3. AGRICULTURE, FISHING AND FORESTRY

3.1 Production Trends

The agricultural sector grew by 3 per cent in 1997. This mainly reflected a recovery from the depressed conditions in 1996 and the improved performance of the buoyant tea sector which was attributed to improved management under the private sector as well as attractive tea prices. Tea production increased by 7 per cent in 1997 following the peak output level in 1996. Coconut output showed a moderate growth rate of 3 per cent. Rubber production, however, declined by 6 per cent, mainly due to labour shortages and heavy rains in the last quarter. Rubber prices also declined sharply in 1997. In the domestic agricultural sector, paddy recovered by 9 per cent with an improvement in the yield. The other agricultural crops showed a mixed performance. Production of pepper, cloves, cinnamon quills and citronella is estimated to have increased in 1997. Among subsidiary food crops, big onions, sesame, ground nuts and red onions showed higher output levels while chillie and potato output declined as these crops became relatively less attractive to high cost producers after the removal of licensing on imports in 1996. Agricultural activities in the Northern Province returned to near normalcy. With the opening up of certain fishing areas in the North and East and higher inland fish output, the total fish production is estimated to have increased by 5 per cent in 1997.

TABLE 3.1

Production and Price Changes of Major Agricultural Items

Item	Unit	Production		% Change in 1997/96	
		1996	1997	Production	Prices
Tea	Kg. Mn.	258	277	7	15
Rubber	Kg. Mn.	113	106	-6	-17
Coconut	Nuts Mn.	2,546	2,631	3	26
Paddy	MT '000	2,061	2,239	9	3
Sugar	MT '000	70	64	-9	-5
Fish	MT '000	229	240	5	8

Sources : Relevant Authorities
Central Bank of Sri Lanka

3.2 Agricultural Policy

The present agricultural strategy is to increase agricultural productivity, improve farm incomes and ensure a continued supply of food at a reasonable price to consumers in a competitive environment. The private sector is expected to play the leading role in production, marketing and provision of inputs such as planting material, while the state sector is expected to play a supportive role to facilitate the achievement of policy objectives.

In the plantation sector, the privatisation of the state-owned Regional Plantation Companies (RPCs) which commenced in 1995 continued in 1997 as well. During the year, 51 per cent of the shares of 7 companies were sold to the highest bidder on an 'all or nothing basis' through the Stock Exchange, bringing the total number of privatised RPCs to 20 and reducing the state owned RPCs to 3. Due to the buoyant tea prices which prevailed during the year, the shares of all these issues fetched premium prices above the fixed minimum of Rs.10 per share. Malwatta Valley Plantations, which was bought by Wayamba Plantations, fetched the highest price of Rs.61 per share. The other plantations of which 51 per cent of the shares were sold during the year were Maturata (at Rs.45.75 per share), Elpitiya (at Rs.30.25 per share), Talawakelle (at Rs.40.00 per share) and Pussellawa (at Rs.39.00 per share). Further, 20 per cent of the shares of Maskeliya and Watawala Plantations were sold to the public through the Stock Exchange at Rs.15 per share, while 19 per cent of the balance shares of 5 companies, namely, Bogawantalawa, Kegalle, Agalawatte, Horana and Kelani Valley, were sold at prices ranging from Rs.31.11 per share to Rs.37.05 per share. At end 1997, 90 per cent of the shares in 5 RPCs, 71 per cent of the shares in 3 RPCs and 51 per cent of the shares in 12 RPCs had been sold to the private sector.

Paddy production, which suffered a severe setback during 1996, recovered only partially during 1997, resulting in a shortfall in production for the second consecutive year. Due to the shortfall in production, rice prices showed an upward movement in 1997. Pressure on rice prices was further aggravated towards the end of 1997 due to supply bottlenecks caused by heavy rains. Consequently, as in 1996, the Government intervened in the market and waived the 35 per cent duty on imported rice from 20 November 1997 until the end of January 1998 just prior to the commencement of the 1997/98 Maha harvest. The import tariff on potatoes, chillies and onions, which was reduced to 20 per cent from 35 per cent in December 1996, continued at that level until 31 January 1997, which resulted in a heavy influx of imports of these commodities.

Increase in chillie imports coupled with an increased Maha harvest led to an excess supply situation, reducing the domestic prices to unremunerative levels. Realising the need to protect the rural farmers, the Government implemented a minimum producer price scheme for some crops, including chillies, in August 1997. The Co-operative Wholesale Establishment (CWE) intervened in the market whenever the market prices dipped below the minimum price. In

November 1997, the Government announced that this scheme would be extended for a period of two years.

Sudden ad hoc tariff changes are not advisable for long-term growth of the agricultural sector. It creates uncertainty in the market as government policy becomes unpredictable and scares away producers, importers and traders. A firm commitment to transparent and consistent trade policy will help the development of the agricultural sector as well as trading arrangements. An improvement in agricultural productivity requires agriculture to be remunerative. It is necessary for agricultural producers to be aware of the returns to their investment prior to cultivation or commencement of production activities. Therefore, policy measures such as ad hoc duty waivers are not in the best interests of the sector. The involvement of the CWE in the procurement, trade and sale of agricultural commodities should be gradually phased out, allowing the private sector to play an effective role in the development of the sector.

The fertiliser subsidy scheme which was in force for the four major varieties of fertiliser, viz. urea, sulphate of ammonia, muriate of potash and triple super phosphate, continued until September 1997. The subsidy was revised during October 1997 and under the new scheme, the subsidy was confined to urea only. The objective of this revision was to target the subsidy to the more needy small farmers. Under this scheme, the retail price of a 50 kg. bag of urea was fixed at Rs.350. The scheme is subject to revision on a seasonal basis.

In order to protect the local sugar industry, a normal tariff rate of 35 per cent is imposed on imported sugar. However, to reduce the local price in the wake of increasing international prices, a 17 percentage point duty waiver was imposed on sugar imports during 1996. With a drop in the international price of sugar, the duty waiver was reduced to 10 percentage points from 11 August 1997. The present duty is 25 per cent.

Recognising the importance of the dairy industry, the Government sought the assistance of the National Dairy Development Board (NDDB) of India to set up a joint venture. The Indian Government responded positively and the 'Kiriya Milk Industries Company', a joint venture was floated between the NDDB of India and the Milk Industries of Lanka Company Ltd. (MILCO). The Indian Government has also offered a line of credit to supply the required machinery and equipment. Further, the Government of India has agreed to use the dividend income from this project to build a separate fund for the development of the dairy industry.

3.3 Export Crops

Tea

Tea production has recorded an upward trend during the last few years. This continued in 1997 as well and production reached a new peak level of 277 million kg. This was an improvement of 7 per cent over the previous year's peak production. Enhanced production in the high elevational areas by 16 per cent and mid elevational areas by 19 per cent, attributed to improved management in estates under the privatised plantation companies, coupled with well distributed rainfall experienced during the year, was primarily responsible for the increased tea output. Production in the high and medium elevations, which suffered a setback with the nationalisation of the plantation sector during the 1970s appears to be bouncing back to higher levels of efficiency with the privatisation of the former state owned Janatha Estate Development Board (JEDB) and Sri Lanka State Plantations Corporation (SLSPC) controlled estates. The high and mid elevations registered the highest production level after 1971 and 1981, respectively. In addition, as a result of the attractive prices which prevailed throughout the year, plucking had commenced even on the abandoned and neglected marginal tea smallholdings, especially in the mid elevational areas. The recommencement of agricultural activities in the neglected tea lands contributed immensely towards the substantial increase in production. However, after four consecutive years of increased production, the output in the low elevational areas dropped by 2 per cent due to a dry spell.

Tea production of the smallholder sector continued to increase and recorded a 1 per cent improvement over the previous year. However, the share of the smallholder contribution towards the overall output declined from 57 per cent in the previous year to 54 per cent in 1997. The average yield of the smallholder sector, which recorded a 5 per cent improvement in 1996, showed a further 2 per cent improvement to 1,972 kg. per hectare in 1997. Meanwhile, the average yields of the estate sector too have shown a significant improvement. This has contributed to a 7 per cent improvement in the national yield to 1,465 kg. per hectare. However, the average yields of the estate sector are far from satisfactory when compared with the smallholders. The yields recorded by the smallholders are more than one and half times that of the estate yields. The main reason for the poor yields of the estate sector could be attributed to the large extents of tea which are still under poor yielding seedling tea compared to the high yielding vegetatively propagated (VP) tea. Hence, the plantation companies will have to embark on a vigorous replanting and infilling programme with VP tea plants to be competitive and viable even if the international prices take a downturn.

TABLE 3.2
Statistics of the Tea Sector

Item	Unit	1995	1996(a)	1997(b)
1. Production	Kg. Mn.	246	258	277
High grown	Kg. Mn.	74	72	84
Medium grown	Kg. Mn.	51	48	57
Low grown	Kg. Mn.	122	138	136
2. Extent (c)				
Total extent	Hectares '000	189	189	194
Extent in bearing	Hectares '000	173	174	182
3. Fertiliser used	MT '000	120	154	160
4. Replanting	Hectares	1,215	937	926
5. New planting	Hectares	1,397	479	340
6. Prices				
Colombo	Rs./Kg.	72.21	103.88	119.40
Export (f.o.b.)	Rs./Kg.	102.31	139.56	158.39
7. Cost of production	Rs./Kg.	76.14	87.04	90.26
8. Exports	Kg. Mn.	241	244	268.5
9. Export earnings	Rs. Mn.	24,638	34,068	42,533
	US$ Mn.	480.7	615.4	719.1
10. Value added as % of GDP(d)		2.1	2.2	2.4

(a) Revised.
(b) Provisional.
(c) Based on a tea land survey conducted in 1994/95 by the Tea Commissioner's Division (excludes abandoned tea lands).
(d) In growing and processing only.

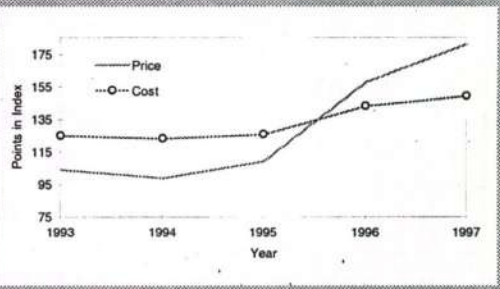
Sources: Sri Lanka Tea Board
National Fertiliser Secretariat
Central Bank of Sri Lanka

The production of cut, tear and curl (CTC) tea which suffered a temporary set back in 1996, recovered during the year and recorded a 15 per cent growth to 19 million kg.

