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BRIEFING PAPER
ON
AGRICULTURE IN SRI LANKA

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BACKGROUND INFORMATION ON SRI LANKA

1.0 Physical Geography: The island is located off the southern tip of India between latitudes 5° 55'N and 9° 50'N, and longitudes 79° 42'E and 81° 52'E. Roughly oval in shape, having a length in a north-south direction of 430 km (267 mi) and a width of 225 km (140 mi), its area is 65,000 square kilometers (25,000 sq. miles). The central and southern parts are mountainous, with peaks rising to 2,500 m. above mean sea level. The northern, eastern and south eastern regions are an undulating plain with occasional rock outcrops.

1.1 Climate: The climate is dominated by the two monsoons. The northeast monsoon affects the country from October to March and it is known as the "Maha" season. The southwest monsoon season lasts from April to September and is called the "Yala" season. Due to land configuration and other factors, the south-western part of the island receives abundant rainfall from both monsoons and is known as the Wet Zone. In contrast, the northern, eastern and south-eastern areas experience rainfall only during the Maha season and is known as the Dry Zone. An intermediate belt is distinguished between the Wet and Dry Zones, called the Intermediate Zone receiving a limited amount of rainfall in the Yala season (see map). Consolidated rainfall data for typical location in these climatic zones are given below:

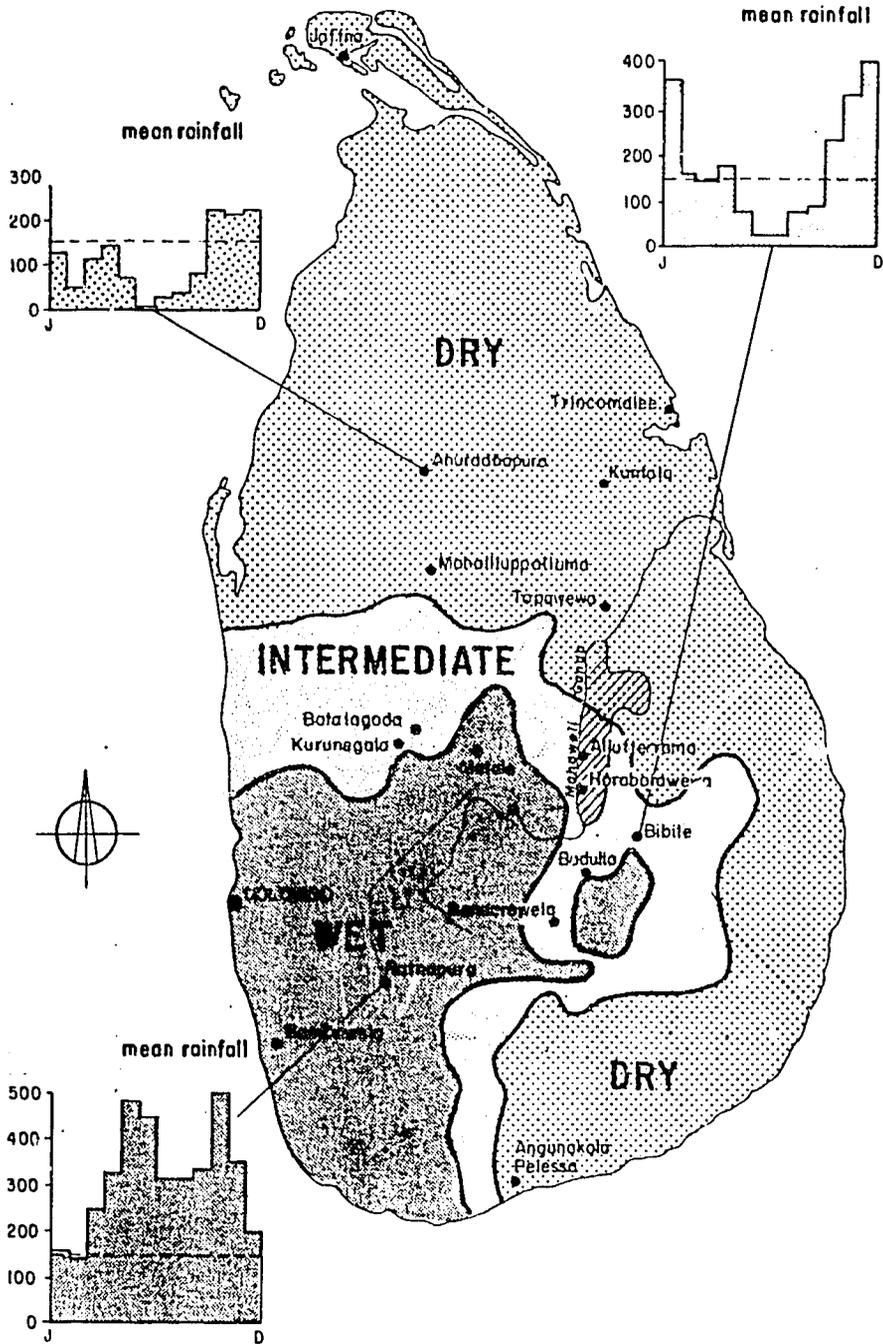
Climatic Zone	Location	Average Rainfall (mm)		Total
		Oct-Mar (Maha)	Apr-Sep (Yala)	
Wet	Ratnapura	1,641	2,247	3,888
Dry	Anuradhapura	999	448	1,447
Intermediate	Bibile	1,657	483	2,140

Average number of rainy days vary from 168 at Ratnapura, 95 at Bibile to 87 at Anuradhapura. Average mean temperature varies from 15 C at Nuwara Eliya (mountainous region) to 29 C on the plains.

1.2 Population: 1982 census reported a population of 14,988 million and the provisional estimate for 1984 was 15,599 million. Sector-wise the population is distributed as 21.5% urban, 72.2% rural and 6.3% estate. On ethnic basis Sinhalese comprise 74%, Sri Lankan Tamils 12.6%, Indian Tamils 5.6%, Moors 7.1%, Burghers 0.3% and Malays 0.3%. Majority are Buddhists 69.3% and others comprise Hindus 15.5%, Muslims 7.6%, Christians 7.5%, others 0.1%. Population growth rate in 1984 was 1.7 (provisional). Average density of persons per square kilometer in 1984 was 241, highest is 2,735 in Colombo District and lowest is 40 in Vavuniya District. The labor force in 1981 was 34.3% of the population. Unemployment was 11.7%.

1.3 Land Use: The following information provides a breakdown on land use in Sri Lanka.

CLIMATE ZONES OF SRI LANKA



	<u>Ha.</u>	<u>% Total Land</u>	<u>% Total Cultivated Land</u>
Total Land	6,560,000	-	-
Large Inland Waters	95,000	1.5	-
Forest	1,630,000	25.0	-
Total Cultivated Land	2,200,000	33.5	-
Plantation Crops	852,600	13.1	39.0
Paddy	747,000	11.5	34.0
Other Field Crops	437,900	6.7	20.0
Minor Export Crops	47,236	0.7	2.0
Others (sugarcane, Tobacco Cashew etc.)	22,000	0.3	1.0
Pasture (well managed)	17,000	0.2	0.8

Note: Conversion rate 1 hectare = 2.47 acres

2.0 CROP AGRICULTURE

2.1 Background: Agriculture, including animal production, fisheries and forestry, is the most important sector in the economy of Sri Lanka. Its contribution averages around 28% to GDP and constitutes up to 60% of exports. It employs half the labor force.

