

REV

YAM  
EXPORT  
COMMITTEE

(YAMEX)



IICA  
E71  
I59y

Participating Agencies, Organizations and Companies:

Agricultural Credit Bank (ACB)  
AGRO-21  
Christiana Potatoes Growers Association (CPGA)  
Guys Hill Producer Marketing Organization (PMO)  
InterAmerican Institute for Cooperation on Agriculture (IICA)  
Jamaica Agricultural Development Foundation (JADF)  
Jamaica Agricultural Society (JAS)  
Jamaica Banana Producers Association (JBPA)  
Jamaica House  
JETCO/Jamaica Promotions (JAMPRO)  
JNIP/Jamaica Promotions (JAMPRO)  
Ministry of Agriculture (MINAG)  
OMNI, International  
Scientific Research Council (SRC)  
University of the West Indies (UWI)  
UN Industrial Development Organization (UNIDO)

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YAM EXPORT (YAMEX) COMMITTEE

PRELIMINARY REPORT

MAY 1988

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## I EXECUTIVE SUMMARY

The Yam Export Committee (YAMEX) was created in order to recommend a strategy for increasing the promotion, production and marketing, locally and overseas, of yams for the small-scale farmer sector, particularly those using the minisett technology. The committee is composed of sixteen agencies, organizations and companies from the public, private and international sectors.

As a result of the first meeting of the YAMEX full committee on March 7, 1988, three workgroups were created: promotion, production and marketing. These workgroups met on a regular basis and produced a series of recommendations regarding the promotion, production and marketing of yam utilising the minisett technology. Following is a summary of their recommendations:

Promotion

It is recommended that:

1. By means of demonstration plots, field days and mass media, small farmers in areas apt for yam production be made aware of the potential increases in yields and income through utilization of the minisett technology package.
2. Small farmers be informed regarding the availability of credit, technical assistance, how to apply minisett technology and requirements of export markets for yams produced using the minisett technology.

Production

It is recommended that:

3. Minisett and intercropping demonstration plots be established in cooperation with small farmers in all major areas apt for yam production.
4. Demonstration plantings be staggered throughout the year to show the potential for year-round yam production and market supply, together with cost and return data for the different planting dates.
5. A major effort be commenced to introduce general use of the hot water treatment to improve yam planting material.

6. Research be continued to further improve the productivity and profitability of yam production using the minisett technology.

### Marketing

It is recommended that:

7. Applied marketing studies begin immediately.
8. The marketing studies be conducted in collaboration with cooperating farmers and cooperating root crop exporters.
9. Market opportunities in both ethnic and broader export markets be tested and determined.
10. Market research concentrate on:

- Sizing of tubers
- Packaging alternatives
- Alternative types of outlets
- Price potential
- Volume potential

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The inter-workgroup recommendations, which integrate the above into project format for easy implementation, are presented in sections VII and VIII as two projects: a pilot project and a medium term project.

Funding for the pilot project is onstream and activities in this project have begun.

Funding for the medium term project must be obtained and every effort should be made toward this end as the yam promotion, production and marketing technologies are readily available from the different organizations represented on the YAMEX Committee.

(Additional recommendations resulting from the May 30th YAMEX meeting shall be added here)



## II BACKGROUND AND INTRODUCTION

In the context within which the Jamaican economy operates today, agricultural modernization and diversification constitute major agricultural policies for stimulating production, particularly in the export earnings sub-sector to increase foreign exchange earnings and savings, to increase employment and raise incomes, and to maintain and enhance the natural resource base. The present government's agricultural policy which has been taking shape since 1981, as part of the structural adjustment programme, has aimed at agricultural revitalization and development. 1/

The yam minisett technology is known to have the potential for providing the Jamaican small scale farmer with the opportunity for earning foreign exchange by producing 2-3 pound yams for the export market. By adopting this technology, small scale farmers, the traditional producers of Jamaican yam, can increase their yam income from \$450. per square to \$3,500. per square. This has been the experience of the small farmers participating in IICA's Cropping Systems Project in Jamaica.

How can small scale farmers throughout the country become convinced of this technology, learn to use it and reach the export market with their produce?

This was the challenge given to Mrs. Jan Hurwitch-MacDonald, IICA Resident Representative in Jamaica, by both Mrs. Vivienne Logan, Agricultural Advisor to the Prime Minister, and the Honourable Anthony Johnson, Minister of State in the Ministry of Agriculture, during individual meetings in early 1988.

After discussing the problem with a number of individuals, IICA invited agricultural agencies, organizations and companies from the public, private and international sectors to join the interdisciplinary effort in response to the challenge.

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1. Extract from Speech made by Mrs. Vivienne Logan, Agriculture Advisor, Bureau of Management Support, Office of the Prime Minister at the Inaugural Meeting of the YAMEX Committee, on March 7, 1988

The first meeting of the Yam Export (YAMEX) Committee was held on March 7, 1988, and as a result, three workgroups were created: promotion, production and marketing. These workgroups met on a regular basis and produced a series of recommendations regarding the promotion, production and marketing of yam utilising the minisett technology. The recommendations may be found in sections III, IV and V; a consolidated version of the recommendation is located in section VI.

Selected individuals from each workgroup attended the meetings of the inter-workgroup, which was entrusted with the responsibility of ensuring that the recommendations from each of the workgroups were integrated before presentation to the full YAMEX Committee, whose next meeting was scheduled for May 30th. The inter-workgroup decided to present the recommendations in project form, so that they could be implemented as soon as funds were made available. Sections VII and VIII contain these project recommendations.

Section VII describes a pilot project entitled:

**Pilot Project for measuring increased yam production among small farmers (utilizing two minisett technology systems, one with plastic mulch and the other local natural mulch) :**

**A collaborative effort between cooperating small farmers of Guy's Hill, Watermount and Christiana, and cooperating yam exporter(s), with technical cooperation of IICA**

**The project is already operational and will provide the opportunity for testing a number of project components to be used in a larger medium term project.**

**Section VIII describes the medium term project in brief profile format. Additional work must be done to finalize this project and financing must be sought to make it a reality.**

### III PROMOTION WORK GROUP REPORT

#### INTRODUCTION

Three meetings of the promotions sub-committee were held. Apologies were received from Mr. Fraser, Ministry of Agriculture and Mr. Morgan of the Jamaica Agricultural Society for their inability to attend the last meeting because of prior commitments. However, they subsequently met with the Chairman of this sub-committee and their views were incorporated in this report.

All the agencies indicated that they were willing to participate, but would be unable to provide financing, and were unable at this time to affix costs to the assistance they would provide. Both Ministry of Agriculture and the Jamaica Agricultural Society indicated that financing for transportation would be required if their officers were to participate in a meaningful way.

#### PROGRAMME DEVELOPMENT

##### Publication of Yamex Brochures

The JNIP undertook to develop a Yamex Brochure aimed at Small Farmers, which would provide information on:

- How to obtain credit
- Differences in yield from traditional and minisett yams
- Anticipated prices
- Marketing information
- Materials and labour costs
- Minisett technology

Mrs. Audrey Wright (JNIP) will be responsible for the development of this brochure.

##### Training the Trainers Programme

With the assistance of Dr. Asnani and the Ministry of Agriculture, Officers of the Jamaica Agricultural Society, Agricultural Credit Bank and P.C. Bank Managers, personnel would be identified in the target areas for training in minisett technology. Four training sessions are recommended, two per target area, at a cost of \$1200.00

Mr. A.C. MacDonald (IICA) is the sub-committee chairman, who will be responsible for coordinating these sessions. Officers benefitting will be assisting with the farmer demonstration workshops and working with farmers later, as the programme is implemented.

## Target Areas

Special areas selected for pilot programmes were:

Manchester	-	Christiana and Devon
Trelawny	-	Wait-a-bit
St. Ann	-	Content, Alexandria, Buxton
Hanover	-	Cascade, Harvey & Dell River

## Farmer Demonstration Workshops

Eight demonstration workshops are proposed for implementation, two per parish, where materials and expertise will be provided by the Production sub-committee, assisted by the officers trained in minisett technology. It is envisaged that these sessions will be held February-May 1989, and existing minisett plots will be utilized where feasible. Farmers will be able to view minisett yams in different stages of production.

Interested farmers will be provided with planting materials in the first instance by the Production sub-committee. Financing for 100 participants at \$20.00 each for eight (8) sessions was budgeted for, amounting to \$16,000.00. Exporters will be invited to attend these meetings.

## Minisett Exhibition

It was agreed that an Exhibition should be mounted at Denbigh. This could be incorporated in one of the other Agency's booths if IICA does not have one. This will be explored by the Coordinator.

It was understood that materials are already available, and a video presentation would be included. Naturally, this will take place in early August. The exhibition will be coordinated by Mrs. Audrey Wright and \$2,000.00 was budgeted for setting up this exhibition.

## Selection and preparation of Demonstration sites

Interested farmers will be encouraged to start with a square of minisett yams, materials for which should be provided free. Supervision of these plots would be the responsibility of the extension services and in particular, those officers benefitting from the training programme.

