Flexible Trade Policies in Agriculture Sectors of Developing Countries: Proposing a Technical Approach for Sri Lanka

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Key wards: Sri Lanka; trade liberalization; market access; special products; special safeguard mechanisms

INTRODUCTION

Sri Lanka adopted liberalized economic policies including disciplined tariff structures, removing non-tariff barriers, and relaxing exchange rates since early 1970's. Further with early accession to World Trade Organization (WTO) we expected a fast economic growth and poverty reduction, but achievements were dismal. Negative growth in the agriculture sector was clearly visible. This paper argues that trade liberalization partly contributed to the slack economic growth. WTO Doha round expects deeper liberalization with increased market access. Evidently (Oxfam, 2005) it will further harm the agriculture sector impeding equitable economic growth and poverty reduction. Alternatively we will benefit from being a friend of the "Development Box"[1] and securing flexibility in tariff revisions in the Doha round.

As neoclassical economic theory postulated trade liberalization cause economic growth through efficient resource allocation guided by comparative advantages of commodities. Macroeconomic stability including stable exchange rates and export revenues; internal redistribution mechanisms such as safety nets; and efficient markets with competition, credit, and infrastructure are required for efficiency (OECD, 1998 and Stiglitz, 2002). These are rarely present in developing countries including Sri Lanka. Economists have therefore refuted the notion of comparative advantage (Porter 1990, Stiglitz, 2002). Many technical and socio-economic relationships could suffer in Sri Lankan if comparative advantage notion primarily determines resource allocation. Damaging biodiversity;

[1] See Matthews (2004) for details and Oxfam (2002) for a definition.

making resource poor farmers poorer; reducing farm employment; and increasing dependency on imported food from fluctuating international markets are examples. This paper argues that Sri Lanka needs flexibility in liberalized trade policies, particularly the market access pillar of WTO Agreement on Agriculture. As Krugman and Lawrence (1994) state, demand for such flexibility is within the countries' sovereignty. The paper proposes Special Products (SP) and Special Safeguard Mechanisms (SSM) agreed in Hong Kong, December 2005 as specific modalities ensuring market access flexibility.

The paper will (a) briefly analyze impacts of liberalizing policies on the agriculture sector; (b) stress the need for flexibility in trade policy instruments; and (c) derive a methodology to objectively designate SP and SSM.

SRI LANKAN ECONOMY AND THE AGRICULTURE SECTOR

Sri Lanka had a welfare-oriented government since independence. The per capita GDP grew by 2.3% between 1965 and 1977 when the regional growth rate was 5.4%. This slow growth led the governments favour economic and trade liberalization with socio-political acceptance. Concomitantly the economy grew at 5.2% and macroeconomic indicators improved during 1990s, but declined to 4.3% in 1999 due to slow world economic growth (WB, 2000) and rose to 5% and remained till 2004. Unemployment fell from 16% in 1990 to 8% in 2000-03. Inflation came down to 5-6% in 1999-2000, before increasing to 14% in 2001-2004. Driving force of development was manufacturing and industry sectors despite its limited diversification. Agriculture, although marginal, is still important at both national and sub-national levels. It employs over 35% of the labour force varying from 50% to 70% in rural areas. This is just 23% in the industrial sector.

