# **3. AGRICULTURE, FISHING AND FORESTRY**

### 3.1 Production Trends

The performance of most agricultural crops improved in 1995, due to favourable weather conditions and attractive prices for major export crops. It was a boom year, particularly for rubber prices. Tea and paddy production surpassed the record production levels of 1994, by 2 per cent and 5 per cent, respectively. Coconut production increased by 5 per cent and registered a record output after 1986. There was only a marginal improvement in rubber production, while sugar production dropped by 1 per cent. Production trends in other agricultural crops were mixed with certain items showing significant increases during the year. Fish production increased by 6 per cent due to increased deep sea and aquaculture fish production.

#### TABLE 3.1

Production and Price Changes of Major Agricultural Items

ltom	Linit	Production		Change in 1995 (%)		
nem	Unit -	1994	1995	Production	Prices	
Tea	Kg. Mn.	242	246	2	11	
Rubber	Kg. Mn.	105	106	0	43	
Coconut	Nuts Mn.	2,622	2,755	5	13	
Paddy	000' TM	2,684	2,810	5	-2	
Sugar	MT '000	72	71	-1	-3	
Fish	MT '000	224	238	6	22	

Source : Central Bank of Sri Lanka

### 3.2 Agricultural Policy

The plantation sector policy became more transparent and significant progress was made towards improving the efficiency of the sector. In 1995, the Government commenced the extension of the current 5 year lease contracts for private management of the state-owned Regional Plantation Companies (RPCs), to 53 years, with effect from 1992. The non-plantation agriculture sector was affected by the interplay of several factors. There was a bumper paddy harvest which exerted downward pressure on rice prices. This situation was aggravated by the wheat flour subsidy which changed the relative prices against paddy farmers. As consumer demand shifted towards cheaper wheat flour based products, there was further downward pressure on rice prices. This was the major justification for the enhanced presence of the Paddy Marketing Board (PMB) in the market to purchase paddy at the guaranteed price. The activities of the PMB interfered with the already established private marketing system. Meanwhile, the PMB was not able

to dispose of the accumulated stock of rice and incurred a large debt (Rs.2 billion) to the domestic banking system. In addition, import licensing of certain agricultural products (potatoes, big onions and chillies ) continued in 1995. Import licensing schemes often become quantitative import controls and a deterrent against efficient functioning of markets, with heavy costs to the consumers. Further, a transparent variable tariff system could provide adequate protection to farmers while minimising costs to consumers. A transparent and consistent policy in this area would have encouraged private sector participation in the storage and distribution network for these agricultural products. Meanwhile, the fertiliser subsidy scheme re-introduced in 1994 continued in 1995 as well but with an overall expenditure cap. However, there were delays in the settlement of subsidy payments by the Government to fertiliser importers due to resource constraints.

A major structural change that took place during the year in the agriculture sector as mentioned above was the extension of management contract leases of nine state owned RPCs to 53 years. The 23 RPCs were being managed by private companies on a profit sharing basis for a 5 year contract period. Some of the private management companies were able to improve productivity and contain cost of production increases. However, they were not active in longterm investments in the plantation sector due to the shortterm nature of the contract. It was a case of management without a reasonable period of long tenure. To improve the efficiency of the plantation sector, under the ongoing privatisation programme, the Government commenced entering into long-term lease agreements with the plantation companies whereby the land was leased for a period of 53 years with effect from 1992, while passing on the full risk and benefit of management to the private sector.

The Public Enterprise Reform Commission (PERC) earmarked 10 RPCs for long-leasing during the year. Fifty one per cent of the total shares in the profit making RPCs were to be sold to the company managing the RPC, while 51 per cent of total shares in the loss making RPCs were to be sold on the Stock Exchange on an 'all or nothing' basis. Twenty per cent of total shares in the company were to be sold to the public, of which 8 per cent were reserved for small investors at a fixed price of Rs.10 per share. The balance 12 per cent were to be sold on a tender basis (each tenderer being limited to a maximum of 4 per cent of the portion). Ten per cent were to be allocated to workers of the plantations, while the method of disposal of the balance 19 per cent had not been decided by the PERC. The Government would hold a 'Golden Share' in each RPC to safeguard national interests and reduce trade union concerns. The capital of each RPC was valued at Rs.200 million and underwritten so as to realise the full value less its charges. Foreign ownership in the equity of a RPC was limited to 49 per cent.

Six profit making plantation management companies had committed to purchase 51 per cent of the shares in the Kotagala, Bogawantalawa, Agalawatta, Kegalle, Kelani Valley and Horana RPCs. Public subscription to the fixed price portion of the share issue was poor resulting in the underwriters having to purchase the balance. Fifty one per cent of the shares of Watawala, Madulsima, Maskeliya and Agarapatana RPCs, which were loss making were offered on an 'all or nothing' basis on the Stock Exchange. By the end of 1995, nine RPCs (excluding Agarapatana RPC) were privatised.

To increase productivity in the tree crop sector, various incentives such as subsidies for replanting, new planting and intercropping (for coconut) and a fertiliser subsidy were continued in 1995. In order to facilitate marketing, improve quality and ensure higher returns to producers of other export crops, a Spices and Allied Crops Marketing Board was established in 1995. This sector was also supported by intensive extension programmes, the provision of improved planting materials and easier access to credit, as in the past.

A major policy thrust was to achieve food security, particularly by increasing the productivity of paddy. Emphasis was laid on quality seed supplies, integrated pest management, straight fertiliser application to reduce costs and increase yields and the use of long aged varieties in the Maha season to increase productivity. However, the policy to subsidise wheat flour in the latter part of 1994 which was subsequently scaled down in 1995, adversely affected the paddy sector as well as some of the subsidiary food crops.

The Government decided to write-off all past due loans to farmers upon payment of 25 per cent, thereby restoring the eligibility of these farmers for new agricultural loans.

Concessionary credit at reduced interest rates continued to be provided to the agriculture sector mainly through the two state banks and local commercial banks. Credit was no longer refinanced by the Central Bank and instead, an interest subsidy was provided by the Government.

# 3.3 Export Crops

# Tea

Sri Lanka's tea industry, once pre-eminent in the world, has been going through intermittent crises for a very long time. The problems became accentuated after the nationalisation of the local and foreign owned plantations. The British business interests shifted to countries in the African Continent such as Kenya, Malawi and Tanzania, resulting in the emergence of stiff competition, especially from Kenya. The emergence of coffee as a popular and convenient beverage caused tea prices to stagnate, compounding the industry's problems. The management of the nationalised plantations under two large state owned corporations - namely the Sri Lanka State Plantations Corporation (SLSPC) and the Janatha Estates Development Board (JEDB) - appeared inadequate to meet the daunting task of adjusting to the new challenges of raising productivity and remaining competitive. Direct state intervention in the management of plantations for sociopolitical considerations took precedence over commercial considerations. The period of their management was characterised by large financial losses, wastage, increasing costs and a decline in efficiency.

