

PROGRAM

FINAL
WORKSHOP

ON THE PROJECT IDENTIFICATION,
FORMULATION AND APPRAISAL

13 December 1998

Ministry of Planning Human Resources and Environment
Male, Maldives

Sunday
13
December

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9:00 - 9:10

INTRODUCTION

9:10 - 10:30

PRESENTATION OF GROUP PAPERS

Maldives Protected Area System Plan (Environment Section)
Presented by: Aishath Faaiz

Manpower Development of the Ministry of Justice: Courts in
Male and Island Courts (MOJ)
Presented by: Ahmed Rasheed

Development of National Drug Database (NCB)
Presented by: Hussain Alim Shukoor

Fuvah Mulaku (Formulaku Atoll) Harbour Development
(MCPW)
Presented by:: Ismail Ibrahim

Feasibility Study of Different Systems of Hydroponics for
Vegetable Production
Presented by: Jadhulla Jameel

Establishment of Children's Home (MWAS)
Presented by: Aishath Latheef

Enhancement of Aid Monitoring Systems (DER)
Presented by: Aishath Shuekar

10:30 - 11:00

FINAL CEREMONY

Feasibility Study of Different Systems of Hydroponics for Vegetable Production

1. Background:

Maldives being a country 99% sea, of its total area, is heavily dependent on fisheries. However agricultural production is being continued throughout the country besides considerable constraints

One main constraints in developing agriculture in the Maldives is the unavailability of nutrient rich soils and the reducing labour turning to, and remaining in the field of agriculture. Water resources and reducing land space with the growing population is also regarded as limiting factors for the development of agricultural production. Alternative methods for production has to be identified and researched to overcome these problems.

In this regard the government has decided to research the feasibility of Hydroponics systems for the production of vegetables.

- 2. General Objectives:**
- The project aims to research the methods of soil less culture suitable to infertile island conditions with minimal inputs. After research the most suitable methods will be introduced to interested groups or farmers.
 - To decrease the importation of fruits and vegetables and finally increasing the contribution of agricultural production in the GDP.

3. Phase One:

3.1 Specific Objectives:

1. To study and experiment the feasibility of different systems of hydroponics in the production of vegetables.
2. To introduce and establish hydroponics in the field of vegetable production in the country
3. To train two staff to manage such systems
4. To study the demand/ market for hydroponically produced vegetables.

3.2 Target groups: Staffs of the Agriculture Section

3.4 Duration: 1-½ years

3.5 Activities (phase one);

1. Survey of equipment and systems
2. Choose 4 systems most suitable to conditions such as climate, space etc.
3. Design the proposed site and install the systems.
4. Purchasing of planting materials and other necessary equipment for the setting up of the unit.
5. Training of staff - One staff from abroad and on the job training for other necessary personnel from the consultant.

4. Phase two:

4.1 Specific Objectives;

1. Create awareness and public interest to use the technology.
2. Training groups interested in commercial production.

4.2 Target groups: Countrywide

4.3 Duration: Continuous

4.4 Activities;

1. Organization of marketing of the products to resorts and local markets.
2. Open the hydroponics station to the public to create interest.
3. Practical and theoretical training of individuals and groups interested in the technology for commercial production.
4. Leasing the project site for commercial production.

5. Financial Contribution: US\$ 400,000

6. Executing Agency: Ministry of Fisheries, Agriculture and Marine Resources

7. Implementing Agency: Ministry of Fisheries, Agriculture and Marine Resources (Agriculture, Forestry Research and Development Section)

8. Overall expected socio-economic impacts:

- Increased income to companies involved in agriculture
- Decrease in the amount of vegetables imported, minimising food shortages.
- Possibility for decreased cost of vegetables, compared to imported vegetables.
- More people turning to the agriculture sector, and creating employment for both women and men.

9. Possible environmental impacts:

Hydroponics has been proved safe if used accordingly. Hydroponics uses less space minimising the impact on environment compared to the area of forests cut down for ordinary cultivation of vegetables.

10. Project Outputs:

1. Results of the feasibility study, containing economic and technical aspects in the use of hydroponics systems.
2. Establishment of a hydroponics system at selected location (if proven possible)
3. Trained staff for operation and maintenance of the unit.

11. Risks:

1. Possibility of contamination of plants and equipment with pests and diseases during experiment.
2. Introduction of new pests and diseases to the country (due to low quarantine measures when importing plants and planting materials).
3. Failure of experiment due to inappropriate operation.
4. Failure of experiment due to selection of inappropriate varieties of vegetable seeds or planting materials.

COST OF DIFFERENT SYSTEMS

SYSTEMS: [Reservoir, Growing, Chambers, Pumping Column, Dripping and Grommet]

AquaFarm-	US\$ 40
MagaFarm-	US\$ 200
AeroFlo 16	US\$ 300
AeroFlo 192N	US\$ 2200
Duch Pots (100)	US\$ 10

CONTROLLERS:

Controller systems US\$ 50

GROWING MEDIA:

Grorox	1/2 Gallon	US\$ 5
	1.5 Gallon	US\$ 10
	3.25 Gallon	US\$ 18
	13.2 Gallon	US\$ 44

Cocopeat (brick)		
	Each	US\$ 1.89
Case (24)	US\$	28.00

Project Outputs:

1. Feasibility study, containing economic and technical aspects in the use of hydroponics systems.
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Phase One:

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4. To study the demand/ market for hydroponically produced vegetables.