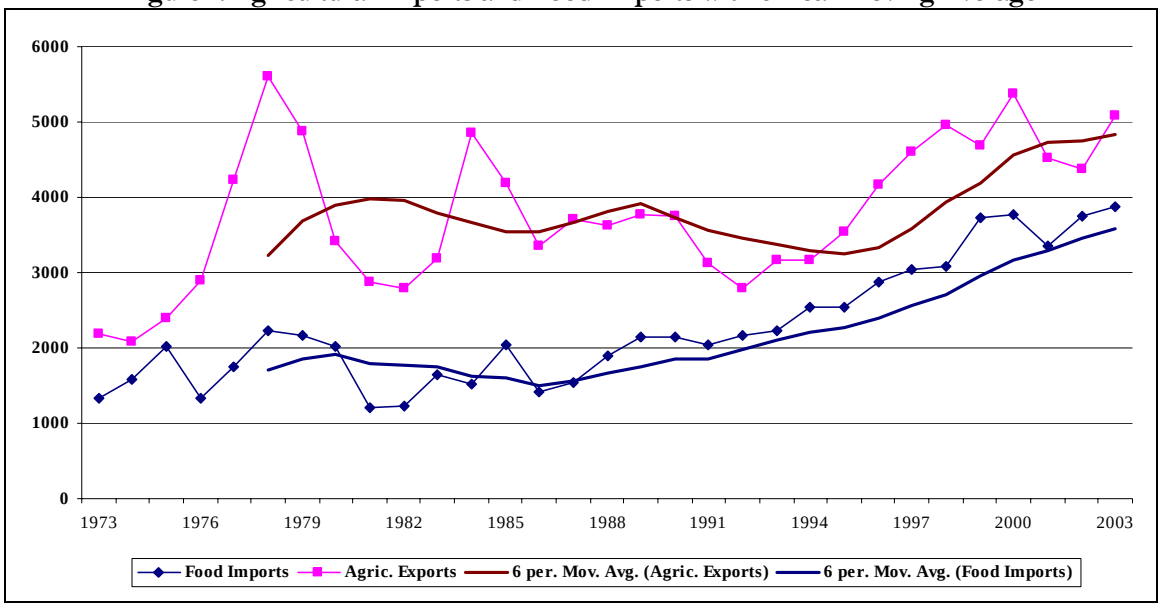
Only about 2.5 million, mostly in urbanised Western Province (WP), out of 19-million population benefited from this economic growth. The income poverty ratio of 7.9% in urban and 24.7% in rural areas in 2003 witnessed this spatially unbalanced development which brought about a deep and growing income inequality and rural poverty. Sluggish growth of the rural agriculture sector is the main cause of this unbalance development.

LIBERALIZATION AND AGRICULTURE

Sri Lanka had a free trade policy regime after independence until late 1950s. The trade account showed deficits after 1956, and a closed economy began in that year. Import substitution and domestic agriculture were encouraged to reduce imports and to achieve self sufficiency in rice and other essential commodities. Import tariffs gradually rose from 10% to 500% in the 1960's with 19 major bands with an expanded product coverage. By 1962 all imports except food, petroleum, fertilizer and pharmaceuticals were subject to quantitative restrictions (QR). After further restriction during 1970-1977, a change towards market driven policies including unified exchange rate; rationalized and simplified tariff structure having three bands with 10%, 20% and 35% and, removing all non-tariff barriers took place in 1977. Fluctuating economic conditions were concomitant with these policies. Trade (i.e. import plus export) to GDP ratio increased from 60% in the beginning of 1990s to 70% on average during last 10 years with a persistent trade deficit of about 8% of GDP and increasing to 10.8% of GDP in 2000.

Both agricultural exports and food imports have increased notably during last 30 years. As shown in Figure 1, food imports grew faster than agricultural exports.

Figure 1: Agricultural Exports and Food Imports with 6-Year Moving Average



Source: Central Bank of Sri Lanka

Without rice, the growth of food and drinks[2] was phenomenal – from Rs 1500 million in 1975 to Rs 4000 million in 2003 in real terms (1973=100). A time series regression with the following model analyses the impact of liberalized trade policies in 1995 on the imports of food and drinks.

$Y_i = a + b_1 T_i + b_2 PD + e_i$ …… i = 1 to t

Where: Y_i is the import value of food and drinks without rice in real terms; T_i is the year; PD is the trade policy dummy showing the drastic policy changes in 1995. PD is 0 for 19973-1994 and 1 for 1995-2004. The least square methods estimated the model. R^2 was 82% with F value being significant at 99% probability indicating the statistical validity of the model. The Dubin-Watson statistics is 1.308 indicating no autocorrelation. The estimated regression equation is:

$Y_i = -72984 + 37.7\ T_i^{***} + 919.5\ PD_1^{***}$

[2] The Central Bank records agricultural imports as imports of food and drinks.

The regression coefficients for T, and the policy dummy are highly significant at 99% probability and having expected positive signs. The analysis concludes the positive association of liberalized trade policies on increasing agricultural imports. A similar test showed no significant association between the same policy and agricultural exports.

Many imported food items have substantially low CIF prices comparing with farm-gate and retail prices (see Figure 2 for selected products). But, cheap imports have not helped both producers and consumers, because retail prices are much higher than both CIF and local prices. Oxfam, 2005 observed a similar situation in Haiti, Indonesia, Ghana and Nicaragua in the case of paddy. Increased agricultural imports and low CIF prices negatively affected the domestic rural agricultural sector. OFC having about 100,000 ha and critical in national food security, suffered heavily. The 1990's saw a sharp drop in OFC production, especially coarse grains, red onion and chili. Potato production declined from 100,000 in 1996 to 30,000 MT in 1998. Chilies dropped form 60,000 MT in 2000 to 14,500 MT in 2004. Figure 3 shows the gradual decline of extent and production of OFC over the last 22 years. Economic theory postulates a shift of resources from less competitive to more competitive products responding to trade liberalization. Evidence presented above failed to support this postulate. There was no increase in other crops to compensate this drop or expansion in the sector (see Table 1).

