

**"Let us Cultivate and
uplift the Nation"**

**National Campaign to
Motivate
Domestic Food Production**

2008 - 2010

**Proposed Plan For
Presidential Task Force**

Ministry of Agricultural Development and Agrarian Services



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Preamble

Inadequate food production to meet the demand has acquired the dimension of a global problem which seem reaching crisis situation the world over. Limitation of additional lands available for cultivation, growth of population, price increases in agricultural input, climate changes, have adversely affected the world food production. In addition ever increasing fuel prices are directly or indirectly affecting all agricultural activities including cultivation of crops, animal husbandry and fishery production.

It has been reported that certain countries are utilizing coarse grains such as maize to produce bio-fuel as remedial measure to the energy crisis which will have strong implications on the food supply situation when maize are used for bio-fuel, price of the same in the world market would invariably be increased causing shortage in animal food supply and livestock production. The ultimate result of which being the price increase of relevant items. If other kinds of cereals are used as an alternative to the maize, the supply of such crops, too would be gone down causing price increases of the same as we in Sri Lanka witnessed in the resent past.

It has recently been reported that India and Vietnam being big giants too among rice producers in Asia have imposed restrictions on exporting rice. Reports were also there that less rice productions in Phillipine and Indonesia caused price increases. In this background price reduction in food items couldn't be expected whatsoever in the near future. More recently the media has reported that food storage in Phillipine sparked protest. At present the prices of rice and maize in the world food market has reached unprecedented heights representing US \$ 550 per MT of rice.

The only way out of this crisis situation and the best option for a country like Sri Lanka yet importing considerable amount of food production is to produce such items locally. The food security of the country could be established by increasing the production of rice and other cereals, grain legumes, fruits, vegetables and potato etc. to meet the local requirement. The National Campaign to Motivate Domestic Food Production 2007-2010 "API WAWAMU – RATA NAGAMU" was launched to obtain the highest commitment and utmost contribution of the people of Sri Lanka in all possible ways to cultivate every inch of land. The main objective of this programme is to make the country self-sufficient mainly in rice, other field crops, fruits and vegetables. In achieving this objective, The Ministry of Agriculture Development and Agrarian Services has been entrusted with special responsibility. Accordingly the Ministry has planned to implement to several programmes to increase production and productivity of selected agricultural crops, all of which are included in brief in this publication. The assistance of other Ministries having direct or indirect affiliations in agricultural activities is sought to make this supreme task a good success.

1. Paddy Cultivation

1.1. Introduction

In 2006 the contribution of agricultural sector towards Gross-National Production in Sri Lanka was 16.5% of which 30% from paddy cultivation sector. Although it appears a relative reduction in the agricultural sector's contribution towards Gross National Production (GNP), the contribution from the paddy cultivation sector represents increasing tendency.

Approximately a number of 879,000 farmer families depend on agriculture. That represents 20% of the county's total population and 32% of the national employment.

There are 807,763 Ha. Of lands brought under cultivation through out the island, of which 524,803 Ha., i.e. 64% are cultivated in 'Maha' season while 282,960, i.e. 35% are cultivated during "Yala". Accordingly, annual cropping intensity in paddy cultivation stands at 118% (census and Statistics Division of the Dept. of Agriculture)

During 'Maha' season of 2005/2006 285,000 Ha. Were cultivated under major irrigation, 138,000 Ha. Under minor irrigation and 162,000 Ha. under rain-fed. During 'Yala' season 220,000 Ha. were cultivated under major irrigation, 55,000 Ha. under minor irrigation and 38,000 Ha. under rain-fed. (Census and Statistics Dept.-2006)

Paddy production had been remained stable during the period 1980 to 1990 and has shown increasing tendency again during the last 10 years. In 1995 the national average harvest was 3.5 MT Per Ha. and this has been increased up to 4.3 MT by 2007.

The use of hybrid varieties of paddy with the application of advanced technologies by farmers and granting of fertilizes subsidy have been attributed as main reason is for the above increase in harvest.

1.2 Present Position

In 2006 paddy production in Sri Lanka was 3.4 MMT which had not been sufficient to meet total consumption and 11500 MT of rice had to be imported in 2006 to meet the small short-fall. (Census and Statistics Dept., Sri Lanka Customs, Dept of Agriculture). However, due to increase of wheat flour price, unprecedented increase in prices of bread and wheat-flour based food items and increasing tendency towards local rice consumption, local production are being insufficient to meet the consumption requirement.

Paddy cultivation which was considered as low income generation venture in the past has now emerged as profit-oriented cultivation due to price increase in the rice market caused by higher demand. Under the existing price structure, a profit margin between Rs. 1604 (2005/6 'Maha' season in Kandy) and Rs. 49000 (2006 'Yala' season in Polonnaruwa) per Hectare could be obtained (Dept. of Agriculture)

Table 1 - Annual per capita rice consumption in Sri Lanka

Year	Quantity (Kg)
1973	86.8
1979	90.9
1982	101.3
1987	103.6
1997	106.14
2004	106.21

Source- Central Bank of Sri Lanka

Annual per capita rice consumption in 2000 remained at 106 Kg. It has been increased up to 108 Kg by 2007 and with the increase of wheat flour price, it is expected to increase

Table 2 -Quantity of rice and paddy required for consumption

Year	Population (Millions)	Annual per capita rice consumption	Quantity of rice required for consumption (MMT)	Addl. Rice required due to reduction wheat flour consumption MMT	Total rice requirement MMT	Total Paddy requirement MMT
2008	20.104*	116	2.24	0.068	2.308	3.55
2009	20.33*	116	2.267	0.137	2.104	3.698
2010	20.55*	116	2.297	0.346	2.643	3.846

* It is assumed that one million people are always abroad the same up to 116 Kg.

Table 3 -Potential demand for paddy

Year	For rice and flour	Requirement with seed paddy (0.090 MT)	Requirement of export of 2-3% of seed paddy	Total requirement inclusive of seed paddy 2%-3% export and losses	Increases in previous years as percentage
2008	3.55	3.64	3.713	3.936	25
2009	3.698	3.788	3.901	4.135	5
2010	3.846	3.936	4.054	4.297	4

Total paddy production in 2007 was 3.2 MMT. After leaving out the post harvest losses of 6%, rice production of 65% available after milling of paddy, seed-paddy

requirement and export requirement of 2.3%, shortage expected in 2008 is 25% and estimated the same to be increased up to 30% by 2010 (Table 2 and 3).

1.3 Problems associated with paddy production

It is expected to achieve 30% increase in the national rice production during the next three years under “Let Us Cultivate and Build the Nation” programme.

Socio-economic, technological and institutional matters prevailing unsettled conditions in the North-East, natural disasters, damages caused by wild animals have been among the main problems that are lying against increasing paddy production.

1.3.1 Socio-economic and policy related problems

Anomalies in land-ownership, poor soil conditions have been identified as hindrance to increasing productivity.

1.3.2 Shortage of labourers and machinery

Of the total cultivation expenditure over 50% represents labour charges and solution for same is to use hi-tech machineries, availability of which yet remains a problem. This could be attributed to farmers in the wet zone keeping away from paddy cultivation.

1.3.3 Non-adaptation to modern technologies

Low income recipients' adaptation to modern technologies always remains at poor level which being a case in point.

1.3.4 Abandoning of paddy cultivation

Cultivation of nearly 40,000 Ha. in 'Maha' and 90,000 Ha. in 'Yala' seasons in wet zone and 168,000 Ha. in 'Maha' and 340,000 Ha. in 'Yala' in intermediate zones are annually abandoned due to various problems. (Table No.4) If certain portion of arable lands are cultivated 7.5% (62,750 Ha.) could be easily cultivated during a normal cultivation season.

