

Chapter 3

AGRICULTURE, FISHING AND FORESTRY

3.1 Overall Trends

Value addition in the agricultural sector declined by 3 per cent during 2001 compared to the growth of 1.8 per cent in 2000. The contraction resulted mainly on account of reduced output of the plantation crops and the major food crops due to the failure of both the North-East and the South-West monsoons. The extent cultivated under annual crops was reduced during both seasons. Extents cultivated under both irrigated and rain fed conditions were affected. The distribution of rainfall was very skewed during the 2001 Yala season. Over 50 to 70 per cent of the precipitation during the South-West monsoon, was received in the month of April in a majority of the dry zone districts. The drought was very severe in the Southern Province, especially in Hambantota and the Uda Walawe area.

The productivity of even the perennial crops was affected due to the prolonged drought. The output of tea, rubber, coconut, paddy, sugar cane and other field crops, except potato, declined compared to 2000. The livestock sector reported a positive growth. Production in all major categories in the livestock sector, namely milk, eggs and poultry meat, was higher than in 2000.

Paddy output declined by 5.8 per cent compared to the previous cultivation year. The output of all other field crops, except potato, declined. Potato output, which increased by 78 per cent in the previous year, increased by a further 19 per cent during 2001 owing to the heavy protection provided by the high rate of tariff imposed on potato imports in 2000.

Tea and coconut production, which reached record output levels in 2000, declined by 3.5 per cent and 9.7 per

cent, respectively. Rubber production, which has been on a declining trend during the last few years, declined further by 1.8 per cent in 2001 to the lowest level ever on record. Sugar output at both Pelawtte and Sevangala factories also declined compared to 2000 due to a shortfall in the intake of cane.

The reduction in extents cultivated reduced employment opportunities in the agriculture sector. As a result, economic activity in rural areas suffered a setback. The income of farmers, the agricultural labour force and those employed in related services such as milling, processing, wholesale and retail trade of commodities also declined.

The price of rice and coconuts increased significantly during the latter part of the year and contributed to increased inflation. Reduction in income, coupled with increases in prices of essential food commodities, had an adverse impact on the low-income groups, especially in the rural sector. The downturn in economic activity in rural areas had an adverse impact on the overall economy.

3.2 Agricultural Policy

Low productivity in the domestic agriculture sector on account of heavy protection provided over a long period of time, could not adjust successfully to a liberalised trade regime. Hence, the performance of the agriculture sector has been disappointing in the recent past. Growth rates have been low. Declining production and stagnant yields have been characteristic of the sector. The only exception is the paddy sector, which has shown improvements in productivity. However, the paddy sector also faced several problems because of inconsistent policies with respect to the tariff structure and ad hoc duty waivers. A sector-wise reform in agriculture has been under consideration in different forms for some time. The salient features emerging out of these deliberations underline the importance of a new policy framework. The objective of this framework should be to improve the contribution from the sector and thereby contribute to overall economic growth. The strategy should strive to achieve improvements within the framework of a market economy by adopting new technologies and increasing productivity and competitiveness. Low rates of adoption of modern technology in farming, and large gaps between the potential yield and the actual yield suggest the

TABLE 3.1
Production and Price Changes of Major
Agricultural Items

Item	Unit	Production		% Change in 2000/2001	
		2000	2001	Production	Prices
Tea	kg.mn.	306	295	-3.5	6.2
Rubber	kg.mn.	88	86	-1.8	-0.1
Coconut	nuts mn.	3,096	2,796	-9.7	10.2
Paddy	mt '000	2,860	2,695	-5.8	5.1
Sugar	mt '000	64	48	-25.0	12.3
Fish	mt '000	304	285	-6.4	10.3

Sources: Central Bank of Sri Lanka
Relevant Authorities

existence of opportunities to improve the sector and thereby increase agricultural incomes.

The strategy should seek to modernise and diversify the sector through increased investment in agriculture. The traditional food commodities offer limited scope for increasing returns to intensified investments. Therefore, the sector needs to explore the opportunities to increase returns through prioritisation and diversification. This will attract commercially oriented private sector investments.

The main emphasis on policy should be to create a competitive agriculture sector, which does not have to depend on state patronage for its existence. The traditional inward looking policy of achieving self-sufficiency in major food commodities has to be replaced with a strategy of competitive production for the domestic market and for the export market, wherever possible, in the context of an open market regime. Domestic food production should be encouraged to maintain minimum acceptable levels of self-reliance on food. A strong domestic agriculture sector gives a greater resilience and robustness to the domestic economy in the face of external shocks. However, the minimum acceptable levels of food self-reliance should not undermine sectoral efficiency. The producers should be upgraded to produce high quality products, which could even cater to international markets. In this respect, attention will have to be focused on a few priority crops such as paddy, a few field crops, and selected fruits, vegetables and floricultural crops that have a comparative advantage.

The productivity of labour in the agriculture sector is far from satisfactory. Farm wages have increased much faster than labour productivity. At present, labour productivity of agriculture lags far behind the productivity in the industry and service sectors. To improve productivity in the agriculture sector, more capital intensive investments should be encouraged by promoting private sector participation. Investment in protected agriculture under controlled environments and cultivating high value crops using modern equipment such as drip irrigation units will improve the productivity of the sector.

TABLE 3.2
National average yield of selected crops in
Sri Lanka and India in 2000

Crop	kg/ha	
	Sri Lanka	India
Tea (a)	1,840	2,000
Smallholders	2,216	
Rubber	653	1,616
Sugar cane	60,248	70,617
Paddy	3,954	2,964
Maize	1,089	1,807
Potato	13,500	18,642

(a) Revised in 2001

Source: FAO database
Dept of Census and Statistics
Central Bank of Sri Lanka

As in the previous year, the government resorted to ad hoc tariff changes in rice and edible oils, which had far reaching consequences. When the domestic rice prices commenced increasing in September, it would have been more appropriate for the government to have removed the licensing requirement without adjusting the duty structure. This would have allowed the private sector to respond to price signals and import if necessary. Government intervention in marketing of commodities should be minimised to allow the market mechanism to function smoothly and thereby stabilise prices.

Sri Lanka drafted a new ground-breaking agricultural patent law that gives the producers sole intellectual property rights over Ceylon tea and cinnamon. The recognition granted to wines and spirits under the geographical indications of the Trade Related Intellectual Property Rights System will be extended to these two crops based on the agreement reached at the WTO talks in Doha, Qatar.

3.3 Export Crops

Tea

The steady upward trend experienced in tea production since 1993 was reversed in 2001, due to the drought that prevailed during the year. The output, which exceeded 300 million kg in 2000, declined by 3.5 per cent to 295 million kg in 2001. The output in low grown teas increased marginally and accounted for over 56 per cent of the total output. In contrast, the output of high and medium grown teas declined significantly due to unfavourable weather conditions that prevailed in many parts of high and medium grown areas during the year.