2.2 Plantation Crops: The plantation crops tea, rubber and coconut together, cover 39% of the arable land, contribute 50% of the export earnings and generate 14% of the budgetary revenue.

2.2.1 Tea - Tea occupies 243,000 ha, and is the single largest foreign exchange earner amounting to about 33% of the country's export earnings. The tea industry employs a labor force of about 600,000 workers directly which is about 11% of the national work force of the country. In addition, another 100,000 are employed in the servicing sector. The area under tea is distributed in 3 elevation zones referred to as high (1,200 m. above), mid (600-1,200 m.) and low (600 m. and below). Old seedling tea constitutes 85% and only 15% of the area is under improved clones. The two state owned corporations Sri Lanka State Plantations Corporation (SPC) and the Janatha Estate Development Board (JEDB) together manage 128,000 ha or 75% of the total area. Balance 43% or 74,837 ha are privately owned by smallholders comprising tea lands less than 20 ha in extent. The national average yield is about 918 kg/ha. Tea production in 1983 fell to 179 m.kg. lowest in the last 10 years. The major constraints to increased production have been the neglect and poor maintenance immediately before and after land reforms in 1972-75 period, periodic drought, and inadequate investment on replanting, fertilizer use, and factory improvement.

2.2.2 Rubber - Rubber is the second important export crop and is cultivated in the wet zone. The average tappable extent has declined from 192,522 ha in 1973 to 170,807 ha in 1982. The state corporations SPC and the JEDB together manage 68,500 ha and constitutes 33% of the extent under rubber. Balance extent of 138,110 ha consist of 31% of holdings below 10 acres in extent. Budded clonal rubber predominates, averaging 70%. In the budded rubber areas, PB86 is the predominant clone. The major program for the rehabilitation of rubber is the Rubber Replanting Subsidy Scheme. In addition to the replanting program funded by a cess on exports, GSL envisions replanting of 18,000 ha of smallholdings, to rehabilitate 67 group processing centers, to establish 50 new centers and to strengthen the extension service. State owned estates will be replanted and rehabilitated under the medium-term investment program (MTIP). The program for the two corporations include replanting 12,500 ha, rehabilitation of rubber factories and strengthening of latex collection. The smallholder latex is largely processed and marketed as ribbed smoked sheets (RSS) and the scrap as crepe rubber. About 90% of smallholder rubber is marketed via the village dealer to town dealer to exporter.

2.2.3 Coconut - Coconut is an important food staple in the Sri Lankan diet. The per capita consumption is about 110 nuts and it provides about 22% of the daily calorie intake of the population. The extent under coconut is approximately 400,000 ha (1.0 million acres), principally grown in the wet and intermediate zones. Coconut is produced by about 100,000 growers and, 75% of cultivation is accounted for by holdings of less than 10 ha. Major products are copra, oil, desiccated coconut, fibre and charcoal. In 1984, exports accounted for Rs.1,552 million. The primary constraints on increasing yield of smallholder coconut are inadequate fertilizer use, rising senility of the plant population, poor crop management, high degree of price instability and low gross returns. A development strategy for the coconut sector has been planned to carry out an integrated approach to stimulating production, improving processing efficiency, maximizing the income of the coconut cultivators by encouraging multicropping and mixed livestock/crop enterprises.

2.3 Paddy - Paddy is the staple food crop and dominates food grain production. About one-fifth of the arable land area is under paddy and is held in over 1.6 million parcels of which 74% are less than one hectare in extent. Paddy land is distributed as 289,480 ha under major tanks (those providing irrigation for over 81 ha) 186,740 ha under minor tanks (those providing irrigation for less than 81 ha) and 270,780 ha as rainfed, and constitutes a total of 747,000 ha (1,845,837 acres). The extent of this land cultivated in the Maha and Yala seasons is approximately 90% and 38% respectively. In 1983, Sri Lanka recorded the highest harvest of 119 million bushels of paddy approaching self-sufficiency estimated at 98 kg. per capita consumption of rice. The following Table provides information on annual production statistics, rice availability and imports from 1970-84.

Paddy Production: Rice Availability and Imports

Year	Gross Ext-ent Sown: '000 ha.	Net Extent Harvested '000 ha.	Total Paddy Production '000 tons	Average Yield kg./ha.	Rice Produc-tion* '000 tons	Net Domes-tic Supply** '000 tons	Rice Impo-rt*** '000 tons
1970	760	611	1,616	2,664	1,131	995	534
1971	726	590	1,396	2,366	977	860	339
1972	727	543	1,312	2,416	918	808	266
1973	725	571	1,312	2,298	918	808	344
1974	825	681	1,602	2,353	1,121	958	332
1975	696	509	1,154	2,270	808	711	457
1976	724	541	1,252	2,315	876	771	419
1977	828	666	1,677	2,521	1,174	1,033	526
1978	876	724	1,891	2,613	1,286	1,132	160
1979	839	697	1,917	2,750	1,304	1,148	212
1980	845	728	2,133	2,927	1,450	1,276	190
1981	877	740	2,230	3,014	1,516	1,334	157
1982	845	661	2,156	3,260	1,466	1,290	160
1983	825	689	2,484	3,591	1,689	1,486	123
1984	990	779	2,398	-	1,631	1,435	26

* Conversion factor of 1 metric ton of paddy = 0.68 metric tons rice.

** Rice production less 12% for seed and wastage.

*** Not adjusted for 2.5% slackage loss.

Source: Sri Lanka: Recent Economic Development and Policies Growth, World Bank, 1985.

New high yielding varieties (BG34-8, BG276-5, BW262-6B three-month duration), (BG94-1, BG34-6, BW267-3 three-and-half-month duration), and (BG1-11, BG400-1, BW100 four to four-and-half-month duration), modern practices, increased irrigation supply, improved extension, guaranteed price, and support services have led to per acre yield increase of 50.5 bushels in 1970 to 69.7 bushels in 1983. (Note: 1 Bushel/acre = 51.55 kg./ha., and 1 ha. = 2.47 acres.) Registered seed is produced in several state farms while certified seed is produced on a contract basis by farmers. The pests (planthoppers, specifically brown planthopper, gall midge, thrips, and stemborers) and diseases (ratoon stunt virus, blast and sheath blight) affect paddy in Sri Lanka. A guaranteed price scheme is in operation. However, GSL purchases through the Paddy Marketing Board (PMB) varies from about 3-13% of the total production with the private sector now playing a dominant role in paddy purchasing, processing and marketing. The Table below gives paddy production statistics in Sri Lanka compared with selected neighbouring countries.