The weighted average cost of production of made tea of the state owned plantations and 21 plantation companies increased by 4 per cent to Rs.90.26 per kg. As in the previous year, the cost of labour (up keep and cultivation) accounted for the biggest share of about 40 per cent in the cost of production (COP). Payment for bought leaf is calculated based on the monthly sales average. Thus the increased payment to green leaf too raised the COP.

The upward movement in the tea prices, which commenced during the latter part of 1995, continued throughout 1997 as well. The buoyant tea prices were attributed to the supply shortfall in the main competing countries, viz., India and Kenya. Exportable surpluses of Indian tea continued to be limited due to increasing domestic demand. Meanwhile, tea production in Kenya suffered a setback due to a severe drought experienced during the year. As a result, Sri Lanka regained her position as the world's premier exporter of tea relegating Kenya to second place. The annual net sales average price realised at the Colombo Auction, which grew by a phenomenal 44 per cent in the previous year, recorded a further significant improvement to Rs.119.40 per kg. to register the best price realised at the Colombo Auction in rupee terms, surpassing the previous year's peak price by a further 15 per cent. The annual average export price, which improved by 36 per cent in the previous year, recorded a further 13 per cent improvement to Rs.158.39 per kg.

Chart 3.1
Price and Cost of Production Indices: Tea
(1990 = 100)



The volume of exports during the year has increased by 10 per cent to 268 million kg. The increased volume of exports, together with enhanced prices, realised a 25 per cent improvement in the export earnings to reach about Rs.42,500 million. As a result, export earnings from tea accounted for 16 per cent of total export earnings in 1997. As in the previous year, countries of the Commonwealth of Independent States (CIS) continued to be the leading buyers of Sri Lankan tea and accounted for 20 per cent of the exports. Turkey was the second largest importer of Sri Lankan tea. The Sri Lanka Tea Board opened a Promotional Tea Bureau in Istanbul in September 1997.

The exports of tea in bags recorded an improvement and accounted for 4 per cent of total exports. However, black tea in bulk form was the largest category, accounting for over 55 per cent of total exports. The average price of value added tea in bags is nearly two and half times the average price fetched for bulk tea. Hence, Sri Lanka has a vast potential to improve export earnings through value addition. This will not only increase employment opportunities but also will minimise the risk of losses incurred due to fluctuations in international tea prices.

Fertiliser application in the tea sector, which increased with the improvement in prices, continued to grow by a further 4 per cent during 1997. The distribution of fertiliser through the fertiliser loan scheme implemented by the Tea Small Holding Development Authority (TSHDA) increased by 60 per cent compared to the previous year. For the third consecutive year, the assistance for new planting remained

at the same level of Rs.36,000 per hectare which is adequate to cover only a fraction (about 11 per cent) of the actual cost of new planting. The extent newly planted during the year declined from 479 hectares in 1996 to 340 hectares. The amount disbursed by the TSHDA for smallholders amounted to Rs. 8 million compared to Rs.16 million disbursed in 1996. Assistance for replanting too remained at the same level as in the previous year at Rs.67,000 for mid and high elevations, while the rate for low elevation was Rs.57,000 per hectare. The extent replanted by the smallholders too diminished to 435 hectares and the amount disbursed was Rs.30 million. Replanting activity would have been affected because of the prevailing high prices as the loss of income due to uprooting at a time of high prices will be substantial. In addition to the assistance given to the tea smallholders for replanting and new planting, the TSHDA also carried out the Small Holder Tea Development Project under which a sum of nearly Rs.300 million was given as loans for replanting, new planting and nursery development. During the year, the TSHDA also implemented a special savings investment insurance scheme referred to as 'Tea Shakthi' for smallholders. The number of members enrolled at end 1997 amounted to 55,648.

Tea is gaining popularity as a health drink in the developed countries, especially in the Western hemisphere. However, the industry should not be too optimistic about the prevailing buoyant prices because the recovery of Kenyan output could depress international prices. Therefore, to be viable and competitive in the international market, improving productivity is essential. In this respect, high priority should be given to a systematic replanting programme.

Under the Factory Development Assistance Scheme, a total of Rs.44 million was disbursed among 93 factories during the year. In view of the increased prices received, the cess was increased by 50 cts. to Rs.2.50 per kg. from 2 April 1997. The total amount of cess collected during the year was Rs.538 million, which was 9 per cent higher than the previous year's collection.

Rubber

Rubber production during 1997, estimated at 106 million kg., was 6 per cent lower than the production recorded in 1996. The decline in production was due to lower fertiliser application and heavy rains in the last quarter. The prices also declined sharply in 1997. In addition, an increased number of rainy days towards the latter part of the year restrained rubber tapping to some extent.

Sri Lanka is neither a major producer nor a major exporter of natural rubber. However, it is a major supplier of latex crepe rubber to the world market, which is sold at a premium. According to 1996 world natural rubber production and export statistics, Sri Lanka is ranked at seventh and fifth positions, respectively. Its production and export shares are less than 2 per cent of the global production and exports. Several factors accounted for the decline in natural rubber prices in the international market. The accumulation of large natural rubber stockpiles in Thailand and China had weakened the strategic importance it had and hence compelled the USA to release its natural rubber stocks in February and May 1997. The International Natural Rubber Organisation (INRO) which represents both natural rubber producers and consumers, intervenes in the market to stabilise rubber prices. However, such intervention did not take place as the Daily Market Indicator Price (DMIP) which is measured in terms of Malaysian/Singapore cents had not come down below the threshold level. Although, the price of natural rubber in terms of local currencies went up especially in Thailand and in Indonesia, in terms of the US dollar the prices declined sharply. This encouraged certain domestic manufacturers to import large quantities of natural rubber, particularly latex, from these countries. As a result, domestic market prices fluctuated with international prices. The declining price trend observed in the international markets in 1997 was also reflected in the domestic market. When compared with 1996 prices, the Colombo Auction price of RSS (Ribbed Smoked Sheet)

TABLE 3.3
Statistics of the Rubber Sector

Item	Unit	1995	1996(a)	1997(b)
1. Production	Kg. Mn.	106	113	106
2. Area (c)				
Under cultivation	Hectares '000	162	162	163
Under tapping	Hectares '000	124	122	129
3. Yield	Kg./Hectare	853	927	823
4. Fertiliser used	MT '000	15	17	12
5. Replanting (d)	Hectares	3,239	3,443	1,033
6. New planting (d)	Hectares	829	1,297	751
7. Prices				
Export (f.o.b.)	Rs./Kg.	83.69	79.78	75.42
Colombo (RSS 1)	Rs./Kg.	72.04	67.85	56.62
8. Cost of production (d)	Rs./Kg.	33.37	36.70	40.37
9. Exports	Kg. Mn.	68	72	62
10. Domestic consumption	Kg. Mn.	37	40	44
11. Export earnings	Rs. Mn.	5,713	5,753	4640
	US$ Mn.	111	104	79
12. Value added as %		0.8	0.9	0.7

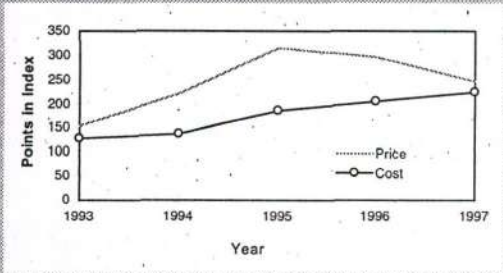
(a) Revised.
(b) Provisional.
(c) Based on the survey of agricultural crops and Livestock-1993, Department of Census and Statistics.
(d) Extents covered by cultivation assistance schemes of the RDD.
(e) In growing and processing only.

Sources : Rubber Development Department
National Fertiliser Secretariat
Central Bank of Sri Lanka

rubber has come down to very low levels, reducing any price incentive to the RSS producer. The annual average price of RSS1 at the Colombo Auction declined by 17 per cent to Rs.56.62, while other grades of RSS prices declined by 25-30 per cent. The average export price (FOB) of all grades of rubber further declined by 5 per cent to Rs.75.42, when compared with 1996. In spite of that, the average cost of production of rubber (in large plantations and in the smallholder sector), as estimated by the Rubber Development Department (RDD), has increased by 10 per cent to Rs.40.37 per kg. The increased cost of production and reduced market prices eroded the profit margins of rubber smallholders, making the manufacture of RSS rubber economically unviable. From the above developments, it is clear that the problems faced by the rubber sector was not only due to the impact of the East Asian currency crisis and other external factors, but also due to downward inflexibility of the cost of production and low productivity in the sector.

Consequent to these developments, domestic rubber producers, particularly latex and sheet rubber producers, performed poorly. The production of sheet rubber (RSS) and crepe rubber decreased by 13 per cent and 1 per cent, respectively, to 46.1 million kg. and 40.9 million kg., respectively, during 1997 compared to the previous year. The share of sheet rubber in total rubber production decreased from 47 per cent in 1996 to 44 per cent in 1997 whereas the share of crepe rubber increased from 37 per cent to 39 per cent during this period. Despite that, certain rubber grades such as latex crepe attracted relatively good prices during 1997. However, the smallholder is generally unable to understand or to afford the technology used in manufacturing such high quality rubber. Further, it is a niche market and excess production could dampen the current high prices. On the other hand, the price difference between RSS1 and other RSS grades is considerably high. Therefore, the immediate priority should be to improve the existing production process to manufacture good quality sheet rubber and to sell rubber in latex form to specialised rubber manufacturers by which the smallholder could obtain a reasonably good price. To co-ordinate these activities it may be useful to reorganise the RDD with a view to providing facilities to the rubber sector smallholders similar to services presently provided by the TSHDA to tea smallholders.

Chart 3.2
Price and Cost of Production Indices: Rubber
(1990 = 100)



In spite of these developments, the extent under rubber has shown a marginal increase to 162,820 hectares, while the extent under tapping also increased by 5 per cent to 128,609 hectares. The second phase of the World Bank funded Small Holder Rubber Rehabilitation Programme (SRRP II) was terminated in June 1997. On account of reduced prices and lack of funds, the extents of rubber newly planted and replanted declined by 42 per cent and 70 per cent, to 751 hectares and 1,033 hectares, respectively. The poor performance reported in new planting and replanting programmes requires special consideration as the termination of SRRP II could have unfavourable implications on the crop rehabilitation programmes, in particular, new planting and replanting.