The smallholder sector, which controlled 48 per cent of the extent under tea, contributed to 62 per cent of the national output, indicating that the productivity of the smallholders is higher than that of the estate sector. The average yield in the smallholder sector amounted to 2,212 kg. per ha. while the estimated average yield in the estate sector¹ was only 1,365 kg. per ha. The national average yield at 1,786 kg. per ha. was much less than the average yield of competing countries such as Kenya. The smallholders, who are mainly concentrated in the low elevations, have high yielding vegetatively propagated tea, compared to the estate sector, which still has a substantial area under low yielding old seedling tea plantations. The scarcity of labour, especially in the low grown area, is a serious problem in the plantation sector. The Tea Research Institute (TRI) invented a mechanical hand pruner and harvester to ease the shortage of labour and to reduce cost of production. However, this mechanical harvester is not yet popular among growers.

¹ Average yield of the estate sector is based on the bearing extents provided by the Plantation companies while the smallholder yields are provided by the TSMDA. Accordingly the national average yield has been revised.

Replanting and new planting activities were affected by the drought conditions that prevailed during the year. Further, the replanting activities were hampered by the attractive prices that prevailed during the last few years, which discouraged the uprooting of old tea bushes. The loss of income by way of crop loss is substantial if uprooting is carried out when the prices are attractive. Hence some of the growers also appear

TABLE 3.3
Statistics of the Tea Sector

Item	Unit	1999	2000(a)	2001(b)
1. Production	kg.mn.	284	306	295
High grown	kg.mn.	81	84	75
Medium grown	kg.mn.	54	56	54
Low grown	kg.mn.	149	166	166
2. Extent				
Total extent (c)	hectares '000	180	180	180
Extent in bearing (d)	hectares '000	168	166	165
3. Fertilizer used	mt '000	164	192	167
4. Replanting	hectares	1,376	1,094	1,048
5. New Planting	hectares	415	264	402
6. Prices				
Colombo Auctions	Rs./kg.	115.19	135.53	143.96
Export (f.o.b)	Rs./kg.	162.39	184.73	208.89
7. Cost of production (e)	Rs./kg.	101.29	110.64	121.43
8. Exports	kg.mn.	269	288	295
9. Export earnings	Rs. mn.	43,728	53,133	61,602
	US\$ mn	621	700	690
10. Value added as % of GDP (f)		2.2	2.6	2.3

- (a) Revised Sources: Sri Lanka Tea Board
 (b) Provisional National Fertiliser Secretariat
 (c) Extents revised based on the Tea Small Holdings
 estate sector survey conducted in 1999 Development Authority
 by the Tea Commissioner's Division. Plantation Companies
 (excludes abandoned tea lands) Central Bank of Sri Lanka
 (d) Based on the data provided by
 Plantation Companies and Tea Small
 Holdings Development Authority.
 (e) Includes green leaf suppliers profit margin
 (f) In growing and processing only

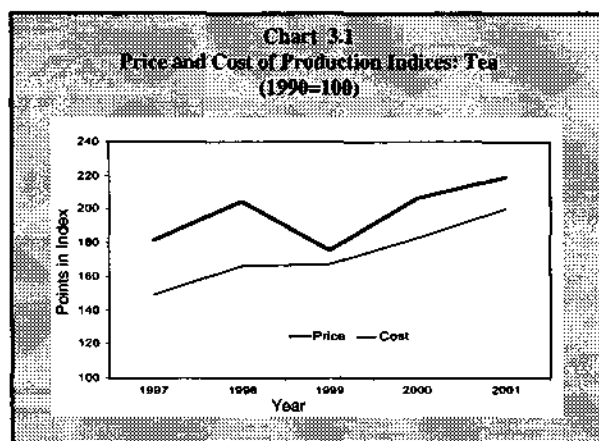
to have postponed their replanting activities. As a result, the total extent replanted during the year was only 1,044 hectares.

The cost of production of tea at the estate level increased by about 10 per cent during 2001, due to several factors such as the wage increase of estate workers in March 2001, increases in fuel and electricity charges and the increase in the prices of other imported inputs such as fertilisers and agro chemicals in the face of depreciation of the rupee. Production of tea by plantation companies was also affected by trade union actions of the estate workers during the early part of the year.

Production of cut, tear and curl (CTC) teas suffered a slight setback, as the prices of CTC teas were not favourable due to an increased global supply. Hence, CTC tea production declined by 2 per cent to 17.1 million kg. Meanwhile, CTC tea imports for blending and re-exporting also declined by 3.7 per cent to 2.7 million kg. in 2001. India is planning to curtail CTC tea production in order to prevent a decline in CTC prices.

Although the production of tea declined, the quantity traded at the Colombo Auctions and exported increased in 2001. This is a result of last years carry forward stocks entering the Auctions this year. However, the annual average Colombo Auction price in US dollar terms declined by 10 per cent as world prices declined in 2001. Export earnings in US dollar terms declined by 1 per cent to US dollars 690 million in spite of an increase in the volumes by 2 per cent due to a decline of 3.6 per cent in the average export price (fob). However, in rupee terms, earnings from tea rose by 16 per cent and exceeded Rs. 61 billion. The share of value added tea exports increased to more than 40 per cent in 2001 from 37 per cent in 2000, owing to several brand promotional activities carried out by exporters as well as the support given by the Tea Promotional Bureau during the year. It is encouraging to note that the private sector is actively taking an important role in modernising the warehousing and packaging facilities to increase value addition in the tea sector. In this context, it is important that the major Sri Lankan tea exporters develop their own brand names so as to maintain a stable market for Sri Lanka tea.

The Tea Small Holdings Development Authority (TSHDA) continued to assist the tea smallholders by providing inputs, advisory and extension services and implementing various subsidy schemes to encourage replanting and new planting activities. The 'Tea Shakthi Fund', which was initiated in 1997 to provide social security to members as well as to encourage investing in Tea Shakthi Projects, had a total membership of 135,836 as at end 2001 and the total savings amounted to Rs. 121 million. Under the Social Security Benefit Scheme, a sum of Rs. 28.5 million was paid to smallholders.



Rubber

Rubber production, which has been on a declining trend in the past, dropped further by 1.8 per cent in 2001 to 86 million kg, the lowest output recorded. The smallholders' share of the total output, at 63 per cent, showed a marginal decline compared to the previous year. The drop in national output came from both sectors. Smallholder production dropped by 2 per cent to 53.7 million kg. Output of the plantation companies dropped by 1 per cent to 32.3 million kg.

TABLE 3.4
Statistics of the Rubber Sector

Item	Unit	1999	2000(a)	2001(b)
1. Production	kg.mn.	97	88	86
2. Area (c)				
Under cultivation	hectares '000	159	157	157
Under tapping	hectares '000	128	128	132
3. Yield	kg./hectare	755	683	663
4. Fertiliser used	mt '000	11	13	9
5. Replanting (d)	hectares	643	793	445
6. New Planting (d)	hectares	218	251	141
7. Prices				
Export (f.o.b)	Rs./kg.	53.90	66.95	66.35
Colombo (RSS 1)	Rs./kg.	45.33	54.78	54.70
8. Cost of production	Rs./kg.	43.50	44.50	48.00
9. Exports	kg.mn.	43	39	32
10. Domestic consumption	kg.mn.	54	55	54
11. Export earnings	Rs. mn	2,305	2,179	2,129
	US\$ mn	33	29	24
12. Value added as % of GDP (e)		0.4	0.4	0.4

Sources : Rubber Development Dept.