## Media Coverage

It was decided that there should be no major thrust in publicity at this stage, other than the use of JIS for the publication of activities in farming communities, and utilization of "Walk and Talk" at the Denbigh Exhibition, and the farmers' demonstration plots.

Mrs. Wright will be responsible for promotional activities.

CONCLUSION

We observed that detailed planning is not possible until some clarification is arrived at, concerning the following:

- Consensus from Exporters on their participation
- Consensus on Exporters guarantee of markets and minimum prices
- Market viability for additional production
- Palatability and quality control

Attached for consideration is the budget and proposed implementation plan.

Freda Sangster, Chairperson  
PROMOTIONS SUB-COMMITTEE  
April 5, 1988

B U D G E T

Preparation of Demonstration sites (1 acre comprising 10 farmers with a square each)	\$10,000.00
Lunch for trainers (20x20x4)	1,600.00
Lunch and refreshments for 100 participants (100x20x8 - two per parish with 100 participants per demonstration)	16,000.00
Brochure	7,000.00
Publicity (Denbigh Exhibition)	2,000.00
Transportation	2,700.00
Contingencies	<u>2,000.00</u>
TOTAL	<u>                    </u>

PROJECTED IMPLEMENTATION PLAN

	1988		1989									
	July	August	September	October	November	December	January	February	March	April	May	June
Collection of data, draft and printing of brochure	--	--	to	--								
Training the Trainers	--	--	to	--								
Minisett Exhibition - Denbigh		--										
Farmers Demonstration Workshops							--	--	to	--	--	--
Preparation of demonstration sites on selected farmers' holdings										--	to	--
Publicity - media coverage & awareness	--	--					--	--	to	--	--	--

ATTENDANCE AT COMMITTEE MEETINGS

	Meetings held	Attendance
F. Sangster	3	3
A. Wright	3	3
H. Campbell	3	2
H. Fraser	3	0
W. Morgan	3	0
C. Evans	3	0
A. McDonald	3	2

## IV PRODUCTION WORK GROUP REPORT

### BACKGROUND

Some 360 million pounds of yam are produced annually in Jamaica from about 32,000 acres. Average production per acre is approximately 12,000 pounds.

While much of the yam produced is used for domestic consumption, about 13 million pounds in 1984 and 19 million pounds in 1985 were exported, generating about US\$2.5 million and US\$4.0 million respectively in foreign exchange.

Yams produced in Jamaica using the traditional systems are inferior to those of competitors (toed and proliferated large tubers infested with virus and nematodes, excessive waste and spoilage) and often do not meet export standards. The traditional systems also require about 25-30% of the tuber (head) to be saved as the next year's planting material thus making about 90 million pounds of yam unavailable either for domestic consumption or the export market.

The mini-sett technology, which was developed at IITA in Nigeria for "seed yam production", has been tested in Jamaica as an alternative technology for commercial yam production on small and large farms. This technology reduces the unit cost of production, in part through increased yields, and produces mainly small to medium-size unproliferated yams which are potentially suited for exporting because the entire yam can be graded into several size categories and marketed as a whole yam.

Past research efforts have shown that nematodes infesting yam planting material can be controlled by immersing infested planting material in hot water or by treating infested planting material with oxamyl. Hot water treatment resulted in a 23% increase in yield, while oxamyl treatment gave a yield increase of 36%. This technology can thus be beneficial for both traditional and mini-sett yam production. Since the disposal of oxamyl treatment solution on a large scale may create an environmental problem only the hot water treatment will be considered.

Past research efforts have also shown that intercropping of traditional yam cultivation with Irish potato, radish, and peanut, or with red pea and ginger, produced 90-111% increase in net returns per unit area as compared with the net return from monocrop yam. However, these intercropping systems reduced saleable yam yield by 14.0-23.4% as compared with monocrop yam.



## OBJECTIVES

The production technology component has the following goals:

- a) to demonstrate and transfer to small-scale farmers the mini-sett yam production technology which reduces the unit cost of production while at the same time producing a product of which a higher percentage would be exportable, as compared to the present technology. Greater efficiency in production and an overall improvement in quality would confer on Jamaican yam the ability to compete more effectively for a greater share of the export market.
- b) to demonstrate and transfer to small-scale farmers the technology for yam intercropping systems that improve farm income.
- c) to demonstrate and transfer to small-scale farmers the technology for nematode control using the hot water method of treating yam planting material.

## STRATEGY

A total of 150 small-scale farmers in Guy's Hill, Watermount, Claremont, Christiana, Allsides, Wait-a-Bit, Smithfield, and Cascade will participate in the yam production technology component of the project. Of these farmers, ninety will be participating in yam production using mini-sett technology, and sixty of them will be participating in the intercropping of traditional yam cultivation. All yam planting material for the on-farm demonstrations will be subjected to the hot water treatment for controlling nematodes. Participating farmers will be required to plant an area approximately equal in size to the demonstration plot using their traditional technologies so that the results of what farmers normally do can be compared with the results of the technologies which the project will introduce.

For the mini-sett technology demonstrations, cooperating farmers will be required to assist in applying the technologies introduced by the project. For the on-farm demonstrations of the mini-sett technology they will also be required to provide the land, labour, fertilizers and farm tools. The project will supply planting and mulching materials which will be returned in kind by the farmers after the crop is marketed so that these materials can become revolving 'funds'.

For the intercropping demonstrations the cooperating farmers will be required to provide the yam, land and labour, farm tools and fertilizer for the yam crop if fertilizing is normally practiced. The project will supply the planting

material, fertilizer, pesticides, and spraying equipment for the intercropping work. After the crops are marketed the farmers will return in kind the materials supplied by the project so that these materials also can revolve to other farmers. Intercropping will be carried out in both mini-sett and traditional yam production plots. Farmers will be encouraged to recycle the plastic mulch for their own use since this has recently been successfully done by one farmer in Watermount.

All of the produce from the demonstration plot will belong to the farmer.

#### BUDGET

	J\$		
	Yr 1	Yr 2	Yr 3
<b>Hot water treatment</b>			
- construction of facilities	3,600	-	-
- recurrent expenses	8,400	8,400	8,400
<b>Mini-sett demonstrations</b>			
- construction of facilities	54,000	-	-
- recurrent nursery expenses	30,000	30,000	30,000
- yam planting material	63,000	-	-
- plastic mulch	36,000	-	-
<b>Intercropping systems</b>			
- planting materials	19,600	-	-
- fertilizers	3,900	-	-
- pesticides	4,000	-	-
	-----	-----	-----
	222,500	38,400	38,400
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## V MARKETING WORK GROUP REPORT

### Background

1. Jamaica has been exporting yams for some time, and has developed considerable knowledge regarding US, Canadian and British markets.
2. The principal overseas consumers for yellow yams, up until the present, are Jamaicans who have migrated to these countries. This is a small proportion of the total consumer market in these countries. It is also a slow growth market for two reasons. First, it is limited to growth in the number of Jamaicans who migrate, and to their descendents. Migration restrictions are slowing down the growth of this market. Second, descendents raised in these countries tend to assimilate their eating habits, and cannot be expected to continue to use yams in their diet as much as their parents. It is possible that in the middle and long term this migration-fueled market may decrease in size.
3. The costs of production and sale price of Jamaica's yellow yams are higher than those of other types of yams produced in other countries such as Brazil.

They also cost consumers double or more the price of Irish potatoes, the main root crop sold in the North America and Great Britain.

4. Compared with Irish potatoes or other staple fruits and vegetables in these markets, the volume of Jamaican yams is extremely small. This restricts the relative amount of advertising or promotion for yams which is economically viable.
5. A successful yam export program should address the following:
  - Reduction in production and marketing costs
  - Improvement in appearance of the yams sold, and of their packaging
  - Entry into the larger, non-Jamaican-migrant market

## Recommendations

### Short Term

1. Concentrate on mini-sett yellow yams, at least initially. They are a more attractive and saleable product, and offer the possibility of lowering costs, through yield increases and lower harvesting losses.
2. Set as a target for the first year the production and export of mini-sett produced yams amounting to 20% of current yam exports. This is estimated at between 2.0 and 2.5 million pounds.
3. Beginning the second year, ensure that all small farmers who wish to adopt mini-sett technology have access to necessary inputs, technical assistance and export markets. All growers who sell for export will have had one year to observe the demand and price differences for mini-sett produced yams, and to decide whether or not they wish to adopt the technology.

### Long Term

4. Establish by law an exclusive brand of Jamaican yams, with specific regulations regarding production technology, harvesting, inspection, sizing, and packaging.

The example of Blue Mountain Coffee can provide some applicable experience.

5. During the first year, do test marketing in selected cities in the US and Canada, to determine consumer preference with respect to yam size(s) and packaging. In addition to traditional ethnic markets, the testing should be done in non-ethnic retail outlets; supermarkets and specialty food stores.