When compared with competitors such as India and Kenya, Sri Lanka's record has been disappointing. Yields and labour productivity have been the lowest, while the cost of production of tea has been the highest. Productivity per worker was also the lowest in Sri Lanka despite wages being higher. Wage setting in the plantations in Sri Lanka had no relation to productivity growth. Export duties had to be reduced progressively and eventually, the exchange rate had to bear the brunt to some extent of the adjustment required in the face of the increasing cost of production and depressed prices to keep the industry afloat. Continuous losses of the plantations were financed by state directed credit.

In order to rectify these ills, in 1992, the Government decided on a programme of restructuring. Initially, the management of a majority of the state owned plantations were handed over to private management companies on five year contracts. As the management companies did not have a stake in the ownership and as the leases were short-term there was no incentive to invest in capital expenditure.

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Therefore, the Government in 1995 took a courageous decision to privatise the management of the state plantations over a 50 year period, with the option to renew the leases.

Tea production in 1995, surpassed the peak production of the previous year by 2 per cent to record 246 million kg. This was due largely to favourable weather conditions, while improved management of certain state plantations, higher productivity from smallholders and attractive prices particularly towards the latter part of the year, too, contributed. The output of low grown teas increased for the third consecutive year by 3 per cent to reach 122 million kg which was the best production recorded so far at the low elevations and accounted for the highest share of total tea production. The increased production was mainly due to high yields from better yielding clones planted in new cultivations. The output of medium elevations increased by 7 per cent, while the output of high grown tea declined by 4 per cent.

TABLE 3.2 Statistics of the Tea Sector 1993-1995

	Item	Unit	1993	1994(a)	1995(b)
1.	Production	Kg. Mn.	232	242	246
	High grown	Kg. Mn.	73	77	74
	Medium grown	Kg. Mn.	47	47	51
÷	Low grown	Kg. Mn.	112	118	122
2.	Extent under tea (c)	Hectares			
		'000	n.a.	187	187
3.	Fertiliser used	000' TM	147	126	120
4.	Replanting	Hectares	1,311	1,225	1,274
5.	Prices				
	Colombo (net)	Rs./Ka.	68.88	65.12	72.21
	Export (f.o.b.)	Rs./Kg.	91.16	91.32	102.31
6.	Cost of production	Rs./Kg.	75.81	75.67	79.14
7.	Exports	Kg. Mn.	218	230	241
8.	Export earnings	Rs. Mn.	19,911	20,964	24,638
		SDR Mn.	296	296	316
9.	Value added as % of				
	GDP(d)		2.4	2.3	2.1
(a)	Revised.	Sourc	es: Sri La	nka Tea Boa	ard

(b) Provisional.

(c)

Provisional. Based on a Survey conducted National Fertiliser Secretariat Central Bank of Sri Lanka

in 1992 by the Tea Commissioner's Division (excludes abandoned tea lands).

(d) In growing and processing only.

It is important to note that smallholders are more efficient producers than the well established state owned large plantations. Smallholders produce nearly 60 per cent of the total green leaf production with a cultivated area of about 45 per cent of the total. Approximately 65 per cent of tea smallholders are located in the low elevational areas in the Galle, Matara and Ratnapura districts.

Of late, Sri Lanka has made an effort to shift from orthodox tea manufacture to the CTC (Cut, Tear and Curl) method which has the advantage of faster brewing and is gaining popularity in markets. CTC production, which recorded a 41 per cent increase in 1994, expanded by a further 77 per cent to 20 million kg in 1995. Thus, CTC tea accounted for 8 per cent of the total production, as against 5 per cent in 1994. The number of CTC tea producing factories rose from 25 to 33 in 1995 as a result of the construction of new CTC tea factories and the conversion of some orthodox factories to the CTC process.

The estimated average cost of production (COP) of made tea increased by 5 per cent in 1995 to Rs. 79.14 per

kg mainly due to rising wage and fertiliser costs. However, the average price of tea received at the Colombo Auctions was lower than the COP for the fifth successive year. As a result of the negative producer margins faced by many of the factory owners over a prolonged period, the industry as a whole faced a serious liquidity crisis. Several private factory owners and several management companies have managed to survive only by borrowing heavily from the banks.

However, the average price of tea at the Colombo Auctions recovered during the latter half of 1995. This was attributed to the reduction of the exportable surplus of India due to increased domestic consumption, the active participation of the Commonwealth of Independent States (CIS countries - former Soviet Union) and certain Middle Eastern countries at the Colombo Auctions. The nominal depreciation of the Sri Lanka Rupee against the US dollar too helped to make tea competitive. The annual average price of tea increased by 11 per cent to Rs.72.21 per kg at the Colombo Auctions, while the average export price also improved by 12 per cent to Rs.102.31 in 1995.



In the tea sector, fertiliser usage dropped by 5 per cent to 120,300 metric tons in 1995 owing to financial difficulties. This decline in fertiliser application in tea was partly the outcome of the financial crisis faced by tea growers and could have long-term adverse consequences on productivity, which is already far below that of her competitors.

As in the previous year, the new planting subsidy rates in all three elevational areas remained at Rs.36,000 per hectare. Replanting subsidy rates too remained unchanged at Rs.67,000 per hectare for high and medium elevations and Rs.57,000 per hectare for low elevations. The replanting subsidy covers only about 25 per cent of the total replanting cost. The total replanting and new planting subsidies disbursed by the Tea Small Holdings Development Authority (TSHDA) at Rs. 76 million during 1995 were marginally higher than the 1994 level.

Apart from planting subsidies, the Government continued to assist tea factory modernisation. The Tea Factory Development Incentive Scheme and the incentive scheme for CTC machinery continued in 1995. To encourage the production of value added tea, the interest subsidy on purchases of tea bagging machines was increased from 50 to 75 per cent. These subsidies were financed by levying of special cesses on the industry. The tea cess remained unchanged at Rs.2.00 per kg in 1995 and yielded Rs. 477 million, which was 2 per cent higher than in the previous year.

#### Rubber

The local rubber industry enjoyed boom conditions during 1995 with natural rubber prices reaching record levels. However, the country was able to benefit from this only partly since rubber production remained stagnant. Meanwhile, costs tended to rise sharply, especially wages arising from a shortage of labour.

According to the estimates of the Rubber Development Department, rubber production showed only a marginal increase of 0.4 per cent to 105.7 million kg in 1995, despite rubber prices reaching record levels. Sheet rubber output

TABLE 3.3								
Statistics of	the	Rubber	Sector	1993-1	1995			

	Item	Unit	1993	1994(a)	1995(b)
1.	Production	Kg. Mn.	104	105	106
2. 3.	Area (c) Under cultivation Under tapping Yield	Hectares '00 Hectares '00 Kg./Hectares	0 162 0 119 873	161 121 870	162 124 853
4.	Fertiliser used	000' TM	18	17	15
5.	Replanting	Hectares	2,419	1,623	2,100
6.	Prices Colombo (RSS 1) Export (f.o.b.)	Rs./Kg. Rs./Kg.	35.48 44.34	50.36 51.81	72.04 83.69
7.	Cost of production (d)	Rs./Kg.	23.00	24.90	26.50
8.	Exports	Kg. Mn.	70	69	68
9.	Domestic consumption	n Kg. Mn.	33	36	37
10.	Export earnings	Rs. Mn. SDR Mn.	3,086 46	3,582 51	5,713 74
11.	Value added as % of GDP (e)		0.7	0.9	0.8
(a) (b) (c)	Revised. S Provisional. Based on the Survey o Agricultural Crops and	Sources : Rul Nat If Cer	ber Dev ional Fer htral Banl	elopment D tiliser Secre k of Sri Lanl	epartment Itariat ka

Livestock-1993. Department of Census and Statistics.