Table 1 : Changes in Area (ha) in Agricultural Crops

Land Use Type	1982	2002	Change	% Change
Tea	207,144	210,623	+3,479	2%
Rubber	171,152	114,679	-56,473	-33%
Coconut	416,251	439,000	+22,749	5%
Paddy	844,163	982,216	+138,053	16%
All Agriculture extent (with estates)	1,916,210	1,973,840	+57,630	3%
All Agriculture holdings (with estates)	3,256,096	1,800,238	-1,455,858	-45%

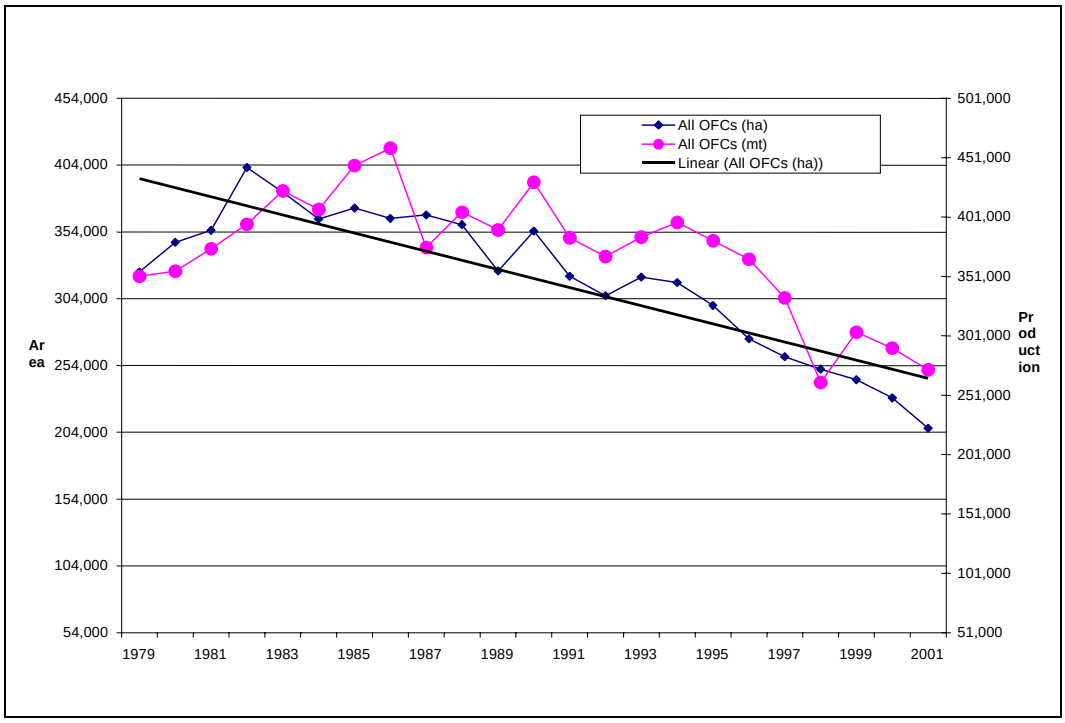
Source: DCS, 1982 & 2002

Figure 2: Comparison of CIF Price and Farm-gate and Retail Prices of Some Selected Agricultural Products

Source: ARTI (2003)

Meanwhile small, medium and large industries sector grew during 1990-2003 at 65% in absolute and 4% relative terms (DCS, 2003) and generated employment. However, the geographical concentration of industries hinders the equitable distribution of employment.

Figure 3 : Production and Area Changes in Other Field Crops in Sri Lanka (1979-2001)



Source: Department of Agriculture and author's estimates

PROTECTIVE MECHANISMS IN THE SRI LANKAN AGRICULTURE

As discussed above protecting vulnerable components of the agriculture sector is necessary for equitable economic development. A balanced mix of policies reinforces adaptive capacity in the face of structural changes, including those stemming from trade and investment liberalization (OECD, 1998, IFAD, 2002). It is vital in developing countries when social protection policies and needed financial commitments are weak.