- (a) Revised. National Fertiliser Secretariat
 (b) Provisional. Central Bank of Sri Lanka
 (c) Based on a survey of Agricultural Crops and Livestock-1993. BY Dept. of Census and Statistics
 (d) Extents covered by cultivation assistance schemes of the Rubber Development Department
 (e) In growing and processing only.

Production dropped because tapping was abandoned in certain areas in response to poor domestic prices. According to a recent study conducted by the Rubber Research Institute (RRI), tapping has been abandoned in over 8,200 hectare, i.e, 6 per cent of total tappable area. Some smallholders who employed tappers could not even cover the wage cost. Some other smallholders could not properly maintain the lands due to the low prices that have prevailed over a considerable period of time.

According to the Rubber Development Department (RDD) estimates, the tappable extent under rubber increased as areas which were replanted about 7-8 years ago, have reached tapping stage. Although the RRI has introduced high yielding clones, the national rubber yield has been on a declining trend during the last few years due to poor management and abandoning on account of depressed prices. National yield levels, which have been on a declining trend since 1996, continued to drop further and declined by 4 per cent and reached the lowest level ever on record in 2001.

Lower output in the rubber sector during 2001 in turn reduced the volume of exports. The domestic consumption of rubber in the industrial sector, which has increased over the last few years, declined by 2 per cent to 54 million kg. due to the slower growth of the domestic industrial sector. The consumption of rubber in the industrial sector accounted for 63 per cent of domestic rubber production. The rubber exports of Sri Lanka have declined by 2 per cent to 32 million kg in 2001.

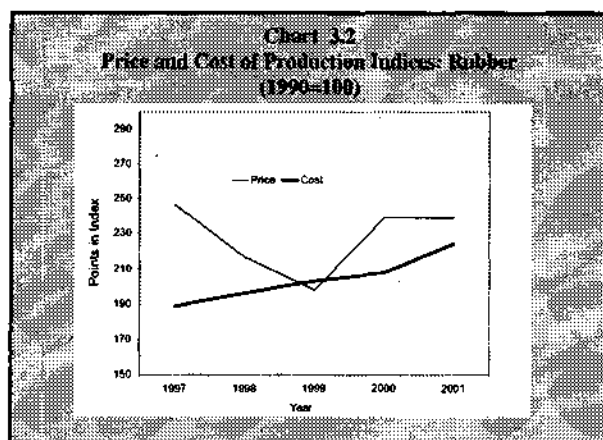
The cost of production of rubber increased by 8 per cent to Rs. 48.00 per kg. in 2001 compared with an average price (RSS 1) of Rs. 54.70 per kg. Both international and domestic demand for natural rubber was low under the global recession in 2001.

During the year, natural rubber and synthetic rubber imports dropped by 78 per cent to 0.7 million kg and by 10 per cent to 15 million kg, respectively.

The international price of natural rubber declined during 2001. Natural rubber prices (RSS1) in the Singapore market dropped by 11 per cent to Singapore dollars 1,030 per metric ton. The average price of all grades of crepe at the Colombo Auction declined during 2001. The average export price of all grades of rubber dropped marginally to Rs.66.35 per kg.

International prices for natural rubber remained low due to a global glut in the supply of natural rubber. Further, the demand for natural rubber declined in the wake of the recession in the US and other developed countries, which adversely affected the automobile industry. The outlook for rubber remains bleak and prices are not expected to improve significantly in the near future.

At the international level, the major rubber producers have been changing their strategies to obtain a better price



for natural rubber. With a view to managing world supply of natural rubber, the three major rubber producers, namely, Thailand, Indonesia and Malaysia, have reached an agreement to set up a consortium named the Tripartite Rubber Corporation in 2001.

In order to strengthen the activities relating to the Thurusaviya scheme, the "Thurusaviya Fund" was established as a separate entity since 12 July 2000 under the Ministry of Plantation Industries. The fund is expected to achieve its objectives with the formation of societies at village, regional and national levels.

Sri Lanka is the world's largest industrial tyre manufacturer. In addition, a wide range of rubber based products including surgical and industrial gloves, pneumatic tyres and tubes are also exported. Earnings from the export of rubber based products in 2001 amounted to US dollars 172 million.

The rubber industry is not confined to the processing of latex only. Treated rubber wood is used in the manufacture of furniture, flooring, toys and ornaments. Semi-treated wood is mainly used for the manufacture of pallets and brush handles. During the year, the rubber wood industry suffered due to the general decline in the industrial sector. Untreated rubber wood is used as shuttering and as a fuel wood.

Coconut

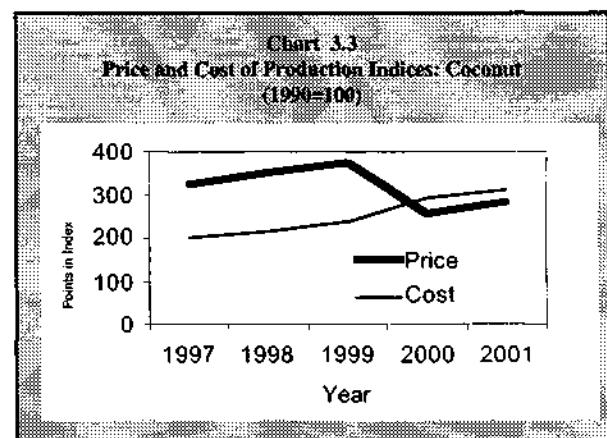
Coconut production in 2001, estimated at 2,796 million nuts, was 9.7 per cent less than the peak output recorded in the previous year. The drop in output was attributed to the lagged effect of reduced rainfall received during the latter half of 2000, especially in the areas in the 'coconut triangle', as well as the unfavourable weather that prevailed during most parts of 2001. A reduction in the application of fertiliser during both 2000 and 2001 also had a negative impact on the output in 2001. In the wake of a drop in output, the price of nuts increased sharply during the latter part of the year. To meet the shortage, approximately 1,000 metric tons of copra were imported during the year under the Temporary Importation for Export Promotion (TIEP) scheme.

