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# MAHAWELI ENTERPRISE DEVELOPMENT

## MED/EIED PROJECT

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### COMMERCIAL DEMONSTRATION FARM INVESTMENT POTENTIAL FOR KALANKUTTIYA FARM

A short-term consultancy report  
by  
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Report 13/1992



INTERNATIONAL SCIENCE AND TECHNOLOGY INSTITUTE, INC.

WITH :

ERNST & YOUNG CONSULTANTS (Sri Lanka)  
DEVELOPMENT ALTERNATIVES, INC.  
HIGH VALUE HORTICULTURE, PLC.  
SPARKS COMMODITIES, INC.  
AGROSKILLS, LTD

CONSULTANTS TO THE MAHAWELI AUTHORITY OF SRI LANKA

## The Mahaweli Enterprise Development Project

The Government of Sri Lanka and the international donor community have given high priority to the development of the natural and human resources of the Mahaweli river basin. The first phase of this development, the construction of dams, irrigation and power systems, roads and other physical infrastructure, is largely complete. The second phase, settling the land and forming an agricultural production base, is well under way. The third phase, the major challenge for the 1990's, is the building of a diverse and dynamic economy, improving employment and income prospects for Mahaweli settlers and their families. In this phase the private sector has a leading role to play.

The Mahaweli Enterprise Development Project (MED) is a USAID-supported initiative of the Mahaweli Authority of Sri Lanka to promote investment and business development in agribusiness, manufacturing, tourism, minerals and services. MED directly assists small, medium and large-scale investors with technical assistance, marketing support, training, business advisory services and credit. MED also provides policy assistance to improve access to resources, such as land, water and capital, and the legal and institutional framework for enterprise development.

The official MED implementing agency is the Employment, Investment and Enterprise Development Division of the Mahaweli Authority. The main MED technical consultancy is provided by a consortium led by the International Science and Technology Institute, Inc., a private consulting firm with head offices in Washington DC. Other firms in the consortium are Agroskills, Development Alternatives, Ernst and Young, High Value Horticulture and Sparks Commodities. Marketing services are provided by SRD Research and Development Group, Inc.

**MAHAWELI ENTERPRISE DEVELOPMENT PROJECT**

**KALANKUTTIYA FARM**

by

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## LIST OF ACRONYMS

CM	-	Centimeters
H	-	Hectare
KG	-	Kilogram(s)
MED	-	Mahaweli Enterprise Development Project
M	-	Meter(s)
Rs	-	Rupees

## **PERSONS INTERVIEWED IN COMPILING THE REPORT**

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7. Mr M. Sabapathy, Project Engineer, Mahaweli Block Office, Galnewa
8. Mr D. Weerasuriya, Marketing Officer, Mahaweli Project Office, Tambuttegama

## **PREFACE**

Dr Cedric de Vaz, an agronomist, is a retired Deputy Director of Agriculture with extensive experience in agriculture and horticulture. He has prepared this MED information report on Kalankuttiya Farm as part of the preparation by the MASL for offering this farm to the private sector for development. The views and proposals expressed in the report are those of the consultant and do not necessarily represent the views of ISTI, the MASL or USAID as the funding agency.

This report is based in good part on information provided by the staff and files of the MASL. However, frequent staff changes and incomplete documentation have contributed to serious gaps in the institutional memory and records of activities and performance on Kalankuttiya Farm.

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## KALANKUTTIYA FARM

### PREAMBLE

Kalankuttiya farm is located in the dry zone of Sri Lanka at an elevation of about 125 metres above sea level and comes within the North Central Province in the District of Anuradhapura. Administratively, it falls into System H and comes under the purview of the Mahaweli project Office at Tambuttegama, which is about 15 km distance from the farm.

Discussions with relevant officers revealed that in 1977 the farm initiated activities under the joint management of the Mahaweli Economic Agency and the Irrigation Department to investigate on-farm water consumption and management, together with studies on soil analysis pertaining to crop growth. In September 1987, on a request made by the Department of Agriculture the farm was handed over to the Agricultural Regional Research Centre at Maha Illupallama for research activities. However, in early 1992 the Department of Agriculture expressed its desire to hand the farm back to the Mahaweli Economic Agency and currently negotiations are in progress to implement this change. Meanwhile, settlers around the farm who are aware of this move, have requested the Mahaweli Economic Agency at Tambuttegama to allocate this land to their second generation progeny. Consequently, about 500 applications have already been received for this purpose. The Mahaweli Economic Agency considering the small extent of the farm (16 h) have made an alternative suggestion of creating a "community farm", amongst the relevant settlers, to which the response has apparently been favourable.