The marketing studies should be performed as a cooperative effort between Jamaican yam growers and exporter(s). See Annex 1 for details.

Preliminary studies should also be conducted to determine what sorts of product promotion efforts would be most cost effective. If sufficient funds are available, demand response to different price levels for the yams should also be determined.

It is believed that by grading the minisett yams produced in the Project, sufficient sized yams of different weights can be obtained to perform these marketing studies, due to YAMEX's Promotion and Production efforts.

6. As soon as sufficiently clear results are available from the market studies to identify optimum size and packaging, intensify research trials to determine how to produce a maximum proportion of yams with the premium size(s), and introduce this technology to producers as rapidly as possible.
7. At the same time, the regulations for the exclusive brand, with respect to packaging and sizing, should be put into effect, and the brand launched, using the product promotion techniques determined to be most cost effective.
8. Should it be decided to initiate a product promotion campaign, a mechanism would be established within YAMEX for obtaining the funds, through a check-off rate per 100 lbs. of yams exported under the YAMEX-established brand.

### Implementation Schedule

#### Phase I INITIATION (July 1988 to December 1989)

Marketing studies; sizes, packaging, outlets. U.S., Canada, Great Britain.

Creation of YAMEX brand, development of packaging standards, establishment of grading standards.

#### Phase II EVOLUTION (1990-91)

Launching of YAMEX brand; legal structure, check-off

Continued quality control, grading and packaging improvements

Volume expansion; drive to increase number of cooperators, acreage, production

#### Phase III CONSOLIDATION (1992)

Improvements in assembly and shipping

Initiation of similar cycle with other tubers

### Budget

1988

Marketing studies \$100,000

1989

Marketing studies \$200,000

Promotion trials 300,000

-----  
\$500,000

1990 - Self financing

The yam marketing studies will be carried out under a agreement between the YAMEX Project, cooperating small growers, and one or more cooperating Jamaican yam exporters.

Only cash costs which are additional to the normal functioning of growers and exporters' operations will be borne by the YAMEX Project.

The details of the market testing strategy will be discussed and agreed upon by cooperating growers and exporters. Among other points, growers will agree to:

- Plant at the approximate dates agreed upon for each grower, in order to ensure a steady supply of yams throughout the year for market testing.
- Use the prescribed minisett technology
- Consult with the technical assistance field officer immediately, should any problems arise
- Conform to any other provisions which are mutually agreed upon between Yamex, cooperating growers and exporter(s).

The exporter(s) will agree to:

- Purchase cooperating growers yams, paying them on the basis of the exporter's sales price(s), less an agreed-upon markup for marketing services
- Test market the sizes and packaging of yams in the retail outlets agreed upon with YAMEX
- Maintain complete records of test marketing sales, including volume, price, and name of grower. Provide YAMEX and growers with copies of these records
- Submit bills to YAMEX only for those cash costs which are additional to normal exporting and selling costs, and which have been previously agreed upon with YAMEX
- Conform to any other provisions which are mutually agreed upon between YAMEX, cooperating growers and exporter(s)

Producers and exporter(s) will agree to:

- Sign an agreement with YAMEX guaranteeing to fulfil their agreed-upon commitments

## VI CONSOLIDATED YAMEX COMMITTEE RECOMMENDATIONS

### Promotion

It is recommended that:

- By means of demonstration plots, field days and mass media, small farmers in areas apt for yam production be made aware of the potential increases in yields and income through utilization of the minisett technology package.
- Small farmers be informed regarding the availability of credit, technical assistance, how to apply minisett technology and requirements of export markets for yams produced using the minisett technology.

### Production

It is recommended that:

- Minisett and intercropping demonstration plots be established in cooperation with small farmers in all major areas apt for yam production.
- Demonstration plantings be staggered throughout the year to show the potential for year-round yam production and market supply, together with cost and return data for the different planting dates.
- A major effort be commenced to introduce general use of the hot water treatment to improve yam planting material.
- Research be continued to further improve the productivity and profitability of yam production using the minisett technology.

### Marketing

It is recommended that:

- Applied marketing studies begin immediately
- The marketing studies be conducted in collaboration with cooperating farmers and cooperating root crop exporters
- Market opportunities in both ethnic and broader export markets be tested and determined
- Market research concentrate on:

- Sizing of tubers
- Packaging alternatives
- Alternative types of outlets
- Price potential
- Volume potential

### Institutional

It is recommended that :

- YAMEX, including an appropriate brand and corresponding measures for ensuring conformity with quality, handling and packaging norms, be institutionalized.
- Such institutionalization be designed to become self sufficient no later than the end of the medium term project
- The present multi-organizational YAMEX Committee serve as an interim policy, advisory and coordinating committee until the medium term project is in operation



## VII PILOT PROJECT

PILOT PROJECT FOR MEASURING INCREASED YAM PRODUCTION AMONG SMALL FARMERS (UTILIZING TWO MINI-SETT TECHNOLOGY SYSTEMS, ONE WITH PLASTIC MULCH AND THE OTHER LOCAL NATURAL MULCH) :

A COLLABORATIVE EFFORT BETWEEN COOPERATING SMALL FARMERS OF GUY'S HILL, WATERMOUNT AND CHRISTIANA, AND COOPERATING YAM EXPORTER(S), WITH TECHNICAL COOPERATION OF IICA

### OBJECTIVES:

- To increase the quality and quantity of Jamaican exportable yams;
- To introduce a Jamaican yam competitive with Irish potato used for roasting;
- To provide small farmers with access to the export market with yams they have produced using the latest yam production technology.

### STRATEGY:

A total of 60 small farmers in Christiana, Guys Hill and Watermount will participate in the pilot project.

During the first planting season, 25 farmers will participate in the pilot project; during the second planting season, 10 farmers will participate in the pilot project; and during the third planting season, 25 farmers will participate.

The small farmers will contribute with their land, labour and fertilizer. In addition, they will contribute half of the mulch required in the form of brambles which will provide the basis for comparison between the local mulching material and imported plastic mulch.

**IMPLEMENTATION PLAN**  
 (for year-round reaping)

year 1-----year 2-----year 3-----  
 S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F  
 nnnppppppggggggggggggghhhhhhhhhh  
 nnnppppppggggggggggggghhhhhhhhhh  
 nnnppppppggggggggggggghhhhhhhhhh  
 nnnppppppggggggggggggghhhhhhhhhh

-----  
 key: n = nursery  
 p = planting  
 g = growing  
 h = harvesting

**BUDGET**

Paid/provided by Cooperating farmers.

J \$ 2.080./acre for fertilizer)	J \$31,200
J \$ 1.500./ " for labour	22.500
J \$ 200. " for land	3.000

Small farmer Sub-Total: J \$378/square

Paid/provided by Cooperating exporter(s)

Sprouted mini-setts	J \$54,000
---------------------	------------

Paid/provided by IICA

Revolving mulch fund *	J \$25,000
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Pilot Project Total Cost	J \$135,700
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( \* IICA will contribute by providing the revolving mulch fund (RMF), at no interest charge, which will be repaid to the project in order to continue with support of future farmer production.)

## VIII MEDIUM TERM PROJECT (PROFILE)

### Problem:

- 1 Jamaica is not able to compete on the yam export market due to poor quality yams, low yields and high costs of production. In addition,
- 2 Small farmers are not using technologies which address these problems, and their production is not reaching the export market.

### Objectives

General - Increased quantity and quality of Jamaican yam exports on a sustained basis.

Specific - To increase small farmer income through utilization of the latest yam production technology and access to the export market.

### Strategy

Improve the promotion, production and export marketing of Jamaican yams through cooperative efforts of small farmers and exporters; develop an organizational structure to provide continuity and growth in these efforts, on a self-financing basis.

#### Components :

- Promotion
- Production
- Marketing

### Activities

#### Promotion Activities

1. YAMEX educational brochures
2. Training of trainers
3. Selection and preparation of demonstration sites
4. Farmer selection
5. Multi-media promotion
6. Farmer demonstration workshops (field days)

### Production Activities

1. Shed construction and nursery establishment
2. Research into uniform sprouting
3. Hot water treatment for nematode control
4. Intercropping systems and outreach
5. Minisett demonstration plots
6. Credit availability

### Marketing Activities

1. Marketing studies on U.S., Canadian and British markets
2. Creation of YAMEX brand
3. Improve quality control
4. Improve assembly and shipping
5. Create yam marketing information service
6. Coordination of yam exporters
7. Explore similar cycle for other tubers

### Institutional Activities

1. Strengthen PMO's
2. Create yam marketing organization
3. YAMEX committee becomes program advisory committee

**Budget**

(Five years; July 1988 to July 1993)

Given the strategy's emphasis on cooperation by growers and exporters, it is estimated that additional financing can be limited to US \$200,000 per year during the medium term.

By the end of that period, institutionalization should be consolidated and the yam/tuber export effort approaching a self-sustaining, self-financing status.