However, the nut equivalent of coconut oil production during the year increased by 45 per cent to 566 million nuts. The protection provided to the oil industry by way of increased import tariff rates on other edible oils encouraged coconut oil production. Several oil mills which were not in operation prior to the imposition of the increased import tariff, commenced milling and contributed positively towards the increased oil output. Meanwhile, the production of desiccated coconut (DC) suffered a severe setback due to the competition for nuts from the oil industry. As a result, domestic production of DC dropped by 43 per cent to 51,000 metric tons. Further, the

TABLE 3.5
Statistics of the Coconut Sector

Item	Unit	1999	2000(a)	2001(b)
1. Production (c)	nuts mn.	2,828	3,096	2,796
Desiccated coconut	nuts mn.(d)	541	712	408
Coconut oil	nuts mn.(d)	309	391	566
Copra (e)	nuts mn.(d)	62	84	85
Fresh nut exports	nuts mn.	21	29	27
Domestic nut consumption (f)	nuts mn.	1,799	1,849	1,872
Coconut cream and milk powder exports	nuts mn.(d)	25	31	30
2. Total Extent	hectares '000	439	439	439
3. Replanting/ Underplanting (g)	hectares	698	714	867
4. New planting (g)	hectares	660	834	993
5. Fertiliser used	mt '000	39	34	30
6. Cost of Production	Rs./nut	2.68	3.27	3.50
7. Retail Price of a Fresh Nut	Rs./nut	11.95	9.04	10.50
8. Average export price f.o.b. (h)	Rs./nut	9.95	7.35	7.05
9. Export earnings	Rs.mn.	9,119	9,174	7,348
US\$		129	121	82
Kernel products (h)	Rs.mn.	5,973	5,786	3,639
US\$ mn.		84	77	41
Other products	Rs.mn.	3,146	3,388	3,709
US\$ mn.		45	45	42
10. Value added as % of GDP (i)		3.2	2.2	2.0

- (a) Revised Sources: Coconut Cultivation Board
 (b) Provisional Coconut Development Authority
 (c) Estimated (breakdown does not add up to total production due to adjustments for changes in copra stock) National Fertiliser Secretariat Central Bank of Sri Lanka
 (d) In nut equivalent - converted at
 1 mt DC = 8,000 nuts
 1 mt Oil = 8,800 nuts
 1 mt Copra = 5,775 nuts.
 1 mt Coconut cream/milk powder = 8,000 nuts.
 (e) Exports only
 (f) Estimated on the basis of household per capita 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.



international prices of DC remained at a low level throughout most of the year due to a higher global output. The average export (fob) price of DC in Colombo during December 2001 was US dollars 775 per metric ton, while the comparable price in the Philippines was approximately US dollars 700, while in Indonesia it was approximately US dollars 600. As a result, Sri Lanka lost a major share of the Middle Eastern market in 2001. Consequently, DC exports declined by 40 per cent to approximately 50,000 metric tons. With a drop in production and an increase in nut prices, fresh nut exports declined by 7 per cent to 27 million nuts. Coconut cream and milk powder exports declined by 3 per cent to 30 million nut equivalents. In contrast, the export of copra increased by 1 per cent to 85 million nut equivalents.

The prices of all three kernel products, which were at very low levels at the beginning of the year, improved significantly owing to the drop in nut supply by the end of the year. The price of coconut oil, which was Rs. 44.17 per kg. in January, more than doubled to Rs. 94.38 per kg by end December. Similarly, the price of copra and DC increased by 94 per cent and 85 per cent to Rs.71.36 per kg and Rs. 76.25 per kg, respectively during the same period.

The average export (fob) price of kernel products, which declined by 26 per cent in the previous year, declined by a further 4 per cent to Rs.7.05 per nut in 2001. The decline in both the volume and the value of kernel products resulted in a 37 per cent drop in export earnings in rupee terms.

During the year the Coconut Cultivation Board (CCB) disbursed Rs. 64 million for planting activities under the cess assisted programmes for replanting, new planting and home gardens. Under the 'Kapruka Ayojana' loan scheme, a further sum of Rs. 42 million was disbursed among 445 growers, benefiting an extent of 688 hectares. The Coconut Research Institute (CRI) released nearly 6,000 seedlings of the newly recommended coconut hybrid CRISL 98 for field planting in 2001.

Other Export Crops

The other export crop sector, which includes spices, and other agricultural produce such as unmanufactured tobacco, cocoa, coffee, arecanut, cashew kernels, essential oils, foliage and cut flowers, recorded a mixed performance during 2001. However, as in the previous year, this sector contributed significantly to the export earnings in the agricultural sector, exceeding the combined export earnings from rubber and coconut. Export earnings from this sector increased by 3 per cent to Rs 12,174 million in 2001.

Cinnamon is the most important of these crops. Export earnings from cinnamon amounted to Rs 3.9 billion in 2001 and accounted for more than 30 per cent of the earnings

of this category. Sri Lanka is the largest producer and exporter of cinnamon in the world. Cinnamon production increased by 17 per cent, while export volumes in raw form increased by 3 per cent during 2001. The improvement in farm gate prices and export prices contributed positively towards increased production. Approximately Rs. 250 million was earned by exporting 130 metric tons of cinnamon leaf and bark oil during the year. It is important to move to more commercially oriented research in cultivation and value addition in cinnamon to reap the benefits of being the largest producer of quality cinnamon. However, as in the other plantation sectors, the scarcity of labour is the main impediment for the development of the cinnamon industry. The problem is more acute as the peeling of cinnamon is a specialised, skilled job.

Pepper production, which increased significantly in 2000, decreased by 28 per cent owing to the phenomenon of alternate bearing. Unfavourable weather conditions also had a negative impact despite an increase in the extent under cultivation in 2001. Export volume declined by 56 per cent due to poor prices in the wake of increased global production. Significantly high output in Vietnam contributed to the decline in global prices. Replanting of pepper, which has been on an increasing trend, during the last few years, increased further in 2001 under the Export Agriculture Assistance scheme implemented by the Department of Export Agriculture (DEA).

TABLE 3.6
Production of Other Export Crops

Crop	metric tons		
	1999	2000 (a)	2001 (b)
Coffee	3,249	2,540	2,400
Cocoa	1,147	1,300	1,276
Cinnamon	13,466	13,490	16,000
Pepper	9,284	10,676	7,650
Clove	4,181	1,700	2,700
Cardamom	74	62	60
Nutmeg and Mace	1,221	1,100	1,050
Cashew	1,014	935	1,239

(a) Revised
(b) Provisional

Source : Department of Export Agriculture
Sri Lanka Cashew Corporation

The export volume of cloves more than doubled in response to very attractive prices in the world market. Increased demand from Indonesia, after a drop in production in Madagascar, contributed to high world prices. The preferential tariff rates enjoyed by Sri Lanka with India also helped increase exports. Attractive farm gate prices that prevailed during the last few years encouraged the application of fertiliser and better management practices. As a result, the output of cloves was estimated to have increased by 59 per cent in 2001.

Although Sri Lanka produces good quality spices, the quantities are limited. This is a hindrance to the

development of a value added industry in spices. Except cinnamon, most of the other spices are grown in home gardens or in small plots. Large scale cultivation of spices as a mono crop or a mixed crop should be encouraged for the further development of the spice sector. It is encouraging to note that some plantation companies are diversifying their abandoned lands to accommodate spice crops. The diversification of unproductive traditional plantations to more lucrative spice plantations should be further encouraged. The DEA plays a major role in providing technical information and extension services in the cultivation and processing of spices. The Second Perennial Crop Development Project with ADB funding continued to assist this sector with medium and long-term loans for nursery development, field development, warehousing, processing etc.