Special and differential treatment (SDT) of WTO provides the necessary concept for protective tools. SDTs take two main forms: first, granting preferential access to developed markets, and second, exempting disciplines on protection of domestic industries under special conditions. The policy tools within the latter are focused in this paper. We are eligible for domestic support and flexible tariff under SDT. A 10% *de*

minimis for aggregate support is allowed, but allocations are constrained by budgetary resources. In tariff discipline, we opted for ceiling bindings rather than tariffication and adopted 50% bound tariff level for all agricultural products. This is relatively low comparing to many other developing countries' bound rates (Matthews, 2004)[3] and it is 62% worldwide (WB, 2003, pp 1). The maximum applied rate of 28% and average rate of 20% for many agricultural products, which is about 50-60% of the bound rate, provides a narrow policy space for us to manure tariff in vulnerable conditions. Several researchers (Sharma, 2002 and Matthews, 2004) reported that if the average applied rate is about 25% of the bound rate then it would provide a better policy space to respond to export penetrations.

We occasionally have used high applied tariff for protecting selected commodities. Rice, potatoes, certain milk products are examples. We have not fully used the tariff policy space due to two reasons: maintaining low tariff as prerequisites of structural adjustment programmes, and keeping food prices low. If bound tariffs and tariff overhang are further reduced in the Doha Round, it may constrain applied tariff levels for certain commodities such as milk products, rice, poultry products, pulses and certain vegetables. This will limit the flexibility of adjusting border protection. Hence Sri Lanka could benefit from SP and SSM modalities as safeguard instruments in import surges and price drops for sensitive agricultural products. This paper proposes a design to designate SP and SSM. July Framework requires every developing country to reduce tariff (WTO, 2004, page A-5), while allowing some flexibility in tariff schedules to address rural development (RD), food security (FS) and livelihood security (LS) needs through protection.

[3] The bound tariff rates: Bangladesh – 200%; Botswana - 100%; Egypt – 62%; Guyana – 100%; India – 116%; Jamaica – 100%; Malawi – 125%; Morocco – 65%; Philippine – 100% - 35% etc. (Matthews, 2003).

PROPOSED DESIGN FOR IDENTIFYING SP AND SSM

Among several methods, self designation based on objective criteria and then ranking products according to the importance is proposed for its objectivity (Hoda, 2005; Ruffer, 2004). The designating methodology should quantify the contribution of products to three development issues (RD, FS and LS) in a systematic way and link them with internationally traded goods. Contribution of agriculture in RD, FS and LS is amply demonstrated in a number of country studies (UNEP, 2005; Delgado *et al*. 1998; IFAD, 2002, pp 63-70).

A set of indicators assessed product's (a crop or a livestock product) contribution to RD, FS and LS. The study addressed regional importance of products and quantified selection criteria at the provincial level as the rural sector development is the central issue. Certain crops have only a marginal importance at the national level, but strategically important at sub-national levels (district or provincial), because: (a) critical agronomic conditions regionally favour them; and (b) localized infrastructural facilities such as irrigation water, markets, processing facilities etc. provide comparative advantages. Crop specialization in specific areas is a response to such advantages. The indicators fall into four broad categories, as listed below, representing RD, FS and LS issues. Forward linkages of products were also qualitatively assessed.

Category A: Rural development and livelihood security: (a) value of a product in a province (district data are summed up) as a percentage of the Provincial Agricultural GDP (PAGDP); (b) total labour use for a product in a district as a percentage of agricultural population in that district to assess employment generation; and (c) value of

backward linkages attributed to a product in a given district (summed up for the province) as a percentage of PAGDP.

Category B: National and regional level food security: (a) quantum of a product in a district as a percentage of the total national requirement of that product or group of product as reported in the food balance sheet; (b) contribution of calories, protein, and fat from a product to total calorie, protein, and fat requirement in a given district taking the food distributional issue into account; (c) contribution of calories, protein, and fat from a product to total national calorie, protein and fat requirement taking the national food security issue into account.

