

PN-ABA-913

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

DATE:

8/25/88

MEMORANDUM

TO: AID/PPC/CDIE/DI, room 209 SA-18  
FROM: AID/SCI, Victoria Ose *VO*  
SUBJECT: Transmittal of AID/SCI Progress Report(s)

Attached for permanent retention/proper disposition is the following:

AID/SCI Progress Report No. 3.A-48

PK - Jan - June 1988

Attachment

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PROGRESS REPORT - JANUARY - JUNE, 1988

Title of Project : Collection, Classification and Evaluation of  
Dioscoreas, Aroids and Plectranthus spp.

PROFESSOR H.P.M. GUNASENA

The following investigations were undertaken during the period under review.

1. Germplasm conservation.
2. Vegetative propagation experiments with Dioscoreas.
3. Experiment to evaluate yield and vegetative growth performance of different sizes of seeds.

1. Germplasm Conservation :

All the accessions of Dioscoreas collected are being conserved at the University Experimental Station at Dodangolla, Kundasale. There also include some Aroids and Plectranthus spp.

2. Vegetative propagation experiment :

The five groups of seed tubers from each of the 10 cultivars obtained from the experiment 1986, were investigated for their yield performance during the 1987 season and final yield was recorded in January 1988. See table 1.

Differences among cultivars were observed and an increase of yield with the increment of the size of the seed tuber was also recorded.

3. Multiplication of yam varieties for research purposes and distribution among the research institutions is being continued.

4. Another experiment was designed to confirm the results of the experiment in section 2.

The following weight groups were considered for the 10 cultivars used in previous experiments.

	<u>Weight Groups</u>
1	100 - 200 g.
2	200 - 300 g.
3	300 - 400 g.
4	400 - 500 g.

This experiment was established in the field on the 13th June, 1988. The objective is to study the size of the seed tuber that could be used to produce a high yields and to evaluate vegetative growth performance. Destructive samples will be taken monthly and Final yield will be taken. This experiment is scheduled to be completed at the end of January, 1989.

5. Participation in Exhibitions :

It is important to keep the public informed about the potential importance of the yam crop as a under-exploited plant species in Sri Lanka. In increasing the public awareness for the crop it was important to participate in following two exhibitions.

1. Exhibition on Plant Conservation Methodology held in the Botanical Gardens, Peradeniya.
2. Exhibition organized on the Environmental day at the Institute of Fundamental Studies, Hantane, Kandy.

6. Contribution to the National Herbarium :

Specimens of important yam cultivars from the germplasm collection were conserved in the National Herbarium, Botanical Gardens, Peradeniya. It will be a permanent reference on yam cultivars for those interested in this species of plants.

7. Involvement of Postgraduate Students :

Mr. D.A.P. Dissanayake is involved with yam research under this grant. He has completed a major part of his research but may have to continue till June/July, 1988.

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8. Presentation of Research findings at Workshops :

The work on Dioscorea yams were presented at two Workshops.

1. S.N.Harischandra and H.P.M. Gunasena - Evaluation and characterization of some commonly cultivated Dioscorea yam accessions in Sri Lanka - International Germplasm Conservation Methodology Workshop - NRESA/Royal Botanic Gardens, May 1988.
2. H.P.M. Gunasena - Botanical classification of Dioscores in Sri Lanka - P.S.T.C. Grantees Workshop, Washington DC, USA June 5 - 9.

Future Plan of Work :

1. Some experiments that are field planted will be confirmed. Their yields could be harvested only around January/February, 1989.
2. Analysing data and Report writing will be undertaken.

Note : It may be necessary to extend the project on no cost basis as harvesting of the last few experiments will be delayed. Therefore, an extension till March 1989 is requested.

Table 1. Tuber per plant in kg. for the experiment on yield performance seed tubers obtained from minisett technique.

Cultivar	125 g.	100 g.	75 g.	50 g.	25 g.
1. Innala	1.21	1.18	1.02	0.93	0.91
2. Nigerian	3.46	3.31	2.82	2.65	2.63
3. Raja ala	1.94	1.92	1.76	1.71	1.54
4. Thambala	2.15	1.90	1.91	1.84	1.56
5. Kahata ala	2.22	1.98	1.65	1.60	1.48
6. Rata ala	2.25	1.98	1.92	1.68	1.44
7. Le-danta	2.87	2.26	1.87	1.56	1.36
8. Angili ala	2.18	1.96	1.84	1.44	1.35
9. Hingurala	1.56	1.26	1.19	1.10	1.02
10. Kombuwalli	2.46	1.97	1.63	1.46	1.13

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