Annex A

LIST OF MEMBERS OF THE YAMEX COMMITTEE

Hon Mr Anthony Johnson, Minister of State, Min. of Agriculture  
Mrs V Logan, Bureau of Management Support, Jamaica House  
Senator Courtney Fletcher, President, Ja Agricultural Society  
Ms Freda Sangster, Agricultural Credit Bank  
Mr Hernal Hamilton, JAMPRO/JETCO  
Ms Audrey Wright, JAMPRO/JNIP  
Mr Dudley Irving, Ministry of Agriculture  
Mr Lennie Morgan, Ministry of Agriculture  
Mr Vernon Morris, AGRO-21  
Dr George Wilson, JADF  
Mr Ian Maxwell, JADF  
Mr Dave Hutton, Faculty of Agriculture, UWI  
Mr Colin Williamson, Exporter of agricultural produce  
Mr Lincoln Williams, Farmer, Guys Hill  
Mr Kenneth Crossman, Guys Hill PMO  
Mr Charles Evans, Christiana Potato Growers Association  
Mr Anton Krufft, UNIDO  
Dr Vishnoo Asnani, Scientific Research Council  
Mrs Jan Hurwitch-MacDonald, IICA  
Dr Malcolm MacDonald, Marketing Consultant  
Mr Ray Miyamoto, USAID  
Mr Vivian Chin, IICA  
Mr A. C. MacDonald, IICA





MEMBERS OF YAMEX WORK GROUPS

Promotion Work Group

Chairperson : Freda Sangster, Agricultural Credit Bank

Members : Audrey Wright, JAMPRO/JNIP  
Lincoln Williams, Farmer  
Sen. C. Fletcher, JAS  
Charles Evans, Christiana Potato Growers  
Hopeton Fraser, Ministry of Agriculture  
Hyacinth Campbell, Jamaica Banana Producers  
A. C. MacDonald, IICA

Production Work Group

Chairman : Dr Vishnoo Asnani, Scientific Research Council

Members : Vivian Chin, IICA  
Ian Maxwell, JADF  
Kenneth Crossman, Guys Hill PMO  
Dave Hutton, Faculty of Agriculture, UWI  
Renford Baker, Ministry of Agriculture

Marketing Work Group

Chairman : Colin Williamson, Exporter

Members : Vernon Morris, AGRO-21  
Lennie Morgan, Ministry of Agriculture  
Hernal Hamilton, JAMPRO/JNIP  
Malcolm MacDonald, Marketing Consultant  
Anton Krufft, Marketing Consultant



YAMEX Committee Planning Meeting February 29, 1988

Purpose of the YAMEX Committee:

The YAMEX Committee will recommend a strategy for the promotion, production and marketing, locally and overseas, of yams for the small-scale farmer sector, particularly those using the minisett technology.

Yam minisett technology produces a better yam using less planting material; it is more likely to be disease-free and more acceptable to the export market.

In order for Jamaica to compete on the export market, we must reduce the price of yams or produce a better quality yam. The YAMEX Committee will concentrate on strategies and mechanisms to reduce the costs of production, increase yields and improve quality.

Mechanisms to accomplish results:

Work groups will be formed at the inaugural meeting to focus on strategies for promotion, production and marketing. The YAMEX Committee will hold quarterly meetings to be appraised of the status of work group recommendations and to provide policy directives.

The work groups will be:

1. Production Technology Work Group
2. Marketing System Work Group
3. Promotion Work Group

1. Production Technology Work Group : Draft Terms of Reference

Objective: Recommend concrete strategies and mechanisms for the application of the minisett technology for yam production.

Areas of concentration:

- \* production of planting material (sprouted minisetts)
- \* improving the technology
- \* processing
- \* pilot area for start-up
- \* institutional support required
- \* financing/funding

2. Marketing System Work Group : Draft Terms of Reference

Objective: Recommend concrete strategies and mechanisms for the marketing of the minisett technology-produced yams.

Areas of concentration:

- \* price considerations
- \* assembly and grading
- \* storage and packaging
- \* transportation
- \* pilot area for start-up
- \* institutional support required
- \* financing/funding

3. Promotion Work Group : Draft Terms of Reference

Objective: Recommend concrete strategies and mechanisms for the promotion of minisett yam production and marketing.

Areas of concentration:

- \* transfer of technological packages
- \* provision of credit
- \* price guarantees acceptable to farmers
- \* use of media
- \* pilot area for start-up
- \* institutional support required
- \* financing/funding

Inaugural Meeting of YAMEX COMMITTEE

=====  
PROCEEDINGS OF THE INAUGURAL MEETING OF THE YAMEX  
COMMITTEE HELD ON MONDAY, MARCH 7TH, 1988 IN THE ST. ANN ROOM  
OF THE WYNDHAM HOTEL.  
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The meeting was chaired by the Hon. Anthony Johnson, Minister of State in the Ministry of Agriculture

Mrs. Jan Hurwitch-MacDonald, Resident Representative of IICA, initiated the meeting at 3:25 p.m. in the absence of Minister Johnson.

She explained the purpose of the YAMEX Committee.  
(see Annex A)

Mrs. Vivienne Logan gave an orientation message.  
(see Annex B)

Dr. Vishnoo Asnani gave a presentation on minisett technologies for an improved yam production system. A major problem over the past 20 to 25 years has been to make available viral and fungal-free planting material. In Nigeria the IITA, in collaboration with the national research institutions, developed the minisett technology as a means of producing disease-free planting material. This has been adapted, through research in Jamaica, to produce uniform-shaped yams weighing from 2 1/2 to 4 pound tubers from 50 - 60 gram pieces of minisett.

Lincoln Williams, a small farmer from Guys Hill who has recently reaped his yam plot, where he used minisett technology profitably, explained his experience.

Questions and discussion followed at this point:

Hutton: How much does the planting material cost? Is it possible for someone to go into producing planting material as a livelihood?

Asnani: Roughly \$0.15 per planting material and yes, it is very possible for an individual to concentrate on planting material production.

Press: What is the comparison between production in Guys Hill (hillside) and Bodles (plains)?

Asnani: The production is better in Guys Hill than Bodles because the rainfall is better in Guys Hill; if Bodles were irrigated, the production would be similar. Actually, the soils of the hillsides are better for yam production, than the soil at Bodles or on the plains. The most important step, at this point, is to promote the work with minisett on the farmer's fields.

Morris: Does plastic mulch create problems with moisture?

Asnani: Not at all, moisture is conserved, plus erosion is minimized.

Press: Is intercropping advisable?

Asnani: Yes, because production of minisett yam takes up to 10 months.

Crossman: Yam needs to be intercropped with crops that can be harvested in 3-4 months, before the yam vines cover the land. Many farmers want to get into the mini-sett technology but they are put off by the cost of the plastic mulch. They are convinced that it is better than the traditional method, but want to hear of a better method as the plastic mulch is very expensive and many small farmers would be more able to put in the labour for weeding and cutting their own yam sticks.

Williams: Can crocus bags be used in place of the plastic?

Logan : Can plastic mulch be re-used?

Williams : No, it is too soft.

Logan : Maybe exporters could provide planting materials and plastic mulch up front and take a lien on the crop.

Williamson : Bramble has been tried, and it works!

Press : The Jamaican farmer does not include the cost of his own labour in calculating production costs. What sort of management information is provided to the small farmers by the agencies.

Campbell : The keeping of farm records is encouraged and assisted in the Cropping Systems project.

Prendergast : Have any of the farmers approached the financing agencies for assistance to buy plastic mulch?



Morris : What about giving a contract so that the farmers could use this as collateral at the finance houses?

Mr. Colin Williamson gave his address on the marketing of yam in the United States. (see Annex C)

Minister of State Johnson gave a short address, highlighting the fact that yam is the biggest single product grown in Jamaica (some 500,000,000 lbs produced annually and approximately 1,000,000 lbs exported per month) and that in 1987 it was our fourth largest export after sugar, bananas and coffee overtaking pimento in 1986. Yam is a year round crop (it used to be seasonal up to a few years ago) with yellow yam exports being currently at 1,000,000 lbs per month. The market for yams from Jamaica was growing at the rate of 5% per year. It is important to recognize that we are now in a state of crisis as for the first time since 1981 the yam crop did not expand in 1987. The figures for the first two months of 1988 show that the trend continues.

Williamson : One of the reasons why the market has not expanded is that our product does not have consistent quality. The only way to expand the market is to produce a better quality yam. I am convinced that mini-sett produced yams are of this quality and am willing to supply farmers with planting materials, mulch, contracts, etc.

Prendergast : Has been informed that Brazil, Colombia and the Dominican Republic are already in production of Jamaican yellow yams for export.

Logan : It appears that mini-sett technology can solve almost all of the problems. What about the additional problems of distribution, infrastructure, transportation, packaging materials and expertise?

Williamson: We already have everything except the right size tuber to put in the packages.

Press : Fear of a new product is the main problem. We need to get the farmers to understand that mini-sett will not have a high percentage of rejection.