Rubber is one of the important domestic industrial raw materials that Sri Lanka possesses (because of its availability at a reasonable price). The prospects for rubber based manufacturing industries are clearly good. Domestic consumption of rubber continued to increase in line with this trend. In 1997, domestic consumption rose by 10 per cent to 44 million kg.

The total rubber cess collected during 1997 amounted to Rs.334 million. A larger portion of the cess is allocated to the RDD which implements rubber crop development and rehabilitation programmes. In the absence of any external assistance for rubber development and rehabilitation programmes, appropriate allocation and utilisation of cess funds would be vital to the sector in the future.

Coconut

Coconut production in 1997 increased by 3 per cent to an estimated level of 2,631 million nuts. Accordingly, the nut equivalent of major kernel products such as desiccated coconut (DC) production increased by 23 per cent to 524 million nuts, while coconut oil production declined by 12 per cent to 289 million nuts. The nut equivalent of copra exports increased by 8 per cent to 42 million nuts while fresh nut exports too recorded a 6 per cent increase. However, the nut equivalent of coconut cream and milk powder production declined by 18 per cent to 14 million nuts as a result of greater demand for nuts from DC mills.

Although there was a tight supply situation in the first few months of the year, the increase in production in the second and third quarters of the year eased supply shortages.

TABLE 3.4

Statistics of the Coconut Sector

Item	Unit	1995	1996(a)	1997(b)
1. Production(c)	Nuts Mn.	2,755	2,546	2,631
Desiccated coconut	Nuts Mn.(d)	465	425	524
Coconut oil	Nuts Mn.(d)	516	328	289
Copra (e)	Nuts Mn.(d)	50	39	42
Fresh nut exports	Nuts Mn.	27	17	18
Domestic nut consumption (f)	Nuts Mn.	1,716	1,720	1,744
2. Total extent	Hectares '000	416	417	417
3. Replanting/ Underplanting (g)	Hectares	986	578	1,221
4. New planting (g)	Hectares	1,250	841	931
5. Fertiliser used	MT '000	34	39	35
6. Cost of production	Rs./Nut	2.02	2.18	2.26
7. Average export price f.o.b.(h)	Rs./Nut	6.08	9.42	9.63
8. Export earnings	Rs. Mn.	5,271	6,091	6,939
	US$ Mn.	103	110	118
Kernel products (h)	Rs. Mn.	3,521	4,469	4,864
	US$ Mn.	69	81	82
Other products	Rs. Mn.	1,750	1,622	2,075
	US$ Mn.	34	29	35
9. Value added as % of GDP(i)		2.1	2.1	2.3

Sources : Coconut Cultivation Board
Coconut Development Authority
National Fertiliser Secretariat
Central Bank of Sri Lanka

(a) Revised.
(b) Provisional.
(c) Estimated (breakdown does not add upto total production due to adjustments for changes in copra stock).
(d) In nut equivalent - converted at 1 MT DC = 6,800 nuts
1 MT Oil = 8,000 nuts
1 MT Copra = 4,925 nuts.
(e) Exports only.
(f) Estimated on the basis of per capita household consumption of 94.8 nuts per year. Excludes industrial use.
(g) Extents covered by cultivation assistance schemes of the CCB
(h) Three major coconut kernel products only.
(i) In producing and processing only.

About 66 per cent of coconut production is locally consumed. The DC mills, oil mills and other kernel processing industries as well as copra exporters compete for the balance. Since output improved, copra imports dropped by 51 per cent to 395,600 kg. With the decline in palm oil prices in the international market and the granting of import tariff and turnover tax concessions, an unprecedented volume of palm oil, amounting to 37.7 million kg., was imported during the year as against 21.9 million kg. imported in 1996. However, palm kernel oil imports declined from 17 million kg. in 1996 to 9 million kg. in 1997. Edible oils, other than coconut oil, enjoyed an import duty waiver of 30 per cent until 15 January 1997 when it was reduced to 20 per cent. The general tariff rate was 35 per cent. Turnover tax on edible oils was at 7 per cent (increased to 8 per cent in November 1997) while for a majority of coconut products, turnover tax was 20 per cent (reduced to 18 per cent in November 1997). The availability of cheaper imported vegetable oils has resulted in a decline in the quality of the coconut oil sold in the local market since it is adulterated with these vegetable oils.

Based on the last islandwide Census of Agriculture in 1982, the extent under coconut is estimated at around 417,000 hectares. However, according to the Coconut Cultivation Board (CCB) the extent in bearing was around 363,000 hectares in 1997, the same as in 1996. Taking the extent in bearing into consideration the average yield improved marginally and is estimated at 7,198 nuts per hectare in 1997. The optimum yield is around 15,000 nuts per hectare. About 75 per cent of the extent under coconut is in the hands of smallholders with holdings of less than 8 hectares. Hence, low yields are mainly the result of poor cultivation practices by smallholders due to neglect of field maintenance. The CCB is taking steps to increase the productivity of coconut lands through their extension services by a more systematic and scientific approach in the application of various inputs, and the disbursement of development assistance.

During the year, cess development assistance rates provided through the CCB for replanting (which includes moisture conservation and intercropping) was Rs.38,750 per hectare, while for new planting it was Rs.40,000 per hectare. Cess assistance services of the CCB are targeted at private sector smallholders and are not provided to public sector estates or plantations over 4 hectares in extent. Through CCB assistance, the extent replanted during the year was 1,221 hectares, a more than twofold increase over 1996. The extent newly planted increased by 11 per cent to 931 hectares. In addition, the CCB provided coconut plants free of charge to home gardens (not exceeding 10 plants per cultivator) where the land had been prepared as stipulated by the CCB. The CCB aims to encourage home garden production for domestic use in order to release estate output for export oriented coconut kernel processing industries. The plants issued to home gardens increased marginally to 1.1 million plants. Favourable weather conditions enabled an improvement in these field activities in 1997. However, fertiliser issued to the coconut sector decreased by 11 per cent to 34,700 metric tons. This is attributed to the reduction in the use of sulphate of ammonia (SA) fertiliser by about 40 per cent compared to 1996 on account of the removal of the subsidy on SA in September 1997.

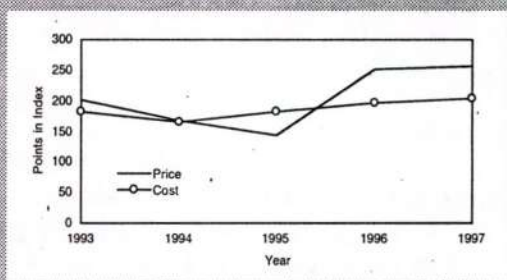
The fragmentation of coconut land as a result of the increase in demand for industries, housing and development projects continued in 1997. The pressure for land is highest

in the low country wet zone areas where most of the coconut as well as rubber lands exist (mainly in the Gampaha and Kalutara Districts). The suitability of these lands for purposes such as housing, together with the high remuneration received on real estate, has led to a reduction in the extent of highly productive coconut lands, thereby reducing the average yields in the coconut sector. At present, the Western Provincial Council (covering the Districts of Kalutara, Colombo and Gampaha) controls the fragmentation of high yielding coconut land through administrative measures. The CCB has estimated that around 1,000 hectares of coconut lands per year is lost to the coconut sector. Assuming that only marginal lands are fragmented, the CCB estimates that the loss in production per year is around 6 million nuts. To overcome the loss in production, the CCB is popularising the cultivation of coconut in other areas such as the Mahaweli Project areas.

According to the Coconut Development Authority (CDA) estimates, the cost of production (COP) had increased by 4 per cent to Rs.2.26 per nut in 1997. However, in large plantations, the COP had gone up to around Rs.3.50 per nut. Fresh nut retail prices were at record levels at an average of Rs.13.15 per nut in the first four months of the year, compared to Rs.9.30 per nut in the previous year. This was mainly due to the spillover of the shortfall in supply experienced in 1996. Prices declined in mid 1997 with the improvement in supply and rose again in the last quarter of the year with the onset of the lean period. The average retail price in 1997 was Rs.11.85 per nut, an increase of 26 per cent. Coconut oil prices in the local market showed a declining trend from the record levels registered at the beginning of the year. Improved nut supply and enhanced imports of vegetable oil substitutes resulted in lower prices. International prices of coconut oil too declined sharply in 1997 due to the improvement in coconut oil supplies from the leading exporter, the Philippines, as well as the increase in world supply of substitute vegetable oils. In January 1997, the average international price of coconut oil was US dollars 784 (c.i.f Rotterdam) per metric ton, while in the same month in 1996 it was US dollars 709 per metric ton. By December, the price declined to US dollars 584 (c.i.f Rotterdam) per metric ton. The currency crisis in East Asian countries also contributed to the drop in coconut oil prices. International prices of copra followed a similar pattern as for coconut oil.

The average export price (f.o.b) of the three major coconut kernel products increased marginally to Rs.9.63 per nut in 1997. Average export (f.o.b) price of DC was US dollars 1,085 per metric ton, while those of coconut oil and copra were US dollars 841 per metric ton and US dollars 824 per metric ton, respectively. The quality of Sri Lanka DC is one of the world's best and as an exporter, Sri Lanka is second only to the Philippines. The export of the three major kernel products increased by 6 per cent to 505 million nuts. The export earnings of all coconut products increased by 14 per cent. A substantial increase of 28 per cent in export earnings was recorded from non kernel export products. Sri Lanka is a major supplier of coconut shell activated carbon and coir/fibre products in the international market.

Chart 3.3
Prices and Cost of Production Indices: Coconut
(1990 = 100)



The same cess rates as in 1996 were applied to different categories of coconut products exported in 1997. The highest cess rate was applied to DC, which was Rs.1,000 per metric ton of DC exported. Total cess collection during 1997 increased by 9 per cent to Rs.110 million. The cess collected is re-invested in the coconut sector through cess assistance schemes. In 1997, Rs.12.9 million was granted for replanting, Rs.12.2 million for new planting and Rs.22.6 million for planting coconut seedlings in home gardens.