Cashew production during the year increased by 33 per cent. This is a result of the initiative taken by the Sri Lanka Cashew Corporation (SLCC) by providing subsidy schemes and extension services to increase the area under cultivation. As a result, the total area under cultivation has increased steadily since 1996 and reached approximately 33,000 hectares in 2001. The private sector accounted for almost the entire cashew production (97 per cent). The introduction of motor driven shelling machines improved the cashew processing activities. Apart from processing kernels, wine and juice from cashew apples have also been introduced to the market. Cashew kernel exports during the year increased by 83 per cent.

Foliage and cut flower cultivation is gaining popularity among small-scale growers as a self employment as well as large-scale export oriented ventures. The assistance provided by the Department of Agriculture (DOA) through the Royal Botanical Gardens, Peradeniya, helped in the expansion of the foliage and cut flower industries. The production of foliage plants, rooted cuttings and cut flowers increased during 2001. Consequently, export earnings from those increased by 16 per cent to Rs 723 million.

Oil palm is one of the crops which has been gaining popular acceptance among the plantation companies in the recent past. Oil palm was introduced to Sri Lanka over three decades ago and is mainly grown in the Southern Province. The total extent under oil palm at present is about 2,050 ha. of which more than half is in the Nakiyadeniya estate (1,095 ha). Several plantation companies are planning to replace their rubber lands with oil palm. It is becoming a popular crop among the plantation companies in the wake of the losses incurred due to poor prices for rubber which have prevailed for a considerable period of time. The other advantage oil palm has over rubber is the low labour utilisation and the shorter gestation period. However, the disadvantage of oil palm compared to rubber is that the trunk does not have any timber or fuel value. Disposing of

uprooted trees could cause environmental problems, as it does not have any productive use. Unlike coconut, oil palm leaves do not have any productive use. Large-scale replacement of rubber with oil palm will have to be done after careful consideration, taking into account the long-term effects as well.

There is a big potential to diversify to export crops such as vanilla, mushrooms, and herbal products with medicinal value. It is necessary to provide research facilities and extension services to diversify production in new agricultural products and to increase value addition.

3.4 Domestic Agriculture

Paddy

Paddy production, at 2.69 million metric tons (129 million bushels), dropped by 5.8 per cent during the 2001 cultivation year. The reduction in production is confined to a 9.4 per cent drop during the Maha season, while the Yala season reported a marginal increase. The extents sown and harvested during both seasons dropped due to adverse weather conditions that prevailed during the year. Yield levels during both seasons improved and contributed positively to achieving the best annual average yield level ever on record. The annual average yield improved for the fifth consecutive year and reached a new record level of almost 4 metric tons per hectare. The average yield during Maha and Yala increased by 2 per cent and 4 per cent, respectively, improving on the previous best levels reported in 2000. The average yield during Yala exceeded 4 metric tons per hectare for the first time and reached 4.1 metric tons per hectare. The improvement in the yield levels could be attributed to the use of good quality seed paddy along with the adoption of the technology package recommended by the DOA. Reduction in the extents cultivated due to the scarcity of water during both the seasons also eliminated the cultivation of marginal lands, which had a positive impact towards improving the yield.

Chart 3.4
Paddy Production

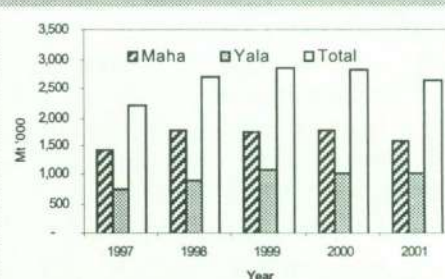


TABLE 3.7
Statistics of the Paddy Sector

Item	Unit	2000(a)			2001(b)		
		Maha	Yala	Total	Maha	Yala	Total
Gross extent sown	hectares '000	549	329	878	479	319	798
Gross extent harvested	hectares '000	526	306	832	471	294	765
Net extent harvested	hectares '000	469	273	742	418	264	682
Production	mt '000	1,781	1,078	2,860	1,613	1,082	2,695
	bushels '000	85,374	51,668	137,042	77,287	51,821	129,108
Yield (c)	kg/ hectare	3,798	3,957	3,856	3,860	4,102	3,954
Credit Granted	Rs. mn.	256	118	374	251	170	421
Rice imports	mt '000	-	-	15	-	-	52
(Paddy equivalent)	(mt '000)	-	-	22	-	-	78

(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 Agriculture
Ministry of Agriculture and Lands
Department of Census and Statistics
Sri Lanka Customs
Central Bank of Sri Lanka.

The output decline in the Maha season was mainly on account of a 12.7 per cent drop in the extent sown and 10.4 per cent drop in the extent harvested during the season. Except in four districts, the gross extent sown during Maha was less than that of the previous Maha season. The districts mainly affected were Kurunegala, Anuradhapura, Hambantota and the Uda Walawe area, which reported production declines of 33 per cent, 24 per cent, 50 per cent and 94 per cent, respectively. As in the previous year, the five major paddy producing districts of Kurunegala, Polonnaruwa, Ampara, Anuradhapura and Mahaweli 'H' area together accounted for 53 per cent of the Maha output.

Paddy output during the Yala season reported a marginal increase in spite of a 3 per cent drop in the gross extent sown, purely on account of a 4 per cent improvement in the average yield levels. The output during Yala increased in Polonnaruwa and Kurunegala by 8 per cent and 48 per cent, respectively. Meanwhile, the output at Anuradhapura and Hambantota declined by 9 per cent and 48 per cent, respectively. The districts of Ampara, Polonnaruwa and Kurunegala together accounted for almost half (49 per cent) of the Yala output. For the eighth consecutive year, Ampara reported the highest Yala output and accounted for over one fifth of the total production during the season.

The special 'Yaya' demonstration programme organised by the Extension Division of the DOA to improve productivity in the paddy lands was continued for the sixth consecutive year. During the year over 3,000 demonstrations covering an extent of over 51,000 hectares, which benefited 70,000 farmers, were conducted throughout the island. DOA has indicated that yields obtained in the fields where the demonstrations were carried out are higher than the yield obtained from other fields and that this programme is contributing positively towards improving the national average yield levels.

The drop in paddy production, coupled with the restrictions imposed on the import of rice, helped the farmers to dispose of their paddy at remunerative prices. The Co-operative Wholesale Establishment (CWE) and the co-operative societies purchased 41,000 and 13,000 metric tons, respectively, after the 2000/2001 Maha harvest. The average farm gate price of paddy during the year was Rs.12.46 per kg.

Licensing requirements were imposed on the import of rice in July 2000 and continued until 22 November 2001. In the wake of increasing domestic prices of rice due to shortfalls in production, the government once again intervened in the market and allowed the private sector and the CWE to import 60,000 metric tons of rice on a duty free basis. Of the total quantity, CWE was allowed to import 30,000 metric tons, while the balance was equally distributed among 15 private sector importers. Duty free imports were allowed until 10 December 2001. The duty applicable for any imports made during the period 10 December to 31 December 2001 was to be 50 per cent of the normal duty. According to the Ministry of Agriculture, private sector importers had imported the full quota of 30,000 metric tons before 10 December and qualified for duty free imports, while the CWE had imported only a portion of the allocated quantity before 10 December. The total quantity of rice imported during the year was 51,900 metric tons.