Irving : There are problems with exporters not doing any forward planning and not advising the Ministry of Agriculture of their requirements with enough lead time, in order that the Ministry can feed back more information to farmers.

Logan : What about an association of exporters making an approach to the GOJ?

Evans : Farmers should be assured a market for yams rejected for export.

Johnson : The bulk of the damage is done in transit from the farm to the packing station. What would be the reaction from farmers to a contract offer from buyers ?

Crossman : Education is the key. We have to show the farmers concretely - not in the air - what the benefits to them are.

Vivian Chin presented a summary of the present situation and where we go from here.

The more important directions pointed out by this meeting are in production technology, alternative types of mulches, some of the possible types of economically feasible intercropping. We must also examine the question of producing planting materials, as well as looking at all aspects of the marketing system with an eye for innovation. Promotion of the technology already available in a way that is acceptable to the small farmers is another matter for consideration.

Mr. Chin pointed out that, based on the experience of the Cropping Systems project, the net return for mini-sett yams per square is \$3,500 compared to \$450 for yams using traditional methods and \$3000 for irish potatoes.

Jan Hurwitch-MacDonald led the meeting in the formation of work groups by reviewing the draft terms of reference (see Annex D) and then asking for volunteers for each work group.

A Chairperson was selected for each work group, as well as the date, time and place for the first meeting. The work group organization follows:

#### WORKGROUPS

##### Promotion

\*Sangster  
Wright  
Williams  
JAS  
Evans  
Fraser  
Campbell  
A. C. MacDonald

3/17/88  
10:00  
Ag. Credit  
Bank

##### Production

\* Asnani  
Chin  
Maxwell  
Crossman  
Hutton  
Baker

3/14/88  
2:00  
MinAg  
4th floor

##### Marketing

\* Williamson  
Morris  
Morgan  
Hamilton  
MacDonald  
Kruft

3/16/88  
10:00  
MinAg

\* = Chairperson

Mrs. Logan requested that the "requirements for export

marketing" be added to the terms of reference for the Marketing workgroup. This was added.

Minister Johnson suggested that the work group objectives focus on yam in general, with a particular interest in minisett produced, rather than exclusively on minisett produced. The objectives were redrafted accordingly.

Dr. MacDonald suggested that an Inter-workgroup comprised of a few individuals from each workgroup meet to assure integration of the recommendations coming from the workgroups before they are presented at the next YAMEX Committee meeting. The Inter-workgroup meeting will be held on April 20, 1988 at 10:00 a.m. (at the halfway point between the first and second YAMEX meetings) at the IICA Office at 11 Fairway Ave.

The second YAMEX Committee meeting will be held May 30, 1988 at 2:00 in the St. Ann Room of the Wyndham Hotel and shall be chaired by Minister Johnson.

The meeting adjourned at 6:10 p.m.

LIST OF PERSONS WHO ATTENDED THE INAUGURAL MEETING OF THE YAMEX COMMITTEE

Hon. Mr. Anthony Johnson, Minister of State, Min. Agriculture

Mrs. Vivienne Logan, B.M.S., Jamaica House

Ms. Freda Sangster, Agricultural Credit Bank

Mr. Hernal Hamilton, JETCO

Mr. Norman Prendergast, JNIP

Mrs. Audrey Wright, JNIP

Mr. Dudley Irving, Ministry of Agriculture

Mr. Lennie Morgan, Ministry of Agriculture

Mr. Vernon Morris, AGRO-21

Dr. George Wilson, JADF

Mr. Ian Maxwell, JADF

Mr. Dave Hutton, Faculty of Agriculture, UWI

Mr. Colin Williamson, Exporter of agricultural produce

Mr. Lincoln Williams, Farmer, Guys Hill

Mr. Kenneth Crossman, Guys Hill P.M.O.  
Mr. Charles Evans, Christiana Potato Growers Assoc.  
Mr. Anton Kruft, UNIDO  
Dr. Vishnoo Asnani, Scientific Research Council  
Dr. Malcolm MacDonald, Marketing Consultant  
Mrs. Jan Hurwitch-MacDonald, IICA  
Mr. Vivian Chin, IICA  
Mr. A. C. MacDonald, IICA  
Ms. Hyacinth Campbell, Hillside Agriculture Project

SPEECH MADE BY MRS VIVIENNE LOGAN, AGRICULTURE ADVISOR,  
BUREAU OF MANAGEMENT SUPPORT, OFFICE OF THE PRIME MINISTER AT  
THE INAUGURAL MEETING OF THE YAMEX COMMITTEE, ON MARCH 7TH

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In the context of a which the Jamaican economy operates today, agricultural modernization and diversification constitute agricultural policies for stimulating production, particularly in the export earnings sub-sector to increase foreign exchange earnings and savings, to increase employment and raise incomes, and to maintain and enhance the natural resource base. The present government's agricultural policy which has been taking shape since 1981, as part of the structural adjustment programme, has aimed at agricultural revitalization and development.

The main thrusts strategy wise have been :

1. To put idle land to work to :
  - a) expand all export crops to meet market demand
  - b) substitute imported crops
2. To promote a more efficient use of land including the divestment of idle government-owned lands to enable expansion of production
3. To diversify production by stimulating non-traditional export crops in addition to export crops and import substitution crops
4. To stimulate private investment by providing price incentives to farmers
5. Deregulation of commodity boards to achieve greater efficiency and flexibility in responding to the needs of the market
6. Improved credit
7. Improved technology
8. Improved marketing facilities
9. Disease control
10. Land capability mapping and zoning
11. Exemption from income tax for agricultural operations and reduced duty for imported vehicles

These structural adjustment measures, despite the painful changes to stabilize the economy and respond to the difficult trade and financial environment, have produced positive

supply responses for most export crops such as coffee and cocoa, mainly due to favorable shifts in the terms of trade, while sugar and bananas have undergone substantial recovery in guaranteed markets.

Important increases in production have taken place also for some import substitution products such as milk, beef, chicken, rice and fish, where pricing policies consequent on the adjustment process (including devaluation) had an incentive effect on production.

However, in the domestic crop sector, where most of the low income farmers are engaged, production levels and farm incomes have not moved at the same pace as the export crop or import substitution crop sector, and farm gate prices have just kept pace with the rural price index. It is to be noted that small farmers are dependent on good weather conditions because in general their farms are rain fed. Following adverse weather conditions in 1985 and 1986 for example, domestic crop production fell by over 3% per annum.

Some domestic crops however are now contributing to export earnings, in particular yams, and pumpkins. Export of this group (ethnic foods) increased from 8.5 million pounds in 1980 to 24.6 million pounds in 1984, to 28.9 million pounds in 1987. Exports of yams in 1987 amounted to 18 million pounds. This is an area that will improve with better organization of the marketing and distribution system and with better production and extension help to increase yields and productivity, which brings me to the purpose of this meeting.

It will be important for the agricultural sector to have more access to appropriate technological innovations as this will be a positive factor in establishing competitiveness in foreign markets. One particular project which is one of the means to the ends mentioned is the Cropping Systems Project being executed by the Ministry of Agriculture with technical and administrative support of IICA. Through this project is the testing of a new system of transferring technologies needed by small farmers to improve their efficiency and productivity. Such improved technologies include the minisett yam production technology which is the basis of our meeting here today.

In order for Jamaica to compete on the export market we must reduce the price of yams or produce a better quality yam. The testing of minisett yam production technology on small farms therefore is very important. The results obtained to date indicate that the use of this technology lowers the total cost of production per unit area by approximately 22%; raises the level of yields to 2630 pounds per square chain as compared to 1200 pounds per square chain with the traditional methods, and reduces the unit cost of production to 40 cents

per pound compared to \$1.10 per pound using the traditional methods. This new technology has the potential of transforming yam on small farms from a subsistence crop into a major export crop, into a foreign exchange earner for the country; and into a major income earner for farmers. IICA must be congratulated on the creation of this committee, the purpose of which is to jointly recommend a strategy for the promotion, production and marketing both locally and overseas of yams from the small farming sector particularly using minisett technology. Often we find in Jamaica that research work is undertaken with very important results, but somehow the commercial application is lacking so the research is never fully utilised. This committee is a vehicle through which to take the research and development efforts of minisett technology into the realms of commercial application.

I think IICA should be congratulated in its efforts to foster joint actions for solving specific problems in agriculture. The cooperation of all the agricultural agencies and international funding and technical cooperation agencies to jointly solve agricultural; problems will ensure a smoother development of the sector, especially since Jamaica seeks to make profound changes in traditional concepts concerning economics, agriculture and development that have prevailed for many years. These changes touch upon medium and long term strategies and the relative importance which the various sectors have in revitalizing the economy. The analysis of the agricultural sector, to which we have all here devoted a large part of our effort, represents a major step towards our taking those actions to enable us to resume and pursue the path of growth, overcome poverty, malnutrition and lack of development.

Agricultural modernization and development will advance more quickly if we all work together and combine our efforts to achieve together what we cannot achieve if we work alone. Agencies like IICA can play an important role by supporting our shared efforts for modernization and economic and social development through development of the agricultural sector.