The DC Mill Development Programme to encourage the installation of new technology to improve the quality of DC was carried out in 1997 and a sum of Rs.5 million was granted to 17 mills as reimbursement for expenditure incurred. This programme is funded partly from the cess collected that is allocated to individual Mill Development Fund accounts of DC factories. Grant assistance not exceeding Rs.3 million per mill for DC mill modernisation to install a modern continuous process drying system and steam system was also provided. Accordingly, 20 DC mills at various stages of modernisation received a total sum of Rs.17.68 million in 1997. Grant assistance was also provided from cess funds for the Fibre Mill Modernisation scheme. A mill is granted a sum not exceeding Rs.250,000 for the installation of a defibering machine and a sum not exceeding Rs.225,000 for the installation of a husk crushing machine. In addition, a grant is provided to cover 50 per cent of the cost of obtaining the main supply of electricity, subject to a

maximum payment of Rs.250,000, while a maximum payment of Rs.75,000 per mill is available for internal electrification. The maximum grant assistance to a mill for installing a husk crushing machine and electrification is Rs.300,000. In 1997, grant assistance amounting to Rs.2.6 million under the Fibre Mill Modernisation Scheme was obtained by 21 fibre mills.

The Coconut Research Institute (CRI) carried out various research activities into improving yields, the application of different types of organic manure, methods of integrated control of major pests and diseases and the development of coconut based products (such as improving the shelf life of king coconuts for the export market). Farm rehabilitation and extension services to improve the knowledge and skills of coconut growers were also carried out by the CRI.

Other Export Crops

Other export crops consist of a wide variety of crops, which includes beverage crops such as coffee and cocoa, spices such as cloves, cardamom, pepper, cinnamon and nutmeg and essential oils such as citronella and cinnamon leaf oil. These crops are grown as mixed crops in home gardens, except cinnamon, which is cultivated in a more organised manner on large scale estates in the Southern Province.

According to the estimates of the Department of Export Agriculture, the production of cloves, pepper, citronella and cocoa during 1997 has improved over the previous year's production levels. The production of nutmeg, cinnamon leaf oil and coffee declined. Clove production, which has shown a declining trend over the years due to unremunerative prices, reported a significant improvement in 1997. Clove production is estimated to have increased by 62 per cent over the previous year, mainly due to favourable weather conditions that prevailed during the flowering season. However, most of the farmers do not pick the entire harvest due to the high cost of harvesting. India still continues to impose non-tariff barriers to restrict the entry of cloves. The removal of non-tariff barriers to improve the export of cloves to India should be a priority at the negotiations of the South Asian Preferential Trading Arrangement (SAPTA).

Pepper production is estimated to have increased by 12 per cent and this improvement in output is attributed to an increase in the extent in bearing as well as an improvement in management due to the attractive prices that prevailed during 1996 and 1997. For the fourth successive year, the global consumption has outstripped production resulting in the stocks dwindling to very low levels. As a result, the international prices of pepper had increased by 73 per cent to Rs.223 per kg. during 1997. Consequently, the average farmgate price and the auction prices have shown a more than twofold increase to Rs.198.24 per kg. and Rs.224.89 per kg., respectively. The international price of white pepper is about one and a half times that of black pepper. Hence, the conversion of black to white pepper would be a means of being competitive in the export market.

TABLE 3.5
Production of Other Export Crops

Metric Tons

Crop	1995(a)	1996(a)	1997(b)
Coffee	2,159	2,158	2,119
Cocoa	1,542	1,628	1,709
Cinnamon Quills	10,815	10,891	11,056
Cinnamon Leaf Oil	205	110	100
Pepper	3,326	3,988	4,471
Clove	1,500	1,437	2,333
Cardamom	75	75	75
Nutmeg and Mace	988	1,198	1,067
Citronella	180	190	210

(a) Revised
(b) Provisional.

Source: Department of Export Agriculture

All the other crops in this category recorded improved farmgate prices during the year, except coffee and cinnamon leaf oil which declined by 9 per cent and 8 per cent, respectively, to Rs.56 per kg. and Rs.366 per kg. The other notable improvement in farmgate prices was recorded by mace (78 per cent), nutmeg with shell (22 per cent) and cinnamon quills (43 per cent).

Extents newly planted with coffee, pepper, cocoa, cinnamon and cardamom increased by nearly 700 hectares during 1997 and thereby increased the cumulative extent under these crops by 1 per cent to 68,122 hectares. As in the previous year, the largest extent newly planted was under pepper and accounted for 77 per cent of the newly planted extent during the year.

The development assistance under the Export Agricultural Crop Assistance Scheme during 1997 increased by 21 per cent to Rs.27 million. As in the two previous years, pepper and cinnamon together accounted for the major share, amounting to 65 per cent of the total disbursements.

The total export volume of these crops showed a 2 per cent increase over the exports of the previous year. However, the total export value showed a substantial increase of over 47 per cent to Rs.4,262 million, mainly on account of the attractive international prices that prevailed during the year for most of these commodities. Cinnamon accounted for over two thirds of the export earnings of these crops. Export earnings from these crops have increased over the years and at present have almost reached (about 92 per cent) the earnings from rubber exports.

Sri Lanka's share of world trade in spices except cinnamon is less than 2 per cent. Hence, there is a potential to increase the output of these spices without affecting the prices. Production of most of the spices could be increased by inter-cropping the coconut lands. Presently, only about 5 per cent of the coconut lands are inter-cropped with these crops.

The Perennial Crops Development Project (PCDP) which commenced operations in 1990 with Asian Development Bank (ADB) funding completed its operations in December 1997 as scheduled originally. The cumulative loan approvals and disbursements as at end of 1997 amounted to Rs.824 million and Rs.642 million, respectively.

In view of the satisfactory progress achieved by the Project, the ADB has agreed to finance the second Perennial Crops Development Project with a loan facility of SDR 14.7 million. The loan was successfully negotiated between the Government and the ADB in September 1997.

3.4 Domestic Agriculture

Paddy

Paddy production increased by 9 per cent to reach 2.2 million metric tons (107 million bushels) after the setback in 1996. Both Maha and Yala seasons registered higher output levels. Increased use of fertiliser application, declines of crop failure and an improvement in the yield contributed to the increased production.

Paddy output in Maha 1996/97 increased by 9 per cent to an estimated 1.46 million metric tons (70 million bushels) due to higher yield and an improvement in the extent harvested. Production in a majority of the districts were better than in the previous Maha season. All the districts in the Northern Province showed improved performances indicating that the security situation has improved after the recapture of these areas by the Government security forces and that agricultural activities appear to have returned to near normal levels.

The most notable improvement was from the Kurunegala District which recorded an improvement of over 90 per cent to reach 193,000 metric tons compared to 102,000 metric tons harvested in the previous Maha season. The highest production level of 215,000 metric tons was recorded from the Ampara district and accounted for 15 per cent of the total Maha output. Ampara, Kurunegala, Polonnaruwa and Mahaweli 'H' area together accounted for almost half (49 per cent) of the Maha production.

Paddy output in the Yala season, which recorded a 30 per cent drop in 1996, improved partially during Yala 1997 and recorded a 7 per cent increase to 782,000 metric tons (37 million bushels). Both an improvement in the yield and an increase in the extent harvested contributed towards the improvement in output. All districts except eight recorded

TABLE 3.6
Statistics of the Paddy Sector

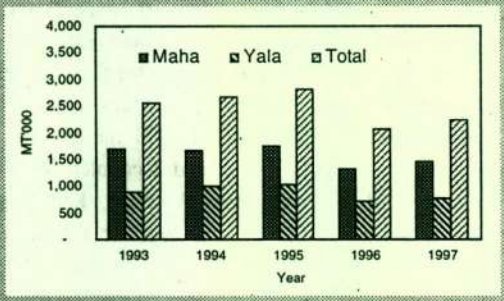
Item	Unit	1996(a)			1997(b)		
		Maha	Yala	Total	Maha	Yala	Total
Gross extent sown	Hectares '000	499	250	749	473	257	730
Gross extent harvested	Hectares '000	425	235	660	443	247	690
Net extent harvested	Hectares '000	377	210	587	397	222	619
Production	MT '000	1,331	730	2,061	1,457	782	2,239
	Bushels '000	63,807	35,000	98,807	69,835	37,496	107,331
Yield (c)	Kg./Hectares	3,534	3,477	3,513	3,670	3,529	3,618
Credit granted	Rs. Mn.	308	88	396	275	108	383
Purchases under the GPS	MT '000	1	-	1	-	-	-
Rice imports	MT '000	-	-	341	-	-	306
(Paddy equivalent)	(MT '000)	(-)	(-)	(488)	(-)	(-)	(436)

(a) Revised.
(b) Provisional.
(c) Yield per hectare for Maha and Yala are calculated using data from the Department of Census and Statistics which are based on crop cutting surveys while total yield is calculated by dividing total production by the net extent harvested.

Sources : Department of Census and Statistics
Department of Agriculture
Ministry of Agriculture and Lands
Paddy Marketing Board
Sri Lanka Customs
Central Bank of Sri Lanka

improved output levels during Yala 1997. The most notable drop in production was recorded in the Ampara District which showed a 25 per cent reduction in output to 162,000 metric tons. In spite of this drop in production, the Ampara District recorded the highest Yala output for the fourth consecutive year and accounted for 21 per cent of the total Yala production. Ampara, Polonnaruwa and Kurunegala Districts together accounted for 50 per cent of the Yala production.

Chart 3.4
Paddy Production



The annual average yield of paddy improved by 3 per cent to reach the best average yield of 3,618 kg. per hectare. The average yield during Maha increased by 4 per cent to reach 3,670 kg. per hectare which is marginally below the best Maha yield (3,678 kg. per ha.) of 1987. The average yield during Yala improved by 1 per cent to 3,529 kg. per hectare. This is the best Yala yield recorded since the peak yield of 3,603 kg. per hectare recorded during Yala 1983.

The Uda Walawe area, which recorded the best Yala yields for 10 consecutive years, conceded its place to the Ampara District during Yala 1996. However, during Yala 1997, the Uda Walawe area regained its premier position and recorded the best average yield of 5,008 kg. per hectare (97 bushels per acre). During Maha 1996/97, the best yield of 5,138 kg. per hectare (100 bushels per acre) was reported from the Mahaweli 'H' area. The entire extent cultivated under paddy in both the Uda Walawe area and Mahaweli 'H' area are under assured major irrigation regimes which reduces the risks in cultivation. Hence the farmers are not reluctant to invest in inputs such as fertiliser and other agro chemicals, resulting in improved yields.