(e) In growing and processing only.

which accounts for the highest share of total output increased by 3 per cent to 42 million kg. Production of technically specified rubber increased more than two fold to 23 million kg. On the other hand, crepe rubber production dropped by 9 per cent to 35 million kg in 1995.

The area under tapping increased by 2 per cent to 123,900 hectares, while the yield per hectare dropped by 2 per cent to 853 kg per hectare in 1995. The drop in yield and stagnant production are due to low fertiliser application, most rubber plantations being under old and relatively low yielding clones, rain interference during the high tapping season and a shortage of experienced tappers.

Rubber is predominantly a smallholder crop with 64 per cent of the extent under tapping being in the hands of the private sector smallholders. Improved prices provided some incentive for replacing older rubber trees. During the year, about 2,100 hectares were replanted, which was an increase of 29 per cent over the previous year. However, the extent newly planted in 1995 declined by 17 per cent to approximately 553 hectares partly due to a shortage of planting material. The subsidy for replanting was increased from Rs.37,065 to Rs. 49,722 per hectare and for new planting from Rs. 35,830 to Rs. 48,185 per hectare. The beneficiaries of these enhanced payments were mainly smallholders. The performance under the 1988 World Bank funded Smallholder Rubber Rehabilitation Programme was disappointing. In 1995, the replanting target was 3,430 hectares (in the districts of Kalutara, Kegalle and Ratnapura) but the actual extent replanted was only 1,329 hectares. This programme envisaged replanting of 30,000 hectares and new planting of 8,750 hectares by July 1996 but during the last seven years the project has been able to achieve only about a 50 percent success rate. Evidently rubber prices have been unattractive for most of the time, providing little incentive to increase the seedling stock in private nurseries. In addition, excessive rain during the seasons had also reduced the stock of seed available.

The average cost of production of rubber has been estimated to have increased by 32 per cent to Rs.50.56 per kg in the larger plantations. In the smallholder sector, however, the increase was only 6 per cent to Rs.26.50 per kg in 1995. The increase in cost of production was due to higher costs of inputs, particularly wages arising from a shortage of tappers and high cost of fertiliser. It is noteworthy that the average cost in smallholdings is half that of larger ones.

There was a boom in rubber prices in 1995. The annual average price of RSS 1 at the Colombo Auctions rose by 43 per cent to Rs. 72.04 per kg. The average export (f.o.b.) price of all grades of rubber reached Rs.83.69 per kg, an

<sup>(</sup>d) Smallholders only.



increase of 62 per cent. Hence, although the export volume declined marginally to 68 million kg in 1995, export earnings increased by over 59 per cent to Rs.5,713 million in 1995.

The demand for natural rubber in the international market rose sharply in 1995, especially in the first nine months of the year, owing to increased demand from the tyre industry and capacity restraints in the synthetic rubber industry. A decline in Malaysian rubber production further helped to sustain high prices. Domestic consumption of rubber too has shown a steady increase for the eleventh consecutive year, arising from a noteworthy improvement in the local rubber-based manufacturing sector. In 1995, domestic consumption rose by 3 percent to 37 million kg, which was a third of local production. The demand for natural rubber is likely to remain high in the near future. An incentive scheme was introduced in 1995 by the Rubber Development Department for manuring mature rubber trees and for fixing rain guards to facilitate tapping.

From 1 February 1995, the Rubber Replanting cess on sheet and crepe rubber was increased from Rs.1.15 to Rs.3.85 per kg to replenish the Rubber Replanting Fund. The cess was extended to other types of exported rubber from 1 July 1995. The collection from this cess is ploughed back into the sector in the form of a subsidy for replanting.

#### Coconut

Coconut production in 1995 has been estimated to have surpassed the previous years' level by 5 per cent, to register an output of 2,755 million nuts. This was the highest crop recorded since 1986. The increase in production was mainly attributed to the lagged effect of the favourable weather conditions that prevailed in the previous two years and increased use of fertiliser. As expected, domestic prices of coconut, which forms an important part of the daily diet, declined modestly. The world prices for coconut kernel products remained high owing to production uncertainties. As

a result, export earnings from coconut kernel products rose by 42 per cent to Rs. 3,521 million (29 per cent in SDR terms).

Generally, when fresh nut prices tend to decline owing to an increase in supply, more coconuts are utilised for the production of desiccated coconut (DC) where the profit margins tend to be higher than in the case of other kernel products. Further, international prices of DC, copra and coconut oil improved in 1995. Accordingly, the nut equivalent of DC production increased by 22 per cent to 465 million nuts. This is the highest on record since 1986. The nut equivalent of coconut oil production increased by 12 per cent to 540 million nuts, while the nut equivalent of copra exports increased by 52 per cent to 49 million nuts. Fresh nut exports in 1995, at 25 million nuts, was the same as in

TABLE 3.4 Statistics of the Coconut Sector 1993-1995

Item	Unit	1993	1994(a)	1995(b)
1. Production(c)	Nuts Mn.	2,164	2,622	2,755
Desiccated coconut	Nuts Mn.(d)	269	380	465
Coconut oil	Nuts Mn.(d)	176	480	540
Copra (e)	Nuts Mn.(d)	24	32	49
Fresh nut exports Domestic nut	Nuts Mn.	22	25	25
consumption (f)	Nuts Mn.	1,668	1,687	1,693
2. Total extent 3. Average export	Hectares `00	0 411	412	413
price f.o.b.(g)	Rs./Nut	6.31	5.67	6.08
4. Fertiliser used	MT `000	35	31	34
5. Cost of Production	Rs./Nut	2.03	1.84	1. <b>97</b>
6. Replanting/				
Underplanting (h)	Hectares	1,553	842	917
7. New planting (h)	Hectares	452	657	1,235
8. Export earnings	Rs. Mn.	2,796	3,761	5,271
	SDR Mn.	41	53	68
Kernel products (g)	HS. Mn.	1,847	2,476	3,521
Other preducts	SDH Mn.	2/	35	45
Other products	SDR Mn.	949 14	1,285	23
9. Value added				
as % of GDP(i)		2.6	2.4	2.1

Sources : Coconut Cultivation Board

**Coconut Development Authority** Central Bank of Sri Lanka

National Fertiliser Secretariat

(a) Revised. (b) Provisional.

(d)

(e)

(c) Estimated (breakdown does not add

upto total production due to adjustments for changes in copra stock)

In nut equivalent - converted at 1 MT DC = 6,800 nuts

1 MT Oil = 8,000 nuts

1 MT Copra = 4,925 nuts.

Exports only.