Table 4 - Potential lands available for increasing the cultivation (Ha.)

Extent of cultivation	Cultivation during 'Yala' season	Possible increases	Cultivation during 'Maha' season	Possible increases	Total possible increases	Total increase (%)
Major irrigation	216156	10807	246602	12330	23137	5%
Minor irrigation	54277	5427	128604	12860	18227	10%
Rain fed	58315	5831	155040	15504	21335	10 %
Total	328749	27049	530246	37520	62750	7.5%

1.3.5 Poor Infrastructure facilities

This means poor irrigation and drainage facilities which has been identified as a problem.

1.3.6 Technological matters

Several technological factors tend to low productivity have been identified. They are;

1. Non-propagation of new varieties among farmer community as expected
2. Low application of higher yielding varieties of seed paddy. Although the production is sufficient to meet the demand, problems are there in the distribution process compelling farmers to use low quality seeds.
3. Low productivity of paddy lands due to non-application of organic manure, poor drainage systems, water scarcity and higher salinity in certain areas.

1.3.7 Institutional Problems

Poor relations between farmers and the relevant institutions.

1.3.8 Problems associated with Natural Resources

1.3.9 Damages and destruction to crops due to the presence of wild animals

1.3.10 It has been reported that nearly 99,000 Ha. in the North-East and adjoining areas remain uncultivated due to unsettle conditions. These lands are abandoned due to damages caused to agricultural infrastructure and the lack of safety.

1.4 Rice Requirement

If it is assumed that per capita rice consumption during 2008 will be increased from 108 Kg to 116 Kg, 55,000 Ha. of new lands have to be cultivated to produce the additional requirement of 206,878 MT. Accordingly by 2010 the local rice production has to be increased by 30% to meet the requirement.

Therefore under the paddy cultivation programme, the following strategies are proposed for increasing the paddy production whereby it is expected to increase the extent of cultivation and productivity by 7.5% and 22.5% respectively by the year 2010.

Table 5 - Rice production and requirement for 2008

Extent of paddy lands (Ha.) cultivated in 2007/2008 Maha Season	558248
Harvest MT/Ha.	4.1
Net paddy production – MMT	2288792
Seed paddy requirement - MT (100 kg per Ha.)	35000
(6% of post harvest loss and 65% ratio between rice & paddy)	
Quantity of rice available for consumption	1221938
Paddy production in Yala season of 2008 (350000 Ha. - 4.5 T/Ha. 88% net production M/T	136313
After leaving out seed paddy requirement of 60000 MT post harvest loss of 6% and availability according to 65% ratio between paddy and rice - MT	846846

Total quantity of rice available for consumption - MT	2243159
(Population of 20104746 to annual per capita rice consumption - 106 Kg plus wheat flour substitution 10 Kg)	
Total monthly requirement – MT	194345
Number of months - the quantity of rice is sufficient	11.5
Quantity of rice (as a percentage) additional requirement for 2007 -	6% (146315 Ha.)
Addl. Extent to be cultivated annually - Ha.	35687

1.5 Main Activities

1.5.1 Aswaddumization of fallow land

During last 5 seasons (Yala & Maha) cultivation programme for fallow lands have been continued. Under this programme it is proposed to provide farmers with seed paddy and weedicide as an encouragement. In addition it is expected to cultivate 2300 Ha. in 2008 'Yala' season and 4350 Ha. in 2008/2009 'Maha' season.

1.5.2. Cultivation paddy lands (so far not cultivated) under Eastern Reawakening Programme

Upon clearing of the entire Eastern region from the grip of the terrorists, a special co-ordination programme with the security is now under implementation, with the aim of recultivating the abandoned paddy lands of 25,000 Ha. Under this farmers will be provided with necessary security, fertilizer subsidy, seed paddy requirement and necessary equipments such as tractors.

1.5.3 Productivity improvement of the existing cultivations

Arrangements will be made to improve the productivity of existing paddy cultivation in both wet and dry zones, particularly in dry and intermediate zones where suitable environment for paddy cultivation is available under major irrigation (267,000 Ha.) Under this 2 main programmes are implemented.

1.5.4 Productivity improvement in paddy lands within dry and intermediate zones.

1.5.5 Productivity improvement on paddy cultivation in the wet zone

It has been planned to increase the productivity by 22.5% within the next 3 years whereby increase the production with high efficiency from 4.3 MT/Ha. to 5.2 MT/Ha. The main activities under this programme are given below;

1. Api Wawamu Rata Nagamu Production tract
2. Api wawamu Rata Nagamu Saruketa tract
3. Cultivation in keeping with the season
4. Propagation of mechanization
5. Conducting demonstration programmes

6. Sub activities like holding media programmes

1.5.6 Cultivation of abandoned land in the dry and intermediate zones

Under this programme, it is expected to cultivate paddy lands under minor irrigation in dry and intermediate zones, which were abandoned due to problems of minor irrigations, damages by wild animals and security problems.

In addition, lands under the authority of security divisions and state lands too will be cultivated.

Repairs to minor irrigation, co-ordination with the security and Wild Life Conservation Dept. for protecting cultivation will be undertaken in this regard. It is expected to cultivate 500 Ha. of lands under this programme.

1.5.7 Seed Paddy Production and Promotion of the application

Farmers are encouraged to use the quality seed paddy in the following manner;

1. Production and promoting the utilization of seed paddy in the formal sector
2. Production and promoting the utilization of seed paddy in the informal sector
3. Proper co-ordination with the relevant sectors in the distribution of seed paddy

The production and promotion of seed paddy will be conducted with proper coordination with relevant institutions/ parties (i.e. seeds and planting material centre, private sector, farmer villages and cooperative societies). It is expected to encourage the application of seed paddy in 20% of the new cultivation out of the total land area cultivated.

1.5.8 Propagation of post harvest technologies

Objective of this programme is to minimize the post harvest losses in the production, encourage the quality rice production. It is expected;

1. To reduce the post harvest losses from 6% to 5%
2. To increase the paddy rice ration by another 2%. For this purpose;
 - a. Mediation will be arranged in drying, cleaning and storing of paddy at field level
 - b) It is expected to modernize 600 medium rice mills, 10 large rice mills with providing bank loans.

1.5.9 Propagation of modern technology

It is expected to propagate application of short term productivity improvement technologies already discovered through research.

New varieties, hybrid varieties, out comes of experiments and other cultivation technologies will be made available to farmers. To make this programme a success proper co-ordination will be arranged with the Paddy Research Development institution in Batalagoda.

1.6 Anticipated Physical targets

Objectives to be achieved under paddy development programme 2008-2010

1. Increasing living standard of farmers
2. Making the country self-sufficient in rice
3. Reducing wheat flour import and consumption by 50%
4. Providing rice to people at affordable price
5. Achieve higher quality specification on rice

1.7 Financial Provision for 2008

It is expected to allocate a sum of Rs 50 M in 2008 for this purpose.

2.0 Supplementary food crops

Supplementary food crops cultivated in Sri Lanka could be mainly categorized into four groups. i.e. Spice crops (chili, Big onion and red onion), course grains (maize and kurakkan), grain legumes (green gram, cowpea, soybean and black gram) and oil crops (ground nuts and gingerly)

According statistics in 2007 the total land area Under Supplementary crop cultivation is 117873 Ha. On which 580000 farmer families are depended. The contribution to NGP is 1.7%

At present chill and Onion cultivations are profitable and form recently a good price is fetched for maize too Grain Legumes are considered as chief food variety enriched with protein while Groundnuts and Gingerly are used to prepare supplementary food.

Farmers in dry zone where natural resource are not available sufficiently are engaged in the cultivation of supplementary food crops. The economic strength of those farmers are remain at low level. Therefore the productivity is not at satisfaction and productivity of these crops keeps the market price of the same at uncertainty.