Category C: Sustainability of production systems: (a) percentage of a product that is imported to meet the total local demand; (b) qualitative assessment of a product in terms of maintaining an environmentally sustainable production system

Category D: Forward Linkages – rural development: (a) potential of a product in value added industries

All these quantitative indicators, expressed in percentage terms are presented in a Screening Criteria Matrix (SC-Matrix – see Table 2). In the practical application of this paper, 21 crops / livestock products are evaluated. The indicators are computed at the district level as shown in the Matrix. There are 25 districts in nine provinces. Therefore the SC-Matrix has 525 rows (21 products * 25 districts) and 12 columns for the indicators (525 * 12 matrix). The body of the SC-Matrix contains the percentage values for the indicators (I_{11} to $I_{11,\ d}$) which are summed up over the indicators and districts (per province) to compute a **Provincial Score** per each product for each Province to designate SP (see the formula).

$$[\text{Pr}\,ocincialScore] = \frac{\sum_{d=1}^{p} \sum_{i=1}^{11} I_{idn}}{p}$$

Where: I_{idn} is the percentage value of i^{th} indicator in the d^{th} district for the $\mathbf{n^{th}}$ product. The lower case ***i*** varies from 1 to 11 taking percentages for each indicator and summing over the total number of indicators, which is eleven. The lower case ***d*** varies from 1 to ***p*** where ***p*** denotes the number of districts per province. For instance, WP has three districts namely; Colombo, Gampaha and Kalutara and therefore ***p*** = 3. The average Provincial Score for each product is then obtained by dividing the total score by ***p***, which depends on the number of district per province. The Provincial Average Scores for each product is arranged according to the **order of importance** of the products, which are the special products. The order of importance is based on the Total Country Score, which is obtained by aggregating all the provincial scores.

Table 2: A Model of the Screening Criteria Matrix Used for SP Selection

Crops in each District		SELECTION INDICATORS FOR SP											
		Rural development & Livelihood security			Food Security							Sustainability	Total Score for selecting SP
Crop	District	GDP Contributor	Employment Generation	Backward Linkages	Food Supply contribution	District level Calorie contribution	District level Protein contribution	District level Fat contribution	National level Calorie contribution	National level Protein contribution	National level Fat contribution	Import dependency	
1	1	I_{11}	I_{21}									$I_{11,1}$	Sum of the % of each indicator
	2	I_{12}	I_{22}									$I_{11,2}$	
	3	I_{13}	I_{23}									$I_{11,3}$	
	↓												
	d = 25	I_{1d}	I_{2d}									$I_{11,d}$	
2	1												
	2												
	3												
	↓												
	d = 25												
3 ↓ n = 21													

APPLICATION OF THE METHOD

The quantitative indicators listed above are valued with the secondary data. Provincial score was computed with these data and presented in Appendix Table 1. The proportion of import value of SP out of the total agricultural import determines the cut-off score to designate SP. According to Ruffer (2004), depending on the GDP and the population, Sri Lanka can have SPs with about 23% of total agricultural import value. The cut-off score of 8% yield a group of SPs contributing 17% to agricultural imports. SP group includes 20 products – 3 cereals, 2 livestock products, 8 vegetables including potatoes, 3 oil crops including coconut, and 4 legumes (see Appendix Table 1).

CONCERNS ON SPECIAL SAFEGUARD MECHANISMS

Key issues for developing countries in resorting to SSM are (a) country eligibility – July framework does not limit SSM to a specific developing country; (b) product eligibility, that would depend on the contribution of products to RD, FS, LS, on one hand and the level of bound tariff on the other – we have 50% bound tariff for all the agricultural products, which is lower than 70% at which products would be eligible for SSM according to Konandreas (2000) and FAO (2005); (c) trigger mechanisms for invoking SSM, which could be either a volume trigger (VT) or a price trigger (PT); and (d) remedy or the measure, which could be additional tariff, Tariff Rate Quota (TRQ) or quantitative restrictions. A theoretical discussion on triggers and remedy is pertinent.

Both triggers have advantages and disadvantages. Firstly VT suffers in many countries with information deficiency to determine import surges (Valdes and Foster, 2005). Monthly trade data with one month lag are published in Sri Lanka, which could be used for the purpose. Second, if the low prices are more damaging, then VT is ineffective. Third is implications of VT on food security. VT could limit necessary imports to meet

local food demand during a shortage. Fourth relates to import volumes responding to world prices. Volume surges often follow price drops. A decline in the CIF prices often results in reducing domestic producers' prices, prior to import surges, making VT ineffective. Fifth is determining the level of VT. Among many proposals (Pomareda, 2005), preceding three-year average import level (Bernal, 2004) would be suitable. This is however inapplicable for new imports.

The main limitation of PT is defining the reference trigger price (FAO, 2005 and Konandreas, 2000). Possibilities are price trends established with econometric techniques, three or more years' moving averages, simple averages of immediately preceding three years, or the preceding year's price. Information availability allows us to use immediately preceding three year average price as the trigger. It is simple, computed annually and could even incorporate long-term commodity price changes. Second limitation is that PT imposes a pressure on the consumers by not allowing low priced commodity in-flow, particularly if they are food security conscious. Over or under invoicing at Customs is another limitation in PT.