Paddy Production: Sri Lanka Compared with Selected Countries

<u>Item</u>	<u>Ref. Year</u>	<u>Sri Lanka</u>	<u>Bangladesh</u>	<u>India</u>	<u>Pakistan</u>	<u>Thailand</u>	<u>Philippines</u>
1. Paddy Harvested Area/ World Paddy Harvested Area	1982	0.53	7.47	26.67	1.38	6.49	2.42
2. Paddy Production/World Paddy Production	1984	0.52	4.58	19.61	1.14	3.75	1.72
3. Paddy Production per Hectare	1984	3,076	2,000	2,103	2,625	1,811	2,470
4. Per Capita Paddy Production	1982	155.1*	231.6	98.3	58.0	348.1	159.8

*Ref. Year 1983

Source: Economic and Social Statistics of Sri Lanka
Central Bank of Ceylon - Vol. VII, 1984

2.4 Wheat - Wheat is not grown in Sri Lanka. While attempts to grow tropical wheat varieties have had some success, rice production on the same land is far more profitable. In 1983, 579,000 metric tonnes of wheat grain have been imported to supply the Prima flour milling complex located at Trincomalee, the major supplier of wheat flour to the Sri Lankan market.

2.5 Other Field Crops - These include a wide range of crops, namely coarse grains, pulses and oilseeds, chillies and onions which are predominantly grown in the dry zone under rainfed or shifting cultivation, also called 'chena.' With the recent GSL restrictions on the expansion of 'chena,' increasing extents of these crops are now cultivated under gravity and lift irrigation systems. The majority of roots and tubers are grown in the wet and intermediate zones. The principal other field crops are as follows:

- coarse grains, including maize, sorghum and the millets;
- pulses or grain legumes, including cowpea, greengram and blackgram;
- oilseeds, consisting groundnut, soybean and sesame;
- high cash value crops such as chillies, onions and potatoes; and
- manioc (cassava), sweet potato, and other yams.

The following Table provides information on the extent cultivated and the yield per hectare of the other food crops during the year 1983.*

<u>Crop</u>	<u>Extent in Ha.</u>	<u>Yield in Kg/Ha.</u>
Maize	47,230	1,080
Sorgham	47	638
Milletts**	19,751	920
Cowpea	45,811	570
Greengram	28,548	1,268
Blackgram	17,488	735
Groundnut	13,619	1,268
Soybean	14,625	725
Sesame	35,089	262
Chilli	32,019	918
Red Onion (Shallots)	11,435	11,790
Bombay Onion (Large)	217	10,986
Potato	6,643	12,415
Manioc	37,498	19,670

*Source: Economic and Social Statistics of Sri Lanka - Central Bank of Ceylon Vo.VII, 1984. Extent and yield figures for these crops are highly questionable, and should be taken only as rough approximations.

** Average for Kurakkan (*Eleusine coracana*) and Thanahal.

With the exception of chillies, onions and potatoes, the yields and production practices of other crops are poor. Of the above, the major crops that are exported are sesame, blackgram and cowpea.

2.6 Vegetables - A variety of tropical and temperate leafy, fruit, root and tuber vegetables are grown in Sri Lanka. They include bean, capsicum, tomato, cabbage, beetroot, raddish, carrot, leek, cauliflower, bushitavo, okra, lufa, snakegourd, bittergourd, cucumber, pumpkin, brinjal and many others. Approximately 40,000 ha are cultivated in the Maha and 28,000 ha in the Yala seasons. The main production districts are Anuradhapura, Badulla, Nuwara Eliya, Matale and Kurunegala. Seed of some tropical vegetables like capsicum, raddish, okra, beans, bushitavo, gourds, pumpkin, spinach and few others are produced in the state farms and private farms on a contract basis. Most of the seed, however, especially of temperate vegetables, is imported.

2.7 Fruits - The major fruits grown in Sri Lanka are pineapple, passionfruit, mango, banana, lime and orange. Durian, mangosteen, rambuttan and grapes are seasonal and are grown in specific areas. Also, papaw is widely grown but is subject to a serious viral disease. Avacado pear, guava and sapodilla are grown in some areas, while Keifer pear is grown at Nuwara Eliya. With the exception of pineapple and passionfruit, which are also exported, others are grown mostly on homegardens. The following Table gives the approximate cultivated extents of some of the more important fruit crops.

<u>Crop</u>	<u>Extent in Ha.</u>
Pineapple	3,605
Passiflorafruit	1,426
Mango	7,380
Banana	44,438
Lime	1,992
Orange	1,077

Source: Agricultural Implementation Program - 1984-85, Ministry of Agricultural Development and Research (MADR).

In the year 1983, 17,800 kg of fresh vegetables was exported mainly to the middle-eastern countries.

2.8 Minor Export Crops - Several spice and beverage crops are classified as minor export crops (MEC). They include cocoa, coffee, cinnamon, clove, nutmeg, citronella, lemongrass, papaw (for papain production), pepper and cardamom. The following Table provide data on the existing extents and new plantings of some of the important minor export crops.

<u>Crop</u>	<u>Extent in Ha.</u>	
	<u>Existing Planting</u>	<u>New Planting</u>
Cocoa	10,878	341
Coffee	9,166	1,685
Cloves	5,580	1,300
Nutmeg	1,853	30
Cardamom	5,538	133
Citronella	5,143	60
Pepper	9,184	1,670
Papaw	209	137

Source: Agricultural Implementation Program, 1984-85, MADR.

The major production districts of cocoa, coffee, cloves, pepper and nutmeg are Kandy, Matale and Kurunegala. Cinnamon is produced predominantly in Galle and Matara districts while citronella is grown in Hambantota district. With the exception of cardamom, MEC's are produced primarily on small farms and home gardens, often mixed with other crops and trees. The average holding of cardamom is more than five hectares mixed with jungle trees to provide the necessary shade. A new planting and replanting subsidy scheme was introduced in 1972, and commencing 1979, subsidy payment has been increased substantially and payments were programmed in six instalments over a 3-4 year period. In 1982, exports of selected MEC's namely, cardamom, cinnamon, clove, nutmeg/mace, pepper, cocoa and coffee totalled 12,640 metric tons with an estimated value of \$36.81 million. The Sri Lankan share of world market ranged from a high 78% for cinnamon to a low 0.94% for pepper. The main buyers are the European countries, U.S.A., Canada, and the Middle East. The major buyer of Sri Lankan cinnamon is Latin America and some quantity of pepper is exported to Japan.

2.9 Sugarcane - In the year 1983, Sri Lanka imported 315,000 tons of sugar at a cost of Rs.1,985 million. Only about 10% of sugar is produced locally, primarily by the state owned factories and plantations (total extent of 5,700 ha) at Kantalai and Hingurana. The cane yield in the two plantations is low at around 58 tons per ha. The predominant variety grown is C.O 775. To optimize the potential, the GSL has planned to reallocate estate lands remote from factories to outgrower farmers in one hectare units, and to consolidate the government owned nucleus estates. A new state owned factory and a nucleus plantation combined with a outgrower system of cane production is presently established at Sevanagala in Uda Walawe. Similarly, two foreign firms, Bookers of London and Mehta of India, have launched joint venture projects for cultivation of sugarcane in the intermediate zone (Moneragala and Badulla districts) under rainfed conditions. Subject to improvements proposed to existing plantations and new projects coming on stream, the estimated domestic production should satisfy about two-fifths of the demand.