Other Field Crops

The other field crop sector performed poorly during the 2001 cultivation year on account of the failure of both the North East and the South West monsoons. Further, the cultivation of most of these crops appears to be declining in the face of stiff competition from imports, which are comparatively cheaper. Output of most of these crops in general, has shown a declining trend during the last few

years. As a result, we are gradually depending on more and more imports to satisfy the consumer demand. Except potato, the output of all the other crops has declined in 2001. As in 2000, potato production increased significantly by 19 per cent, owing to the very heavy protection provided to the potato farmers by way of specific duty imposed on imports. The increase in the output is a result of an improvement in the extent as well as an improvement in the yield levels. Potato yields increased for the fourth consecutive year approximately by 2 per cent to 13.5 metric tons per hectare, but still well below yields in other countries.

Chillie production, which has been on a declining trend since 1993, declined further by 12 per cent during 2001. Output declined during both Maha and Yala seasons purely on account of a reduction in the extent cultivated, in spite of a marginal improvement in the yields during both seasons. The DOA has conducted several demonstrations and field days with the intention of improving the yields. The average chillie yield obtained in demonstrations is over 50 per cent in excess of the national average. With the application of recommended practices farmers can enhance their income substantially. The output of both big onions and red onions declined, by 9 per cent and 15 per cent, respectively, in 2001. Reduced extents under cultivation as well as a reduction in the yield levels were responsible for the low output of red onions. The big onion output declined on account of a reduction in the yields, in spite of a marginal increase in the extent under cultivation.

The output of legume crops such as green gram, black gram and cowpea, which has been on a declining trend since 1998 declined further by 16 per cent, 5 per cent and 17 per cent, respectively. Both the extent and the yield levels were lower in all three crops compared to 2000.

The output of maize and sesame too has decreased steadily since 1998. Maize and sesame production declined by 7 per cent and 11 per cent, respectively, compared to the previous year.

Local purchases by the CWE of green grams recorded a more than two-fold increase to 229 metric tons. Meanwhile, the purchases of dry chillies, potatoes and big onions by the CWE declined drastically by 90 per cent, 87 per cent and 47 per cent, respectively, indicating that the farmers did not face much difficulty in marketing their products.

In the wake of the increase in potato output mentioned above the imports of consumption potatoes declined drastically by 46 per cent to approximately 62,550 metric tons. However, the imports of seed potatoes increased more than two-fold to 6,725 metric tons in view of the increasing demand for good quality seed potatoes for cultivation.

In response to poor domestic production, the import of chillies and green gram increased by 11 per cent and 29

per cent, respectively. Of the total supply of green gram and chillies, imports have accounted for 47 per cent and 34 per cent, respectively. The drop in the output of green gram and cowpea prompted an increase in imports of red and yellow lentils by 13 per cent during the year.

Fruits and Vegetables

According to provisional estimates of the Department of Census and Statistics (DCS), the overall vegetable production declined by 5 per cent to 550,000 metric tons in 2001. The production of low country vegetables declined by 8 per cent due to a reduction in the area under cultivation on account of unfavourable weather conditions that prevailed during the year in the main growing areas. The extent under up country vegetables too declined due to an increase in the extent under potato, which competed with vegetables. In response to a decline in output, prices of many vegetables were higher in 2001 than in 2000. The increase in input prices and increased transport cost also added to the vegetable prices. The average retail prices of low country vegetables ranged between Rs. 20.00 and Rs. 40.00 per kg, while the prices of up country vegetables ranged between Rs. 35.00 and Rs. 70.00 per kg.

The large-scale cultivation of fruits in Sri Lanka is limited to few varieties such as pineapple, banana and rambutan. However, many varieties of fruits are grown on a small scale and in home gardens for domestic consumption as well as for exports. The DOA, DEA and the Perennial Crop Development Project provided assistance for the cultivation of fruits. The volume of fresh and dried fruit exports increased by 30 per cent to 7,399 metric tons and earned approximately Rs. 400 million. Meanwhile, the volume of processed fruit exports increased by 44 per cent to 4,069 metric tons and the export earnings amounted to a sum of Rs. 372 million.

A wide range of vegetables is exported from Sri Lanka mainly to the Middle East, Maldives and Europe. During 2001, the overall vegetable exports declined by 13 per cent to 576 metric tons. Inadequate freight space and increase in freight rates also adversely affected the fresh vegetable and fruit export industry after the attack on the Katunayake Airport.

Even though there is a good export demand for local fruits and vegetables, the inability to supply large quantities on a continuous basis is a major constraint. Maintaining direct links with the exporters and further development of the contract farming system is important to improve the fruit and vegetable export market. High value vegetables are grown in poly tunnels and in green houses in limited quantities at present, for supermarkets and the airline industry. Banana cultivation is successfully carried out in the Mahaweli area using drip irrigation. The establishment of agricultural processing zones in the main identified

growing areas will help attract investors in agricultural processing and exports. The availability of air cargo facilities is also important to develop the fruit and vegetable export sector.

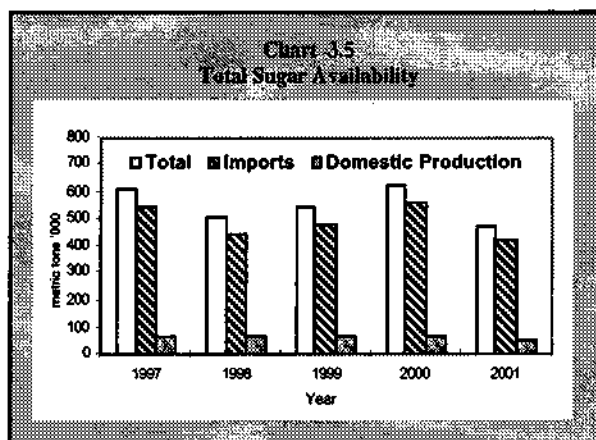
Sri Lanka imported approximately 40,000 metric tons of fruits incurring a cost of Rs. 1.3 billion during 2001. As in previous years, apples, oranges, dates and grapes were the main kinds of fruits imported.

Sugar

The sugar sector has not performed to expectation during the four decades of its existence in Sri Lanka. A significant change cannot be expected in the near future unless drastic policy measures are introduced. The number of operational factories halved to two during the last 10 years. The ownership of the industry is not clear, with both the state and the private sector having a stake. This has led to a lack of clear direction in medium to long-term decision making.

The pricing policy of cane should be revised to encourage the supply of good quality cane, which is directly related to the sugar recovery rates. At present, the payment for cane is purely based on the weight, irrespective of the quality of cane. This has encouraged the farmers to grow high cane producing varieties at the expense of high sugar producing varieties. As a result, two varieties released by the Sugar Research Institute (SRI) in 1992 as high sugar varieties (viz., SL8306 and SLI 121) are still not popular among the growers.