Estimated on the basis of per capita household consumption of (f)94.8 nuts per year. Excludes industrial use.

(g) Three major coconut kernel products only.

This excludes planting activities undertaken on holdings less than (h) 0.4 hectares in size owing to lack of detailed data.

(i) In producing and processing only. the previous year. Domestic coconut consumption has been estimated to have increased marginally to 1,692 million nuts, accounting for 61 per cent of national production.

The total extent under coconut in 1995 was estimated by the Coconut Cultivation Board (CCB) to be nearly 413,000 hectares, of which 1,235 hectares were newly planted during the year. Certain new areas in the Moneragala district, the Southern Province and the Mahaweli 'C' area have been brought under coconut cultivation. At the same time, there has been a reduction of cultivation near urban areas owing to the use of coconut lands for residential construction. The average yield increased by 5 per cent to 6,671 nuts per hectare in 1995 when compared with 6,368 nuts per hectare in 1994. This was partly due to increased fertiliser use by 8 per cent in 1995.

Coconut planting subsidies remained unchanged during 1995 at Rs. 25,000 per hectare for replanting (clear felling) and new planting, Rs.12,500 per hectare for staggered replanting, Rs.7,500 per hectare for moisture conservation and Rs.10,000 per hectare for intercropping. During 1995, the replanted area increased by 9 per cent to 917 hectares, the newly planted area increased by 88 per cent to 1,235 hectares, the moisture conserved area increased by 14 per cent to 1,212 hectares and the area inter-cropped increased by 41 per cent to 1,188 hectares.

Increased supply depressed the average wholesale price of fresh coconuts at the Colombo Auctions by 4 per cent to Rs.3.52 per nut in 1995. However, the average export price of the three major kernel products rose by 7 per cent to Rs.6.08 per nut in 1995. This was because of an increased world demand for all three kernel products, especially for copra and coconut oil, during the latter part of the year, due to reduced supplies of coconut products from the Philippines.

Export earnings from kernel products increased by 29 per cent in SDR terms, in 1995. The export earnings from



other coconut products such as coconut milk powder also increased by 28 per cent.

Meanwhile, the average cost of production increased by 7 per cent to Rs.1.97 per nut in 1995 owing to wage increases and higher fertiliser prices.

The financial assistance scheme for the installation of continuous drying systems for DC factories, which was introduced in 1993 by the Coconut Development Authority, continued in 1995. Cabinet approval has been obtained to continue this scheme upto 31 December 1997. Under the DC Mill Development Programme, DC millers were paid a subsidy of 40 per cent of the cost of the machinery, subject to a maximum of Rs.3 million per factory. During 1995, Rs.7 million was disbursed among 15 millers under this programme.

A programme to establish Coconut Growers' Cooperatives commenced in 1995 and by the end of the year, 25 such societies had been formed. The CCB introduced a new 5 kg coconut fertiliser pack to popularise the use of fertiliser among smallholders.

To promote the use of high quality seedlings, a seed certification scheme was introduced with the assistance of the Department of Agriculture (DOA). To promote coconut cultivation, especially outside the Coconut Triangle, the CCB together with the Coconut Research Institute has planned to set up a research sub-station and a seed garden in the Southern Province.

A five year Coconut Development Plan (1995-1999) was launched by the CCB to increase the productivity of coconut lands through an effective extension service and the provision of good quality seedlings.

### **Other Export Crops**

The production performance of other export crops was mixed with crops such as cinnamon, citronella and nutmeg and mace recording increases and coffee, pepper and cloves registering decreases. The production of cinnamon quills during the year increased by 13 per cent to 11,056 metric tons compared to 9,774 metric tons produced in 1994. The significant improvement in cinnamon production has been attributed to improved maintenance practices adopted by the farmers due to the attractive prices. Further, harvesting of replanted and rehabilitated areas too have contributed to the increased production. Production of citronella and nutmeg and mace increased by 20 per cent and 5 per cent, respectively.

Coffee production declined considerably by 51 per cent to 1,800 metric tons in 1995. The drop in production of

#### Part 1

TABLE 3.5	
Production of Other Export Crops	1993-1995

Cron	1002	000 1001	1005(-)	Percentage Change		
Crop	1993	1994	1995(a)	1994	1995	
Coffee	2,012	3,687	1,800	83	-51	
Cocoa Cinnamon	1,051	1,463	1,542	39	5	
Quills Cinnamon	9,498	9,774	11,056	3	13	
Leaf Oil	138	180	195	30	8	
Pepper	4,734	4,708	3,665	-1	-22	
Clove	1,550	1,551	1,500	-	-3	
Cardamom Nutmeg and	30	40	40	33	-	
Mace	937	939	988	-	5	
Citronella	140	150	180	7	20	

(a) Provisional.

Source: Department of Export Agriculture

coffee has been attributed to the inclement weather that prevailed during the flowering season as well as the physiological stress of the plants after two years of heavy bearing in 1993 and 1994. Pepper production in 1995 dropped by 22 per cent to 3,665 metric tons compared to 4,708 metric tons harvested in 1994. Meanwhile, clove production which had shown a downward trend in the recent past declined by a further 3 per cent to 1,500 metric tons in 1995.

The cumulative extent under all other export crops during 1995 increased by 1 per cent to 69,442 hectares. Notable contributions towards the increased extent came from the expansion of the extent under cocoa and pepper by 440 hectares and 480 hectares, respectively, to 8,511 and 12,092 hectares, respectively.

The subsidies disbursed under the Export Agricultural Crops Assistance Scheme (EAC) during 1995 was Rs.18 million as against Rs.15 million in 1994. Pepper and cinnamon producers received 71 per cent of the disbursements.

World prices of several primary agricultural products improved in 1995. The world price of black pepper increased by 39 per cent to Rs.139 per kg. This was the second highest price recorded during the last decade. The local farmgate price of pepper too rose by 43 per cent to Rs.111 per kg. Similarly, the annual average international price of coffee increased by 15 per cent to Rs.150 per kg while the farmgate price of coffee rose by 25 per cent to Rs.98 per kg. The farm gate price of cloves improved by 15 per cent to Rs.52 per kg. Meanwhile, the annual average farmgate price of cardamom rose by 2 percent to Rs. 337 and of cocoa decreased by 8 per cent to Rs.49 per kg during 1995.

Project continued to assist farmers in 1995. Loans approved

at end 1995 stood at Rs.586 million. This was about 90 per cent of the total allocation of Rs.650 million. The total extent covered by the loans was 5,055 hectares as against the targeted extent of 6,000 hectares.

### 3.4 Domestic Agriculture

### Paddy

Paddy production increased by 5 per cent and reached 2.8 million metric tons (135 million bushels) in 1995 with improved Maha and Yala crops. Favourable weather conditions, increased use of fertiliser and timely availability of credit facilities were responsible for this bumper crop in 1995.

