	89	90	3.1

Source: Survey 2005

#### **Main Markets for Fruit**

Over 90% of the citrus, pears, and walnut crop of the project area find way to off Dir market centres. Bulk

of the persimmon and apple production is consumed locally. The fruit by fruit situation is described below:

S. No.	Fruit	Main Markets
1	Citrus	Almost the entire crop is sold to contractors who sell over 90% of it onwards in off-Dir market centres, mainly Mardan, Peshawar, Rawalpendi.
2	Persimmon	The quality being poor, bulk of it is consumed locally. Small quantities are sold out side Dir.
3	Apple	The pattern is the same as in the case at persimmon
4	Pear	Major portion is sold in off-Dir market centres, mostly in Mardan, Peshawar and Rawalpendi
5	Walnut	The sample farmers sold 97% of their output with Dir and only three percent outside. However, over 90% of in-Dir sales ultimately find way to off-Dir market centres.

**Transport Cost/Price of Fruit**

Almost all walnut farmers sold their walnut crop on their own. In the case of other fruits sale transactions were made after harvest by only a few farmers of each of the four types of fresh fruit. The transport costs incurred by them expressed as percentage of the price received were widely different from fruit to fruit 0.68 percent for citrus, 8.34% for persimmon, 1.92% for apple, 4.25% for pear, and 0.74% for walnut. This is course quite logical as freight charges are related to volume weight of the consignment and not the value. Thus while there is not much difference in transport cost per unit, the prices per unit of different items were widely different and hence the wide difference in marketing cost expressed as percentage of price.(Patterson and Richard, 2000).

**Successive Marketing by Bulk Purchases**

Successive marketing in the present context denotes sales of the commodities, under study, by the traders. Or alternatively speaking, it starts after the farmers have parted with their produce. As previously stated over 90% of the selected vegetables and fruits are sold in off-Dir markets. Bulk of the project area's fruit is sent by the contractors to wholesale markets of Mardan and Peshawar for onward sale through commission agents, or and their own wholesale depots, to petty wholesale and retailers. Undetermined, but not a large, proportion of citrus, apple pear, etc – especially citrus is sold by contractors in small lots to travelers on their road side trading points. This is a common practice, but the proportions involved are quite small (Lariviere and Padmanabhan 1997, Litwak 1998).

**CONCLUSION AND RECOMMENDATIONS**

The current marketing practices and system in respect of fruits and vegetable are, on the whole, in conformity with the characteristics of the agricultural sector of the project area and also confirm to the patterns found in other parts of the country. The marketing system is, generally speaking, capable of clearing the normal surplus fruit and vegetable production and most farmers are able to secure revenue according to their expectation. Thus, on the whole the system is performing nearly as efficiently as in other parts of the country and seems to be acceptable to the farmers. There are, however, several problem areas, too, and the scope for improvement is quite large. The major problem areas are being as follows;

- i. The currently high incidence of sale of vegetables in rural areas-farmers own and other villages, and almost complete dependence of

farmers on pre-harvest sale of fruit are convenient but not the most efficient modes of sale. These modes result in lower prices as compared with the prices obtained in central markets in the project area or/and in the more distant off-dir market centres.

- ii. For most farmers the afforested problem is unavoidable or difficult to avoid as they have small holdings and consequently small surplus produce to render it feasible to sell in the central market centres. But this constraint cannot be taken to justify continuation of heavy dependence on on-farm or pre-harvest sales. On the contrary, this points to a serious flaw in the marketing system.
- iii. Marketing infrastructure- farm to market roads, space and facilities in the existing central market, number of central mandis, storages and allied services- is not sufficiently developed and that is one of major reasons for heavy dependence of farmers on rural mandis/middlemen.
- iv. Both vegetable and fruit farming are not efficiently conducted. Yields are low, in field and post-harvest losses are high harvesting methods are inefficient, and little or no varietals improvement is observed in the project areas. These factors have adverse bearing on the project area's competitiveness in off-Dir markets.

The forestated problem areas plead for the need for taking measures to minimize the gap between the farm gate and the retail price, ensure complete absorption of the project areas agricultural surplus, improve the farming systems so as to improve yields at reduced cost, and establish institutional capability to take care of farmers farming and marketing problems. To achieve the above mentioned improvements in marketing and general farming systems the following recommendation are made:

- a. Establish farmers associations for joint marketing and with scope extendable to farming related areas as well. The principal objective of this recommendation is to help small farmers get over the problems encountered when many small farmers do-marketing singly.
- b. Arrange for farmers training embracing the farming systems in their wider sense i.e. covering farming and marketing. This can be made a part of functions of Farmers

Association, but should not have to wait for the latter's formation.

- c. Undertake off-Dir market explorations to maximize sale of agricultural surplus of the project area. DASP officers and progressive farmers should visit major market centres, each season (of different vegetables) for price, supply and demand appraisal.
- d. Marketing infrastructure in the project area should be improved. This entails new farms-to-market roads, repair of existing roads, expansion and improvement of the Timergara wholesales market, establishment of new wholesale markets, construction of a cold storage, establishment of price information services etc.

Of all the recommendations as given above, the most important one is about farmers associations. The DASP should do the required motivation work. These associations can undertake all or most of the above recommended measures in collaboration with DASP and ultimately independently.

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