In the wake of a shortage of agricultural labour, the cost of production of sugar could be minimised by mechanisation. However, the average size of private cane farms does not encourage mechanisation to reap the benefits of economies of scale. The recovery rates are also affected



by the efficiency of extraction at the factories. The factories have not invested in modernising and improving the efficiency of the procedure of extraction. As the cost of production is high, the domestic producers find it difficult to face competition from imports. Hence, the factories are faced with financial difficulties discouraging further investments in modernising the factories.

The declining trend observed in the output of cane and sugar production in the recent past continued in 2001. Sugar production, at 48,000 metric tons in 2001, was 25 per cent less than the output in the previous year. The production at both Sevanagala and Pelwatta dropped during the year when compared with 2000.

The availability of cane was hampered by the severe drought conditions that prevailed in the sugar cane growing areas during 2000. Further, the production at Pelwatta was affected due to a delay in the commencement of the harvesting season. Meanwhile, at Sevanagala, in addition to the drought, a portion of the sugar cane plantation caught

TABLE 3.8
Statistics of the Sugar Sector

Item	Unit	Sevanagala Sugar Factory		Pelwatta Sugar Factory		Total	
		2000 (a)	2001 (b)	2000 (a)	2001 (b)	2000 (a)	2001 (b)
1. Total area under cane (with ratoons) (c)	hectares	3,540	3,466	3,497	4,081	7,037	7,557
2. Area Harvested (c)	hectares	2,753	2,702	3,493	3,343	6,246	6,045
3. Cane Harvested (c)	mt '000	286	236	183	132	469	368
4. Private cane purchased	mt '000	2	1	317	197	319	198
5. Quantity of cane crushed	mt '000	287	237	500	329	787	566
6. Average yield (c)	mt/hectare	83	71	52	38	68	55
7. Sugar production (without sweepings)	mt '000	24	20	40	26	64	46
8. Sugar recovery rate (d)	%	8.60	8.51	8.01	8.64	8.13	8.49

(a) Revised.

(b) Provisional

(c) Includes nucleus estates and allottees.

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

Sources: Pelwatta Sugar Industries Ltd.
Sevanagala Sugar Industries Ltd.

fire reducing the availability of cane for crushing. Hence, domestic production was sufficient only to meet less than 10 per cent of the demand. As a result, the country continues to depend heavily on imports.

Sri Lanka's sugar recovery rates, as well as the cane yields, are much less than that of its neighbouring countries. If the sugar industry is to be a viable proposition, Sri Lanka will have to improve its yield levels as well as plant more sugar containing cane varieties, which will improve the recovery rates.

3.5 Fish and Livestock

Fish

Fish production, as estimated by the Ministry of Fisheries and Aquatic Resources and the National Aquatic Resources Research and Development Agency (NARA) declined by 6 per cent. The reduction in the output of both marine and aquaculture sectors by 5 per cent and 19 per cent contributed to the overall decline in the output.

The marine sector consists of the coastal, deep sea and off shore sub sectors, and accounted for 89 per cent of the total fish production. The drop in marine output is solely on account of a 9 per cent decline in the coastal sector. In contrast, the deep and off shore sector improved by 4 per cent.

TABLE 3.9
Fish Production

Sub-Sector	metric tons '000		
	1999	2000(a)	2001(b)
Marine (c)	276	267	255
Aquaculture	31	37	30
Total	307	304	285

Source: Ministry of Fisheries and Aquatic Resources Development National Aquatic Resources Research and Development Agency

(a) Revised
(b) Provisional
(c) Coastal and deep sea sectors

The output of the inland fisheries and aquaculture sector, which accounted for 11 per cent of the total production, also decreased mainly due to the reduction in stocking fingerlings in the inland reservoirs and implementation of management regulations.

In response to a drop in production as well as a reduction in the imports, fish prices increased during the year. The prices of all species of fish at the Colombo wholesale fish market increased by 2 per cent to 43 per cent. Meanwhile, retail prices in the Colombo region also increased by 6 per cent to 18 per cent.

During the year, fishing activities were restricted in Northern and Eastern areas in view of the unsettled security

situation. To encourage deep-sea fishing, the government issued 7 multiday boats, 783 traditional crafts and 269 sets of fishing gear to fishermen under the subsidy programme in 2001.

The total volume of fresh fish, salted fish and crustacean exports dropped by 20 per cent to 15,572 metric tons. Canned fish, salted fish and other forms of fish imports also reported a drop of 7 per cent to 71,586 metric tons. However, the value of imports increased by 15 per cent to Rs. 5,767 million.

Earnings from exports of ornamental fish dropped by 8 per cent to Rs.545 million in 2001. Singapore, which is the main competitor for Sri Lanka in ornamental fish business, recently improved its marketing systems considerably. Sri Lanka also needs to improve handling and packing of ornamental fish in order to increase its export market share.

Livestock

The livestock sector consists mainly of the dairy and the poultry sub sectors. In the dairy sector, cow milk and buffalo milk production increased marginally to 266 million litres and 83 million litres, respectively, in 2001. Milk collection by the main processing companies namely MILCO Private Limited, Nestle Lanka Limited (NLL), International Dairy Products Limited (IDPL) and other processors together amounted to 102 million litres, an 11 per cent increase compared to the previous year. MILCO and IDPL milk collection increased by 16 per cent and 42 per cent, respectively. Milk collection by IDPL increased due to the improvement in the producer price and expansion of the area covered around Polonnaruwa. The price paid to producers was increased from Rs.14.17 per litre to Rs.14.81 per litre with effect from 16 April 2001.

In line with the increase in collection, major products of MILCO, mainly pasteurised milk, sterilised milk, powdered milk and yoghurt increased by 6 per cent, 9 per cent, 15 per cent and 10 per cent respectively. The total output of milk products of NLL increased by 39 per cent to 12,104 metric tons, while the production of IDPL recorded a 7 per cent increase to 6,703 metric tons in 2001.

During the year, milk and milk based product imports declined by 9 per cent to 55,471 metric tons. The value of imports was Rs.10,912 million.

According to the estimates of the Ministry of Agriculture and Livestock, national egg production during the year increased by 5 per cent to 966 million eggs. The chick production increased by 22 per cent to 6 million chicks. The high costs of feed and stagnant egg prices have made small scale poultry farming an unviable enterprise.

Poultry meat production increased by 11 per cent to 70,000 metric tons in 2001. According to the All Island

Poultry Producers Association, due to lack of communication among the hatchery owners, the day old chick production increased despite low demand. The small-scale poultry farmers faced problems in marketing due to the frequent interruption to the power supply and the setback faced by the tourist industry.

3.6 Inputs

Fertiliser

Fertiliser issues dropped by 2 per cent mainly due to a decline in fertiliser application in all major plantation crops and field crops due to adverse weather conditions. However, fertiliser issues to the paddy sector on a calendar year basis in 2001 increased by 6.5 per cent due to an increase in the extent cultivated under paddy during the 2001/2002 Maha season, which commenced during the latter part of 2001.