Giving due considerations to the above factors, a set of guidelines is developed for Sri Lanka in selecting a trigger mechanism. VT is appropriate for products with (a) local prices lower than international prices so that such products are locally competitive, but imports of high volumes even at a higher price may harm the industry – e.g fresh milk, butter, cheese, poultry products, some vegetables and fruits etc.; (b) seasonal nature of harvest so that the product is adequately available at the harvesting seasons and any imports will lead to depressed producer prices – e.g onion, tomatoes, potatoes, cereal and

legumes etc.; (c) high food security concerns where even with lower prices imports are allowed to some extent so that food security concerns are not hampered.

PT is appropriate for products with (a) international prices lower than or close to the local prices so that local industry cannot compete and at the same time they will be severely hurt with cheap imports (several similar examples are listed in Oxfam, 2005); and (b) high fluctuating prices (historical nature) so that even a small quantity can come into the country at a very low price.

There are arguments that SP and SSM modalities should cover different products, rather than SP being a subset of SSM (Ruffer, 2004). However, SSM modality would be applied under specific and exceptional circumstances with imports surges or with very low CIF prices. It is therefore appropriate that the criteria for selecting products subject to the SSM be far broader and less stringent than the criteria for selecting SP (Ruffer, 2004). Based on this thinking, product characteristics and their relative place in production and consumption are used to nominate 261 products (90 with VT and 170 with PT) for SSM, which account for 43% of the total agricultural tariff lines. The average import value of them for 2001-2003 was Rs 13,656 million which is about 20% of the total value.

Two SSM treatments are proposed namely **increasing applied tariff** and **TRQ**. Tariff measures are proposed for products having a large difference between applied and bound tariff rates with wide policy space; with low sensitivity in terms of food security, but hurting local industries with cheaper imports; with high potential in value addition in the local market and allow substitution effects. TRQs are proposed for products with narrow policy space in tariff schedules; with high food security value where restrictions will not

affect the local prices; and with seasonal production. Out of 261 products, 235 and 26 are proposed for tariff increase and TRQ respectively (see Appendix Table 5).

CONCLUSIONS

Objective criteria could be well developed, as demonstrated in this study for designating SP and SSM vouching the acceptability of self designating method. The same criteria could rank the SP products to form an objective stage for WTO negotiations process. Sri Lanka could use the criteria for proposing SP and SSM for the forthcoming WTO ministerial negotiation.

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Appendix Table 1: Provincial Average Score for the SP Selection Indicators

Crop	Central	Eastern	North-Central	Northern	North-Western	Sabaragamuwa	Southern	Uva	Western	Total: Country
Paddy	77%	475%	427%	186%	174%	98%	119%	146%	35%	199%
Coconut	9%	9%	8%	19%	125%	22%	23%	16%	24%	25%
Poultry	10%	8%	12%	31%	89%	6%	5%	4%	36%	22%
Milk	14%	31%	19%	37%	31%	3%	14%	23%	8%	21%
Vegetables	38%	12%	14%	12%	7%	7%	8%	40%	4%	15%
Cowpea	1%	18%	10%	4%	9%	4%	6%	21%	0%	7%
Ground Nuts	1%	9%	5%	9%	5%	5%	3%	28%	0%	7%
Maize	3%	15%	10%	1%	2%	1%	2%	34%	0%	7%
Red Onions	3%	10%	1%	18%	11%	3%	1%	4%	0%	7%
Chilies	4%	5%	14%	8%	7%	2%	2%	7%	1%	6%
Tomato	19%	2%	2%	3%	1%	3%	2%	25%	0%	6%
Capsicum	11%	1%	3%	2%	10%	2%	2%	20%	1%	5%
Cucumber	9%	4%	6%	0%	9%	3%	5%	9%	1%	5%
Green Gram	1%	3%	3%	3%	7%	2%	8%	17%	0%	5%
Potatoes	11%	0%	0%	1%	0%	0%	0%	45%	0%	5%
Sorghum	4%	8%	12%	1%	0%	7%	10%	15%	0%	5%
Black gram	0%	1%	9%	16%	1%	0%	0%	1%	0%	4%
Gingerly	1%	1%	11%	1%	5%	3%	6%	13%	0%	4%
Soya	1%	0%	22%	0%	0%	0%	0%	0%	0%	3%
Big Onions	8%	0%	5%	0%	0%	0%	0%	0%	0%	2%