Table 6 - National Requirement, present production and importation levels

Crop	National requirement (MT)	Present production (MT) 2007	Import in 2007 (MT)
Big onion	250000	89684 (38*)	140728 (62*)
Red onion	100000	57041 (85*)	23754 (15*)
Maize	407120	56438 (36*)	78366 (69*)
Chili	42634	18616 (31*)	31242 (59*)
Green gram	19500	8513 (41*)	12764 (59*)
Cowpea	11000	10855 (97*)	575 (3*)
Soybean	9700	4799 (97*)	1 (4*)
Black gram	10000	10531 (82*)	7109 (18*)
Ground Nuts	15000		3847 (34*)
Kurakkan	7000	5463 (77*)	2602 (23*)

(a percentage of National requirement)

Although the present requirement of supplementary food crops is 829,328 MT the Nation production is 271,000 Mt (See Table therefore a quantity Valued at Rs.12738 M has to be imported (in 2007) costing 12738.5 In Calculating national requirement for agro based industries are taken into consideration. It has been planned to cultivate all requirement utilizing alternative resources.

Expect maize all other supplementary crops are mainly used for human consumption. Maize is the main ingredient for animal food production. Hence there is a very high demand for maize (demand for 2008 is 0.4MMT)

A considerable amount of foreign Exchange could be saved by increasing local production of supplementary food crops for which many strategies may be adopted. It has been planned to reduce the import from 50% to 100% under 'Api Wawamu Rata Nagamu' cultivation drive (2008-2010)

Table 7 - Decreasing percentage of supplementary food crops import

Crop	Imports in 2007 (MT)	Percentage of reducing import		
		2008	2009	2020
Big onion	140728	30	32	50
Red onion	23754	80	100	100
Maize	78866	100	100	100
Chili	31242	17	30	50
Green gram	12764	40	84	90
Cowpea	575	100	100	100
Soybean	1	100	100	100
Black gram	7109	83	90	100
Ground Nuts	3847	100	100	100
Kurakkan	2602	80	100	100

2.1 Strategies for increasing local production

There are two strategies for increasing the local Production.

1. Increasing the extend of cultivation
2. Increasing the productivity

2.1.1 Increasing the extent of cultivation

Supplementary crops are normally cultivated in uplands in 'Maha' season as rain-fed cultivation. However it could be cultivated in paddy lands too during 'Yala' under crop diversification. Extent of cultivation is to be increased utilizing following strategies;

- Increasing the extent of cultivation utilizing lands – so far not cultivated but could be cultivated – in dry and intermediate zones during 'Maha' season
- Cultivating supplementary crops in paddy lands (where paddy is not cultivated) during 'Maha' season in consideration of suitability
- By further expanding cultivation in paddy lands during 'Yala' season

- As short-term inter seasonal crop (Mainly as fresh crop)
- Recultivation in abandoned land in the Eastern region

2.1.2 Productivity Increase

Limitation of additional lands for further expansion of the cultivation could be overcome by increasing the productivity through;

- Application of hybrid varieties
- Propagation of quality seeds
- Utilization of advanced technologies as main strategies

2.1.3 Quality improvement, Minimization of Production cost and Regularization of Marketing

While adopting strategies such as increasing the extent of cultivation and productivity improvement action will be taken to improve the quality of production and to minimize the production cost through;

- Facilitation to buy/hire simple machines (for separation of seeds and drying with higher efficiency and minimization of losses) by small holders and middle sized machines for medium and large scale farmers in respect of identified crops such as maize
- Grading of production, marketing of half or fully processed products
- Carry out cultivation under 'forward Trade Agreement' with private/state institution
- Encouraging private sector to open regional purchasing centers
- Maintaining the same tax already introduced to encourage local production and import restrictions

It is expected to further increase the qualities of basic seeds produced in research institutions and get the participation of farmers and private sector institutions in the production of quality seeds. This will be further expanded with the assistance of Extension Services Division and Seeds Certification Unit. Further higher yielding varieties improved through researches and locally produced hybrid varieties of maize will be increased and propagated among farmers.

In addition to the above mentioned two main strategies it is expected to provide subsidies to identified farmer organizations. Provision of Rain Cover Sheds and Tuber-Storage facilities for big onion cultivators, provision of subsidy to construct water retention ponds, provision of seed fertilizer and thrashing floor mats through selected farmer organizations on concessionary rates for encouraging new cultivators, provision of machinery and equipments necessary for separation of seeds and grading of cowpea, green gram and black gram etc., obtaining private sector participation through Forward Trade Agreements. For example:- Soya- Plant Foods, Kurakkan- Ceylon Biscuits, Black gram- Elli, Maize- Golden Grains Supreme Marketing, K.S.T Ever Green, Cowpea- A.Wijewikrama, Maha Oya , Green Gram- Plant Foods.

Given the present situation and national requirement, production targets for the next 03 years are as follows;

2.2 Spice Crops

2.2.1 Big Onion and Red Onion

Being a dry zone cultivation big Onion growing is limited to 'Yala' season depending on climatic conditions. The annual per capita consumption is 7.2 Kg and the national requirement is 25,0000 MT

Big Onion production in 2007 was 89,648 MT which being 36% of the local requirement. Import figure of the year was 140,739 MT. Due to problems associated with keeping a long period for the future use, local production is limited for 6 to 8 months. To increase the local production up to 130,000 Tons it is necessary to increase both productivity and the extent of cultivation. Accordingly land area of cultivation will be increased up to 12,660 Ha. i.e. by 80% by 2010.

In addition to main cultivation areas of Anuradhapura, Matale and system H, it is expected to expand, within newly identified areas in Kurunegala, Monaragala, Hambanthota and Rathnapura districts.

According to estimates the local requirement of Red Onion is 100,000 MT. In 2007 57,0451 MT – i.e. 80% of the local requirement, have been produced locally and imported 23,754 MT. It has been planned to bring down the import in 2010 by 100% under 'Api Wawamu – rata Nagamu' Cultivation Drive. Accordingly present extent of cultivation being 5610 Ha. is expected to be increased by 42% (2375 Ha.) in 2010 (tables 8 & 9)

In order to achieve the above production targets the cultivation of Red Onion will be expanded up to Mahaveli Systems G and H, Udawalawa, Galewala, Polonnaruwa and Monaragala in addition to the existing cultivations (in Puttlam, Jaffna, Trincomalee, Vaunia, Mulatiuv and Kilinochchi)

2.2.2. Chili

Cultivation of chili is profitable. However due to the shortage of quality seeds, volubility to diseases and pests , nonavailability of current cultivation techniques to farmers, weakness of economic agricultural trade policies chili production during the last decades remained low. The production is 18,616 MT.

The national requirement is 42,634 MT and the import figure in 2007 was 31,242 MT. this was due to consumption of green chili at house hold level and exporting of certain amount.

Under the local food production motivation drive it has been planned to increase the local production from 1.3 MT to 1.45 MT –i.e to meet the 50% of the local requirement. It is also expected to increase the exciting cultivation (14083 Ha) up to (23,600Ha) by 2010 (Table 8 & 9)

In this regard priority will be given to main chili cultivation areas in Anuradhadapura, MonaragalaKurunegala, puttalam, hambanthota,Districts and Mahaweli regions while encouraging Green chili cultivation at house hold level in home gardens.