The average yield of all three irrigation regimes, viz., major irrigated, minor irrigated and rainfed, increased during Maha 1996/97 compared to the previous Maha. The average yields of major and minor irrigated areas increased by 10 per cent each to 4,289 kg. per hectare and 3,369 kg. per hectare, respectively. The average yield of rainfed areas increased by 7 per cent to 2,843 kg. per hectare. The average yields of the major irrigated areas which increased by 5 per cent during Yala 1996 recorded a further 8 per cent improvement to 4,139 kg. per hectare during Yala 1997. The average yield of the rainfed areas during Yala, which declined during the previous year, recorded a 10 per cent improvement to 2,519 kg. per hectare. Meanwhile, the average yield of the minor irrigated areas during Yala declined by 5 per cent to 2,862 kg. per hectare.

The gross extent cultivated with paddy, which declined by 18 per cent in the previous cultivation year, recorded a further 3 per cent decline to 730,000 hectares during the 1996/97 cultivation year. The gross extent sown during the previous Maha, which dropped by 12 per cent, recorded a further 5 per cent decrease to 473,000 hectares. Meanwhile, the gross extent sown during the 1997 Yala season increased by 3 per cent to 257,000 hectares.

In spite of the decline in the extent sown, the extent harvested during the 1996/97 cultivation year showed a 5 per cent improvement over the previous year indicating a sharp drop in the degree of crop failure. The degree of crop failure in the cultivation year, which was 12 per cent in the previous year, fell to 5 per cent during this year. The reduction in crop failure could be attributed to improved weather conditions compared to the drought stricken year of 1996. The degree of crop failure, which was very high at 15 per cent during 1995/96 Maha, dropped to 6 per cent during 1996/97 Maha. The number of farmers who had obtained agricultural insurance against crop failures decreased to 20,229. The extent insured too had decreased to 20,896 hectares.

Fertiliser issues to the paddy sector during the cultivation year declined by 1 per cent to 230,000 metric tons compared to the previous year. On the basis of the extents sown, the fertiliser issues per hectare had improved by 1 per cent to 315 kg. per hectare compared to 311 kg. per hectare issued during the 1996 cultivation year. The improvement in the application of fertiliser could be attributed to the improved weather conditions that prevailed during the 1996/97 cultivation year compared to the previous cultivation year. The improvement in the intensity of fertiliser application had a direct impact on increasing the per hectare yield of paddy during the year. Fertiliser application during Maha 1996/97 decreased by 2 per cent to 140,000 metric tons while the quantity applied during Yala 1997 increased by 1 per cent to 91,000 metric tons.

Credit granted to the paddy sector under the New Comprehensive Rural Credit Scheme (NCRCS) declined by 3 per cent to Rs.383 million. The quantum of credit granted

during the 1996/97 Maha season was Rs.275 million compared to Rs.308 million granted during the previous Maha season. The amount of credit granted during Yala 1997 was Rs.108 million compared to Rs.88 million granted during Yala 1996.

Though paddy output during the cultivation year improved over the drought stricken previous year, it was only a partial recovery. The production recorded during the 1997 cultivation year was 7 per cent less than the average production recorded for the last decade. Owing to this drop in production, the open market price of paddy remained well above the guaranteed price of Rs.155 per bushel (Rs.7.42 per kg.). The Paddy Marketing Board (PMB) could not purchase any paddy during the year as the State relied on farmer organisations to purchase paddy. Credit facilities were provided to these organisations by the state banks while a few PMB stores were utilised by some of these farmer organisations.

The rice equivalent of paddy produced after adjusting for wastage and seed paddy requirements amounted to 1,370 thousand metric tons. Based on the estimated annual consumption, this accounted for about 74 per cent of the requirement. The shortfall had to be imported. During the year 306,000 metric tons were imported as against 341,000 metric tons imported in 1996. Over the years, the per capita consumption of rice has dropped gradually. The corresponding reduction in the calorie requirement appears to have been met with an increase in the intake of wheat flour based food items.

The rice trade experienced a considerable degree of uncertainity in 1997 and prices varied excessively during the year as trade policy relating to rice, as well as several other food commodities remained unpredictable. After a 27 per cent drop in production in 1996, the Maha harvest recorded only a 9 per cent increase and the existence of a supply shortage was known to the market. However, the private sector appeared unwilling to place import orders in an unpredictable policy environment. As in the past, when the domestic rice prices started to increase sharply, a duty waiver was granted for a short period. This helped to improve domestic supply as 181,025 metric tons of rice were imported during the fourth quarter. Due to the uncertainty, bondsmen also did not maintain any buffer stocks during 1997. Welfare gains to both producers and consumers could be enhanced by giving a minimum degree of protection to the paddy sector, possibly at the maximum rate under the existing tariff structure, irrespective of whether there is a shortfall in domestic production or not. It is advisable for the Government to withdraw from its involvement in the rice trade.

The recently released paddy variety, Bg 357, bred at the Rice Research and Development Institute at Batalagoda is resistant to all economically important pests and diseases and is highly adaptable to varying climatic zones of the country. The Department of Agriculture has also released a Basmathi variety (At 5) which is of high quality and superior yield.

Under the Integrated Pest Management Programme for Paddy, 'yaya' demonstrations had been held in all the 'Govi Jana Kendras' except the North and East and a total of 7,770 farmers had been trained under this programme.

Other Field Crops

Other Field Crops (OFCs) consist of a heterogeneous group of crops varying from high value cash crops such as chillies, onions and potatoes, to low value cereals such as maize and kurakkan. Most high value crops are grown very intensively, at times under irrigated conditions, while low value crops are often grown in a very ad hoc manner in home gardens or in chena lands under rainfed conditions. Hence, most available data with respect to OFCs are crude estimates.

Provisional estimates of the Department of Census and Statistics indicate a poor performance of major OFCs during 1997, particularly of high value cash crops such as chillies (especially in Yala 1997) and potatoes. However, big onion production increased by 16 per cent from 19,400 metric tons in 1996 to 22,500 metric tons in 1997. This was mainly due to the improvement in the average yield by 4 per cent to 7.6 metric tons per hectare in 1997 and an increase in the extent under cultivation by 11 per cent. In contrast, potato production declined drastically during the year by 34 per cent to 66,500 metric tons in 1997 compared to 100,800 metric tons produced in 1996. This was attributed to the drop in extent cultivated from 7,900 hectares in 1996, to 6,400 hectares in 1997. The average yield of potatoes declined by 19 per cent. The production of chillies declined by 2 per cent from 18,400 metric tons in 1996 to 18,100 metric tons in 1997. However, the extent cultivated with chillies declined by 8 per cent from 26,100 hectares in 1996 to 24,100 hectares during the year under review. In the 1996/97 Maha season the extent cultivated with chillies increased by 2 per cent, while production increased by 10 per cent. However, in the 1997 Yala season the extent cultivated with chillies declined substantially by 23 per cent followed by a decline in production of 21 per cent. The average yield of chillies increased by 6 per cent. The poor performance of these two crops is attributed to the removal of excessive protection given to these crops in the past in the form of quantitative restrictions through import licensing.

Sesame production recorded a 74 per cent increase to 6,600 metric tons when compared to 3,800 metric tons

produced in 1996. The extent cultivated under sesame too increased by 55 per cent from 7,500 hectares in 1996 to 11,700 hectares in 1997. This may be attributed to increased cultivation of sesame, especially in the Yala season, on land earlier cultivated with cash crops such as chillies. Red onion production increased marginally in 1997. Cowpea production which was 17,000 metric tons in 1996, declined by 18 per cent to 14,000 metric tons in 1997. The production of black gram, maize, green gram and soya beans recorded decreases of 8 per cent, 22 per cent, 10 per cent and 43 per cent, respectively, in 1997 when compared to the previous year. The drop in production of these crops during 1997 may be attributed to reduced extents under cultivation.

It has been observed that the decline in production of high value cash crops such as chillies and potatoes was mainly due to farmers facing difficulties in marketing their output due to the availability of cheaper imported varieties. The imports of these commodities were liberalised by the Government in 1996 while duty waivers were provided in an ad hoc manner to further bring down prices. The cost of production of local farmers is relatively high when compared to the cost of production of farmers in India, which is the source of most of the imported chillies, onions and potatoes, largely due to differences in yields, input subsidies and wage costs. Imports of consumption potatoes increased more than four fold from 25,740 metric tons in 1996 to 108,375 metric tons in 1997. The CIF price had declined by 25 per cent in 1997. Seed potato imports declined by 78 per cent to 1,122 metric tons mainly due to the decrease in the cultivation of potatoes which is no longer a remunerative crop. The import of dried chillies increased by 36 per cent from 9,777 metric tons in 1996 to 13,269 metric tons in 1997. The import price had declined by 47 per cent in 1997. The bumper chillie crop in India also contributed to the drastic decline in import price. The import of big onions too increased by 34 per cent to 119,317 metric tons with import prices (CIF) declining by 10 per cent. Although the consumers benefitted, producers who were heavily protected earlier were adversely affected by the decline in import price.

The average producer price of chillies was Rs.98.30 per kg. in March 1996. This decreased by 16 per cent to Rs.82.07 per kg. in March 1997. The average producer price of potatoes also decreased by 23 per cent to Rs.16.20 per kg. in March 1997. Likewise the average producer price of big onions, which was Rs.15.83 per kg. in September 1996, declined by 13 per cent to Rs.13.83 per kg. in September 1997.

The Government, having realised the need to give a certain degree of protection to local farmers, introduced a producer price scheme for selected important OFCs in August 1997. The recommended price ranges were: chillies Rs. 55 - Rs. 70 per kg., big onion Rs. 12 - Rs. 14 per kg., potato Rs. 20 - Rs. 25 per kg., maize Rs. 10 - Rs. 12 per kg., green gram Rs. 30 - Rs. 40 per kg., cowpea Rs. 15 - Rs. 20 per kg., toor dhal Rs. 20 - Rs. 30 per kg., ground nut Rs. 15 - Rs. 25 per kg. and red onion Rs. 15 - Rs.18 per kg. Under this scheme the Co-operative Wholesale Establishment (CWE) is expected to purchase these commodities within the price range whenever producer prices fall. The price range provides the CWE with a certain degree of flexibility to decide on the purchase price depending on the quality of the commodity. The CWE purchases of dried chillies in 1997 declined by 3 per cent to 1,797 metric tons while purchases of big onions increased by 44 per cent to 1,570 metric tons.