2.10 Cotton - Cotton (variety HC 101) was earlier grown under rainfed 'chena' predominantly in the Hambantota district. Attempts to expand its cultivation under irrigation were also jeopardized due to high pestilence, low returns and due to farmers preference for other crops, mainly paddy. Not more than 200 ha of cotton are grown today in the Hambantota district. An effort is, however, made to demonstrate cotton production under irrigation at the Malwanagama Experimental Station in the Mahaweli System H. The import value of cotton, cotton-based products and textiles in 1983 totalled Rs.2,724 million.

2.11 Tobacco - About 12,000 ha of cigarette tobacco are grown annually in Sri Lanka. The main cultivation areas are in the Kandy, Nuwara Eliya and Matale Districts and the North Central Province. In addition, beedi and chewing tobacco are also grown in the dry zone. Production is organized through small scale growers, primarily by the Ceylon Tobacco Company (CTC) and to some extent by a recently established company, Interbex. About 8,000 ha of flue-cured tobacco are distributed among 3,000 barn owners. Also, 2,000 ha of air-cured tobacco is grown, mainly in the NCP areas. In both cases, support facilities are provided by the CTC. In addition to the input supplies, the CTC gives a subsidy of Rs.4,500/- per ha for soil conservation by stone/bench terracing in the upcountry areas. Cultivation of slopes over 40% gradient is legally prohibited. Improvements to barn design by the CTC has caused a 40% reduction in the use of fuelwood. Revenue to GSL by way of excise duty in the year 1983/84 was Rs.3,268 million, comprising 92% of the total earnings of the CTC. Tobacco exports range around 100-200 tons per annum.

2.12 Cashew - Cashew is cultivated generally in the dry zone; while small scale cashew cultivation has existed for some time, large-scale commercial production commenced in 1968. The Sri Lanka Cashew Corporation manages the two major plantations at Kondachchi (2,750 ha already planted) and at Batticaloa (400 ha) and also operates several smaller plantations in the dry zone. Work on a plantation (target extent 2,000 ha) also commenced in Mahaweli System C. Smallholder growers are provided with seedlings and planting subsidies. Cashew production in 1980 reached 1,000 tons of nuts, representing less than 0.5% of world production. The corporation exports about 50%, and the balance by private traders. Cashew exports are expected to continue to increase.

2.13 Betel Leaves and Arecanuts - Betel leaf and arecanut are the basic ingredients for chewing in the Asian countries. Betel leaf is cultivated, mainly in the Gampaha, Colombo and Kegalle districts while arecanut is grown in home gardens, specifically in the wet zone. Exports of betel leaf and arecanut have been around 5,000 tons per annum during the past 8 years, primarily to Pakistan and the Middle East.

3.0 ANIMAL HUSBANDRY

3.1 Background - The contribution of livestock to the gross value of agricultural production is estimated at 8%. Livestock statistics reveal similar population trends over the past 12 years, being around 1.6 million cattle, 0.74 million buffaloes and 0.6 million goats. The total numbers of pigs and poultry were about 75,000 and 6.3 million respectively. The distribution of livestock by main climatic zones in Sri Lanka is given below.

Table
(in '000s)

<u>Species</u>	<u>Dry Zone</u>	<u>Intermediate Zone</u>	<u>Wet Zone</u>	<u>Total</u>
Cattle	995	355	338	1,688
Buffaloes	458	239	182	879
Goats	326	80	106	512
Sheep	22	5	1	28
Pigs	16	15	44	75
Poultry	2,079	1,125	3,038	6,242

Source: Sri Lanka Livestock Statistics 1983.

3.2 Dairy Development - The demand for milk in Sri Lanka today is estimated at about 800,000 litres per day. But, the total production is about 400,000 litres a day. To supplement local production, between 20,000 to 25,000 tons of dairy products, providing the liquid milk equivalent of 400,000-500,000 litres per day, are imported annually at a cost of about U.S.\$25 million. Dairying is essentially a smallholder enterprise. It is estimated that there are 500,000 to 600,000 potential dairy farmers in Sri Lanka. Only about one-third of total milk produced is processed through three dairy plants of the National Milk Board and plants operated as a joint venture between the National Milk Board and Nestle's Ltd. The balance is consumed locally. Raw milk is collected by the Dairy Producers Associations (DPAs) and supplied to the National Milk Board. A comprehensive dairy sector project is now planned for implementation. Under this project, nearly 2,000 village milk producer companies, 5 milk shed producers' companies, and an apex organization called Milco will be formed to organize milk production, collection, processing, and marketing. The National Milk Board will cease to function after the formation of Milco.

3.3.1 Milk Production Constraints - The main production constraints are low farmgate price (range from Rs.2.90 to Rs.3.46 per litre), high production costs (limited pasture and forage production areas and high cost of concentrates), inadequacy of farm support services and high cost of processing and marketing. Retail prices of dairy products are controlled by government sale of subsidized imports.

3.3.2 Beef Production - Beef for consumption, is predominantly obtained from animals of the large dry zone herds, which average about 200 animals. A ban on slaughter of buffaloes and female cattle was introduced to build up the national herd. Illicit slaughter, however, continues despite the ban. The beef trade is in the hands of some 60 main agents and about 14 wholesale merchants. About 25,000 tons from registered slaughter houses and through illicit slaughter is annually consumed in Sri Lanka. In addition, 462 tons of beef were imported to cater to the small market of high quality beef in 1982. Imports of quality beef are yet continuing. The number of cattle slaughtered in 1982 is estimated to be about 254,000.

3.3.3 Draft Power Development - The number of buffaloes with potential for draft is estimated at 292,000. Uneven distribution of buffaloes has to a great extent caused draft animal scarcity. In the Mahaweli settlements, the main focus is to breed and distribute the Indian breeds Surti (buffaloe), Sahiwal, Tharpaka and Kangayam (cattle) for the dual purpose of draft and milk. According to recent surveys by the Farm Machinery Research and Training Center, Maha Illuppallama, about 45% of tillage in the dry zone is done by tractor.

3.4 Goat Production - The estimated number of goat farmers is about 90,000 concentrated in Jaffna, other parts of the dry zone and the coconut triangle. Goat keeping in Sri Lanka is characterized by very low or no capital inputs. In the dry zone the herds are large, ranging from 40-50 in the Puttalam district to 100-200, in the Batticaloa district.

3.5 Sheep Production - In Sri Lanka, not more than 30,000 sheep are raised in the Jaffna, Kurunegala and Puttalam districts. Attempts have been made to improve productivity of mutton and wool by crossing with Indian, English and Australian breeds. The main constraints to sheep breeding are unfavorable humid climate, high incidence of disease and high costs in the control of diseases.