Table 8 - Increasing the extent of cultivation - Spice crops

Crop	Present extent of Cultivation (Ha.)	Traget extent of cultivation		
		2008	2009	2010
Big onion	6738	7342	10762	12659
Red Onion	5110	8363	8436	8524
Chili	14083	17691	19994	23611

Table 9 - Increase of production and decrease of imports

Crop	2008		2009		2010	
	Production MT	Decrease of Imports (%)	Production MT	Decrease of Imports (%)	Production MT	Decrease of Imports (%)
Big Onion	90041	1	134527	32	159513	50
Red Onion	75932	80	80150	97	85240	100
Chili	23882	17	27992	50	34234	50

2.3 Course Grains

2.3.1 Maize

Maize is used for both human and animal food present National requirement is 407,000 MT (2008)

Local production in 2007 was 56,438 MT (14%) and Import figure was 78,366 MT(20%) It has been planned to stop all imports under 'Api Wawamu Rata Nagamu' cultivation programme. The present productivity stands at 1.48 MT/Ha and this will be increased up to 3.0 MT/Ha by 2010.

The extent of cultivation in 2007 was 34,181 Ha, and this will be increased up to 72,823 Ha by 2010 with production target of 225,750 MT representing 104%increase over 2007 Accordingly the anticipated production increase is 272% over the current production. (Table 10& 11)

As total animal feeding cannot be met through the supply of maize, producers are compelled use alternative materials.

The cultivation of maize is to be promoted mainly in the districts of Anuradhapura, Monaragala, Badulla , Ampara, Batticalos, Puttalam and Kurunegala. Arrangement will be made to increase the extant of cultivation up to 20,000 Ha in major and minor irrigation areas under crop diversification in 'Yala' season It has been targeted to obtain

40 MT of production from local hybrid variety. It has been planned to construct a large processing factory in Mahiyangana while 25 small seeds drying sets are to be distributed.

2.3.2 Kurakkan

This is a traditional food item with herbal value. The cultivation of kurakkan will also be promoted under the "Api Wawamu – Rata Nagamu" Programme. The current national requirement is 7,000 MT while production stands at 5,463 MT.

2,602 MT of kurakkan have been imported in 2007 and the target is to reduce imports by 100% by the year 2009. In order to achieve this target, it is expected to increase the extent of cultivation from existing 5,910 Ha. to 7,067 Ha. and productivity from 0.9 MT/Ha. to 1.2 MT/Ha. (Table No. 10 & 11)

The cultivation will be further expanded in the districts of Anuradhapura, Moneragala, Kurunegala, Hambantota and Puttalam.

Table 10 - Increase the extent of coarse grains cultivations

Crop	Present extent (Ha.)	Target extent (Ha.)		
		2008	2009	2010
Maize	34181	70142	71488	72823
Kurakkan	4407	7521	7630	7067

Table 11 - Production and import decreases -Coarse grains

	Annual production (MT) 2007	2008		2009		2010	
		Production (MT)	Import decrease (%)	Production (MT)	Import decrease (%)	Production (MT)	Import decrease (%)
Maize	56438	203412	100	214464	100	225750	100
Kurakkan	5463	7521	80	8393	100	8489	100

2.4 Grain Legumes

2.4.1 Green Gram

Special attention has been paid to Green Gram cultivation under local food production drive considering it as a crop ensuring food and nutrition security. This may be consumed mainly as breakfast, dessert, in fast food and in the preparation of confectionary.

Present local requirement of Green Gram is 19,500 MT are produced locally while 12,774 MT are imported. It has been planned to achieve a reduction of 90% by the year 2010 current extent of cultivation is 8,776 Ha and is expected to increase the same up to 15,304 Ha and productivity from existing 0.93 MT/Ha to 1.4 MT/Ha in the next 03 years. (Table 12 & 13)

It has been planned to increase the extent of cultivation in Kegalle, Anuradhapura, Moneragala, Hambanthota and Rathnapura districts. This will be cultivated as inter seasonal crop as well also be taken to expand the cultivation under forward Trade Agreements.

2.4.2. Black Gram

Black Gram could be grown as rain fed cultivation in uplands and in paddy lands under irrigation during 'Maha' season and is used as main ingredient in the local food industry. Present national requirement is 17,000 MT.

Present local production is 10,531 MT. and import figure stands at 7,109 MT. Target is to stop import by 2010 increasing the present production by 22% and productivity from existing 0.95 MT/Ha to 1.5 MT/Ha. In order to achieve this planned to increase the existing cultivation extent up to 13,638 Ha. by 2010. (Table 12 & 13)

Anuradhapura, Vavunia, and Kurunegala districts have been identified as potential areas for Black Gram cultivation while Ampara, Moneragala, Anuradhapura and Puttlam districts identified for its promotion. Cultivation of this crop will be further expanded under forward Trade Agreements.

2.4.3 Soybean

Soybean is used mainly for human food and to a certain extent in the production of animal food. It is protein rich food. Although soybean is not suitable for direct consumption like other flesh crops it may be used as substitute for protein-rich meat, chicken etc. In Sri Lanka soybean is used mainly to prepare 'Threeposha' and as ingredient in the production of animal food. The annual requirement is 5,389 MT.

The present production is 4,7989 MT. representing 96% of the total requirement. The annual import figure is 212 MT (in 2006) and is expected to stop all imports by production and productivity. It has been planned to increase cultivation land from existing 2,586 Ha. (Mahaweli system in Anuradhapura) up to 8,125 Ha. by 2010. Private sector participation will be sought towards increasing quality seeds (Table 12 & 13)

Arrangements are being made to increase the extent of seed production at research level up to 03 Ha. and foundation & registered seed will be provided to private sector. Inoculation skill will be provided by 1000 farmers in each year. Private sector contribution is also sought in constructing a large scale processing centre.

2.4.4 Cowpea

Cowpea when boiled is a tasty and nutritious food and could be used as breakfast. It is also used to prepare dessert. The present national requirement is 11,000 MT.

Almost 97% i.e. 10,586 MT are Produced locally and only 5% (575 MT) imported. Target is to do away with all imports by 2008. It is Expected to increase the present cultivation land (10,650 Ha) up to 17,077 by 2010 and productivity from existing 0.95 MT/Ha up to 1.5 MT/HA (Table 12 & 13)

Cultivation of cowpea is done mainly in the district of Monaragala, Ampara, Puttalam and Anuradhapura all within the dry-zone and is expected to bring areas under cultivation in Monaragala and Anuradhapura District as well.

Table 12

Crop	Extent of cultivation at present (Ha.)	Target expansion (Ha.)		
		2008	2009	2010
Green gram	8766	15172	16075	15304
Cowpea	10634	17745	18378	17077
Soybean	2856	7829	8502	8125
Black gram	8083	13737	13542	13638

Table 13

Crop	2008		2009		2010	
	Production (MT)	Import decrease (%)	Production (MT)	Import decrease (%)	Production (MT)	Import decrease (%)
Green gram	13655	40	19290	84	19896	90
Cowpea	17745	100	22054	100	22200	100
Soybean	12590	100	15305	100	15438	100
Black gram	16485	83	16928	90	17730	100

2.5 Oil Crops

2.5.1 Ground Nuts

In Sri Lanka Ground Nuts is used as dessert and in production of confectionary and in other countries it is used to extract oil and prepare animal food. The national requirement is 15,000 MT. 75% of the national requirement i.e. 9,831 MT are produced locally while 28% (3,847 MT) is imported.

Target is to produce entire requirement locally by the end of 2008. Accordingly it is expected to increase the extent of cultivation 16,222 Ha. and productivity from 0.90 MT/Ha to 1.3 MT/Ha. Target is to increase the extent of cultivation as well as the production up to 15,950 Ha. and 19,140 MT respectively

(Table 14 &15)

In addition to the main cultivation areas in Monaragala, Ampara, Puttalam and Hambantota d, districts, cultivation will be expended covering the districts of Kurunegala, Batticaloa, Trincomalle and Mahaweli 'system H'

Table 14 - Increasing extent of cultivation - oil crops

	Present extent (Ha.)	Target extent (Ha.)		
		2008	2009	2010
Ground nuts	10481	16222	17050	15950

2.6 Financial provisions for 2008

Anticipated expenditure for promoting supplementary food crops during 2008 will be Rs.32.5 Million

3.0 Fruit Development

Over 55 Kind of fruits available in Tropical and Sub Tropical regions are grown in Sri Lanka of which 25 are cultivated.