Paddy production in Maha 1994/95 was estimated at 1.76 million metric tons (84 million bushels) and accounted for nearly 63 per cent of the total output. This was 5 per cent more than the production recorded during the previous Maha season and is the second best Maha production recorded since 1983. The improved performance during the Maha season was entirely due to higher yield and was in spite of a decrease in the extents sown and harvested compared to the previous Maha season. For the eighth consecutive year, the Kurunegala district recorded the highest Maha production, amounting to 224,000 metric tons or 13 per cent of the production during the Maha season. The Kurunegala, Anuradhapura, Polonnaruwa and Ampara districts together accounted for 45 per cent of the total Maha harvest.

Paddy production during Yala 1995 increased for the third consecutive year and was estimated at 1.05 million metric tons (50 million bushels). This was 3 per cent more than the production recorded during the previous Yala season. An increase in the net extent harvested as well as an improvement in the yield contributed towards this



		1994(a)			1995(b)			
Item	Unit	Maha	Yala	Total	Maha	Yala	Total	
Gross extent sown	Hectares '000	581	349	930	566	348	915	
Gross extent harvested	Hectares '000	561	336	897	549	340	890	
Net extent harvested	Hectares '000	499	299	798	489	306	795	
Production	MT '000 Bushels '000	1,670 80,054	1,014 48,616	2,684 128,670	1,761 84,407	1,049 50,271	2,810 134,678	
Yield (c)	Kg./Hectares	3,345	3,393	3,363	3,603	3,427	3,535	
Credit granted	Rs. Mn.	453	207	660	570	236	806	
Purchases under the GPS	000' TM	69	51	120	197	85	282	
Rice imports	MT '000	-	-	58	•		9	
(Paddy equivalent)	(MT '000)	(-)	(-)	(85)	(-)	(•)	(14)	

TABLE 3.6 Statistics of the Paddy Sector 1994-1995

(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.

enhanced production. As in the previous year, the Ampara district recorded the highest output level (198,000 metric tons), accounting for nearly a fifth of the Yala production. Paddy production in the Ampara, Polonnaruwa and Kurunegala districts together accounted for 48 per cent of the entire Yala production.

The annual average yield of paddy during 1995 improved by 5 per cent over the previous year to 3,535 kg per hectare. This was the best yield recorded since 1987. Improved performance during both seasons contributed to the improvement in the overall average yield during 1995. The average yield during Maha 1994/95 increased by 8 per cent to 3,603 kg per hectare. The average yield, which declined by 2 per cent during the previous Yala season, recorded an increase of one per cent to 3,427 kg per hectare during Yala 1995. The Mahaweli 'H' area once again regained its premier position during the Maha season, by recording an all time high of 5,340 kg per hectare relegating the Uda Walawe area, with an average yield of 4,888 kg per hectare, to second place. However, for the tenth consecutive year the Uda Walawe area recorded the highest average yield of 4,669 kg per hectare for the Yala season.

The average yield of major and minor irrigated areas during Maha 1994/95 increased by 15 per cent and 7 per cent, respectively, to 3,923 kg per hectare and 3,292 kg per hectare, when compared with the previous Maha season. However, the average yield of the rainfed areas during Maha 1994/95 dropped by 1 per cent to 2,814 kg per hectare. The Sources : Department of Census and Statistics Department of Agriculture Ministry of Agriculture, Lands and Forestry Paddy Marketing Board Sri Lanka Customs Central Bank of Sri Lanka

average yield of the major irrigated areas during Yala 1995 dropped by 2 per cent to 3,529 kg per hectare. Meanwhile, the average yield of the minor irrigated and rainfed areas during Yala 1995 increased by 7 per cent and 2 per cent, respectively, to 3,062 kg and 2,525 kg per hectare.

The total gross extent sown with paddy during the cultivation year dropped by 2 per cent to 915,000 hectares. The drop in extent sown was reflected in both seasons. The gross extent sown during the Maha season dropped by 3 per cent to 566,000 hectares while that of Yala also dropped marginally to 348,000 hectares. The total gross extent harvested during the 1995 cultivation year dropped by 1 per cent to 890,000 hectares from 897,000 hectares in the previous cultivation year. The gross extent harvested during the Maha season dropped by 2 per cent to 549,000 hectares, while that in Yala 1995 increased by 1 per cent to 340,000 hectares.

According to the National Fertiliser Secretariat (NFS), the fertiliser used in the paddy sector during the 1994/95 cultivation year rose by 17 per cent to 287,000 metric tons. This increase in the use of fertiliser could be attributed to the re-introduction of the fertiliser subsidy in October 1994 which coincided with the commencement of Maha 1994/95. Fertiliser used on paddy during Maha 1994/95 had increased significantly by 20 per cent to 171,000 metric tons, while the quantity used in Yala 1995 also increased by 12 per cent to 116,000 metric tons. The increased use of fertiliser, amongst other things, was helped by the credit granted to the paddy sector. This increased sharply with more farmers becoming eligible to apply for credit from Maha 1994/95 onwards, owing to the writing off of past due cultivation loans by the Government. Credit granted to the paddy sector under the New Comprehensive Rural Credit Scheme (NCRCS) during the 1994/95 cultivation year was Rs.806 million as against Rs.660 million granted during the 1993/94 cultivation year. Credit granted during Maha 1994/95 increased by 26 per cent to Rs.570 million compared to Rs.453 million granted during Yala 1995 also improved by 14 per cent over the previous Yala season, to Rs.236 million.

There was a two fold increase in paddy purchases by the PMB. The PMB purchased 282,000 metric tons of paddy during 1995 as against 120,000 metric tons purchased during 1994, and accounted for 10 per cent of the total paddy output. The sharp drop in the open market price of paddy below the guaranteed price, especially during the harvesting period, enabled the PMB to purchase a large quantity of paddy in 1995. As in the previous year, the guaranteed price of paddy remained unchanged at Rs.155 per bushel during 1995, but the market prices were around Rs.136 per bushel. The partial removal of the wheat flour subsidy during the latter part of 1995 was a welcome change to correct the distortions created by the subsidy and, to some extent, arrest the drop in paddy prices.

The rice equivalent of paddy produced, after adjusting for wastage and seed paddy requirements, was 1.8 million metric tons. Consequent to the increased production of paddy, rice imports during 1995 declined to 9,000 metric tons from 58,000 metric tons imported in 1994. This was the smallest quantity of rice imported in the recent past. However, wheat grain imports during the year increased by 28 per cent to 1.1 million metric tons compared to the previous year. The substantial increase in wheat grain imports despite very high international prices, could be attributed to the heavily subsidised wheat flour prices which increased the demand for wheat flour at the expense of rice.

### Sugar

Sugar production during 1995, estimated at 71,416 metric tons, was 1 per cent less than the peak production of 72,275 metric tons recorded in 1994. The drop in overall output was solely on account of a 31 per cent drop in production at the Hingurana factory, from 14,058 metric tons in 1994 to 9,681 metric tons in 1995. Meanwhile, the sugar production at the Pelwatte and Sevenagala factories increased by 9 per cent and 1 per cent, respectively, from 39,682

metric tons to 43,081 metric tons and from 18,535 metric tons to 18,654 metric tons, respectively, in 1995. As in the previous year, there was no production at the Kantale factory during 1995.

