

MAHAWELI ENTERPRISE DEVELOPMENT

MED/EIED PROJECT

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COMMERCIAL DEMONSTRATION FARM INVESTMENT POTENTIAL FOR SURIYAWEWA

A short-term consultancy report
by
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INTERNATIONAL SCIENCE AND TECHNOLOGY INSTITUTE, INC.

WITH :

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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.

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SURIYAWEWA FARM

by

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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 Suriyawewa 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 Suriyawewa Farm.

LIST OF ACRONYMS

H	-	Hectare
KG	-	Kilogram(s)
MED	-	Mahaweli Enterprise Development Project
MM	-	Millimeter(s)
OIC	-	Officer-in-charge
RS.	-	Rupees

PERSONS INTERVIEWED IN COMPILING THE REPORT

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5. Mr Upali Dissanayake, Seed Manager, DARP, Peradeniya
6. Mr N. Wijewarnasuriya, DRPM, Mahaweli Project, Embilipitiya
7. Mr K. Wimalasiri, Block Manager, Mahaweli Project, Embilipitiya
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SURIYAWEWA FARM - UDA WALAWE

PREAMBLE

Suriyawewa Farm with an unimpressive history is located in the Southern Province of Sri Lanka, in the District of Hambantota. Subsequent to discussions with relevant Officers, the information pertaining to past activities about this farm is scanty. It apparently came into being as a demonstration farm around 1968 with an area of about 80 acres during the era of the River Valleys Development Board. Plagued by poor management and financial constraints, the then Chairman of the Agricultural Development Authority alienated the land in 3 stages to prospective settlers at one hectare each. It was during this exercise in 1982 that the Mahaweli Authority was also given about 4.4 h, which comprised the Suriyawewa Farm. However, quite recently from this very limited land extent, a further 0.6 has been released to a Buddhist monk on a request made by him to higher authorities. Consequently, the farm is now a compact little unit of 3.8 h, containing both highland (1.6 h) and paddy land (2.2 h).

Currently the farm lies neglected and idle, although a few years back successful crops of paddy and vegetable plant nurseries were seen. It was revealed that paddy yields of around 125 bushels per acre have been obtained during past cultivations. It was also encouraging to note that exotic vegetable crops like cabbage, knol-khol and beet, were successfully grown in this farm.

The farm has a perimeter fencing supported by concrete posts. However, about 15% of these posts and most of the barbed wire will need replacement. The entire farm is overgrown with weeds and shrubs. A few bearing king coconut palms, banana clumps and mango trees stand as silent witnesses to the ingenuity of pioneering agricultural policy makers whose programmes had unfortunately not achieved the desired objectives in this instance.

1.	<u>Farm extent</u>	Highland	-	1.6 h
		Paddy land	-	2.2 h
		Total	-	3.8 h

2. Climate

The rainfall data for the past 3 years at the farm obtained from the Mahaweli Project Office at Embilipitiya, is given below.

<u>Year</u>	<u>Total rainfall mm</u>	<u>Average mm</u>
1989	594.96) 605.63
1990	529.28	
1991	692.67	

Temperature The average monthly mean is 26°C-28°C

1-

3. Soils

They belong to a combination of reddish brown earths and low humic gley soils. Towards the lower end of the paddy field, the soil appears ill-drained compared to the rest of the paddy land. Based on observations of standing crops in the farm, fruit crops, vegetables and paddy can be successfully cultivated in this soil. However, due to the very small nature of the farm, only high value short term crops should be attempted.

4. Available Facilities

Roads - Embilipitiya, which is the nearest town to the farm is about 19 Km and linked by a good macadamized road upto the Block Office. The dirt road engulfing the tank bund from the Block Office to the farm is about 250 m which is motorable even during the monsoon periods. Consequently, approach to the farm should pose no problems.

Electricity - Although 3 phase electricity is available at the farm site, it is currently not being tapped. The process of obtaining electricity therefore appears a mere formality.

Telephone - There is a radio telephone currently in use at the Block Office, with direct dialing facilities to all over Sri Lanka. It is therefore presumed that similar facilities can be enjoyed by the farm.