Currently, the farm lies totally neglected, with grasses covering most of the area. The farm is divided into two blocks of one hectare and fifteen hectares each, separated by a dirt road. The office complex, research laboratory, water pump house and stores are located in the 1 h block, while the 15 h block consists of the farm and living quarters. The farm perimeter for both blocks is demarcated by concrete posts, with most of the barbed wire needing replacement. The entire 15 h area is well levelled and provided with open irrigation channels for effective irrigation by gravity flow. There apparently is no water problem as cultivation is done in both Maha and Yala seasons. Paddy is the main crop during Maha and other field crops like chillie, big onion, soya and gingelly, in combination with paddy are cultivated in Yala.

Approximately 65% of the annual rainfall occurs during the North East monsoon months of September to December. This is followed by a period of low rainfall from early January to about early March, with a second rainy season from mid March to early May, coinciding with the commencement of Yala cropping. The major dry season occurs during Yala, from late May to early September.

The farm is provided with water and electricity and the living quarters is designated as a grade IV building having the basic conveniences. The office and stores complex are well constructed permanent buildings and need very little attention for occupation or use.

Considering the excellent lay out of the irrigation system covering the entire farm land, it can be given a new lease of productive life with little effort. The weed population of mainly grasses and the cleaning of irrigation channels should not pose any serious problems by way of labour or high financial commitment.

1. FARM EXTENT

Approximately 11 h - reddish brown earth  
approximately 05 h - low humic gley

----  
16 h  
=====

One hectare of this land is located on one side of a dirt road and houses the office complex and stores.

2. CLIMATE

- (a) The elevation is about 125 m above sea level
- (b) The average annual temperatures range from 26°C to 37°C.

- (c) Rainfall in mm obtained from the Galnewa Mahaweli Block Office which is in close proximity to the farm is indicated below:

AVERAGE RAINFALL IN MM			
Year	Yala	Year	Maha
1981	224	1980/81	830
1982	285	1981/82	449
1983	258	1982/83	692
1984	220	1983/84	1516
1985	131	1984/85	845
1986	226	1985/86	901
1987	160	1986/87	476
1988	238	1987/88	648
1989	116	1988/89	357
1990	241	1989/90	869
1991	312	1990/91	643

### 3. SOILS

Approximately 2/3 of the farm land is comprised of reddish brown earths, while the balance 1/3 is classified as low humic gleys.

The farm land has been well levelled and provided with a good irrigation system, enabling the entire area to be cultivated during both Maha and Yala.

### 4. AVAILABLE FACILITIES

The farm is located between two populated towns of Galnewa (9 km) and Tambuttegema (16 km), which affords all basic amenities for a comfortable living. The dirt road of about 2 km from the macadamized highway leading to the farm is in good condition and motorable throughout.

Water and electricity are provided on site at the farm, for domestic and other uses.

5. **BUILDINGS AND OTHER CONSTRUCTIONS**

(a) **Stores**

A permanent building 12 x 6 m, constructed with brick and cement and asbestos roof, providing good security and located in the 15 h block.

(b) **Housing**

Well constructed Grade IV quarters, provided with water service and electricity. The building is of brick and cement, with a tiled roof and consists of 3 bedrooms, verandah, sitting and dining areas, with an attached toilet and kitchen facilities.

(c) **Office building**

A permanent structure with brick and cement, measuring 18 m x 9 m, having a tiled roof. It has 3 rooms and a hall. Water service is not available, while electricity is provided.

(d) **Stores and laboratory building**

This was earlier a research laboratory, currently used as a stores, measuring 36 m x 8 m, built with brick and cement, with a tiled roof. There are 6 large doors and two windows on one side of the building.

(e) **Drying floors**

Two units measuring 18 m x 12 m and 18 m x 18 m, in good condition.

(f) **Vehicle shed**

A semi-permanent building, measuring 9 m x 6 m, with open sides and a zinc roof.

(g) **Pump house**

Accommodating the water pump, which is in use.

(h) **Meteorological unit**

An abandoned set-up, with only the protective fencing enclosing some pillars within.

6. **OTHER ASSETS**

A few standing crops of banana, king coconut and mango, which are all showing good growth and production.

7. **CONSTRAINTS**

- (a) Lack of telephone for quick communication
- (b) Most of the perimeter, without barbed wire
- (c) Apparently, theft of produce is common
- (d) Shortage of labour during important agricultural operations

8. **IRRIGATION**

The farm has the advantage of having effectively laid out open irrigation channels to cater to the entire cropping area. Officially, water is released from October to March and again from May to August, based on approved cultivation programmes for the Maha and Yala seasons, respectively. However, due to the high water table, a few shallow wells could satisfy any extra supplementary irrigation if required, during other times. Discussions with relevant personnel revealed that successful cultivations have been done in the farm, during both Maha and Yala seasons with paddy and other field crops, without any shortage in supplementary irrigation.