Fruits play an important role in providing a nutritious and balanced diet to resource in the task of building a healthy nation. According to medical Researches 112 g. of fruit should be included in a diet of a person per day. However in Sri Lanka per capita consumption of fruit is 40 g per day. Therefore it is necessary to increase the fruit production. Accordingly the fruit requirement by 2010 will be approximately 1 MMT. As there is a good export potential on fruit it is considered as foreign earner as well.

In 2206 fruits have been cultivated in 97,827 Ha. of lands which brought production of 538,773 MT> of which 2341 MT were exported and earned a foreign exchange of Rs. 192.8 Million Meanwhile 16,290 MT of fruit have been imported at a cost of Rs. 697Million to meet the local Requirement.

Therefore increasing the fruit production means many benefits apart from consumption requirement. They are foreign exchange earnings additional of new employment opportunities etc.

It fruit crop have been selected to promote under the Api Wawamu Rata Nagamu cultivation Programme. Accordingly 03 year programme (2008-2010) of fruit development is included here.

3.1 Fruit Production Programme

This includes pineapple, Mango, avocado, Banana, Jak, Mangusteen, Rambutan, Citronella.(Orange ,lemon, naran)

3.2 Main Problems of Increasing Production.

- Limitation of organized commercial (Large & Medium size) ventures (Except Banana and pineapple)
- Lack of quality planting material
- Availability of production during a period of the year and excessive losses of that period

- Losses in collecting, transporting and storing of production.
- Poor storage facilities and weak marketing arrangements
- Insufficiency of advanced technologies in fruit processing and making value – added products and even the lack of knowledge on prevailing technologies.

Table 16 - Fruit cultivation - Extent and Production

	2004		2005		2006	
	Extent Ha.	Production MT	Extent Ha.	Production MT	Extent Ha.	Production MT
Banana	50376	405000	51147	408996	48856	378336
Mango	26330	75826	27200	76581	25315	70418
Pineapple	5188	60081	5257	60901	4963	59550
Papaw	5013	20173	4941	19754	5079	21138
Rambuttan	2856	-----	3240	-----	3120	-----
Avacado	1625	-----	1458	-----	1591	-----
Pomegranate	771	-----	791	-----	736	-----
Citrus Orange	4291	4119	4433	3692	4292	3772
	429	-----	538	-----	447	-----
Lemon	9945	5387	9678	5210	8973	4965
Jack						

Source: Census & Statistics Division - Ministry of Agriculture Development and Agrarian Services

(Crop Production Programme)

Table 17 - Fruit Cultivation - Quantity of export & Value

	2004		2005		2006	
	Quantity MT	Value Rs.'000	Quantity MT	Value Rs.'000	Quantity MT	Value Rs.'000
Citrus Orange	4.23	218	28.2	3362	6.47	728
Lemon	39.78	5656	28.99	3688	396.83	9331
Pineapple	2712.31	171814	1681.5	142638	1751.11	148234
Papaw	11.87	3631	59.97	11500	113.36	23711
Mango	17.74	740	27.54	4479	28.96	8735
Banana	11.25	1367	8.53	1992	31.45	937
Avocado	3.82	165	0.51	29	4.26	223
Mangusteen	0.1	8	-----	-----	8.63	952
Total	2796.87	183599	1835.24	167688	2341.07	192851

Sources - Sri Lanka Customs Dept.

Table 18 - Grape & Citrus imports - Quantity of export & Value

	2004		2005		2006	
	Quantity MT	Value Rs. M.	Quantity MT	Value Rs. M.	Quantity MT	Value Rs. M.
Grape fruit dried	3479	316.6	3037	261	3493	306.6
	1755	80.1	1386	53.3	1822	74.9
Citrus orange	7217	198.2	3606	136.6	4881	185.8
	2528	54.9	4004	80.2	6084	128
Lemon	----	----	18	3.6	5	1.6
Grape fruit	10	0.2	60	1.8	5	0.3
	14989	650	12111	537	16290	697

3.3 Strategies for increasing production

3.3.1 Establishment of new cultivations (small Medium & Large)

Under this arrangement, it has been planned to establish new cultivations (small, Medium & Large). In lands owned by good institutions (state Plantation corp, Public Estate Development Board, Army Camps and Reservation Border areas etc.) and in lands & estates (Tea, Rubber, and others) owned by private companies.

3.3.2 Increasing the planting materials

Improvement of private nurseries and increasing the supply of planting materials in state farms will make it possible to bring about solutions to the lack of Quality planting materials under this programme it is expected to increase the issue of mother plants and widen the seeds certifications, cooperative societies and samurdhi societies etc.

3.3.3 Rehabilitation of the established cultivation

Stabilished cultivations of Mango and Rambutton Will are Rehabilitated under the rehabilitation of established cultivations.

3.3.4 Improvement and dissemination of pre/post- harvest technologies

It has become Essential to conduct awareness programmes on the existing technologies on the harvest collecting. Modern packeting and storing techniques would also be introduced

3.3.5 Introducing new technologies paving the way for value added products.

It is through introduction of appropriate technologies that more and more valued added fruit productions could be released to the market. Therefore it is expected to the conduct media programmes and awareness campaigns with particular attention on nutritional and herbal value of the product. It is also proposed to provide a subsidy to small scale fruit product producers. In addition, demonstration programmes, workshops, performance appraisals and training season are to be held to encourage there in the fruit industry. Scheme of providing back loan to them are also in place.

3.3.6 Maintaining a Strong Data Bank

Maintaining a strong and well-organized database covering all aspects of the fruit industry such as cultivation expansion extent, production capacity relevant Periods, exciting commercial cultivations, producer/industrialists and foreign buyers is necessary to ensure future planning and ease the marketing of the industry.

3.4 Development Of selected Crops and anticipated strategies

3.4.1 Pineapple (present extent 4825 Ha.)

- Establishment of new cultivations (separate and mixed cultivation in coconut land-increasing new cultivation by 40 Ha. in areas of Ampara district and Mahaweli Systems.
- Production of plants 0.4 million new plants and encouraging private sector.
- Maintenance of mother plants cultivations of 5 Ha.

3.4.2 Mango (Present Extent 26,289 Ha.)

- Minimization of pre/post harvest losses pruning of commercial cultivation/training
- Controlling of infect and insect related disease-controlling of flies damaging fruit.
- Arranging to obtain fruit and outside the fruit bearing post harvest technologies
- Production of planting materials (one hundred Thousand plant encouraging private sector)

3.4.3. Avocado (Present Extent – 600 Ha.)

- Production of quality panting materials- 50,000 grafted plants (Gas, Parte, Cimendis and Polok)
- Establishment of new cultivation (Medium and Large using tea Estates), new cultivation 174 Ha.
- Grafting of old trees in home gardens- 5,000 trees
- Training programmes for 3000 farmers
- Post harvest technology improvement
- Increasing value added productions
- Development of Data Banks – Opening a web-page
- Encouraging private sector -50,000 plants

3.4.4 Banana (Present Extent – 50,000 Ha.)

- Increasing productivity from 8 MT/Ha. to 25 MT/Ha.
- Quality improvement of produce
- Minimizing production cost
- Producing healthy plants – 300,000 Nos Encouraging the private sector