3.6 Pig Production - There are about 90,000 pigs, concentrated mainly along the western coastal belt. Large pig farms are linked with the pig processing sector in Colombo utilizing swill from hotels and or with compound feed. The indigenous pigs are of low mature weight (50 kg.) compared with pure exotic stock (100-120 kg.). An outbreak of swine fever in 1983, due to the feeding of infected swill, temporarily discouraged pig production and consumption.

3.7 Poultry Development - Over 60% of the poultry production is concentrated along the western coast, including around Colombo. There are two types of birds in Sri Lanka. They are (1) low productive birds for the extensive (backyard or free range) sector and, (2) the high productive (commercial or deep litter) sector. The high productive birds are White Leghorn, Brown Leghorn, Rhode Island Red, Light Sussex, Cornish and White Rock Strains.

3.8 Animal Feed Resources - Only about 17,500 ha of land is under good pasture. On natural grazing land, the grass is of poor quality. A subsidy scheme for pasture and fodder planting giving Rs.3,750 per ha is operated by the GSL. The farmgate cost, and cost of transport add to the high cost of feed ingredients (coconut cake/meal, rice bran, maize, soymeal, etc.).

About 160,000 tons of animal feed ingredients per year are locally available and only half of these ingredients is processed by feed mills. The Oils and Fats Corporation produces annually about 60,000 tons of animal feed for cattle, poultry and pig. A modern provender plant, installed recently, by the Grain Elevators (Prima Flour Complex) is also in production and is the main competitor to the Oils and Fats Corporation. In addition, small plants are operated by the private sector companies like Farm House and Moosajee Ltd., the latter, primarily for export. In 1984, prices of animal feed varied per ton from Rs.4,700-5,200 for poultry, Rs.3,300 for cattle and Rs.2,000-2,200 for pigs.

4.0 LAND AND IRRIGATION

4.1 Background - The potential for rainfed and irrigated agriculture lies in the dry and intermediate zones, comprising two-thirds of the land area in Sri Lanka.

4.2 Topography and Soils - The topography in the dry and intermediate zones is mainly undulating, with sporadic rock outcrops, but becomes flat in the lower elevations, specifically in the floodplains. About 8 of the 15 great soil groups recognized in Sri Lanka are present in the region. They are the widely distributed reddish-brown earths in the North-central and South-eastern region, red-yellow latosols in the North-western and Northern region, non-calcic brown earths, mainly concentrated in the eastern region, regosols in the eastern coastal belt, and the low humic gley soils in the valley bottoms in most regions. Small extents of new and old alluvials and solodized solonchets are found scattered in the Eastern region.

4.3 Irrigation Development and Water Resources - Irrigation development in Sri Lanka dates back to 2,500 years ago when tanks/reservoirs were constructed for storage of rainwater and irrigation. Several river diversion schemes have also been constructed during ancient times for irrigation and agricultural development. The irrigation schemes fall under the following categories.

<u>Scheme</u>	<u>Extent under Command</u>	<u>Number of Schemes</u>	<u>Irrigated Extent(ha)</u>
Minor Tanks	Less than 81 ha.	30,000*	186,740**
Medium Scale Tanks	81-203 ha.	209	
Major Scale Tanks	203-803 ha.	97	
Major Scale Tanks	803 ha.	67	289,480***
Mahaweli Potential (Total)	265,853 ha. (new land) and 100,000 ha. exist- ing irrigated land		
Mahaweli Achievement (to- date)	35,156 ha. (new land) and 65,040 ha. exist- ing land.		35,156(new)****

*Only about 52% are operational.

** Agrarian Services Department managed.

*** Irrigation Department managed.

**** Mahaweli Economic Agency managed.

4.4 Other Water Resources - Along the miocene limestone belt in the North-western region (Vanathlawillu, Vellankulam etc.) ground water aquifers exist and have been exploited to cultivate about 162 ha. Also, in the Jaffna peninsula where there are no surface water courses, only possible irrigation is by ground water. Flood protection schemes (Gin ganga in Galle district and Nilwala ganga in Matara district) in the wet zone will render reclamation and improvement to existing land. With the harnessing of Mahaweli, water resources for irrigation development will become increasingly scarce.

5.0 AGRICULTURAL SUPPORT SERVICES

5.1 Background - The GSL has introduced several measures for the promotion of agriculture, animal production, forestry and the fisheries sectors. Some of the measures taken, specifically to assist the farmers/animal husbandry men/fishermen are outlined below.

5.2 Floor Price Scheme - The following floor prices were offered in 1983 and purchasing agencies were the Paddy Marketing Board (primarily, paddy), Marketing Department, Oils and Fats Corporation, Cooperative Wholesale Establishment and the National Milk Board.

<u>Commodity</u>	<u>Floor Price in Rupees</u>	
	<u>from</u> <u>09/30/83-12/31/85</u>	<u>With Effect from</u> <u>01/01/86</u>
Paddy	62.50/Bushel*	70.00/Bushel*
Maize	3.00/Kg.	4.00/Kg.
Blackgram	4.50/Kg.	-
Finger Millet	2.75/Kg.	4.50/Kg.
Groundnut (with shell)	6.00/Kg.	6.25/Kg.
Soybean	6.00/Kg.	7.00/Kg.
Sesame (Black)	6.00/Kg.	7.00/Kg.
Sesame (White)	6.00/Kg.	8.00/Kg.
Chilli (dried)	21.00/Kg.	26.00/Kg.
Cowpea	5.50/Kg.	8.50/Kg.
Greengram	7.50/Kg.	10.00/Kg.
Onion Large (Bombay)	5.00/Kg.	-
Onion Small (Red)	2.30-3.05/Kg (Grades I & II)	-
Milk	2.90-3.46/Litre (Based on fat content)	

- No floor price announced.

* 1 bushel = 20.8652 kilograms.

The above GSL agencies maintain wholesale and retail outlets for product price stabilization. In addition, the Ceylon Fisheries Corporation purchases and sells fish through retail outlets, also as a means of stabilizing fish prices of the fisherman and consumer.

5.3 Planting Subsidy Schemes - Apart from the planting subsidy scheme operated for the major plantation crops (tea, rubber and coconut), the GSL has introduced planting subsidies for several minor export and horticultural crops, and cashew. Subsidies per ha./crop are given below.

5.3.1 Minor Export Crops - Cocoa (new and replanting) Rs.6,765; Coffee (new planting) Rs.6,765; Cinnamon (new planting) Rs.2,450; Cinnamon (replanting) Rs.6,150; Cardamom (new planting and replanting) Rs.3,690; Pepper (new planting) Rs.6,150; Cloves (new planting) Rs.2,460; Nutmeg (new planting) Rs.2,460; Papaw (new planting) Rs.2,460; Citronella (replanting) Rs.2,460; Cinchona (new planting) Rs.3,690.

5.3.2 Horticultural Crops - Lime, Rs.6,888 (Ampara)*; Orange, Rs.6,150 (Moneragala); Grapefruit, Rs.4,920 (Badulla); Mango, Rs.4,305 (Puttalam, Vavuniya, Mullativu); Banana, Rs.4,920 (Kegalle, Hambantota, Kurunegala, Trincomalee, Jaffna, Walawe); Pineapple, Rs.8,610 (Colombo, Gampaha); Passionfruit, Rs.9,840 (Badulla, Gampaha, Kalutara); Avocado Pear, Rs.5,535 (Kandy, Kegalle, Badulla); Rambuttan, Rs.1,230 (Colombo, Gampaha, Kegalle); Mangosteen, Rs.4,920 (Kalutara, Gampaha, Kandy).