Studies of the comparative costs of production of big onions, chillies and potatoes in Sri Lanka and India conducted in 1997 have revealed that the major reasons for the low average cost of production in India are due to low rural wages and the Indian Government providing extensive subsidies for fertiliser, agro chemicals, power, irrigation and high yielding seed varieties. Thereby, a larger share of actual costs in India is borne by the State. In addition various interventions by the State in the market reduce marketing risks of the farmer. In Sri Lanka the largest cost component of the cost of production of these agricultural crops is labour. For example, in the case of big onions it is nearly 53 per cent while in India it is about 26 per cent. The average yields of onions and chillies in Sri Lanka are comparable with those of India. Sri Lanka will have to substantially increase productivity of resources employed in agriculture, especially labour, in addition to rapid modernisation of agriculture to be able to compete with cheaper imported commodities. As an immediate step, a reasonable degree of protection at the maximum tariff rate of 35 per cent may be provided for a stipulated period with a plan for a gradual reduction thereafter. These measures need to be transparent so that farmers are well informed and prepared to allocate resources at the optimum level.

The need to increase the availability of suitable quality seed materials to farmers is also important to increase yields. In keeping with the new policy on seed material, the private sector should be able to produce or import an adequate quantity of quality seed. However, there are various constraints such as the non tariff barriers India has imposed on the export of big onion seeds to Sri Lanka. Hence, the big onion seeds imported to Sri Lanka are smuggled seeds which do not guarantee the quality of seeds. High cost and poor quality of seeds will have a negative impact on productivity. These issues need to be resolved at negotiations of the South Asian Preferential Trading Arrangement (SAPTA).

Vegetables and Fruits

Vegetable cultivation can be broadly classified into low country vegetables (LCV) and up country vegetables (UCV). LCV are generally cultivated under rainfed conditions on small plots of land or in home gardens using little input by way of fertiliser or pesticides, except in paddy fields during the Yala season under irrigated conditions. Harvesting is on a seasonal basis. UCV are cultivated more intensively under irrigated conditions in the Nuwara Eliya, Bandarawela and Welimada areas and most of these vegetables are temperate varieties. The cultivation is staggered (not confined to the Maha and Yala seasons) and harvesting is carried out throughout the year. Commercial cultivation of vegetables with heavy capital investment has been started recently and is becoming increasingly popular due to higher returns. As vegetable production is carried out by a large number of small scale producers scattered throughout the country, the data on vegetable production are only rough estimates. According to estimates provided by the Department of Census and Statistics(DCS), vegetable production declined by about 2 per cent in 1997, to approximately 419,000 metric tons, when compared to production in 1996. This decline is mainly attributed to a 5 per cent decline in LCV production (e.g. okra, tomatoes, snake gourd, etc.) both in the Maha and Yala seasons, to 260,000 metric tons. In contrast, the production of UCV such as leeks and radish increased by 3 per cent to 159,000 metric tons. Sri Lanka does not have well managed fruit orchards as in other countries. However, pineapples are cultivated in a more organised manner as an inter-crop under coconut, especially in the Gampaha District. Production of fruits such as plantains, mango, papaw and pineapple declined by 5 per cent in 1997 to 6,646 million fruits. According to estimates of the DCS, plantains and cashew nuts accounted for 63 per cent and 29 per cent, respectively, of this total.

Seasonal demand and continuous rain in the last quarter of 1997 which hampered the supply of vegetables, contributed to a sharp increase in prices. In addition to consumer demand for vegetables and fruits, there was increased demand for these items from the tourist industry as well as from the export sector. Vegetable and fruit (fresh and dried) exports in 1997, which were 6,869 metric tons and 9,886 metric tons, respectively, increased by 2 per cent and 70 per cent, respectively, when compared to the previous year. Most vegetable exports are to countries in the Middle East, which have a very large South Asian population, and to the Maldives. In order to meet the supply shortfall of vegetables in the domestic market, 750 metric tons of vegetables were imported in 1997, compared to 695 metric tons imported in 1996. In addition, 19,511 metric tons of fresh and dried fruits (such as dates) were imported in 1997, in comparison to imports of 16,733 metric tons in 1996. Accordingly, Sri Lanka is a net importer of fruits.

The Department of Agriculture (DOA) is continually investigating new food crops with better returns and greater growth potential to replace traditional food crops cultivated in the wet and dry zones. Grape and strawberry cultivation, respectively in the dry zone and higher elevations and leafy vegetable cultivation in the low country wet zone have been explored. These crops are considered to have a very high income generating ability. A study by the DOA to seek alternatives to improve the productivity of paddy land in the low country wet zone and increase farm incomes by the cultivation of leafy vegetables in certain paddy lands in the Colombo and Gampaha Districts had shown certain positive results. However, constraints such as environmental factors (soil quality, drainage and salinity) and increased demand for hired labour for field activities in the diversification of paddy lands need to be resolved. Preliminary studies are being conducted by the DOA on the profitability of vegetable cultivation in unproductive paddy lands.

Studies by the DOA have shown that farmers can reduce the cost of cultivation of vegetables and increase their incomes by adopting recommended seed rates of new varieties, using straight fertilisers and application of recommended pesticides. However, constraints such as the availability of adequate irrigation water, difficulties in finding hired labour as most farmers are part time cultivators, remain. Encouraging farmers to participate in training and demonstration programmes is considered necessary to increase agricultural productivity.

Sugar

Sugar production during 1997, estimated at 63,897 metric tons, was 9 per cent lower than the 70,414 metric tons produced in 1996. All three factories, namely Hingurana, Sevanagala and Pelwatta, recorded lower output levels. The highest decline of 45 per cent from 10,830 metric tons in 1996 to 5,887 metric tons in 1997 was recorded at the Hingurana factory. The Sevenagala and Pelwatte sugar

Chart 3.5
Total Sugar Availability

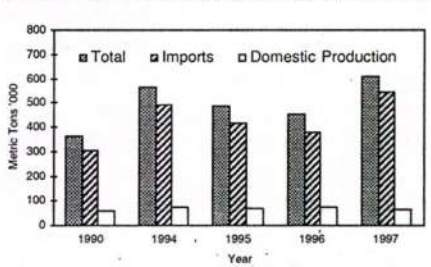


TABLE 3.7
Statistics of the Sugar Sector

Item	Unit	Hingurana Sugar Factory		Sevanagala Sugar Factory		Pelwatte Sugar Factory		Total	
		1996 (a)	1997 (b)	1996 (a)	1997 (b)	1996 (a)	1997 (b)	1996 (a)	1997 (b)
Total area under cane (with ratoons) (c)	Hectares	n.a.	1,673	3,282	3,147	6,056	4,872	8,510 (d)	9,692
Area harvested (c)	Hectares	1,329	934	2,699	2,377	4,927	3,831	8,955	7,142
Cane harvested (c)	MT '000	n.a.	69	176	169	188	161	363 (d)	398
Private cane purchased	MT '000	n.a.	26	2	2	453	462	455 (d)	491
Quantity of cane crushed	MT '000	170	95	178	169	515	520	862	783
Average yield(c)	MT/Hectare	n.a.	73	65	70	37	41	48 (d)	53(d)
Sugar production (without sweepings)	MT '000	11	6	16	15	44	43	70	64
Sugar recovery rate (e)	%	6.39	6.20	9.02	8.76	8.46	8.32	8.17	8.16

(a) Revised.
(b) Provisional.
(c) Includes nucleus estates and allottees.
(d) Excludes data in Hingurana Sugar Industries Ltd.

(e) Recovery rate = $\frac{\text{Sugar produced}}{\text{Quantity of cane crushed}} \times 100$

Sources : Pelwatte Sugar Industries Ltd.
Sevanagala Sugar Industries Ltd.
Hingurana Sugar Industries Ltd.

factories recorded an 8 per cent and 1 per cent drop in production, respectively, from 1996 to 1997. The Hingurana factory was beset with problems of mismanagement and labour unrest and the company was vested with the Government on 21 January 1997. During 1997, there was a drastic reduction in the area harvested (by 30 per cent) and the quantity of cane crushed (by 44 per cent). In most months the factory did not operate but due to pressure from private growers for a return on their investment in growing cane, the company purchased their cane and sent it to be crushed at the Pelwatta factory. In the second half of the year, the company started to produce wine spirits and alcohol. In 1997, the quantity of cane crushed at the Sevanagala factory declined by 5 per cent while at the Pelwatta factory it increased by 1 per cent. As in the last two years there was no production of sugar at the Kantale factory during 1997.

In 1997, the average yield of cane at Sevenagala increased by 8 per cent to 70 metric tons per hectare. In contrast, the average yield at the Pelwatta factory was very much less at 41 metric tons per hectare. However, when compared to 1996, the average yield at the Pelwatta factory had increased by 11 per cent in 1997. The increase in the average yield in nucleus estates as a result of favourable weather that prevailed during the year may have contributed to the yield increase at Pelwatta. The sugar recovery rate for both Hingurana and Sevenagala factories dropped by 3 per cent each in 1997, when compared to 1996. At the Pelwatte factory, the decline in the recovery rate was 2 per cent. The overall sugar recovery rate declined marginally to 8.16 per cent.

At Sevenagala, private cane purchases, although small in volume compared to the other two factories, increased significantly by 39 per cent to 2,437 metric tons in 1997 from 1,754 metric tons in 1996. Cane purchases from the private sector by the Pelwatte factory increased marginally and reached 462,000 metric tons, while purchases by the Hingurana factory were 26,000 metric tons.

In 1997, domestic sugar production was adequate to meet only about 10 per cent of the country's sugar consumption requirements compared to 15 per cent recorded in 1996. The quantity of sugar imported during 1997 was 545,158 metric tons, a 43 per cent increase compared to 381,158 metric tons imported in 1996. Thus, the performance of the sugar industry in the country has been far below expectations and has deteriorated over the years. However, import duty has been maintained at higher levels to protect the industry. Presently, import duty is at 25 per cent, increased from 18 per cent on 11 August 1997. The general level of import duty for sugar is 35 per cent. The 10 per cent duty reduction was to ease the burden on the consumer. In November 1997, a new sugar factory was established under Board of Investment regulations at Siyambalanduwa in the Moneragala District, with a capacity to crush 1,250 tons of cane per day (TCD). The capacity is to be further expanded to 2000 TCD.

3.5 Fish and Livestock

Fish

Total fish production in 1997 has been provisionally estimated by the Ministry of Fisheries and Aquatic Resources Development (MFARD) at 240,000 metric tons, an increase of 5 per cent. Marine fish production (coastal, deep sea and off shore) contributed 212,750 metric tons which was an increase of 3 per cent over 1996. The resumption of fishing in certain areas in the North and East, where fishing was banned earlier due to security reasons, helped to increase marine fish production. The increase in the number of multi-day boats in the deep sea fishing fleet also helped to step up production.