The difficulties we have in mobilizing human and financial resources required and the small scale of much of our production which limits our ability to gain suitable access to technology and develop productive and marketing infrastructure and find solutions to many other difficult problems are all difficulties that can be reduced if not eliminated if we all foster joint activities to the solutions of these problems.

Thank you

**PROMOTION & MARKETING of  
MINI-SETT YAM TUBOR**

**Wyndham Hotel, March 7, 1988  
By Colin Williamson**

The purpose of this presentation is to give an overview of the problems affecting the marketing of Jamaican yams and show how the production by the mini-sett method would solve the major areas of concern and thereby poise the country to dramatically increase its share of the market.

The demand for both yellow & negro yam in the USA, Canada, & the UK has been well documented by market studies that have spanned the last decade. However, the major problems that have been identified from the very early studies appear to have been ignored to this very day and are only reaffirmed by the latest report.

(Agro 21 - Jim Murphry March/July 1987)

The major problems which can be successfully tackled by the mini-sett method of yam production are (not-listed within order of importance):

1. High cost of production
2. Inconsistent quality
3. Lack of uniformity
4. Poor grading and packing
5. Inconsistent & erratic shipments
6. Short shelf life

The cost of production has been prepared by Dr. V.L. Asnani, and by comparison with the traditional method is far more cost efficient and uses less planting material which would automatically result in an increased marketable yield even if the current acreage were to remain the same.

The major reason for inconsistent quality is the removal of the "head" for planting material. The cut-portion is the entry point for fungal attack thereby reducing the shelf life by many weeks. The mini-sett method of production would eliminate this need for removing the "head" to use as planting material and thereby result in extended shelf life.

Tubors grown by the mini-sett method are uniform, straight and lack the toes of our current crop and are between 1 1/2 to 4 1/2 lbs which my market research shows to be the range the consumers prefer.

Tubors grown by mini-sett method would allow for grading by size and open new markets.

Because the growing cycle is more predictable, planting to meet high price seasons (when supplies from other countries are low) would mean a better return to the grower and country and eventually lead to consistent and reliable penetration of the marketplace. Jamaican yams could become a major foreign exchange earner.

A longer shelf life would open new markets such as Japan, Korea, Singapore, Taiwan and others; and losses due to spoilage would be reduced to a minimum, thereby reducing the biggest single risk to this export crop.

Finally, a successful export crop which is grown by thousands of small farmers would have enormous economic and social benefits to the entire country.

Note - Jamaica is the only major supplier of yellow yam, the round leaf variety being the most popular, however because of its growing popularity, it is rumored that other countries are planning to enter the market which would be a disaster to Jamaica if the industry is not modernized.

Negro yam is comparable to white yams from Brazil, Colombia, and Puerto Rico. The Jamaican product has a preferred taste to the others, but because the quality fluctuates and the price is generally higher, the only time we have a chance to enter the bigger hispanic market is in June to September when the major hispanic market is in short supply. The higher price however has a depressing effect to the marketing efforts.



FIRST YAMEX INTER-WORK GROUP COMMITTEE MEETING

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Held in the Board Room of the Wyndham Hotel on April 20, 1988  
10:00 a.m. to 3:00 p.m.

Present were : Jan Hurwitch-MacDonald  
Vivian Chin  
Dr. Vishnoo Asnani  
Ms Freda Sangster  
Mrs Audrey Wright  
Dr Malcolm MacDonald  
Ms Hyacinth Campbell  
Mr Hopeton Fraser  
Mr Colin Williamson

Opening Remarks

Mrs MacDonald welcomed everybody to the meeting which was scheduled to take place half way between the first two General Meetings. She stated that the results have been rewarding so far. For today they would try to informally itemise where the groups are and coordinate their efforts so that at the next meeting, one coordinated report can be presented from the 3 work groups.

Report of the Promotion Work Group

The report from the Promotion Work Group was given by Ms Freda Sangster, chairperson of the group :

Two meetings of the YAMEX Promotions Committee were held. However the representatives from Ministry of Agriculture, Jamaica Agricultural Society and the Christiana Potato Growers Cooperative were absent. Mr Hopeton Fraser (Ministry of Agriculture) and Mr. W Morgan (JAS) met with the chairperson independently and their views were incorporated into the report presented.

Limitations - Both Mr Fraser and Mr Morgan indicated their willingness to assist, but expressed concern over their organizations' inability to participate in a meaningful way, if funding was not identified to meet the expenses their officers were likely to incur. It was felt that it was necessary for funding to be identified so that the committee would know how it should operate and have an idea of the budget which would be available for financing the activities of the promotional committee.

All the agencies indicated that their organizations would be unable to finance the activities, but would be willing to utilize their officers, and JNIP would be willing to undertake the responsibility for preparing promotional literature which would be required. In order to develop the programme certain assumptions were made :

1. That the Production Committee would produce minisett yams for demonstrations
2. That funding would be made available by IICA
3. That the Marketing Committee would ensure that farmers would have a guaranteed market and pricing structure.

Training the Trainers - With the assistance of Dr Asnani, officers of the Ministry of Agriculture, Jamaica Agricultural Society, Agricultural Credit Bank and P.C. Bank managers, would be identified and undergo a course in minisett technology. These officers would be used to undertake demonstration sessions for farmers, and would be selected from the target areas listed below. At least one from each, with two from Ministry of Agriculture would be needed from each parish.

#### Promotions

1. Special areas were selected for the pilot programme, namely :
 

Manchester	-	Christiana and Devon
Trelawny	-	Wait-a-Bit
St. Ann	-	Alexandria, Buxton and/or Browns Town
Hanover	-	Cascade, Harvey & Pell River
2. The selected trainers are to be used to conduct demonstrations for farmers at JAS meetings and special promotional meetings organized by the Extension Service, A.C. Bank and P.C. Bank staff.
3. Preparation of minisett technology literature. JNIP volunteered to undertake the preparation of promotional literature. This booklet would be in very simple language and would show the following :
  - How to obtain credit
  - Differences in yield from traditional and minisett yams
  - Anticipated prices
  - Marketing information
  - Materials and labour costs, etc.

4. Utilization of established demonstration plots for preparation of demonstration plots in the target areas.
5. Video on minisett technology to be used on demonstration days.
6. JIS and media houses to be used for media coverage at the appropriate time for :
  - a) Promotion of farmers workshops
  - b) Media coverage of demonstrations
  - c) "Farm Well My Friends" radio programme on minisett technology
  - d) JNIP's Public Relations Department will assist with promotion and liaising with the Press at the appropriate time.

**Budget** - Budgetary requirements for training the trainers and farmers demonstration workshops were identified as :

Preparation of sites	\$10,000
Lunch for trainers (20x15)	300
Lunch & refreshments for 200 participants for demonstrations 200 x 20 x 4	16,000
Transportation, stationery & publicity	3,700
Contingencies	<u>2,000</u>
<b>TOTAL</b>	<b><u>32,000</u></b>

Incentives To Farmers - Before this programme is developed further, there should be a common understanding that exporters would be willing to guarantee the market, prices, and be prepared to undertake a crop lien programme for farmers who will be unable to provide acceptable security to the P.C.Banks. Without a crop lien programme, farmers would have to provide their own security.

Recommendations

1. That a marketing person is placed on the Promotions Committee
2. That a cheaper form of mulch is used, such as grass, to which our farmers are accustomed. Plastic mulch, it was felt, is costly and many small farmers would be unable to afford this.
3. That materials will be identified and made available for farmers' usage as well as for demonstration purposes.
4. Provision for incentive to encourage farmers to try minisett technology.

The following questions and observations were asked/made arising from the report :

- a) Dr Asnani pointed out that 20 extensionists were already trained in yam minisett technology (6 from the Eastern Caribbean and the remainder from Jamaica, drawn from almost the same areas which were selected by this work group as pilot areas. Mrs. MacDonald suggested that they could be identified and perhaps given a 2-week refresher course, similar to the one carried out at Twickenham Park in 198?.
- b) Mrs Wright said that her office (JNIP) would be willing and able to assist in production of a simply worded, graphically illustrated pamphlet or posters which could be used for example at JIS "village meetings"
- c) Regarding the demonstration plots Mr Fraser pointed out that these already exist in the areas from which the extensionists formerly trained in minisett technology were selected.

- d) In response to a question on the possibilities of institutionalization of the project within the Extension Division (raised by Dr Asnani) Mr Fraser said that the role of the Extensionists is to be agents of change and promote the transfer of technology, therefore this should not pose a problem for them.
- e) On the question of using grass mulch, Dr Asnani pointed out that the experience has been that grass works effectively but it is very highly labour intensive. As a result, the costs rise proportionally with the increase in the size of the plot, and therefore it is now recommended only for small plots. He said the feasibility would have to be looked at very closely.
- f) Mr Fraser recommended the involvement of the Land Authorities in the project; Mrs MacDonald pointed out that it was planned to fit into those structures which were already in place, and bodies such as the PMO's would be looked at also from the point of view of coordinating the selection of farmers and the monitoring of contractual agreements made with buyers.
- g) Mrs MacDonald raised the question of what incentives could be offered to Extension Officers. Some suggestions were :
- that these officers be selected on the basis of who is able to generate more interest in the miniset technology among their farmers
  - that an overseas training course could be offered as an incentive to "qualifying" extension officers
- h) Mrs MacDonald suggested that some thought be given to the use of a revolving yam project where initially farmers are provided with planting materials by the project. These farmers are responsible for producing planting materials for passing on to the next "generation" of farmers.