3.4.5 Jack (According to estimates 49 million trees are available)

- Introducing a method of Jack fruit processing and marketing
- Streamlining of production – Introducing of high yielding varieties, production of grafted plants of recommended varieties (50,000 Nos.) Improvement of harvest reaping technology and minimizing of post harvest losses

- Awareness/training programmes
- Encouraging private sector – 50,000 plants

3.4.6 Pomegranate (exist as home garden level)

- Production of planting materials – Adding 55,000 new plants during the next 03 years
- Establishment of new cultivations – 55 Ha.
- Training programmes – 350 farmers

3.4.7 Papaw (Present Extent – 5000 Ha.)

- Increasing seed production – ('Rathna' variety)
- Establishment of new cultivations
- Commercial cultivations – Bring 35.5 Ha. advanced water supply (In 7 districts)
- Concessions – provision of post harvest equipment, seeds, and drip irrigation at 50% concession – 35.5 Ha.
- Awareness and Training programmes – planting one papaw plant in every home garden
- Seed production – Rathna variety

3.4.8 Grapes (Present Extent 100 Ha.)

- Reducing import by 50% (long term) particularly reduction of dried grape import
- Increasing the extent of cultivation – planting 7500 new grape creepers
- Plant production increases – distribution of 15,000 creepers
- Training of farmers (10 Nos) in pruning of creepers at professional level
- Training programmes –
 - On cultivation field
 - Nursery maintaining officers
 - Pruning and training
 - Mould disease control

3.4.9 Mangusteen (Present Extent 620 Ha.)

- Increasing the extent of cultivation
- Production of planting material – 34,000 plants during 03 years
- Productivity improvement – Proper maintenance of existing cultivations
- Encouraging organic/chemical fertilizer application, pruning, soil conservation and maintenance of pre/post harvest losses
- Provision of harvesting equipments and packing materials and introduction of grading
- Training and awareness programmes

3.4.10 Rambuttan (Present Extent – 3,598 Ha.)

- Establishment of new cultivations – increasing by 120 Ha. within 03 years
- Rehabilitation of old trees – 1200 trees within 03 years
- Plant treatment and pruning – Provision of 75 instrument sets to respective centers

- Controlling mould disease – provision of spraying machines – 75 machines to 75 centers
- Introducing of cultivation and post harvest technologies – production of 12,000 plants within 03 years

3.4.11 Citronella (Present Extent – 4,342 Ha.)

- Increasing production and decreasing imports
- Productivity improvement
- Rehabilitation of old cultivations – 2,000 Ha. 25 Ha. of Naran.
- Introducing of advanced crop control technologies
- Establishment of new cultivations (Moneragala, Badulla, rathnapura, Kandy, Kalutara, Galle) 2,000 Ha. and 2,000 Ha. of Naran
- Arranging to bear fruit out of fruit bearing season

3.5 Financial Provision for 2008

Expenditure – 2008 on fruit development is expected to be around Rs. 15 Million

4.0 Vegetable

Vegetable cultivation is important for many reasons, Ensuring nutrition security of the people, increasing farmer-income and its extensive contribution to the NGP are some of them. In the cultivation of vegetable several problems have been encountered. Unavailability of input of time, disease and insect damages, higher production cost, low productivity, excess production during harvesting season and fluctuations, low quality production, indiscriminate use of agro-chemicals, excessive post harvest losses are some of them.

Under the proposed cultivation programme, it has been planned to find solutions to the above problems for increasing the productivity. Accordingly attempts will be made to not only to increase farmer income and provide local vegetable to consumers at affordable prices.

Table 19 - Cultivation of main vegetable - Extent and produce

	2005			2006		
	Extent (Ha.)	Production (MT)	Average yield MT/Ha.	Extent (Ha.)	Production (MT)	Average yield MT/Ha.
Bean	7715	40790	5.29	7809	40553	5.19
Tomato	6413	56894	8.87	6633	61043	9.2
Brinjal	9784	83640	8.55	10169	88375	8.69
Ladies fingers	6744	4172	6.2	6646	40634	6.11

source - Census and Statistics Dept.

Table 20 -Main vegetable quantity and value of export

	2005		2006	
	Quantity (MT)	Value (Rs. '000)	Quantity (MT)	Value (Rs. '000)
Bean	0.01	435	0.54	35
Tomato	1.63	142	2.33	210
Brinjal	1.49	231	0.16	98

source - Sri Lanka Customs

Table 21 -Main vegetable quantity and value of import

	2005		2006	
	Quantity (MT)	Value (Rs. '000)	Quantity (MT)	Value (Rs. '000)
Bean	8.1	2500	7.1	2916
Tomato	1.3	1591	1.3	1150

source - Sri Lanka Customs

4.1.1 Bean (Present Extent – 7,809 Ha.)

- Encouraging self seed production – ¼ acre each hundred farmers
- Increasing the seed production of state farmers and private sector seed producing farmers
- Causing basic seeds to be produced by farmers – 03 years and 9,700 Kg
- Systematically training 400-500 farmers.

4.1.2 Tomato

- Reducing the import of sauce and processed food items
 - Propagation of suitable varieties and providing necessary technology
 - Promotion of processed local food items
- Increasing the quality hybrid seed production

4.1.3 Leafy vegetables (Present Extent approximately 3,435 Ha.)

- Production of seeds and planting materials by 15 new medium scale producers
- Introducing environment-friendly pest control methods
- Increasing the production – Existing 6-10 MT/Ha. up to 10-50%
- Propagation of processed food items
 - Leaf Starch
 - Waterless leafy vegetables
 - Fresh leafy vegetables

4.1.4 Brinjal

- Introducing of new squirrel strip variety
- Printing of leaflets on brinjal

- Inter-seasonal cultivation to meet the demand during non-yeilding period of state owned and Mahaveli farms
- Increasing quality hybrid seeds

4.1.5. Wing bean, long bean, vegetable cowpea

- Sufficient supply of stricks
 - Introducing the cultivation of Gliricedia and Apala plant in the cultivation area
- Printing of leaflets
- Quality seed production

4.1.6 Ladies Fingers

- Encouraging farmers toward quality self-seed production
- Printing of leaflets
- Classification of harvest
- Providing proper transport

4.2 Financial Provision for 2008

It is expected to spend a sum of Rs. 17.5 Million in 2008 for the promotion of those main vegetables

5.0 Production of Tuber and Root Crops

5.1 Potato

Potato is a very important crop in Sri Lanka cultivated in both 'Yala' and 'Maha' seasons, mainly in the Nuwara Eliya and Badulla districts. Extent of cultivation in 2007 was 5,238 Ha. and the total production is 75,263 MT. During this period 113,000 MT of Potato have been imported. Potato consumption during the year was 9 Kg and per capita consumption out of the local supply was 3.7 Kg. Accordingly it is necessary to increase the production by 100%.