5.3.3 Cashew - The subsidy scheme operated by the Sri Lanka Cashew Corporation, provides Rs.1,476 per ha, payable in 4 annual installments, up to a upper limit of 4.0 ha. It is inclusive of seedlings provided by the Corporation.

5.3.4 Tobacco - The Ceylon Tobacco Company provides a soil conservation subsidy of Rs.4,300 per ha. to growers in the hilly areas for establishing bench or stone terraces. Planting over the gradient of 40% is disallowed.

5.3.5 Pasture and Fodder - The Department of Animal Production and Health operates the following planting subsidy scheme since 1981.

(i) To establish pasture/fodder crops in the hill and mid country where uprooting of existing crops is required	Rs.4,920/ha.
(ii) To establish pasture/fodder crops in the hill and mid country where no uprooting of existing crops is involved	Rs.3,690/ha.
(iii) To plant pasture/fodder crops in coconut plantations	Rs.1,968/ha.
(iv) To establish pasture on any other land	Rs.3,690/ha.

*Eligible districts.

5.4 Fertilizer Subsidy Scheme - The GSL provides annually an allocation of about Rs.1,000 million for the operation of a fertilizer subsidy scheme. The subsidy varies with the type of fertilizer imported, viz. Urea, Ammonium Phosphate, Concentrated Superphosphate, Rock Phosphate, Muriate of Potash etc. Experience has shown, that it is impractical to implement a fertilizer subsidy to one sector (viz. plantation crops or paddy) because of operational problems.

5.5 Agricultural Credit - The two major sources of institutional agricultural credit are the State banks, namely (1) The Peoples Bank operating mainly through cooperative rural banks, and (2) The Bank of Ceylon through its sub-branches located at Agrarian Service Centers. The Hatton National Bank, a private bank, has recently begun disbursing agricultural credit in limited geographic areas. Cultivation loans are given for paddy, subsidiary food crops etc. Loan recovery for annual production loans from the small farm sector, specially by the State banks and the cooperative rural banks during the period 1977-82 is illustrated below.

Year	Total Loan Advanced (in Rs. Million)	Total Recoveries (in Rs. Million)	% Recovery of Total
1977/78	527.60	138.30	26.2
1978/79	106.19	64.04	60.3
1979/80	78.44	63.06	80.4
1980/81	89.80	68.32	75.9
1981/82	122.90	34.94	28.4

Sources of non-institutional credit are professional money lenders, landlords, commission agents and traders, boutique keepers, friends, relations etc. Private sources usually do not involve procedures, delays, conditions on use of credit etc., but, the interest rates are extremely high, varying from 10-40% per month as opposed to institutional credit where the interest rate has been subsidized to 9% per annum.

Only about 900 of an estimated 2,400 cooperative credit societies are active and provide credit for various agricultural activities. Medium and long-term credit is also channelled through the banks for dairy development, orchid cultivation, fisheries development, coconut rehabilitation, farm machinery and inland fisheries etc.

5.6 Crop Insurance - Crop insurance has been widely applied to paddy cultivation. More recently, it has been applied to livestock. Pilot studies are also being conducted to determine the feasibility of extending crop insurance to subsidiary field crops. The coverages and premia rates applicable to paddy with effect from 1st March, 1984 are given below.

Coverages and Premium per/ha.

<u>Cultivation System</u>	<u>Risk Level</u>					
	<u>Low</u>		<u>Medium</u>		<u>High</u>	
	<u>Coverage</u>	<u>Premium</u>	<u>Coverage</u>	<u>Premium</u>	<u>Coverage</u>	<u>Premium</u>
Rainfed	1,476	88	1,476	132	1,476	177
	2,460	147	2,460	221		
Minor Irrigated	2,952	177	2,706	244	2,460	295
	3,936	236	3,444	310		
Major Irrigated	3,444	206	2,952	266	2,952	354
	5,412	325	3,936	354		

Cattle and buffaloes (dairy, draught and stud), come under an insurance scheme effective from June 1st, 1985, and the maximum insurance coverage offered range from Rs.2,500-Rs.6,000 depending on the category of animals and age limits.

5.7 Marketing - The major share of marketing is in the hands of the private sector. GSL intervention is directed mainly toward product price stabilization. For instance, the Paddy Marketing Board procures and markets less than 10% of paddy produced annually. Some field grain crops are also procured by the Paddy Marketing Board, Cooperative Wholesale Establishment, Oils and Fats Corporation, Marketing Department and the Markfed. The Marketing Department and Markfed, in addition, procure and market perishables like vegetables and fruits. The private sector operates through a network of collectors, wholesalers, commission agents and retailers. The government sector, on the contrary, procures directly from farmers and markets through wholesale and retail stalls. Milk is collected by the National Milk Board through Dairy Producers Associations, processed/pasturized and marketed through selected agents.

6.0 FISHERIES

6.1 Background - The average annual growth in fish production during the past decade has been about 9.3%. Coastal fisheries account for nearly 85% of total production; its increase was mainly due to the introduction of a larger number of mechanized boats and better utilization of existing craft. Inland fish production, also increased through systematic stocking of fingerlings in the inland tanks, and improved harvesting methods. Fish accounts for about 60% of all animal protein consumed in Sri Lanka. In 1982, production reached 213,000 tons of fish (net equivalent). The quantity of fish imported in 1982 was 13,595 tons (dried weight) at a CIF value of Rs.318 million. In the same year, the exports, specifically shrimps, lobsters, cuttle fish, shark skins etc., was 3,246 tons (dried weight) at an FOB value of Rs.437 million.

6.2 Marine Fishery Resources - The marine fishery resources include coastal (up to 25 miles off the coast), offshore (between 25-60 miles from the coast) and deep sea (beyond 60 miles from the coast). The annual sustainable yield from coastal resources is estimated at about 250,000 tons while from offshore and deep sea resources the sustainable annual yield is estimated at 29,000 tons. The present production from the latter resource is not more than 1,000 tons.

6.3 Inland Fishery Resources - The inland fishery resources comprise 121,950 ha. of brackish water lagoons, estuaries and mangrove swamps, and 139,837 ha. of freshwater tanks and reservoirs. The latter, comprise the major and medium reservoirs and tanks (96,341 ha.), and the balance extent in minor tanks and villus (swamp lands). Additional water bodies of around 20,000 ha will be available for inland fishery development under the Mahaweli Development program.

6.4 Infrastructure Facilities - Seven fishery harbours at Mutwal (Colombo), Galle, Trincomalee, Beruwala, Mirissa, Tangalle and Myliddy are in operation while 3 others at Valaichchenai, Kirinda and Puranwella are being constructed. Sri Lanka has 65 ice plants with a total capacity of 700 tons per day. There are 64 boat yards of which only one is owned by the State sector; 21 yards produce fiber glass boats and the others produce wooden boats. Three fish net factories with a capacity of 300 tons are in operation. There are 12 freshwater and two brackish water fish breeding and experimental stations. Three inland fisheries extension centers are also in operation. The estimated nucleus of active fisherman and number of craft in 1982 are given below.