**Report of the Production Work Group**

The report of the Production work group was given by Dr Vishnoo Asnani, the chairman :

The work group met three times in the period (unfortunately Dr. Baker was only able to attend the 2nd meeting).

Four areas were identified as having the most potential for production of technology transfer. These are :

- a) Minisett technology
- b) Research & development - particularly research into producing uniform sprouting
- c) Treatment of planting material for control of nematodes
  - with pesticides, which is very expensive and potentially hazardous to health
  - with hot water, which is cheaper, less hazardous health-wise, and more accessible in rural areas
- d) Intercropping systems - which have shown rewarding results in terms of additional profits to the farmers

a) Minisett Technology - It was felt that many farmers want to try the minisett technology, but they feel confused because the information which has reached them was unclear. Some farmers have expressed an interest in producing minisett yams, but they are unsure about producing the planting material themselves. They would prefer to get already sprouted cutlets. They also expressed doubts based on the limited availability of the plastic mulch.

b) Research - The work group expressed an interest in continuing research into minisett technology, especially in the area of developing uniformity in the sprouting of the cutlets.

c) Treatment of planting material for nematode control - The work group suggested a community based site (in the suggested parishes/towns) where cutlets can be sprouted for the farmers in the area, and where hot water treatments for nematode control could be either carried out or monitored.

d) Intercropping - A series of suggestions were made by Mr Chin of various possibilities for intercropping between the yams, using different vegetable crops.

#### QUESTIONS & SUGGESTIONS ARISING OUT OF REPORT

Mr Fraser - what about damage to sprouted plants in transit to the farms? Wouldn't it be better to have each farmer deal with his own preparation of planting material?

Dr Asnani - All technical advice/experience which would be required can be obtained free from within the YAMEX Committee

Mr Chin can provide coordinating support regarding  
intercropping

Mr Hutton can provide coordinating support regarding nematode  
control

Dr Asnani can provide support regarding minisett technology  
and research

#### Report of the Marketing Work group

The Marketing workgroup report was presented by Mr. Colin Williamson and Dr. Malcolm Mac Donald.

#### Background

1. Jamaica has been exporting yams for some time, and has developed considerable knowledge regarding US, Canadian and British market.
2. The principal consumers up until the present for yellow yams are Jamaicans who have migrated to these countries. This is a small proportion of the total consumer market in these countries.

It is also a slow growth market for two reasons. First, it is limited to growth in the number of Jamaicans who migrate, and to their descendants. Migration restrictions are slowing down the growth of this market. Second, descendants raised in these countries tend to assimilate their eating habits, and cannot be expected to continue to use yams in their diet as much as their parents. It is possible that in the middle and long term this migration-fuelled market may decrease in size.

3. The costs of production and sale price of Jamaica's yellow yams are higher than those of other types of yams produced in other countries such as Brazil.

They also cost consumers double or more the price of Irish potatoes, the main root crop sold in North America and Great Britain.

4. Compared with Irish Potatoes or other staple fruits and vegetables in these markets, the volume of Jamaican yams is extremely small. This restricts the relative amount of advertising or promotion for yams which is economically viable.

5. A successful yam export program should address the following :

- Reduction in production and marketing costs
- Improvement in appearance of the yams sold, and of their packaging.
- Entry into the larger, non-Jamaican-migrant market

#### Yam Export Program and Strategy : Some suggested Components

##### Short Term

1. Concentrate on mini-sett yellow yams, at least initially. They are a more attractive and saleable product, and offer the possibility of lowering costs, through yield increases and lower harvesting losses.
2. Set as a target for the first year the production and export of mini-sett produced yams amounting to 20% of current yam exports. This is estimated at between 2.0 and 2.5 million pounds.



While the improved quality may increase the volume purchased slightly, the mini-sett produced yams will large part displace yams produced using traditional methods. It is felt that an introduction of 20% the first year will not cause serious disturbances in domestic yam prices, since the displaced traditional yams will represent a relatively small percentage increase in domestic supplies (Estimated at between 0.2% and 2%).

3. Beginning the second year, make mini-sett technology available to all small farmers who wish to adopt it. All growers who sell for export will have had one year to observe the demand and price differences for mini-sett produced yams, and to decide whether or not they wish to adopt the technology.

#### Long Term

4. Establish by Law, an exclusive brand of Jamaican yams, with specific regulations with respect to production, harvesting, inspection, sizing and packaging.

The example of Blue Mountain Coffee can provide some applicable experience.

5. During the first year, do test marketing in selected cities in the US and Canada, with respect to preferred yam sizes and packages. In addition to traditional ethnic markets, the testing should be done in non-ethnic retail outlets; supermarkets and specialty food shops.

Preliminary studies should also be conducted with the goal of determining what sorts of product promotion efforts would be cost effective.

If sufficient funds are available, demand response to different price levels for the yams should also be determined.

It is believed that sufficient sized yams of different weights can be obtained for these market studies by grading mini-sett produced yams.

6. As soon as sufficiently clear results are available from the market studies to identify optimum size and packaging, intensify research trials to determine how to produce a maximum proportion of yams with the premium size(s), and introduce this technology to producers as rapidly as possible.
7. At the same time, the regulations for the exclusive brand, with respect to packaging and sizing, should be put into effect, and the brand launched, using the product promotion techniques determined to be most cost effective.

The following points were made during the discussion:

There was some discussion around the selection of the type of yams to be used for the project. Jamaica is not competitive internationally with the Negro yams, because of the cost, but the quality is very desirable. If the cost of production could be lowered it could become very competitive.

It was suggested that the Marketing Division of the Ministry of Agriculture could come up with, and monitor, guidelines for product inspection, quality control, and a YAMEX seal of approval.

The role of the YAMEX committee in these developments was discussed, as was the issue of institutionalization.

Mrs. MacDonald suggested that the recommendations of the three work groups fell into a three staged 4.5 year project which might be a way of integrating the results of the work groups. She presented the following implementation plan:



The group agreed to this form of presenting the recommendations and discussed the changes which might be considered. It was decided that:

1. The inter-workgroup would continue meeting to refine these recommendations into project form; the next meeting will be Friday, May 6, 1988 from 8:00 am to 12:00 noon at the Wyndham Board Room.

2. The members of the inter-workgroup would prepare for the next meeting by:

2.1 Reviewing the implementation chart above and making suggestions for changes.

2.2 Reviewing the individual workgroup recommendations and putting them into a format similar to that devised by the Promotion workgroup in order to obtain consistent presentations that eventually will be combined into one document.

2.3 Finalizing the budgets for the three workgroups or project components

#### OTHER IDEAS WHICH HAVE SURFACED

1. Producer coops/growers marketing coops
2. Other root crops
3. Price stabilization/averaging (the Mexico case)

SECOND YAMEX INTER-WORK GROUP MEETING

SECOND MEETING OF THE INTER WORK GROUP COMMITTEE OF THE YAMEX COMMITTEE, HELD AT 8 A.M. ON MAY 6, 1988 IN THE BOARD ROOM OF THE WYNDHAM HOTEL

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Present were : Mrs Jan Hurwitch-MacDonald  
Mr Vivian Chin  
Dr Vishnoo Asnani  
Mrs A Wright  
Mr Colin Williamson  
Ms Freda Sangster  
Dr Malcolm MacDonald  
Mr Hopeton Fraser

1. Reports

1.1 The report from the Promotion work group was given by Ms Freda Sangster, chairperson of the group.

Ms Sangster reported that the main work of the committee was to tidy up their suggestions and ideas. There were a few additional suggestions :

\* having a stall at the annual Denbigh agricultural show

\* amendments to the budget were made (details in appendix)

\* having a 'fact sheet' available by August for distribution at the Denbigh show

The budget proposal was discussed in detail, particularly with respect to areas of overlap between the work groups, and areas of possible savings. It was pointed out that the plan was to use already existing experimental plots and institutions, and the suggestion was made that there will in fact be one major budget.

Mrs MacDonald said that the exhibition would have a 'trial run' in early July as a minisett technology presentation would be mounted at the Dialogue on Development conference at the Jamaica Conference Centre.

- 1.2 The report of the Production work group was given by Dr Vishnoo Asnani, the chairperson. He reported that the sub-committee had not met since the last inter-work group meeting on April 20, but that they had been in touch with each other and refined their thinking.

The major problem with this suggestion was the financing of the plastic mulch, fertilizer and pesticides, planting material for both yams and intercropping material.