Buildings -

- a) Stores and Office complex: This is a good building constructed with brick and cement and covered with an asbestos roof. The store section has two units, one, 7.5 m x 3.5 m and the other 12 m x 5m. Attached to these are two rooms, 5m x 3.5m and 3m x 3m, onto the right side of the building. On the opposite side is another room 3m x 3m, all having a common roof. The building has no toilets, water service nor electricity, although getting them will be no problem.
- b) Fertilizer store - A semi permanent building with two rooms measuring 3m x 3m and 3m x 2.5m, with a verandah of 3 m x 2.5 m. It has about a meter high, brick side walls and from thereon covered with asbestos ceiling sheets to roof level. The cement floor needs repairs. The structure has no windows and security is provided by some cheap, ill fitting doors, which need repairs.
- c) Residential quarters - This appears a very modest abode, built with brick and cement measuring 7.5 m x 6 m, comprising of a drawing room, bed room, toilet and kitchen, with no water service or electricity. The house was locked up and consequently no internal measurements could be taken. The doors and windows appear crudely done and in general the building needs some minor repairs and colour washing.

Currently, there appears to be an unauthorized occupant, designated as a peon in a Government office. The Resident Project Manager has already taken action to get back the quarters and he does not anticipate any serious problem.

5. Other Constructions

- a) Two drying floors, one measuring 12 m x 5.5 m and the other 8.5 m x 6 m. Both need minor repairs.
- b) **Water Storage tank** - This is in a dilapidated condition due to it not being used over several years. It is constructed with granite and cement. Needs cleaning and repair for effective use.

6. Other Assets

- a) **Moveable** - It was indicated that there is a non working paddy thresher and 8 mammoties locked up in a store room of the main building. No other machinery or equipment is available in the farm.
- b) **Standing Crops** -
 - 35 budded mango trees (Vellai columban)
 - 15 banana clumps (Embul and Kolikuttu)
 - 02 coconut palms
 - 18 king-coconut palms.

7. Irrigation

Based on the information conveyed at discussions with responsible and relevant officers, there should be no problem at all about supplementary irrigation. Officially, there is no release of tank water during Feb/Mar. and Aug/Sept. However, there appears to be ample provision to sustain this very small unit by digging wells or even storing water in storage tanks for this short spell. Channel irrigation by gravity flow was practiced and this can be continued with very little cleaning to the channels for an efficient irrigation system.

8. Labour

Except briefly, during the paddy planting months ample labour is available during the rest of the year. The current wages at the farm are Rs 73/- per day, although outside in the private sector, wages can go upto Rs 100/- per day. There are more female labourers than male and considering the very small farm unit, there should be no problem whatsoever about availability of casual labour.

9. Past Cropping

Cultivation programmes were mainly confined to paddy and vegetable plant nurseries during maha and yala seasons. Details of planting schedules, expenditure, income etc. are patchy and unreliable. Details of the varieties of vegetables, number of seedlings sold, labour utilized etc. are not available. This may be due to the frequent changes in staff. However, one refreshing experience is that when the paddy area was given on lease to the Officers Welfare Society, they earned a net profit of Rs 10,000/-, indicating the potential of the small unit.

Vegetable plant nurseries of about 1/4 acre area per season, comprised of chilli, egg-plant, cabbage and beet-root were sold at 10 to 20 cents per seedling. All sales were done at the farm gate, and the demand was heavy for all seedlings.

All mango trees and most of the king coconut trees are in bearing. Unfortunately no records are available about harvest, sales etc. With appropriate care, these permanent crops should rake in a bonus income.

10. Settlers

There are 3984 registered allottee families in the Suriyawewa area, owning on an average about one hectare each. There are a further 1839 resident families who are not registered settlers, with no land still being allocated to them. This may cause problems, as there is not a large area of land remaining for distribution at the initial grant of one hectare each. However, these unregistered settlers will not pose problems of encroachment, provided the Suriyawewa Farm is in operation.

The growing congestion is obvious, when considering that 6,200 students are enrolled at the Suriyawewa Madya Maha Vidyalaya, which conducts two sessions per day to cater to these student populations.

11. Recommended Cropping Patterns and Other Activities

- a) The Consultant recommends intensive cultivation of the limited farm area with vegetable plant nurseries for sale to the local farmers. These should include, chillie, egg-plant, capsicum, big onion, cabbage and knol khol. Price per seedling can range from 15 to 25 cents.

Cost of vegetable seeds

The Department of Agriculture can supply locally produced seed of the following vegetable crops, from Peradeniya.

Vegetable Crop	Name of Variety	Cost/Kg in Rupees
Egg-plant (Brinjal)	SM-164	580/-
Capsicum	CA-8	1,400/-
Tomato	Biansz or T-146 or KWR	1,550/-
Chilli	MI-1	750/-

All exotic varieties will have to be purchased from the private sector outlets, whose current prices are given below.