Estimated Number of Fishermen	Mechanized	Number of Fishing Craft	
		Non-Mechanized	Total
74,330	13,092	13,999	27,091

6.5 Marketing - The Ceylon Fisheries Corporation stabilizes fish price both to the producer and the consumer. The wholesale trade is controlled by a handful of fish traders while the retail trade is channelled through private and corporation owned fish stalls and vendors.

7.0 FORESTRY

7.1 Background - Forest lands in Sri Lanka occupied about 44% (2.9 million ha.) of the country's total land area in 1956. In 1976, it had dwindled to 22% (1.4 million ha.) and, at the present rate of exploitation and felling it is expected to be around 10% in the year 2000. Forests are being depleted by legal and illegal felling of timber for commercial purposes and fuelwood for rural families. Slash and burn (chena) agriculture, though outlawed, is yet continuing on a restricted scale. About 94% of Sri Lankan families use fuelwood for domestic cooking which together with commercial timber accounts for 61,000 ha. of forest per year. The current rate of reforestation is about 7,130 ha. per year. The GSL's long-term policies and goals in the forestry sector are conservation, protection and scientific management of natural and man-made forests, reforestation of the erodible lands of the mountain catchments for watershed improvement, and establishment of fuelwood plantations to meet the increasing energy needs, and of commercial plantations to meet the industrial requirements.

7.2 Reforestation Activities - The GSL, primarily with donor assistance, has launched on the following reforestation projects.

7.2.1 (1) Establish 9,840 ha. of fuelwood plantations on degraded chena land in Puttalam, Trincomalee, Kurunegala and Batticaloa districts and in Mahaweli System H; (2) reforestation of 9,600 ha. in the upper Mahaweli catchment, mainly concentrating on erodible lands in the Nawalapitiya area; and, (3) 15 new agro-forestry blocks each less than 20 ha. in extent.

7.2.2 (1) Establish 8,000 ha. of industrial plantations in the dry zone districts of Batticaloa, Ampara, Moneragala and Hambantota; (2) upgrading of 10,000 ha of old teak plantations; (3) silvicultural treatment of 15,000 ha of neglected teak, pine and mahogany plantations; and, (4) harvest and replant 200 ha annually of over mature eucalyptus, cypress and pine plantations in the up-country areas.

7.2.3 (1) Establish 4,055 ha of farmers' wood lots of 0.5 to 1.0 ha on state land in Kandy, Matale, Nuwara Eliya, Badulla and Batticaloa districts; (2) 5 community wood lots, each 25 ha. in extent in the above districts; (3) 5 demonstration wood lots of which 4 will be in the wet/intermediate zone of 25 ha. each and one at Batticaloa of 120 ha; and, (4) 14,000 ha. block fuelwood plantation in the Badulla district.

7.2.4 Others include several small sector/project/district oriented projects. The following summary provides the important components.

Table

<u>Other Forest Plantation Projects</u>			
<u>Project</u>	<u>Period</u>	<u>Target (ha)</u>	<u>End Use of Wood</u>
Tree Crop Rehabilitation	1979-83	590	F
Tree Crop Diversification	1979-83	3700	F, T
2nd Rural Development	1981-85	6700	F, T, P
Mahaweli I (System C)	1982-86	1500	F
IRDP Hambantota	1979-82	2000	F
IRDP Matara	1980-82	1500	F
IRDP Nuwara Eliya	1980-84	5200	F
Mahaweli III (System C- Zone 2)	1981-84	1016	F, T
Mahaweli Reforestation (Minipe Right Bank by Nation Builders)	1984-87	1340	F
Mahaweli Environment Project - Habitat Enrich- ment	1984-87	285 3252	T T, G

F=Fuelwood; T=Timber; P=Pulp; G=Grass

All the above projects are envisaged to increase the annual replanting rate by about 10,000 hectares (Public Investment Plan 1984-88).

7.3 The following is a list of naturally occurring and exotic species planted for commercial timber or fuelwood.

Naturally Occuring Species

Terminalia chebula (Aralu)

Terminalia bellirica (Bulu)

Terminalia cattappa (Kottan)

Vitex pinnata (Milla)

Phyllanthus emblica (Nelli)

Pericopsis mooniana (Nedun)

Pterocarpus marsupium (Gannalu)

Nephelium longana (Mora)

Manilkara hexandra (Palu)

Feronia limonia (Jool)

Elaeocarpus serratus (Weralu)

Cedrella toona (Toona)

Chloroxylon swietenia (Burutha)

Albizzia odoratissima (Suriya Mara)

Albizzia lebbeck (Mara)

Alaseodaphne sesmicarpifolia (Wewarna)

Azadirachta indica (Kohomba)

Tectona grandis (Teak)

Gmelina arborea (Et-demata)

Melia composita (Lunumidella)

Dipterocarpus zeylanicus

Mesua nagassarium (Na)

Berrya cordifolia (Halmilla)

Diospyros ebenum (Ebony)

Artocarpus heterophyllus (Jack)

Artocarpus nobilis (Bedi-del)

Exotic Species

Alstonia macrophylla

Eucalyptus citriodora

Eucalyptus camaldulensis

Eucalyptus grandis

Eucalyptus tereticornis

Pinus carribea

Pinus spatula

Casuarina equisetifolia

Cupressos macrocarpa

Eucalyptus microcorys

Eucalyptus robusta

Swietenia macrophylla (mahogany)

Acacia melanoxylon

Acacia decurrens

8.0 MAHAWELI DEVELOPMENT

8.1 Background - Mahaweli Ganga (river) is the longest river (110 miles) in Sri Lanka having a catchment of 4,000 sq. miles; it drops from an elevation of 8,000 feet, originating and meandering through parts of the country receiving the highest rainfall, and discharges to the sea near Trincomalee about 6,000 acre feet of water annually. The UNDP/FAO Master Plan of 1968, provided for development of the Mahaweli over a period of 30 years. Project implementation, however, was accelerated in 1978 to meet the increased demand for (a) hydropower generation; (b) food production; and (c) employment generation.

8.2 Hydropower - The following multipurpose (hydropower generation and irrigation regulation) projects have been completed or due for completion.