9. **LABOUR**

There is an acute shortage of labour during important agricultural operations like land preparation, planting and harvesting. The casual labour who are also cultivators, will not seek employment elsewhere till they complete their planting programme etc. These generally coincide with the months of October, March and May. The wages vary from Rs. 80/- to 100/- per day, for females and males, respectively.

There are currently 9 casual watchers attached to the farm, on the payroll of the Department of Agriculture. Their future must necessarily be decided before the final taking over of the farm by the Mahaweli Economic Agency. Apparently, they were initially attached to the Mahaweli and subsequently drifted to the Department of Agriculture during the change over in 1987.

## 10. PAST CROPPING

Paddy has been the main crop grown over the entire extent during Maha and other field crops like chillie, soya, groundnut, big onion and gingelly were reported to have been cultivated in Yala, in combination with paddy. Paddy yields of around 4,700 kg/h and dried chillie harvests of about 1750 kg/h have been obtained.

## 11. SETTLERS

Currently there are 31,000 registered families in this settlement, 125,000 of whom own one hectare irrigable land and 0.2 homestead. The balance 6,000 families are provided with only the 0.2 h for their homestead.

System H is the first area to be settled under the Mahaweli Development Programme initiated in 1975, with about 500 families being involved. The project covers an area of 43,725 h, and the target envisaged was about 24,000 families as beneficiaries.

The settlers mostly cultivate paddy during Maha and other field crops during Yala, which include chilli, soya and big onion.

## 12. RECOMMENDATIONS BY THE CONSULTANT

- (a) An intensive cropping programme for both Maha and Yala with paddy and other field crops like chilli, soya, big onion and gingelly can be successfully implemented.
- (b) As almost the entire land area can be cultivated in both seasons due to the efficient land lay-out and irrigation channel systems, maximum production fm seed paddy should be the prime objective. There is a big and ready demand for seed paddy amongst the settlers, and with the current price of around Rs. 300/- per bushel, substantial profits can be expected, with yields of around 225 bushels per hectare.
- (c) A profitable venture would be the sale of chilli seedlings to the settlers, who grow this crop on a very large scale due to its lucrative returns. Consequently, the sale of chillie seedlings at approximately 10 cents each, would rake in a substantial income on a regular basis.

As farmers have to depend on their own family labour for most of the agricultural activities, they may realise that by purchasing seedlings from a dependable source like the Kalankuttiya Farm, very valuable time spent on chilli nursery work could be saved and devoted to other important activities. Ultimately, this would also

ensure uniform quality of the produce, as the entire area will plant seedlings of only a recommended variety, eg. MI-2. Such uniform and quality produce of both green and red chilli will greatly help the processing industry to sustain high standards of finished products, like chilli sauce, pickles etc. This programme can also include sale of big onion seedlings.

- (d) An egg production unit, with 250 pullets will be an asset to this farm, both by way of income from the sale of eggs and also the free and easy availability of deep litter manure to enrich the arable land area with organic matter to sustain an intensive cropping programme. There is also a belief, that poultry manure is a repellent to the survival of nematodes (Meloidogyne sp.) which are an acknowledged hazard to most crops grown in Sri Lanka. Establishment of such a unit should cost about Rs. 30,000/- upto the point of lay at 4 1/2 months, starting from day old chicks. The current sale price of eggs in this area is Rs 2.25 each, and a ready local market seems assured, for such small quantities of production.

13. **SUGGESTED FARM STAFF**

- (a) An Officer-in-charge, with experience in farm management, with a Diploma in Agriculture.
- (b) An assistant to the Officer-in-charge, whose duties will include supervision of labour, maintaining of check roll, stores, purchases, sales etc. He should also have some exposure to poultry management, should the investor decide to diversify into egg production.
- (c) 3 watchers, working in 8 hour shifts.
- (d) 1 poultry labourer, depending on whether a poultry unit is to be established.
- (e) Casual labourers, depending on work load per day

14. **SUGGESTED EQUIPMENT AND TOOLS**

Mammoties	20
Mammoty forks	15
Pruning knives	06
Watering cans	10
G.I. buckets	05
Hand forks	06
Power sprayer	01

A two wheel tractor, mould board plough and a rotavator can either be bought if the investor so desires, or he has the provision to hire this machinery and equipment locally on a contract basis.

15. **FURNITURE AND OFFICE EQUIPMENT**

Writing tables	02
Office chairs	06
Filing cabinet	01
Iron safe	01
Typewriter	01
Stationery, puncher, stapler, file covers etc.	

16. **SUMMARY**

Kalankuttiya farm with a good climate, soil conditions, well laid out irrigation system and water availability throughout the year, provides every basic facility to ensure a successful cropping programme for both Maha and Yala seasons.

A judiciously planned programme for the production of seed paddy, sale of chilli and big onion seedlings, combined with a poultry unit should provide ample incentives to agricultural entrepreneurs to venture into a profitable agro-business.