Vegetable Crop	Name of Variety	Cost/Kg in Rupees
Cabbage-hybrids	YR Cross	14,000/-
Knol Khol		750/-
Beet-root	Crimson Globe	900/-
Big Onion	Red Creole	1,500/-
Capsicum	Hungarian YW	2,250/-

- b) All unsold seedlings should be planted in vacant areas of the farm to ensure an extra income and also totally eliminate losses incurred for purchase of seed, fertilizer etc.

The officer-in charge should also judiciously plan for the entire farm area to be planted every season, by raising extra seedlings, if those meant for sale to the public are not in excess. Rotation of crops including legumes eg. green gram, should figure prominently in the cropping programme.

- c) Except for cabbage, big-onion and knol-khol seeds which have to be purchased every season, the other local varieties like chillie, egg-plant etc, can be obtained from the farm planting itself. Any excess vegetable seed produced in the farm can also be sold locally to some farmers who may wish to raise their own seedlings.

- d) Every two years, the 2.2 hectares of paddy land should be cultivated for seed paddy, where with reported yields of around 125 bushels per acre, a significant income can be expected in about 3 months. This exercise, besides the monetary gain, will contribute to a judicious rotation to circumvent soil borne pests and diseases, where under flooded conditions such hazards will be naturally arrested due to anaerobic soil conditions. A spectacular example of this practice will be the control of Bacterial wilt disease caused by Pseudomonas solanacearum, which is a limiting factor for successful and extended cultivation of solanaceous crops. Consequently, a crop of tomato planted in this field immediately following the paddy crop, with appropriate drainage precautions, should produce a bumper harvest of quality fruit.

It must be necessarily be emphasized that in this exercise only the principle of creating anaerobic soil conditions need be exploited for its success. Consequently, if serious soil problems are envisaged due to the puddling of poorly drained low humid gley soils, which subsequently may not be the ideal for the cultivation of other field crops, water can only be impounded for a few weeks to destroy or hamper the survival of Pseudomonas solanacearum, without resorting to puddling of soil and the actual cultivation of paddy. This approach will also provide a significant time saving factor for early planting of the other field crops, where otherwise the land would not be available for about 4 months until the paddy is harvested and the land adequately prepared for cropping.

- e) There is a good demand for king-coconut seedlings amongst the settlers for their home gardens. The produce from the existing 18 trees in the farm, which appears to be of good stock, could be advantageously used to raise such planting material, which will fetch an attractive price.
- f) An egg producing 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 cultivation programme. There is also a belief, that poultry manure is a repellent to the survival of nematodes (Meloidogyne spp.) 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 at Suriyawewa is Rs 2.25 each and a ready local market was assured for such small quantities of production. This programme will also gainfully employ the watchers who will be working round the clock anyway, in 8 hour shifts to safeguard the nurseries, fruit crops etc.

12. Constraints

- a) There are no problems envisaged by way of encroaches or theft of farm produce.
- b) Electricity, water service and telephone connections could be obtained with minimum effort.

13. Current Farm Labour

The 3 casual labourers currently employed as watchers could continue in the same job, or be absorbed into the Mahaweli System. As there is no other permanent staff attached to the farm, there should be no problems whatsoever. Currently, the Block Manager oversees this farm, in addition to his other duties in the Mahaweli Project.

14. General Observations

Besides the sale of farm produce at the farm gate, there are 3 "polas" (village fairs) held weekly in close proximity to the farm. It was indicated that all farm produce if sold at these outlets, will fetch better prices than at the farm gate. This opportunity should naturally be exploited.

15. Suggested Farm Staff

- a) Officer-in-charge, with experience in farm management and preferably holding a Farm School Diploma in Agriculture.
- b) Assistant to the OIC, whose responsibilities will include supervision of labour, maintaining check roll, stores, sales records etc.
- c) Three watchers, working in 8 hour shifts.
- d) Casual labour, depending on work load per day.

16. Suggested Equipment and Tools

Mammoties	-	10
Mammoty forks	-	6
Pruning knives	-	6
Watering cans	-	6
G.I. buckets	-	3
Hand forks	-	6
Knap sack sprayer	-	1

Two wheeled hand tractor, rotavator, mould board plough, and trailer.