The drop in sugar produced at the Hingurana factory was attributed to the reduction in both the recovery rate as well as a drop in the quantity of cane crushed during the year under review, mainly on account of labour unrest at the height of the harvesting season. The quantity of cane crushed at Hingurana declined significantly by 23 per cent to 145,125 metric tons from 188,822 metric tons crushed a year ago. In contrast, the quantity of cane crushed at the Sevenagala factory increased by 5 per cent to 221,801 metric tons, while the quantity of cane crushed during the year at the Pelwatte factory increased by 16 per cent over the previous year to 547,900 metric tons. The total quantity of cane crushed in all three factories during the year increased by 5 per cent to 914,826 metric tons of cane from 873,990 metric tons crushed during 1994.

The overall sugar recovery rate for all three factories continued to drop for the third consecutive year and in 1995, dropped to 7.81 per cent from 8.27 per cent in the previous year. For the sixth consecutive year the Sevenagala factory recorded the best individual recovery rate.

The average yield of sugar cane of the nucleus estates at Hingurana and Sevanagala dropped by 27 per cent and 2 per cent, respectively, to 41 metric tons and 88 metric tons per hectare. The average yield at Pelwatte, which increased by 23 per cent in 1994, recorded a further 9 per cent increase to 60 metric tons per hectare in 1995. Sevanagala continued to record the highest average yield for the fifth consecutive year. The overall average yield of all three nucleus estates maintained by these factories remained at the same level as in 1994.

The quantity of cane supplied by private cultivators to sugar factories rose by 14 per cent to 316,383 metric tons in 1995. Cane purchased by Hingurana increased substantially (by 35 per cent) to 65,583 metric tons. Meanwhile, the cane purchased at Sevanagala and Pelwatte increased by 9 per cent and 10 per cent, respectively, to 1,898 and 248,902 metric tons. Private cane purchased accounted for 35 per cent of the total cane crushed during the year as against 32 per cent recorded during 1994.

Presently, domestic sugar production is adequate to meet only about 15 per cent of the country's sugar consumption requirements. The quantity of sugar imported during 1995 was 416,909 metric tons compared to 491,000 metric tons imported in 1994.

Item	Linit	Hingurana Sugar Factory		Sevanagala Sugar Factory		Pelwatte Sugar Factory		Total	
	Onic	1994 (a)	1995 (b)	1994 (a)	1995 (b)	1994 (a)	1995 (b)	1994 (a)	1995 (b)
Total area under cane (with ratoons) (c)	Hectares	3,019	2,098	3,460	3,130	5,032	5,346	11,511	10,574
Area harvested (c)	Hectares	2,505	1,920	2,331	2,503	8,543(d)	9,151(d	) 13,379	13,574
Cane harvested (c)	МТ	140,217	79,542	210,105	219,903	246,105	325,998	596,427	625,443
Private cane purchsed	мт	48,605	65,583	1,748	1,898	227,210	248,902	277,563	316,383
Quantity of cane crushed	мт	188,822	145,125	211,853	221,801	473,315	547,900	873,990	914,826
Average yield(c)	MT/Hectare	56	41	90	88	55	60	67	67
Sugar production (without sweepings)	. М.Т	14,058	9,681	18,535	18,654	39,682	43,081	72,275	71,416
Sugar recovery rate (e)	%	7.45	6.67	8.74	8.41	8.38	7.49	8.27	7.81

TABLE 3.7							
Statistics	of the	Sugar	Sector	1994-1995			

(a) Revised.

(b) Provisional.

(c) includes nucleus estates and allottees.

(d) Includes nucleus estates, allottees and out growers.

Sugar produced

(e) Recovery rate = X 100 Quantity of cane crushed

#### **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. Except for the high value crops mentioned above, all the OFCs are grown in a very ad hoc manner in home gardens or in small plots of land. Therefore, most available data with respect to these crops are crude estimates.

According to the provisional estimates of the Ministry of Agriculture, Lands and Forestry (MALF) the output of potatoes, soya bean and sesame (gingelly) improved significantly in 1995. The potato harvest increased by 44 per cent to 101,600 metric tons and was one of the best in the recent past. Both an improvement in the yield and an increase in the extent cultivated contributed towards this increased production. The potato yield during the year increased significantly by 36 per cent to 11,250 metric tons per hectare compared to 8,300 metric tons per hectare achieved in 1994. The significant improvement in the potato yield and extents cultivated could be attributed to the availability of large stocks of good quality imported seed potato, favourable weather conditions and the extension of cultivation into non-traditional areas. Sesame production recorded a 74 per cent increase to 6,100 metric tons Sources : Pelwatte Sugar Industries Ltd.

Sevanagala Sugar Industries Ltd.

Hingurana Sugar Industries Ltd.

compared to 3,500 metric tons produced in 1994. However, sesame production in 1995 was less than half the production recorded in 1991, which may be attributed to reduced production in the unsettled areas in the Northern and Eastern Provinces and the respective border villages.

The production of most other OFCs in 1995 was poor compared to the previous year (Appendix Table 16). Big onion production, which recorded an all time high of 81,400 metric tons in 1994, declined drastically by 45 per cent to 44,500 metric tons in 1995. Problems faced by big onion growers, especially in marketing their produce after the bumper crop in 1994, discouraged the cultivation of this crop in the subsequent year. The extent under big onion dropped from 7,800 hectares in 1994 to 4,400 hectares by 1995. The production of red onions, chillies and green gram recorded decreases of 18 per cent, 10 per cent and 8 per cent, respectively, compared to 1994. The drop in production of these crops during 1995 was attributed to the reduced extents cultivated especially during Maha 1994/95, as the climatic conditions were more favourable for paddy cultivation.

The floor price scheme operated by the PMB for OFCs continued to be in force during 1995. The floor prices have not changed since 1993. As a result, the floor prices have become less attractive and private traders became active market participants in competition with the PMB.

### 3.5 Fish and Livestock

According to the estimates of the Ministry of Fisheries and Aquatic Resources Development, fish production in 1995 was 237,550 metric tons. This was a 6 per cent increase when compared with the previous year. Both marine and aquaculture sectors contributed to this increased production. Meanwhile, the production of dry fish declined by 24 per cent in 1995. Marine fish production increased during the year, mainly on account of the addition of new boats, engines and fishing gear to the industry, as well as the cessation of hostilities in the Northern and Eastern Provinces until the latter part of April 1995. Further, the increase in the conversion of day boats to multi-day vessels also contributed to the improvement in the output. The increase in aquaculture could be attributed to better management and strengthening of the extension services in fresh water fisheries.

TABLE 3.8 Fish Production 1991-1995

				1	Metric Tons
Sub-Sector	1991	1992	1993	1994(a)	1995(b)
Marine(c)	174,231	185,168	202,900	212,000	217,550
Aquaculture(d)	23,832	21,000	18,000	12,000	20,000
Total	198,063	206,168	220,900	224,000	237,550

Source: Ministry of Fisheries and

Aquatic Resources Development

(a) Revised.

(b) Provisional.

(c) Coastal and deep sea sector.