Table 22 - Potato cultivation - Increasing the extent of production

Procedure	2008	2009	2010
Present Extent (Ha.)	5294	5294	5294
Increasing the extent (3000 Ha.)			
1. Traditional areas; N'Eliya & Badulla	500	1000	2500
2. Non traditional - Kandy, Matale, Kalpitiya -East	125	250	500
Total extent	5919	6544	8294
Productivity MT/Ha.	14.5	15	18
Anticipated total local production (MT)	85825.5	98160	149292

Table 23 - Reduction of imported quantity seeds

Procedure	2008	2009	2010
Production of certified seeds - Annual growth (MT)	375	750	1500
Reduction of the quantity of imported seeds (MT)	250	500	1000

Table 24 - Tuber & Root crops - Extent & Production

Crop	2005			2006		
	Extent (Ha.)	Production (MT)	Average yield MT/Ha.	Extent (Ha.)	Production (MT)	Average yield MT/Ha.
Potato	5601	79445	14.18	5294	78484	14.83

Table 25 - Potato - Quantity Exported and Value

2005		2006	
Quantity MT	Value Rs. '000	Quantity MT	Value Rs. '000
15.75	1049	48799	1189

Table 26- Potato - Quantity Imported and Value

2005		2006	
Quantity MT	Value Rs. M.	Quantity MT	Value Rs. M.
46464	1117366	48799	1266244

5.1.1 Methodology for Increasing Production

- Increasing the production
 - Basic seed production in Govt. owned farmers
 - Provision of basic seeds to private-sector farms
 - Increasing the self seed production at field level
 - Establishment of seed storage facility
- Increasing the productivity
- Increasing the average yield up to 18 MT/Ha. by 2010
- Improvement of technology
 - Proceeding of varieties resistant to pest and diseases

5.1.2 Meeting the National Requirement of Potato

The per capita consumption in 2007 was 9 Kg, this may be reduced to 7 Kg by 2010 by promoting the cultivation of other local root crops (Sweet Potato, Manioc, Creep root and Kiri Ala), under the on going Local Production Campaign. Accordingly it has been estimated that the total Potato requirement in 2010 will be in the region of 145,000 MT, production of which locally may be possible by 2010.

5.2 Other Root Crops

Sweet Potato, Manioc, Creep Root and Kiri Ala are considered as ideal substitutes for rice and other grains in view of the ever increasing prices of the latter. They too are carbohydrate rich just like rice and other grains and could be profitably cultivated uplands and even as additional cultivation in coconut estates. If cultivated systematically using recommended varieties and also with the application of fertilizer in due proportion, a good profit could be earned from the same. For instance at the present value of Manioc (which is Rs.30 per Kg) an income of Rs. 360,000 can be earned from one hectare of cultivation considering average yield to be 12 MT/Ha. It has been planned to promote the cultivation of the root crops not only in rural areas bus also in semi-urban areas as well under 'Api Wawamu – Rata Nagamu' programme whereby it is expected to ensure food security of the people living in the respective areas.

Table 27 - Other root crop cultivation - Extent and production

	2005			2006		
	Extent (Ha.)	Production (MT)	Average yield MT/Ha.	Extent (Ha.)	Production (MT)	Average yield MT/Ha.
Manioc	23457	223212	9.52	23563	226074	9.59
Sweet Potato	6611	41175	6.23	6647	41620	6.26

source - Census and Statistics Dept.

5.2.1 Methodology of increasing production

- Production of planting materials (Sweet Potato, Manioc, Kiri Ala)
- Increasing the productivity
- Processed food production

5.3 Financial Provision for 2008

Anticipated expenditure on potato and other root crop promotions for 2008 will be Rs. 10 M and Rs. 2.5 M respectively

6.0 Home Gardening Development

It is a known fact that a considerable amount of family income is spent on the purchase of vegetable and fruit for daily consumption. Accordingly the family Food Balance Sheet stresses the fact of developing home gardens. Therefore it is expected to encourage people to grow vegetable and fruit in their home gardens using organic manure as far as possible and with the least application of agro-chemicals under the home gardening development programme.

6.1 Proposed Activities

Provision of seed and planting materials, encouraging self seed production, conducting awareness programmes (through CDs and hand-bills) establishment of home garden development associations and introduction/expansion of new crops adaptable to the respective environment .

6.2 Financial Provision for 2008

Expected amount of expenditure is Rs 2.8 M for 2008

7.0 Quality seeds and planting materials

The success of any cultivation basically depends on the availability of quality seeds and planting materials. Therefore the accelerated programme has been made to produce and distribute quality seeds and planting materials in respect of vegetable, fruit and other food crops by the Seeds and Planting Material Unit and Seed Certification Division of the Dept. of agriculture. Private sector participation too is expected in this regard.

Following measures have been taken to increase the quality seed productions in state farms.

- Rehabilitation of irrigation in 03 farms
- Constructions of Agro-wells and water supply systems in 02 farms
- Rehabilitation of storages in 07 farms
- Construction of seed drying, threshing floor in 01 farm
- Soil conservation in 25 Ha. in Seeta-Eliya Farm
- Construction of cool storage facilities

7.1 Financial Provisions for 2008

It is expected to spend Rs. 45 M on quality seeds and planting material production programme.

Hunger is spreading rapidly among poor nations already taking heavy toll. Food storage is reaching a crisis situation which may affect all other nations directly or indirectly. Food importing countries like Sri Lanka are the worst affected. The utmost duty of us is to protect every Sri Lankan from this global crisis. Therefore let's contribute in every possible way to make the country self-sufficient in food.

'Api Wawamu –Rata Nagamu' is the programme of us launched for our own benefit.

8.0 Development Programme for Pepper

8.1 Introduction

Present extent of pepper cultivation in Sri Lanka is 30,000 Ha. done by nearly 0.2 Million cultivators. It has been the main income generation of 50,000 families. The global demand for pepper is 275,000 MT per year. In 2007 Sri Lanka has exported 9,026 MT and earned an income of Rs. 3,550 M. This pepper export accounted for 2% of the world pepper trade. Therefore pepper cultivation in Sri Lanka has better prospects which may serve as an income generator for local people and a foreign exchange earner for the country as wide international market potentials are available for more and more value-added products. Therefore, the Dept. of Export Agriculture has planned to increase the pepper export by 15% during the next 03 years.

8.2 Present Position

Table 28 - Pepper cultivation - Normal data

Present extent	30738 Ha.
Total production	14166 MT
Annual local requirement	5140 MT
Annual export income	358 M Rs.

8.3 Objectives

1. Establishment of new cultivations
2. Increasing the productivity of existing cultivations
3. Encouraging the production and use of organic manure
4. Increasing the export capacity and income by 15%
5. Production of high quality pepper plants and the distribution of the same among farmers

8.4 Development Programme

Establishment of new cultivations, processing units, pepper plant production, productivity improvement, investment supportive for organic cultivation are being implemented under normal programmes of the Department, the details of which are given below.

Table 29 - Development programme for pepper cultivation

Activity	2008	2009	2010
Extent of new cultivation	400	400	450
Increasing the productivity of existing cultivations (Ha.)	1000	2000	2000
Production of organic manure (units)	1500	2500	2500
Number of processing units (individual & center groups)	264	314	314

Arrangements have been made to develop infra-structure facilities for producing quality planting materials and to promote food production activities under ' Api Wawamu – Rata Nagamu' Cultivation Programme.

Table 30 - Development programme under "Api Wawamu - Rata Nagamu" Programme Drive

Activity	2008	2009	2010
1) Establishment of medium size nursery in Kundasale and provision of fertilizer, material,	Under implementation	Under implementation	Under implementation

technical tools and other necessities to produce high quality pepper plants	produce nearly 30,000 plants a year	produce nearly 30,000 plants a year	produce nearly 30,000 plants a year
2) Providing water supply system by constructing an agricultural well.	Commence construction	Will be completed	-----
3) Input and labour for production of local food crops in research farms and nurseries of the Department	Develop 15 farms	Under implementation	Under implementation
4) Tools, agricultural instruments, training and other expenditure	Under implementation Train 150 farmers/ officers	Under implementation Train 150 farmers/ officers	Under implementation Train 150 farmers/ officers

8.5 Estimate (Financial Requirement) – 2008-2010

Table 31 - Financial requirement for pepper

Activity	2008	2009	2010
1) Establishment of a central nursery in Kundasale and provision of fertilizer, materials, agricultural instruments and other necessities for production of quality pepper plants	0.5	1.5	2
2) Providing water supply to central nursery in Kundasale by constructing agricultural wells	2.5	0.5	-----
3) Input and labour for production of local food crops in research farms and nurseries of the Department	3	4	4
4) Tools, agricultural instruments, training and other expenditure	1	1	1
Total	7	7	7

9.0 Turmeric Cultivation

Turmeric is used in local food production and for other purposes. Present extent of cultivation is 680 Ha. in the wet and intermediate zones. Annual production is 4500 Mt and consumption is 6800 MT. Accordingly 3,750 MT have to be imported at a cost of Rs 125 Million. It is expected to meet the local requirement by promoting the cultivation in home gardens and other lands.