Activities (phase one);

1. Survey of equipment and systems
2. Choose 4 systems most suitable to conditions such as climate, space etc.
3. Design the proposed site and install the systems.
4. Purchasing of planting materials and necessary equipment for the setting up of the unit.
5. Training of staff - One staff from abroad and on the job training for other necessary personnel by the consultant.

Activities (phase 2);

1. Organization of marketing of the products to resorts and local markets.
2. Open the hydroponics station to the public to create interest.
3. Practical and theoretical training of individuals and groups interested in the technology for commercial production.
4. Leasing the project site for commercial production.

Phase two:

Specific Objectives;

1. Create awareness and public interest to use the technology.
2. Training groups interested in commercial production.

Project Outputs:

1. Feasibility study, containing economic and technical aspects in the use of hydroponics systems.
2. Establishment of a hydroponics system at selected location (if proven possible)
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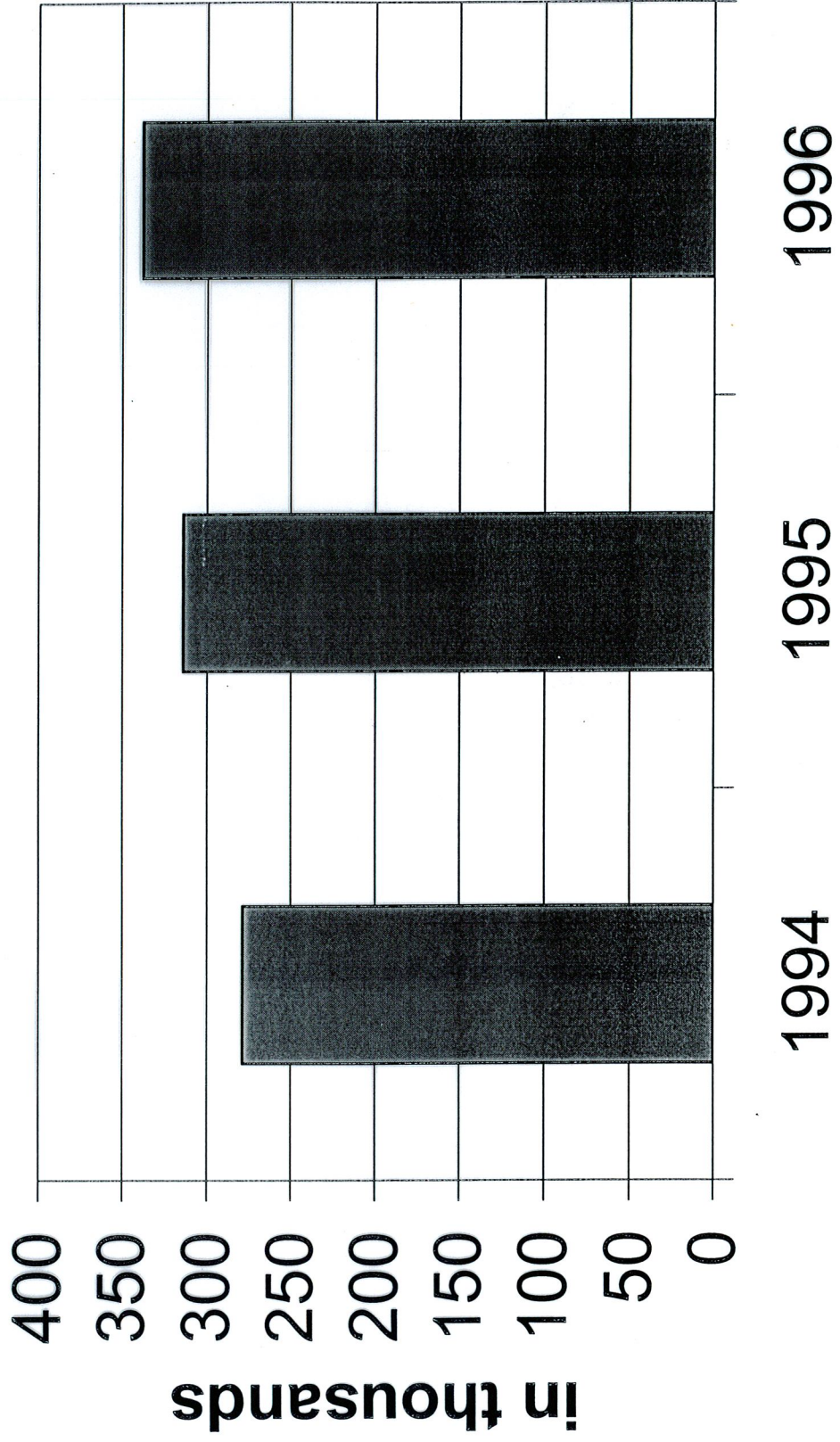
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ARRIVALS OF TOURIST TO MALDIVES 1994-1996



TREND OF VEGETABLES IMPORTED 1994-1996