Aquaculture fish production (inland, coastal brackish water prawn culture and cultured prawns) during 1997 showed a significant improvement of 22 per cent to register 27,250 metric tons. This was mainly due to improvement in the inland fisheries sector resulting from an increase in the release of fingerlings to tanks, adequate water in tanks due to favourable distribution of rainfall, better management and co-ordination and more awareness programs. During the year, the MFARD continued with the rehabilitation work on the Dambulla, Udawalawe and Iginiyagala inland fisheries development centres. The Iginiyagala inland fisheries centre was taken over from the private sector in September 1996, after which repair work was initiated by the MFARD in 1997. Although the white spot viral infection affecting prawns in the prawn farms in the North Western Province was controlled in the third quarter of 1996, it broke out again in mid December 1996. This had a negative impact on prawn production in 1997 as nearly 90 per cent of the farms became non-operational. There are nearly 900 prawn farms covering an extent of about 3,000 hectares. The majority of prawn farmers are small-scale operators with an area less than 1 hectare in extent. Most farm operators were not able to repay their loans or carry out remedial measures due to lack of financial resources and this necessitated government assistance. Financial assistance was channeled through the Development Finance Corporation of Ceylon Bank (DFCC) for modification of affected farms. This enabled the construction of sedimentation reservoirs (for small farms) and recycling systems (for large farms) to arrest the spread of the disease. In addition, under the Food and Agriculture Organisation (FAO) Technical Co-operation Programme, assistance has been provided to improve the diagnostic capabilities of relevant institutions and train research officers and scientists. Training is also provided to prawn farmers on disease prevention and control. The Prawn Farmers and Exporters Association provides resource personnel and consultants for these training programmes.

The private sector dominates the fisheries sector. However, the Ceylon Fisheries Corporation (CFC) is involved in the supply of fish to consumers at a reasonable price through its countrywide sales outlets. In 1997, total fish supply of the CFC was 2,144 metric tons, which was an increase of 3 per cent. The CFC is also engaged in the production of ice for the fisheries sector. In 1997, CFC ice production increased by 2 per cent to 6,947 metric tons.

TABLE 3.8
Fish Production

Metric Tons '000

Sub-Sector	1995	1996(a)	1997(b)
Marine(c)	218	206	213
Aquaculture (d)	20	22	27
Total	238	228	240

(a) Revised.
(b) Provisional.
(c) Coastal and deep sea sector.
(d) Inland sector, coastal brackish water prawn and cultured prawn production

Source: Ministry of Fisheries and Aquatic Resources Development

Considering the highly capital intensive nature of the fishing industry, MFARD continued to provide various subsidies to the fishing industry to overcome constraints faced in the modernisation of the fishing fleet and fishing gear. Under the producer subsidy schemes 55 day boats, 52 multi-day boats and 383 traditional crafts were issued in 1997 when compared to 202 day boats, 53 multi-day boats and 405 traditional crafts in 1996. The decline in the issue of day boats was to discourage the over exploitation of coastal fisheries resources in the Southern and Western seas as a consequence of fishing being banned in the Northern and Eastern coastal areas in the past few years. More encouragement is provided to deep sea fishing. Productivity is higher by fishing in multi-day boats that are able to stay out in the deep sea for nearly 15 days. The subsidies issued to the marine fisheries sector declined by 19 per cent to Rs.65 million, while the subsidy issued to the aquaculture sector increased by 33 per cent to Rs.4 million. The aquaculture sector has the potential to meet the demand for fish from the interior villages of the country and to provide products for the export market. The reorganisation of Fisheries Co-operative Societies (FCSS) commenced in 1996 and by 1997 there were 746 FCSS. The total membership of the FCSS was 77,656. However, past experience has shown that Government intervention in forming FCSS has hindered the development of these institutions as self-supporting peoples' organisations. State assistance is disbursed through the FCSS.

The average producer price of all species of fish increased by 10 per cent to Rs.110 per kg. in 1997. The

average retail price for all species of fish increased by 8 per cent to Rs.154 per kg. in 1997 from Rs.143 per kg. recorded in 1996. The highest retail price recorded for a kg. of fish was Rs.297 for 'Seer' (a large species) while the lowest average retail price recorded was Rs.65 per kg. for 'Salaya' (a small species). In order to meet the increasing demand for fish, which is a major source of protein of the population, total fish imports increased by 18 per cent to 73,950 metric tons in 1997. Canned fish imports increased significantly by 44 per cent to 21,925 metric tons and salted fish (dry fish) imports increased by 11 per cent to 48,782 metric tons.

In the past, the major variety of fish exported has been prawns. However, in recent years, the category of fresh and frozen fish exports have increased significantly and in 1997 it increased by 30 per cent to 3,251 metric tons from 2,494 metric tons recorded in 1996. This is mainly attributed to the export of fish landed by foreign vessels at harbours managed by the Ceylon Fisheries Harbours Corporation. These vessels that fish outside Sri Lanka's Exclusive Economic Zone (EEZ) have established joint ventures in Sri Lanka under the Board of Investment regulations. The export of prawns declined by 18 per cent to 2,584 metric tons in 1997 mainly due to the drop in production as a result of the white spot viral infection. However, earnings from prawn exports declined by only 7 per cent as a result of favourable prices received in foreign markets. There is a great potential for prawn exports to the Japanese, USA and European Union markets in spite of these importing countries enforcing strict quality requirements. The MFARD is taking action to improve fish landing sites and the quality and safety of fish processing at fish processing establishments.

Livestock

Although the livestock industry comprises several sub-sectors, dairy and poultry industries are the most prominent and organised sectors at present. The livestock sector contributes about 8 per cent to the gross value of agricultural production and is dominated by the private sector. A small contribution of about 2 per cent by the National Livestock Development Board (NLDB) to total milk production continued in 1997 as well.

The Department of Census and Statistics estimates that national cow milk production increased by 1 per cent from approximately 249 million litres in 1996 to 252 million litres in 1997. In contrast, buffalo milk production in 1997 had decreased by 4 per cent to 79 million litres. In 1997, the NLDB farms produced about 4.1 million litres of cow milk which was a decrease of 7 per cent when compared with 1996 and about 0.7 million litres of buffalo milk which was an increase of 8 per cent when compared to 1996.

Milk Industries of Lanka company Ltd. (MILCO), the largest milk collector in the country accounted for about 50 per cent of the share in national milk collection, which amounted to 57.5 million litres of milk in 1997. This was an increase of 6 per cent over the previous yearís collection of 54 million litres. This could be attributed to better prices paid to producers since 1996 (Rs.12.64 per litre) as well as favourable weather conditions due to well distributed rainfall in 1997 for pasture or fodder growth. The volume of milk collected by Nestle Lanka Ltd. (NLL) decreased by 5 per cent from 36.8 million litres in 1996 to 35.1 million litres in 1997, while the volume collected by International Dairy Producers Ltd. (IDPL) decreased by 24 per cent in the same period. Other milk processing industries increased collection by more than fourfold to 12 million litres in 1997.

Value added milk products of MILCO increased in 1997. Accordingly, the production of pasteurised full cream milk declined marginally by 2 per cent, while flavoured milk increased by 17 per cent. Full cream and flavoured sterilised milk production increased by 17 per cent each since there was a greater demand for these products. Cultured milk products such as yoghurt and drinking yoghurt increased by 10 per cent and processed cheese production increased more than twofold to 22,000 kg. In 1997 MILCO's full cream milk powder production increased by nearly 10 per cent to 4.5 million kg. Output of milk products by NLL decreased by 7 per cent from approximately 6,000 metric tons in 1996 to 5,600 metric tons in 1997. This was attributed to utilisation of a large carried forward stock of 1996.

Milk production in 1997 remained around 20 per cent of the country's requirement of milk and milk products. The country has the potential to be self sufficient in milk and milk products and steps have been taken to step up milk production. On 30 September 1997, preliminary work relating to change in ownership of MILCO to Kiriya Milk Industries Co. Ltd., a joint venture between the Government of Sri Lanka and the National Dairy Development Board (NDDB) of India was initiated.

The poultry industry, which is dominated by the private sector, includes a large number of small producers and a few large producers. It also has a conglomeration feature of a combination of poultry feed manufacturers and producers of poultry products. According to the Department of Census and Statistics, egg production in the country decreased marginally from 856 million in 1996 to 855 million in 1997. This was attributed to the viral infection affecting chicks in mid 1997. Egg production of the NLDB farms in 1997 was around 4 million which was a decrease of nearly 52 per cent over the production in 1996. As a result of a drop in egg supplies and greater demand for eggs due to the increase in the price of fish in the third quarter of 1997, egg prices rose sharply.

The price of eggs continued to remain high towards the end of the year due to seasonal demand and the increase in demand for eggs due to the outbreak of cholera in the Negombo fishing areas. Favourable prices for eggs have encouraged poultry producers to increase production. This would have an impact in 1998. The cost of production has been estimated at around Rs.3.50 per egg. According to the Ministry of Livestock Development and Estate Infrastructure chicken production in 1997 was around 40,000 metric tons, which was a 5 per cent increase over the production in 1996. Attractive prices and increase in demand for chicken due to the high prices of substitute animal protein such as fish and mutton have provided a good market for poultry products. The average retail price of broiler chicken which was Rs.113 per kg. in December 1996, increased by 24 per cent to Rs.140 per kg. in December 1997.

The decline in international prices of raw materials used in animal feed enabled the price of feed to be fairly stable throughout 1997. Attractive output prices with fairly stable input prices created a conducive environment to producers in the livestock industry and the country's poultry market recovered from its recession in 1996.

3.6 Inputs and Credit

The expectations of farmers regarding their farm income are greatly influenced by the movements in input prices. Any increase in input prices should generally be compensated by a corresponding increase in the prices of the final product, but this may not always be possible. It was also observed that the existence of attractive producer prices influenced proper utilisation of inputs on time.

Fertiliser

Fertiliser used during the 1997 calendar year increased marginally to 524,558 metric tons. However, among plantation crops, only tea recorded an increase in fertiliser usage. Improved prices for tea which prevailed throughout the year and favourable weather conditions contributed to enhanced fertiliser application by 4 per cent. Fertiliser issues to the rubber and coconut sectors declined by 28 per cent and 11 per cent, respectively, compared to the previous year. A significant decrease in fertiliser usage in the rubber sector reported in 1997 could be attributed to the decline in rubber prices. The decline in the issue of fertiliser to the coconut sector may be attributed to reduced use of sulphate of ammonia (SA) as a result of high prices after the removal of the subsidy on SA. On a calendar year basis, fertiliser used in the paddy sector increased by 3 per cent when compared with the previous year. Increased application of fertiliser in the paddy sector could be attributed to an assured supply of irrigation water during the 1997/98 Maha season. Fertiliser issues to the export agricultural crop sector also recorded a 14 per cent increase, which may be attributed to the overall improvement in producer prices that encouraged fertiliser application.