Table 32 - Turmeric cultivation normal data

Present extent	680 Ha.
Total production (fresh)	4500 MT
Import (dried)	3750 MT
Import bill	Rs. 125 M

9.3 Objectives

1. Saving the foreign exchange by producing the national requirement locally
2. Earn foreign exchange by exporting turmeric

9.4 Development Programme (Api Wawamu – Rata Nagamu)

In addition to the existing turmeric cultivation in the island, nearly 3,500 Ha. of new lands have to be brought under cultivation to meet the local requirement. Therefore it is expected to cultivate 2,500 Ha. under home gardening and mixed cultivation and 1000 Ha. under normal cultivation.

Table 33 - Turmeric - Cultivation targets and seed requirement

Activity	2008	2009	2010
New cultivations in Ha.	300	500	1000
Anticipated home gardens and number of farmers	3000	5000	5000
Seed requirement - MT	300	500	1000

9.5 Financial Provision – Estimate

New cultivator will be provided with financial support at the rate of Rs. 25/= per 01 Kg of turmeric seed roots up to the maximum of 250 Kg. This accounts for 30% of the seed root requirement of the proposed cultivations. Financial requirement has been calculated accordingly.

Table 34 - Financial requirement for turmeric

Activity	2008 Rs. M	2009 Rs. M	2010 Rs. M
i. Investment support for seed root requirement	1.5	2	2
ii. Training programmes and others	0.5	1	1
Total	2	3	3

10.0 Ginger

10.1 Introduction

Ginger cultivation in Sri Lanka is done mainly in wet and intermediate zone as home-garden cultivation and additional cultivation in coconut lands. It has good market potentials locally and internationally.

Table 35 - Ginger cultivation, normal data

Existing cultivation	1530 Ha.
Local production (fresh ginger)	8270 Ha.
annual requirement (fresh ginger)	15600 Ha.
Total import	392 MT
Import value	Rs. 33 Million

10.3 Objectives

1. Increase the production to meet the local requirement and save foreign exchange
2. Earn foreign exchange by exporting ginger productions

10.4 Development Programme (Api Wawamu – Rata Nagamu 2008-2010)

It has been planned to expand the ginger cultivation by encouraging growers to increase the local produce.

Table 36 -Ginger cultivation - target and seed root requirement

Activity	2008	2009	2010
New cultivations - Ha.	1750	2000	2000
Home gardens included and number of farmers	17500	20000	20000
Seed root requirement - MT	1750	2000	2000

10.5 Financial Requirement 2008-2010

New cultivators will be provided with financial support at the rate of Rs. 40/= per 01 Kg of seed roots up to the maximum of 250 Kg. This accounts for 25% of the proposed extent of cultivation. Financial requirements have been calculated accordingly.

11.0 Cinnamon Cultivation

11.1 Introduction

Table 37 -Financial requirement for Ginger

Activity	2008	2009	2010	Total
	Rs. M.	Rs. M.	Rs. M.	Rs. M.
Provision of seed roots at concessionary rates for new cultivations	7	8	8	23
Training programmes and other activities	1	1	1	3
Total	8	9	9	26

Sri Lanka is famous for its unique cinnamon production and its actual share in the world market is 15% of which 'Cashiya' variety of contributes of 85% Sri Lanka supplies 80%-90% of actual supply in the international market. It is expected to increase the same by another 5% i.e. by 3,000 Mt under 'Api Wawamu - Rata Nagamu' Programme.

11.2 Present Position

Table 38 - Cinnamon cultivation - Normal data

Present extent - Ha.	25413
Average annual yield Ha/Kg.	500
Total export - MT	5350
Export value - Rs. M.	2229.9

11.3 Objectives

1. Increase the exportation by 3,000 MT during the 03 year period
2. Improve quality of produce
3. Increase Sri Lanka's contribution to international market (by 5%)
4. Increase export income
5. Increase profitability by production and quality improvement
6. Training of cinnamon producers (500) according to market requirement
7. Modernizing of processing units

11.4 Development Programme

1. Cinnamon development programmes to be implemented under the supervision of the dept. of Export Agriculture are as follows;

Table 39 -Cinnamon Development Programme

Activity	2008	2009	2010	Total
Extent of new cultivations - Ha.	600	600	600	1800
Productivity improvements of the existing cultivations - Ha.	1000	1000	1000	3000
Organic cinnamon cultivation - Ha.	40	40	40	120

2. Training of cinnamon producers, establishment of mother plant parks for producing quality planting materials, are to be implemented in the 'Api Wawamu – Rata Nagamu' Cultivation drive.

Activity	2008	2009	2010	Total
Training of cinnamon producers	150	150	200	500
Establishment of mother plant parks (0.5 Ha. each)	4	4	4	12
Maintaining mother plant parks	4	4	4	12

11.5 Estimate – Financial Requirement

Investment support will be provided subject to the maximum of Rs. 2000 each training of one producer and provision of one crushing set, Rs. 150,000 as investment support for establishing mother plant parks and Rs. 100,000 per year for post maintenance activities.

Table 40 -Financial requirement for cinnamon cultivation

Activity	2008 Rs. M.	2009 Rs. M.	2010 Rs. M.	Total Rs. M.
Establishment of mother plant parks	0.3	0.3	0.3	0.9
Training of cinnamon producers	0.3	0.3	0.3	0.9
Maintenance of mother plant parks	-----	0.2	0.4	0.6
Total	0.6	0.8	1	2.4

12.0 Cardamom Cultivation

12.1 Introduction

This is a perennial crop belonging to the ginger family. Main cultivation districts are Kandy, Kegalle, Matale, N'Eliya and Rathnapura, and extent of cultivation is approximately 3,000 Ha. Most suitable for its cultivation is forestry lands with shade. Cardamom is used as food flavor ingredient in the manufacture of confectionary, pastry, cake, pudding, meat curry, sausages etc. Cardamom oil is added to certain kinds of beverages like coffee and tea for increasing their flavor.

12.2 Present position (2007)

Table 41 - Cardamom cultivation - Normal data

Extent	2897 Ha.
Annual production	74 MT
Local consumption	20 MT
Annual harvest	60 Kg/Ha.
Annual export - (Cardamom and cardamom oil)	8.4 MT
Total income - (Cardamom and cardamom oil)	Rs. 60.6 M

12.3 Objectives

1. Increasing the productivity
2. Establishment of new cultivations
3. Quality improvement of products to cater the needs of the export market
4. Provision of certified high quality planting material
5. Liaison between Department and all parties concerned

12.4 Development Programme

Table 42 - Cardamom Development Programme

Programme	Year		
	2008	2009	2010
New	108	108	108
Productivity improvement	175	175	175
Total	283	283	283

12.5 Requirement of plants – 280,000 Nos.

12.6 Financial Requirement

Table 43 - Financial requirement for cardamom

	Establishment of new cultivations	Rs. M.	
1	For planting material	1.6	
2	Investment support for new cultivations	3.8	
3	Productivity improvement support	3.2	
4	Introduction of micro farming	2.2	
5	Post harvest technology improvement	1.6	
	Total	12.4	
	Others	0.1	
	Grand Total	12.5	
Year	2008	2009	2010
Rs. M.	12.5	12.5	12.5