In response to Dr Asnani's comments Mr Colin Williamson proposed to make available his property/sheds/sawdust in going ahead with setting up the sprouting of some cutlets.

### Suggestions

Dr MacDonald suggested that MINAG could be approached for seconding somebody to YAMEX to 'bird dog' the project - possibly someone from the marketing division.

Mrs MacDonald suggested putting a staff position within the project proposal, with the understanding that the person would work out of MINAG.

- 1.3 The report from the Marketing Work Group was given by Dr Malcolm MacDonald.

This was an up-dated version of the report given by this committee at the April 20 meeting, in which the following suggestions were made :

- \* Looking at other varieties yams for minisett technology especially negro yams and yampies
- \* That the Promotion work group has responsibility for promoting marketing as well as production

## 2. Projects

- 2.1 Colin Williamson presented the pilot project profile which would provide an opportunity to initiate some of the activities recommended on a small scale, by the three work groups with existing funds (farmers, exporters, IICA)

It was agreed that the concept of the pilot project is a good idea but it should be rewritten generically replacing OMNI International with 'Cooperating Exporters'

- 2.2 As it was agreed that the recommendations of the three work groups should be presented in a project format, the inter-work group spent the remainder of the meeting formulating a draft project profile for the medium term. The problem,, objectives, strategy, activities (implementation plan), organizational structure and budget follow.

### 2.2.1 Problem :

Jamaica is not able to compete on the yam export market due to poor quality yams, low yields and high costs of production

In addition, small farmers are not using technologies which address these problems, and their production is not reaching the export market.

### 2.2.2 Objectives

General - Increased quality and quantity of Jamaican yam exports on a sustained basis.

Specific - To increase small farmer income through access to the latest yam production technology, and to the export market.

### 2.2.3 Strategy

Improve the promotion, production and marketing of Jamaican yams by working with small farmers and exporters using an innovative methodology.

Components :

- Promotion
- Production
- Marketing







Yamex seal (inc. in test marketing & PR org)

Staff

Travel

Vehicles

Consultants

Miscellaneous

Overhead

Institutional Activities

1. Strengthen PMO's
2. Create yam marketing organization
3. YAMEX committee to become project advisory committee

3 Proposals for next YAMEX meeting - May 30, 1988

- 3.1 Put together a conceptual project without the budget
- 3.2 Present the pilot project i.e. phase 1
- 3.3 Concentrate work on project in this committee now to be the project coordinating committee. Work groups can be phased out
- 3.4 Seek approval of full committee for project planning to go ahead.

## New technology to improve yam production

A NEW effort is being made to improve the growing of yam for the export market with the introduction of what is known as Mini-sett technology.

This was brought out at an inaugural meeting held at the Wyndham Hotel on Monday by a new committee for the promotion of yam export, known as YAMEX. The Committee was set up through the Inter-American Institute for Cooperation in Agriculture (IICA).

The islands yam production has been falling and as a result the vibrant export market the country had is being taken over by other yam-producing countries, notably Brazil, Dominican Republic and Puerto Rico.

The chief architect in Jamaica's Mini-Sett project is Dr. Vishnoo Asnani, formerly of the International Institute of Tropical Agriculture in Nigeria, and now the Scientific Research Council (SRC).

The Mini-sett project is a departure from the traditional yam growing method where sticks and mounds are used. The technology calls for the cutting-up of tubers into small bits weighing about two ounces, which are then placed in a media of saw dust or nursery bed, so that sprouting can take place.

Planting of the tiny bits are then done in mounds and it takes eight to nine months to produce the required 3-4 pound tuber.

According to Dr. Asnani, the method can allow the farmer to produce between 10 and 20,000 tubers per acre or 35-40,000 pounds per acre. This is compared to the traditional yield of 8-10,000 pounds per acre.

### Problems

The problem, the importers are contending, is that the traditional method produces large yams with fingers which are not acceptable by the consumers in major markets in the US.

Mr. Colin Williamson, an exporter/importer, told the meeting that when the tubers were produced that way, it carried problems of packaging and that they were easier to spoil. He said that what the consumers were looking for were small pieces of yam which were not easy to carry fungus.

The fact is that the yam grown through the Mini-sett method, does not grow very large, is easy to pack

which encourages the growing of fungus.

This is a method that is being used in other countries as observed by officials of the Ministry of Agriculture and the IICA.

Minister of State in the Ministry of Agriculture, Anthony Johnson told the meeting that last year the country produced 500 million pounds of yam, making it the 4th largest produce behind sugar, banana and coffee.

He said that 1987 was the first year since 1981, that there had not been any growth in yam production in the island compared with an annual growth rate of 27% that it had enjoyed.

"It is critical that we realise that we are in a state of crisis. The figures for the first two months of this year is not better than that of last year," he said, adding that he did not see yam production doing any better this year than last year.

Mr. Johnson said that there were several factors that could be attributed to the low level of production. He named the flood rains and "heavy weather" in the latter part of last year.

### Tuber crops

According to a study, 13 million pounds of yam were exported in 1984, and 19 million in 1985 which generated US\$2.5 million (J\$13.75 million) and US\$4 million (J\$22 million) respectively. The study said that tuber crops had accounted for 57% (yam with 29%), vegetables 20%, fruits 11% and others 4%.

And Mrs Vivienne Logan, of the Bureau of Management at Jamaica House, told the meeting that in order for the island to compete on the export market, it should reduce the price of yam or produce a better quality product, hence the importance of the Mini-sett technology.

She said that the new technology had the potential of transforming yam on small farms from subsistence into a major income earner.

The meeting had exhibits of the yam produced through the new technology by farmers in Guys Hill, St. Catherine, who had been on experimental plots.

The meeting which was chaired by Mrs. Jan Hurwitch-McDonald the IICA representative, saw the setting up of sub-groups to look further into production technology, marketing and promotion of the

THE DAILY GLEANER, SATURDAY, MARCH 12, 1968



(DaCosta photo)

**EXPORT YAM:** Keen interest is being shown in the method of producing small exportable tubers (yam) in the island. Here Dr. V. Asnani (2nd left) of the Scientific Research Council who is developing the new technology in Jamaica, discusses with farmers from Guy's Hill how a saw dust bed can be prepared for setting of cutlets of yam for sprouting. Others from left are Mr. Colin Williamson, an exporter/importer of tubers and other agricultural products; Mr. Ken-

neth Grossman and Mr. Lincoln Williams both of Guys Hill. The tubers in picture are the products of the new technology. Those at left were grown from the tiny bits (usually weighing about two ounces) at right. The display was put on at the Wyndham Hotel on Monday during the inaugural meeting of YAMEX a committee being established by the Inter-American Institute for Co-operation, for the promotion of yam export.

## FARM FRONT

### *New technology...* **Interesting changes for yam industry**

By John Plowman

**THE FORMATION** of a committee for the promotion of the export of yams could hardly have come at a better time. Because it has come at the right time, we can forgive those behind the venture for falling prey to what one writer recently described as "acronymitis", in naming the new committee "YAMEX".

It was pointed out at the launching of the new committee that the production of yams in Jamaica has been declining, and there has been no recent growth in production. What is worse, is that we are now losing our export market for yams to other countries, primarily Brazil, the Dominican Republic and Puerto Rico. A number of factors could have influenced the fall off in production, not the least of which could be the effects of praedial larceny.

The loss of the export markets presents a different picture and the primary reason for this loss is that we have stuck to the traditional ways of growing yams while the other yam-exporting countries have been embracing new technologies which produce a yam with more eye appeal.

A few years ago there was the recognition that the export market was demanding a uniform-shaped yam, without the many "toes" that our yams tend to have. Other countries have taken a lead in producing this type of yam and are enjoying the benefit of increased export sales.

All is not lost, experiments have been carried out locally with one new technology, the "minisett" method of growing yams, which was developed in West Africa. The results have been encouraging. The new technology was introduced to Jamaica and is being actively promoted by the Inter-American Institute for Co-operation in Agriculture.

Some small farmers in the Guy's Hill area have tried the new technique with good results and one large company, Jamaica Poultry Breeders, a subsidiary of Jamaica Broilers, have produced extremely good results with Round Leaf yellow yam on a two-acre plot in St. Ann. The company has recorded yields of 25,000-30,000 pounds to the acre, compared to 8,000-10,000 pounds to the acre in the traditional type of yam cultivation. The company has also found that by using the "minisett" technique, a uniform yam is produced which weighs from two to six pounds. The yam grown with the new techniques is ready for harvesting in eight to nine months.

Jamaica Poultry Breeders plans to expand its acreage in yams to 26 this year and expects to increase this to 200 acres in the next two years.

The company is convinced that by using the new technology, we will not only recapture, but also expand the export market for yams. It is currently examining the feasibility of using the contract farming methods it has employed successfully in the broiler industry, with yam farmers in the St. Ann area. The farmers would be encouraged to use the "minisett" method and would be provided with extension and other services as well as a market for their production.