TABLE 3.9
Fertiliser Usage by Crops

Metric Tons '000

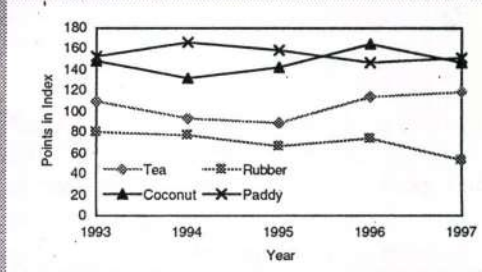
Crop	1995	1996(a)	1997(b)
Paddy	257	238	245
Tea	120	154	160
Rubber	15	17	12
Coconut	34	39	35
Other Field Crops	40	55	49
Other Export Crops	5	6	7
Others	39	16	17
Total	509	524	525

(a) Revised.
(b) Provisional.

Source: National Fertiliser Secretariat

The fertiliser subsidy scheme in respect of four major varieties of fertiliser, namely, urea, sulphate of ammonia, muriate of potash and triple super phosphate continued till end September 1997. However, this scheme was revised with effect from October 1997. Under the new scheme, the fertiliser subsidy was confined to urea fertiliser only. The objective of this revision was to provide a higher benefit to small farmers. Approximately, 75 per cent of the urea fertiliser used in the country is for the cultivation of paddy. Under the revised scheme, the retail price was fixed at Rs.7,000 per metric ton or Rs.350 per 50 kg. bag. The new scheme is subject to revision on a seasonal basis.

Chart 3.6
Fertiliser Application: Major Crop Categories
(1990 = 100)



Seed

The national seed policy (the policy of the Government of Sri Lanka on the Seed and Planting Material Industry) was officially declared in 1997. Guidelines have been provided to encourage private sector participation in producing the country's requirement of quality seed and planting material. Viable seed industries are to be established to facilitate the Sri Lankan farming community to gain easy access to good quality seed and planting material from domestic sources or through importation. Therefore, the new policy is focussed towards the establishment of seed enterprises, which will produce and market the seed and planting material. The DOA will co-ordinate and provide the required support to ensure quality of seed and planting material. In this regard, several workshops were held in Colombo and the outstations to explain the content and facilities available to the public and private sectors.

In November 1997, the Government announced in the 1998 Budget various measures that would be taken to make available an adequate quantity of quality seed material. The DOA, the Mahaweli Authority of Sri Lanka (MASL), farmers and private sector enterprises are expected to meet the seed requirement through local production and imports. In the case of seed paddy, in the 5 major rice producing districts of Ampara, Polonnaruwa, Kurunegala, Anuradhapura and Hambantota, five acre seed farms among paddy farmers are to be developed to increase seed production. The DOA would provide quality seed for reproduction as well as the necessary extension services. The Pelwehera, Polonnaruwa and Hingurakgoda seed production farms of the DOA would concentrate on developing high yielding seed. The DOA is also expected to give certain seed farms on long term lease to the private sector for commercial seed production. The DOA is expected to enhance its extension services by a mobile agricultural technology service in these 5 districts to improve field level testing, fertiliser application and use of quality seed that would result in increased yields. To strengthen agricultural extension services, a performance incentive by way of a reward is expected to be given to those officers who achieve their production targets. In November 1997, the Government further announced that the import of seed cleaning machines, sorting and grading machines, seed testing equipment and seed packing machines would be made duty free.

The quantity of seed paddy issued by the DOA in 1997 declined by 2 per cent to 3,600 metric tons. The DOA is able to fulfil about 3 per cent of the national seed paddy requirement, while the balance is met by paddy farmers, farmer organisations, co-operatives, private companies, MASL and Provincial Councils. Only a part of the seed paddy production of these institutions had been certified by the DOA. The issue of OFC seeds such as chillies, black gram, maize and groundnuts by the DOA increased substantially in 1997. A major portion of the seed requirements of OFCs is met by the farmers. However, the seed requirements of potatoes and big onions are mostly imported.

A drought tolerant cowpea variety ('Dhawala') suitable for cultivation in Yala and late Maha, another cowpea variety ('Sena') and a pigeonpea variety ('Prasada') giving excellent ratoon yields were the new varieties released by the DOA to farmers in 1997. In addition, two sweet potato varieties, a few other root and tuber crops and a papaya variety ('Rathna') suitable for the dry and intermediate zones were also released for cultivation by the DOA in 1997.

Agro Chemicals

According to provisional estimates provided by the Registrar of Pesticides (ROP), the total quantity of agro chemicals (insecticides, weedicides and fungicides) sales in 1997 declined by 6 per cent compared to the provisional figures of 1996. The quantity of weedicides, which account for about 50 per cent of total agro chemical sales, increased by 6 per cent to 2,985 metric tons, while insecticide sales declined by 10 per cent to 2,144 metric tons. The quantity of fungicide sales also declined by 31 per cent to 579 metric tons.

Increased sales of weedicides may be attributed to increased dependency by farmers on chemical weed control measures. The decline in sales of insecticides may be due to the promotion of Integrated Pest Management methods (where straight application of insecticides are being discouraged). In November 1997, the Government announced the exemption of customs duty on agro chemical imports.

Credit

Low productivity, frequently referred to and highlighted in the agricultural sector, could be partly attributed to poor timing and inadequate utilisation of required inputs. In this regard, credit constraint is a major factor that needs special consideration. According to the available data, demand and utilisation of agricultural credit in the informal sector appears to be less encouraging.

In 1997, the commercial banks continued to grant cultivation loans with their own funds while the Government provided an interest subsidy of 7.5 per cent per annum. The total quantum of credit granted under the New Comprehensive Rural Credit Scheme (NCRCS) during the 1996/97 cultivation year remained at the same level of Rs. 586 million when compared to the previous year.

Sixty eight per cent of the total loans granted amounting to Rs.398 million was on account of the 1996/97 Maha season, while the balance Rs.188 million was granted during Yala 1997. Loans granted during the Yala season increased by 33 per cent due to enhanced cultivation activities, when compared with the loans granted in 1996. As in the previous year, of the total loans granted two thirds amounting to Rs.383 million was granted for paddy and the balance was granted for other field crops. Two state banks, namely Bank of Ceylon and People's Bank disbursed 68 per cent of the total loan quantum which was a decline of about 10 per cent when compared to the previous year. The loans granted by the Regional Rural Development Banks (RRDBs) during the year increased by 11 per cent to Rs.89 million.

3.7 Forestry

Forests and forest resources are vital for the sustenance and conservation of water resources, soils, animal and plant life and mitigation of atmospheric pollution, etc. Forest resources also supply economic requirements such as fuel wood, timber and medicine.

Based on a survey carried out in 1992 by the Forest Department (FD), total forest cover has been estimated at approximately 2 million hectares. Closed canopy forests including mangroves is estimated at around 1.6 million hectares, while sparse forest cover is about 0.5 million hectares. Viable forest plantations are estimated at around 72,350 hectares. The extent deforested (clear felled) from forest plantations for the supply of timber in 1997 was 205 hectares. During the year this area was reforested by the FD.

TABLE 3.10
Statistics of the Forestry Sector

Item	Unit	1995	1996(a)	1997 (b)
1. Total forest cover (c)	000' Hectares	2,119	2,119	2,119
Closed canopy forest (d)	000' Hectares	1,583	1,583	1,583
Sparse Forest	000' Hectares	464	464	464
Mangroves	000' Hectares	9	9	9
2. Extent deforested (e)	Hectares	100	300	205
3. Extent reforested	Hectares	10,307	13,167	205 (f)
4. Number of forest offences recorded	No.	5,368	5,014	5,158
Volume of timber detected	Cubic Meters	2,724	3,918	2,488
Value of timber detected	Rs. Mn.	29.3	35.7	29.5

Source : Forest Department.

(a) Revised
(b) Provisional
(c) Approximately 72,350 ha. of viable forest plantations are included.
(d) Includes mangroves.
(e) Estimates
(f) Excluding extents under Participatory Forestry Project.

Reforestation programs have been implemented by the FD to minimise the negative impact of deforestation on the environment, to protect environmentally sensitive areas and to provide for the increase in demand for fuel wood and timber.

The number of forest offences recorded in 1997 increased by 3 per cent to 5,158 as against 5,014 recorded in 1996. However, the volume of illicitly felled timber detected declined by 36 per cent to 2,488 cubic meters, while the value declined by 17 per cent to Rs.30 million. Increased surveillance and stringent regulations in the transportation of timber has had a positive impact on illegal deforestation.

Several projects in environmental management were undertaken by the FD in 1997. The Sinharaja and Knuckles Conservation Projects were carried out with foreign aid amounting to Rs.8 million from the Norwegian Development Programme (NORAD) which was completely utilised. NORAD assistance totalling Rs.1 million of which 95 per cent was utilised was provided for the Mangrove Conservation Project. Activities under these projects included conservation area management, buffer zone management, survey of mangrove habitats, extension, awareness and training programs and the construction and maintenance of buildings and roads. The Asian Development Bank and Australian Aid (AUSAID) provided funds amounting to Rs.115 million of which 95 per cent was utilised for the Participatory Forestry Project. Under this project 9.3 million seedlings were produced in 1997 and forest plantations were raised through homestead development (7,857 hectares), farmer woodlots (2,035 hectares), protective woodlots (1,254 hectares) and through miscellaneous tree planting programmes (696 hectares block planting and 396 km. avenue planting). Tree improvement activities have also been carried out during 1997. In 1997 the Food and Agriculture Organisation (FAO) had provided funds equivalent to Rs.100,000 for research activities which were fully utilised.

A Five Year Implementation Program has been prepared for the next 5 years, within the context of the Forestry Sector Master Plan by the FD. The programme comprises 7 major components.

- Forest land allocation and macro level zoning
- Forest conservation management
- Multiple use management of natural forests
- Commercial plantation development
- Social/agro forestry and extension
- Forest based industry development
- Institutional development