The fertiliser subsidy scheme, which is confined to urea, continued to operate during 2001. Urea is sold to farmers at a price of Rs. 350 per 50 kg. bag. During 2001, the fertiliser subsidy rate was revised upwards several times, in keeping with both the changes of the international price of urea and exchange rate fluctuations. In early January, the subsidy rate was Rs. 8,642 per metric ton and it gradually increased to a peak level of Rs. 15,060 per metric ton by end January to accommodate increases in import price and the depreciation of the rupee. However, this rate came down gradually with the decline in world market prices and gradual stabilisation of the rupee. At end 2001, the subsidy rate was at Rs. 12,400 per metric ton. These subsidy rates were substantially higher than the rates that prevailed during 2000. As at end 2001, the total subsidy payments amounted to Rs 3,649 million and this includes the payment of a balance of Rs. 749 million carried forward from 2000. Under the subsidy scheme 241,754 metric tons of urea were imported during 2001.

Urea imports during 2001 reveal that large quantities were imported when the international prices were at very

TABLE 3.10
Fertiliser Usage by Crops

Crop	metric tons '000		
	1999	2000(a)	2001(b)
Paddy	321	262	279
Tea	164	200	187
Rubber	10	14	9
Coconut	39	34	30
Other Field Crops	43	40	30
Other Export Crops	10	9	9
Others	30	34	36
Total	617	593	580

Source: National Fertiliser Secretariat.

(a) Revised
(b) Provisional.

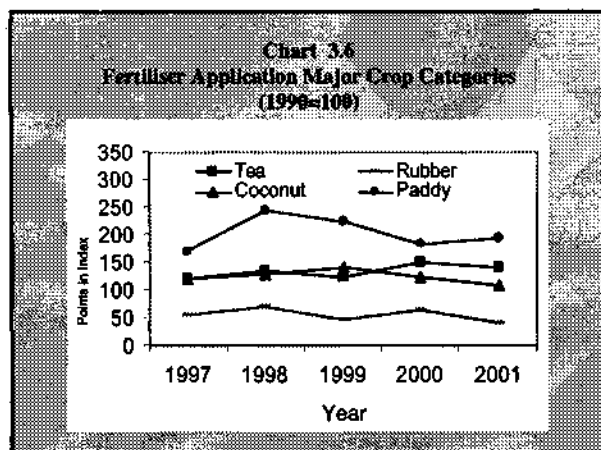
high levels. Since the subsidy payment is calculated on the basis of import prices, there is no incentive for importers to import urea when international prices are at low levels. The present method of calculating the subsidy payment could lead to problems of moral hazard and various malpractices. Hence, the subsidy scheme should be reviewed and altered to a more rational system, which encourages the importers to import urea when international prices are low.

Seed

Public and private sector enterprises produced 11,300 metric tons of certified seed paddy, which represented about 13 per cent of the national requirement. The balance seed paddy requirement was met by the farmers themselves by keeping their own seed from the previous season. The quantity of seed paddy issued by the DOA increased by 45 per cent to 3,090 metric tons compared to the previous year. In addition to the private sector and government seed farms, provincial councils, the Mahaweli Authority and co-operative societies also continued the production of seed paddy.

In response to the representation made by the private seed paddy producers, requesting the government not to sell seed paddy below the cost of production, the price of certified seed paddy sold by the DOA was increased by 10 per cent during the year. This was the first price revision made since 1997.

The DOA continued to issue basic vegetable seeds to the private sector for the production of certified vegetable seeds. Seeds of low country vegetables are locally produced and most of the seeds of the exotic vegetables are imported. Vegetable seed imports increased by 19 per cent to 223 thousand metric tons amounting to Rs.136 million in 2001. The DOA also continued the issue of certified seed potato in 2001. In order to meet the high demand for seed potato, seed potato imports increased more than two fold to approximately 7,000 metric tons in 2001.



Agro-Chemicals

According to the provisional estimates of the Registrar of Pesticides, the use of pesticides, which includes insecticides, herbicides and fungicides, increased by 2 per cent during the year. The use of insecticides dropped by 3 per cent. In contrast, the use of herbicides and fungicides increased by 8 per cent and 2 per cent, respectively. The drop in use of insecticides can be attributed to the promotion of the Integrated Pest Management (IPM) programme of the DOA, which discourages the use of insecticides. In view of the high cost of labour in agriculture, manual weeding have become relatively expensive and therefore, farmers have opted to use more herbicides to control weeds.

3.7 Forestry

The Forest Department (FD) continued to implement the Forestry Sector Master Plan and carried out several projects for forestry related activities with the assistance of foreign donor agencies.

ADB provided Rs. 40 million for the implementation of the Participatory Forestry Project and Rs 62 million for the Upper Watershed Management Project. Activities such as buffer zone planting, homestead development, boundary planting, stream reservation planting, planting in public places and private lands, seedling production and boundary survey of natural forests were carried out under these projects. ADB provided Rs. 49 million for the Forest Resources Management Project during 2001, the restructuring of the FD, and the revision of the Forest Ordinance. The UNDP granted Rs. 9.2 million for the Global Environment Activity Project to carry out activities such as staff training programmes, awareness programmes, extension services and rural development activities. Under Medicinal Plant Project, World Bank granted Rs. 4.3 million. Under environment management, some degraded lands in natural forests were improved and mangrove reserve areas were demarcated. Further awareness programmes on forest conservation were conducted for villagers, teachers, students and government officers. To reduce illegal deforestation, the FD continued monitoring regulations related to timber felling and transport activities.

TABLE 3.11
Statistics on the Forestry Sector

Item	Unit	1999	2000(a)	2001 (b)
1. Total Forest Cover (c)	hectares '000	2,119	2,119	2,119
Closed canopy forest (d)	hectares '000	1,583	1,583	1,583
Sparse Forest	hectares '000	464	464	464
Mangroves	hectares '000	8,687	8,687	8,687
2. Extent Deforested (e)	hectares	-	244	314
3. Extent Reforested (f)	hectares	556	828	640
4. Number of forest offences recorded	No.	3,928	4,626	4,344
Volume of Timber detected	cubic meters	2,912	5,662	4,201
Value of Timber detected	Rs. mn.	28.7	56.0	58.0

(a) Revised

Source : Forest Department

(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

During 2001, six resin tapping lease agreements related to 6,577 pine plantations continued to be in force, and Rs. 2.8 million was generated as rental. Under the extension nursery programme, 7,500 kg. of seeds were collected and 2.1 million forest seedlings were raised for tree planting programmes. For regeneration cutting, 675 hectares of forest plantations were released to the State Timber Corporation (STC).

The private sector has initiated private forest plantation activities by planting high valued timber species. Some plantation management companies also have shown an interest in diversifying their unproductive traditional plantations to forest plantations. This should be encouraged, as it would help to generate promising income for the investors as well as to increase the availability of timber for domestic purposes without depleting our natural forests. The cultivation of plant species, which can be used as firewood too needs to be encouraged as a source of energy.

The STC continued to supply timber to the state sector and to the public. During 2001, the total output of logs, sawn timber and firewood of the STC declined by 6.5 per cent to 259,521 cubic meters compared to 2000.