<u>Project (Dam)</u>	<u>Gross Storage (MCM)*</u>	<u>No. of Initial Sets in Mega Watts</u>	<u>No. of Final Sets in Mega Watts</u>
Polgolla a/	5-10	1 x 40	1 x 40
Bowatenna a/	51	1 x 40	1 x 40
Maduru Oya a/	596	3 x 2.5	3 x 2.5
Victoria a/	728	3 x 70	6 x 70
Kotmale a/	174	2 x 67	3 x 67
Randenigala b/	860	2 x 61	2 x 61
TOTAL		553.5**	830.5**

* Million Cubic Meters

** Total hydropower installed capacity

a/ Completed

b/ Completion in mid-1986

8.3 Irrigation Development - Eight of the fifteen irrigation systems identified in the Master Plan will receive Mahaweli water for increasing food production. The relevant details are summarized below:

Irrigation System	Description	Existing Specified Extent Supplemented with Mahaweli Water (ha.)*	New Land Developed for Irrigation (ha.)	Number of Settler Families
H	In Kandalama/Kala Oya basins in the Polgolla/Bowatenna Diversion augmented by Kotmale	18,170	23,546	23,170
G	Under Elahera Reservoir with Polgolla/Bowatenna Diversion augmented by Kotmale	2,154	3,049	3,049
M	Under Horuluwewa Reservoir with Polgolla/Bowatenna Diversion augmented by Kotmale	3,415	Nil	-
D	In Ambanganga basin with Polgolla Diversion under Minneriya Kantalai, Kaudulla, Parakrama Samudra, etc., reservoirs augmented by Kotmale	30,284**	Nil	-
E	Under Minipe Anicut Left Bank augmented by Victoria/Randeni-gala reservoirs	6,098	Nil	-
C	Under Minipe Anicut Right Bank augmented by Victoria/Randeni-gala reservoirs	4,024	24,491	24,491
B	Under Maduru Oya Reservoir and augmented by Victoria/Randeni-gala reservoirs	4,959	36,622	36,622
A	In the Mahaweli Deltaic	6,300	15,244	15,244
	TOTAL	<u>75,404</u>	<u>98,952</u>	<u>102,576***</u>

* Actual extent cultivated is 10-15% in excess of the specified extent.

** Include 3,333 ha. irrigated sugarcane at Kantalai

*** Approximately 500,000 persons.

8.3 Impact on Agriculture - Project implementation to date has benefitted the following:

- (a) provision of supplemental irrigation water for double cropping of 65,244 ha. (specified extent) of existing land thereby increasing the cropping intensity and the total annual agricultural production; and

- (b) settlement of new land in System H has been completed. In Systems G, C and B where development is in progress approximately 2,000, 10,000 and 5,000 farm families respectively have been settled for agricultural production.

8.4 Project Implementation - The Mahaweli Authority of Sri Lanka (MASL) under the Ministry of Mahaweli Development is vested with the planning, implementation and management of the different project elements. The related agencies are Mahaweli Engineering Construction Agency (MECA) for irrigation infrastructure construction, Mahaweli Economic Agency (MEA) for settlement, agriculture development and management of the completed systems or sub-systems, Central Engineering Construction Agency (CECB) for the Headworks (dams, hydropower installation, etc.), Water Management Secretariat (WMS) for allocation of water resources for hydropower generation and irrigation.

9.0 NUTRITION

9.1 Background - The predominant source of starch in the Sri Lankan diet is rice. It is supplemented with wheat flour, tubers and yams and to some degree maize and millets. Main sources of protein and fat are fish, meat, poultry and eggs, pulses, milk and milk products while vitamins and minerals are supplied from a variety of vegetables and fruits. Coconut and to lesser extent sesame provide the oil for domestic consumption.

9.2 Calorie and Protein Intake - The average per capita per day calorie consumption in 1980-81 was 2,161 for the entire island. The percent households with inadequate calorie intake is highest in the urban sector (50%) and lowest in the estate sector (33%). In the rural sector, approximately 43% of the households do not receive adequate calories. Per capita per day protein consumption in the 1980-81 survey was 49.1 grams.

9.3 Food Stamps Scheme - For a long period, a generous food subsidy policy of the country was applied universally. In 1972, the free ration was withdrawn from income tax payers and their dependents thereby reducing the number entitled to the free ration by 10% of the country's population. In 1978, the number of beneficiaries was further reduced to 50% of the population by a 'cut-off' point of those receiving an income of less than Rs.300/- per month. The food stamps scheme offers a choice of commodities including rice, paddy, sugar, milk, flour, bread, pulses and dried fish. Kerosene stamps can also be utilized for the purchase of these food items. The current food stamp scheme is under review by the GSL, mainly with the purpose of providing a better food basket to the more vulnerable groups of the population.

9.4 Thriposha Program - Thriposha is a protein rich, calorie dense, pre-cooked cereal comprising of 61% maize, 30% soya, 6% dry skimmed milk, 3% vitamin A, folic acid, and vitamin B 12 and iron. The program is designed to reach nutritionally vulnerable groups with a suitable food supplement free of charge. Thriposha was formulated to reduce the incidence of Protein-Energy Malnutrition, Nutritional Anaemia and Xerophthalmia, the three main nutritional disorders identified among lactating and pregnant women, infants and pre-school children. The number of persons receiving thriposha has progressively increased to about 600,000.

9.5 Other Nutrition Programs - The school biscuit, low cost weaning foods and kola kenda (soup containing protein rich edible leaf-extract and rice) are programs operated by the GSL to alleviate the nutrition of target groups. The school feeding program commenced in 1968 on an islandwide basis. In 1973, it was targeted to reach the primary school population. Under this program, 103,520 beneficiaries were provided with both biscuits and thripasha while 108,298 primary school children received biscuits.

10.0 NATIONAL AGRICULTURE, FOOD AND NUTRITION STRATEGY (NAFNS)

10.1 Background - The NAFNS was a two-year activity led by the National Planning Division (NPD) of the Ministry of Finance and Planning (MF&P) working in tandem with six agriculture, food and nutrition related ministries. It represented the GSL's first systematic attempt at integrated agricultural planning, the preparation of which was guided by the following objectives enunciated by the GSL.

- (a) Achievement of self-sufficiency in basic foods - rice, milk, sugar, fish and pulses.
- (b) Expansion of export capacity to increase the contribution of agriculture to the balance of payments.
- (c) Income generation and creation of employment opportunities in the rural sector.
- (d) Improvement of the nutritional status of the people.

The strategy reports were released as a package in November 1984 and were accepted by the Committee of Development Secretaries as the basis for future agricultural policy, project and program formulation.

10.2 Investment and Priorities: The NAFNS has identified the following investment priorities.

(1) Tank Rehabilitation/Irrigation Management; (2) Agricultural Research Development; (3) Forest Resource Development/Watershed Management; (4) Rural Credit Reform; (5) Tree/Crop Agriculture Extension System; (6) Dairy Development; (7) Sugar Self-sufficiency; (8) Offshore/Brackish Water Fisheries Development; (9) Minor Perennial Crop Development; (10) Agro-industrial Promotion; (11) Technology Development for Other Field Crops; (12) Upland Farm Stabilization; (13) Marketing Improvement Project; (14) Smallholder Tea and Rubber Development; (15) Coconut Marketing and Institutional Reform; and (16) Coconut Intercropping.

In addition, the NAFNS has identified a number of small scale projects ranging from agricultural planning improvement to aquaculture and mariculture development as a guide to further investment in the agricultural sector.*

* For more information refer "National Agriculture, Food and Nutrition Strategy - A Change in Perspective" published by the National Planning Division, Ministry of Finance and Planning, Colombo, Sri Lanka, June 1984.