(d) Includes only inland sector upto 1994. From 1995, includes inland sector, coastal brackish water prawn and cultured prawn production.

The marine fishery sub-sector, which accounted for 92 per cent of total fish production, increased by 3 per cent to 217,550 metric tons in 1995 from 212,000 metric tons recorded in 1994. As in the past, the private sector played the most prominent role in the fisheries sector and accounted for nearly 99 per cent of total fish production. The total fish supply of the Ceylon Fisheries Corporation (CFC) increased by 8 per cent to 2,400 metric tons in 1995. Ice production by the CFC, which declined by 18 per cent in the previous year, rose by 38 per cent to approximately 5,090 metric tons in 1995, mainly due to the recommencement of production at two ice plants at Anuradhapura and Pesalai.

Subsidies disbursed to the marine sector amounted to approximately Rs.60 million in 1995, when compared with Rs.75 million disbursed in 1994. Under the producer subsidy schemes, 196 mechanised day boats, 40 multi-day boats, 333 traditional crafts, 406 fishing gear units, 19 SSB radios and 42 navigators were issued to the marine fishery sector. In the previous year only 40 multi-day boats, 145 traditional crafts and 69 mechanised day boats had been issued. As in the previous year, the total number of fisheries co-operative societies and their total membership remained unchanged at 769 and 86,966, respectively.

Though production increased, the average retail prices of all species of fish increased by about 22 per cent when compared to the previous year. The total volume of fish exports increased by 4 per cent to 7,457 metric tons in 1995 from 7,194 metric tons recorded in the previous year. However, the total volume of fish imported in the form of canned and dry fish also increased by 21 per cent to 68,348 metric tons during the year.

The private sector continued to play a major role in egg production in 1995 as well. Total egg production decreased marginally from 863 million eggs in 1994 to 862 million in 1995. This was mainly due to many small farmers being pushed out of business due to the high price of poultry feed as a result of the near monopolistic situation in the provender industry and a drop in the egg production of the National Livestock Development Board farms.

Total cow milk production increased marginally to 253 million litres, while buffalo milk production dropped by 2 per cent to 80 million litres in 1995. The volume of milk collected by Milk Industries of Lanka Company Limited (MILCO) in 1995 increased by 14 per cent to 50 million litres, from 44 million litres recorded in 1994. Increased milk collection in the Anuradhapura and Batticaloa districts contributed towards the overall improvement. The volume of milk collected by Nestle Lanka Limited and other milk collecting centres also increased by 9 per cent from 35 million litres collected in 1994, to 38 million litres in 1995. Total domestic milk production meets only about 30 per cent of the country's requirements of milk and milk products. This is an area where effective import substitution could take place. The price paid to the producer for a litre of milk did not increase in 1995 resulting in a low remuneration to the milk producer. Further, a duty waiver of 10 per cent had been granted to import full cream powdered milk (with over 26 per cent milk fat) which benefited consumers but acted as a deterrent against the expansion of the local dairy industry.

# **3.6 Inputs and Credit**

#### Fertiliser

The total quantity of fertiliser used in the calendar year 1995, dropped by 5 per cent to 506,400 metric tons. This

was due to a reduction in the use of fertiliser in all crops other than in coconut. Fertiliser used by the paddy sector dropped by 4 per cent and accounted for 51 per cent of fertiliser used during the year, mainly due to a reduction in the area cultivated. In the tea sector, fertiliser use dropped by 4 per cent to 120,300 metric tons in 1995. The use of fertiliser in the rubber sector declined by 13 per cent to 14,900 metric tons in 1995. Fertiliser used in other crops such as tobacco, vegetables, fruits and flower plants declined by 10 per cent to 34,900 metric tons. There was an 8 per cent increase in the use of fertiliser by the coconut sector. In spite of the fertiliser subsidy (reintroduced in October 1994), there was a reduction in the total use of fertiliser especially in the last quarter of 1995 by about 15 per cent. The decline during this period is attributed to the failure of the North-East Monsoon that resulted in drought conditions which was not conducive for the application of fertiliser. The decline in fertiliser usage may also be attributed to the increase in international fertiliser prices.

TABLE 3.9 Fertiliser Usage by Crops 1992-1995

Matria Tana 1000

		S. S. S. B. Cont	Weinc	10115 000
Сгор	1992	1993	1994(a)	1995(b)
Paddy	207.8	248.0	269.7 <sup>.</sup>	258.0
Теа	110.2	147.2	126.4	120.3
Rubber	13.1	17.9	17.2	14.9
Coconut	34.3	35.1	31.2	33.6
Other Field Crops	49.5	44.3	40.6	39.5
Other Export Crops	7.1	7.0	5.6	5.2
Others	53.8	48.6	41.9	34.9
Total	475.8	548.1	532.6	506.4
and the second		12000		

(a) Revised. Source: National Fertiliser Secretariat (b) Provisional.

The 30 per cent fertiliser subsidy on the four major fertiliser ingredients, namely urea, sulphate of ammonia (SA), muriate of potash (MOP) and triple super phosphate (TSP) was terminated on 31 January 1995. However, due to the significant increase in the import price of urea and TSP, as an interim measure, a subsidy was introduced for these two ingredients for the period 1 February 1995 to 3 April 1995. The subsidy paid to the importer was at the rate of US dollars 80 per metric ton for urea and US dollars 20 per metric ton for TSP. A new fertiliser subsidy scheme was implemented with effect from 4 April 1995, where the ceiling subsidy rates payable to importers were fixed at US dollars 131 per metric ton of urea, US dollars 29 per metric ton of SA, US dollars 19 per metric ton of MOP and US dollars 59 per metric ton of TSP to maintain the market price of a 50 kg bag of urea at Rs.500, SA at Rs.420, MOP at Rs.500 and TSP at Rs.540. When the import price of urea declined in May 1995, the ceiling price for the subsidy was adjusted to US dollars 101 per metric ton and subsequently readjusted to US dollars 131 per metric ton when the price increased. According to the NFS, the cost of this subsidy scheme is estimated at Rs.1,700 million per year.



Approximately 95 per cent of the country's requirement of inorganic fertiliser is imported. The only inorganic fertilisers produced locally are rock phosphate at Eppawela in the North Central Province by Lanka Phosphate Ltd. and dolomite (which has other uses than as a fertiliser) from the central hills by a few organisations. The production of rock phosphate increased by 20 per cent to 32,115 metric tons in 1995. This continued to substitute for imported rock phosphate and is mainly applied to perennial crops.

In order to improve the efficiency and competitiveness in the fertiliser sector, the Government has encouraged the participation of the private sector, which now accounts for nearly 40 per cent of fertiliser sales by approximately 10 wholesale traders.

#### Seed

The use of high quality seed and planting material increases yields and farmers' income. The Seed and Planting Material Centre of the Department of Agriculture (DOA) is able to produce only 5-10 per cent of the total seed requirement of the country. Therefore, the DOA encourages and facilitates farmers and the private sector to produce certified quality seed. Under the Diversified Agricultural Research Project funded by the USAID, the private sector which includes both large and small-scale businesses as well as farmer organisations and co-operatives, has been able to participate in the development of the local seed industry. Since the liberalisation of the economy, the private sector has become the major importer and distributor of seed subject to plant quarantine, where the local seed industry is not able to meet the domestic requirement. This stresses the need for a national seed policy in order to develop the local seed industry with the active participation of the private sector.