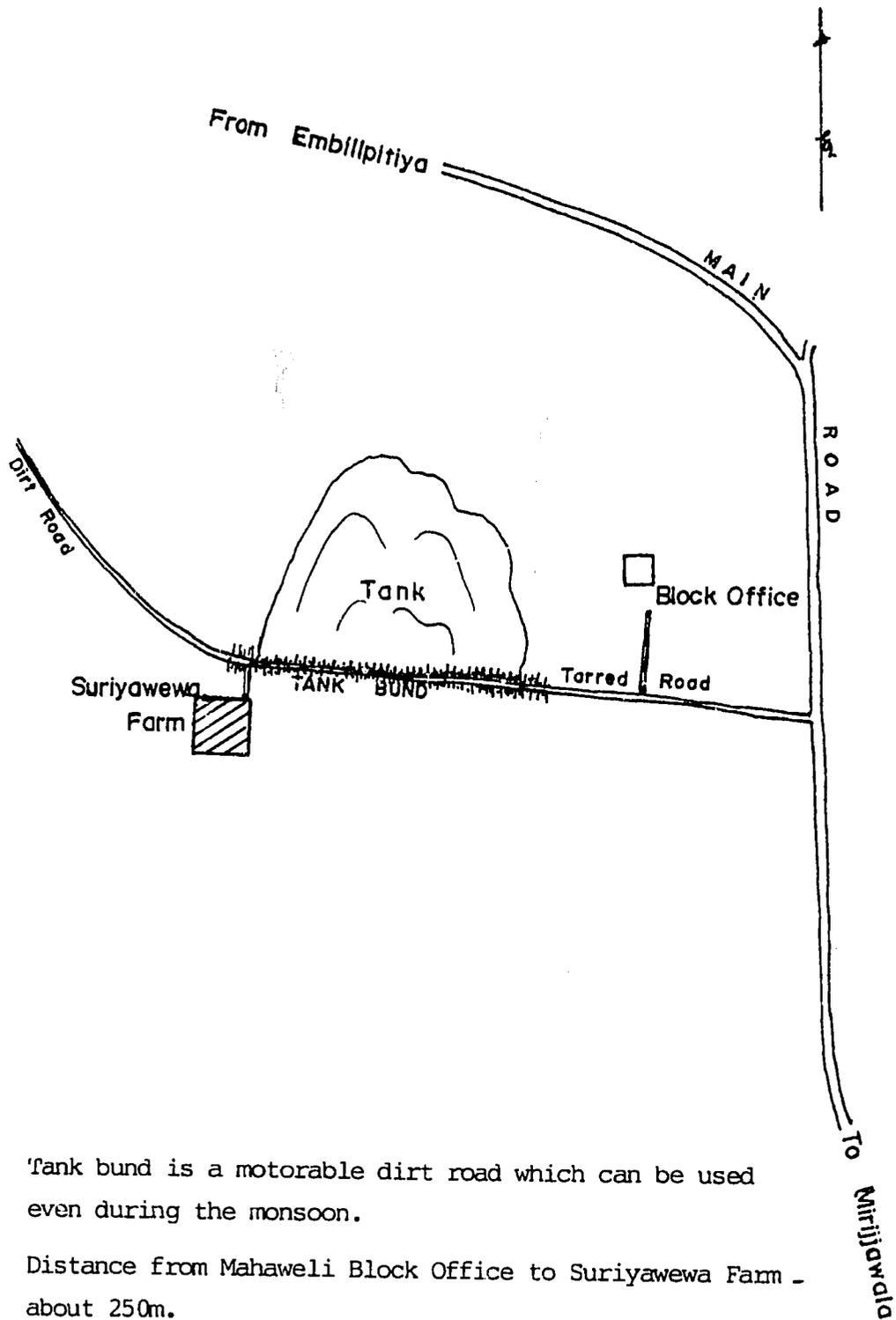
17. Furniture & Office Equipment

2 writing tables
1 filing cabinet
6 office chairs
1 iron safe
Typewriter and stationery

SUMMARY

In summary, the Suriyawewa Farm offers an enterprising investor some of the most important pre-requisites for a successful agricultural venture. These will include, an assured supply of water, a land suited to diverse cropping patterns, an uninterrupted labour availability, all gift wrapped into an easily manageable small sized farm unit. Its easy accessibility and unique location, immediately adjacent to the tank bund has also the added advantage of being in close proximity to reliable wholesale and retail outlets, where an envisaged modest production can always find a ready market.

SKETCH OF SURIYAWEWA FARM (3.8 h)



Tank bund is a motorable dirt road which can be used even during the monsoon.

Distance from Mahaweli Block Office to Suriyawewa Farm - about 250m.