The Seed and Planting Material Centre of the DOA was able to issue over 4,100 metric tons (198,000 bushels) of seed paddy and seed material for a variety of OFCs, such as maize (62,000 kg), soya bean (13,000 kg) and green gram (12,000 kg) during 1995.

The research activities of the DOA had led to the identification of several new varieties of rice varying from 3 1/2 - 5 months in addition to a local 'Basmathi' variety for release in 1995. The DOA has also been able to identify many new varieties of OFCs (e.g. chillies, green gram and early maturing cowpea varieties) that are characterised by better yields, longer storability periods, higher resistance to viruses and ability to survive drought. Further, the DOA had identified promising varieties of vegetables and fruits that have superior yields, tolerance to certain viruses and better shelf life.

#### **Agro-Chemicals**

Agro-chemicals, which include insecticides, weedicides and fungicides are imported. The Ceylon Petroleum Corporation and the private sector are the importers of these products. Wholesale and retail distribution are mainly done by the private sector. All agro-chemical imports have to be registered with the Registrar of Pesticides (ROP) of the DOA.

In 1995, according to the ROP, total sales of agrochemicals increased by 13 per cent to 6,740 metric tons. Weedicide sales, which account for nearly 45 per cent of total agro-chemical sales, rose by 10 per cent to 3,043 metric tons. In the wake of increasing labour wages and the scarcity of labour, the use of weedicides over the years has increased, indicating that farmers are shifting to chemical weeding in place of manual weeding. Insecticide sales which are about 42 per cent of total agro-chemical sales, increased by 21 per cent to 2,843 metric tons, while fungicide sales which accounts for about 13 per cent of total agro-chemical sales, increased marginally in 1995.

As the demand has increased for agro-chemicals, greater emphasis is now being placed on integrated pest management methods for reasons of reducing cost of production, environmental protection and health/security considerations.

### Credit

Cultivation loans granted under the NCRCS during the 1994/95 cultivation year amounted to Rs.1,180 million, compared to Rs.977 million granted during the previous cultivation year.

The decision of the Government to write off past due cultivation loans in September 1994 subject to the condition that 25 per cent of the principal sum in default was repaid, made more farmers eligible for new cultivation loans. This explains the substantial increase in the loans obtained during the 1994/95 cultivation year. However, this kind of general amnesty is not desirable as it could have several adverse repercussions on credit culture.

Of the total loans granted during the year, 67 per cent or Rs.791 million was granted during Maha 1994/95, while the balance Rs.389 million was granted during Yala 1995. The loans granted during Maha 1994/95, increased by 25 per cent compared to the previous Maha season, while those granted during Yala 1995 increased by 13 per cent over the previous Yala season. Of the total loans granted during the cultivation year, 68 per cent or Rs.806 million was granted to the paddy sector, while the balance Rs.374 million was granted for cultivation of OFCs. The two state banks together accounted for 80 per cent or Rs.943 million of the cultivation loans granted.

Although the formal financial sector has increased the quantum of cultivation loans granted to the rural agricultural sector, this sector still depends largely on informal sources of financing to meet most of its credit needs.

### 3.7 Forestry

According to the Forest Department (FD), the forest cover in 1994 was around 2 million hectares, which was about 31 per cent of the total land area. The net annual average deforestation is estimated at 38,000 hectares due to the increasing demand on forest resources by an ever expanding population and increasing economic activity. According to the MALF, if current trends in deforestation continue, the closed canopy forests, defined as forests having over 70 percent of canopy cover, would decline as a percentage of total land area from 24 per cent in 1992 to about 17 per cent by the year 2020. This indicates a bleak outlook for the forestry sector, as its capacity to meet the needs of the population on a sustainable basis is expected to diminish gradually.

The main causes of deforestation as identified by the MALF are landlessness and a poor land tenure system, large

agricultural and settlement projects, reservoir and hydro power projects, 'chena' (shifting) cultivation, conversion of natural forests for other crops and excessive harvesting of forest products. The serious problems that will arise as a result of deforestation and forest degradation are reduction in bio-diversity (due to the destruction of the habitats of wildlife and plants), irregular water supply, shortened lifespan of irrigation channels and reservoirs, soil erosion and resulting loss of fertility and scarcity of wood supply. These will have a negative impact on agricultural production.

As identified in the National Policy Framework of the MALF, the most urgent need at present is a national land use policy that would guide agricultural development and settlement policies so that, simultaneously, bio-diversity is conserved, watersheds protected, the landless are provided with land and timber and other forestry products are adequately supplied. A National Forestry Policy was approved by the Government in 1995. With a view to achieving the optimal development of the forestry sector a comprehensive long term development framework, referred to as the Forestry Sector Master Plan (FSMP), was drawn up in 1995 by the MALF, covering the period 1995-2020. The FSMP particularly emphasises conserving the remaining natural forests to maintain bio-diversity while increasing overall tree cover and empowering people, especially in rural communities, to manage and protect multiple-use forests to meet the needs of the population (fuel wood, timber, etc.). In order to arrest rapid deforestation, the FSMP has projected that about 3,000 hectares of forest plantations should be established annually. From the year 2000, about 200 hectares of closed canopy forests and 1,000 hectares of sparse forests and mangroves should be regenerated and about 4,000 hectares should be reforested annually.

In 1995, the FD, with assistance from the International Development Association (IDA) and the Overseas Development Administration (ODA), was able to raise 8.2 million seedlings, reforest 3,475 hectares, maintain 23,864 hectares of forest plantations and attend to silvicultural treatment of 11,481 hectares of forest cover. Under the Participatory Forestry Project (especially to raise the supply of fuel wood and general utility timber), the FD was able to involve over 51,000 families, including farmers, in planting approximately 6,900 hectares of homesteads and woodlots, while strip planting 127 kilometers by roadsides, rivers and canals. Under this project, over 4.4 million plants were raised by the FD, in collaboration with schools, nongovernmental organisations, agrarian centres and farmer organisations. The Forestry Extension Programme raised more than 1.2 million plants. The FD was able to achieve about 85 per cent of the annual target for the year under these various programmes. In addition, the FD was able to conduct awareness programmes on reforestation and forestry extension.

According to the FD, 5,191 forest offences were recorded in 1995, which involved 2.7 million cubic decimeters of timber valued at Rs.29.3 million. This indicates only the officially recorded extent of deforestation, while a substantial extent goes undetected.

In 1995, projects in environmental management in the forestry sector included the National Conservation Review Survey (which assesses the bio-diversity in all natural forests), the Sinharaja Conservation Project, the Knuckles Conservation Project and the Mangrove Conservation Project. With a view to developing the forestry sector, various research activities were carried out in the year, including trials with respect to tree improvement, under planting, teak block planting, fertiliser application and fire control methods.

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