

**REPORT OF THE MONITORING OF THE  
WEST AFRICAN SMALL GRANTS PROGRAMME -  
NIGERIA**

**USAID/SAFGRAD/FMARD PROJECT**

**ON**

**AGRICULTURAL TECHNOLOGY TRANSFER AND  
COMMERCIALIZATION IN NIGERIA**

**FEBRUARY 2003**

**PROJECTS COORDINATING UNIT (PCU)  
Fed. Ministry of Agricultural and Rural Development Sheda, Km 29,  
Suleja-Lokoja Highway.**

631  
USA/5F

**REPORT OF THE MONITORING OF THE  
WEST AFRICAN SMALL GRANTS PROGRAMME -  
NIGERIA**

**USAID/SAFGRAD/FMARD PROJECT**

**ON**

**AGRICULTURAL TECHNOLOGY TRANSFER AND  
COMMERCIALIZATION IN NIGERIA**

**BY**

**Dr. O.O. OYEBANJI**  
Programme Leader  
Adaptive Research & Extension

**MRS. V.C. AGU**  
National Coordinator  
Women In Agriculture

**PROJECTS COORDINATING UNIT  
FED. MINISTRY OF AGRICULTURE & RURAL DEV. (FMARD)  
SHEDA, KM 29 SULEJA-Lokoja highway  
08035909268, 09/8821051, 09/8821033, 09/5235685  
08044184886 and 08033119902**

## **Acknowledgement**

PCU would like to place on record the cooperation of the Focal Unit Coordinators, the Facilitators and directly benefiting farmers during the monitoring exercise. At short notice, and in a few cases, no notice due to some communication gap, the monitoring team was well received by the project implementers who showed activities carried out and openly discussed progress, problems and prospects.

We are particularly grateful to the South Focal Unit Coordinator, Prof. Peter O. Oyekan, for guiding the team through, to almost all the project locations in his jurisdiction. His direction on the routes followed greatly facilitated linking up projects through the shortest and best motorways. Furthermore, his participation during the monitoring exercise provided the chance, not just of clarifying issues, but added valuable assessment of project implementation.

To the SAFGRAD International Coordination Office, we are glad for the opportunity to check actual performance with planned activities. The exercise has been illuminating. It has provided insights and lessons on another approach to agricultural innovation dissemination. We look forward to further collaboration in future.

## **EXECUTIVE SUMMARY**

The West African Small Grants Programme - Nigeria of SAFGRAD being supported by USAID was monitored from 31<sup>st</sup> October – 3<sup>rd</sup> December 2002. The objective of the monitoring was to assess the progress of implementation of the 18 projects designed to promote the commercialization of agricultural technologies to improve farmers' productivity and facilitate micro-enterprise development. There were 4 projects involving the multiplication of improved planting materials; 8, on post-harvest and farm produce processing; while 6 were on livestock and fisheries related activities.

Most of the projects (11) were facilitated by research institutions, thus establishing direct linkage between sources of technologies and their end users. The rest of the projects were facilitated by 3 NGOs, (2 international and 1 local); 2 Agricultural Development Programmes and 2 farmers' organizations. Beneficiaries were mainly male and female smallholder farmers some of whom were already engaged in the activities being promoted. Women participated in over 80% of the projects.

The projects were dispersed in 11 states of Nigeria, equally distributed in the northern and southern parts of the country. Information was sought on stakeholder's contributions, and activities, as well as achievements or expected results. Observations were discussed jointly with beneficiaries and facilitators. As much as possible agreements were reached on immediate remedial actions in implementation to achieve project objectives. The

decision on some remedial action above the scope of the monitoring team was reserved for the International Coordinator.

Projects were at different stages of implementation based mainly on time of approval and subsequently, release of funds. Almost all the technologies proposed for commercialization were available and participants enthusiastically collaborated in the programme. In the 'Enhancing Value-Added Ginger Production and Marketing project, the slicing machine, which was one of the technology components, was not available and there was no ready substitute. Although the proposed technology in the 'Improved Village Level Yam Flour Processing for Micro-enterprise Development' was available, it was not adapted to cottage industry level. The project substituted with an alternative that produced another type of yam flour that is also in demand.

The majority of the projects were on course, positively moving towards achieving their objectives. Projects that were not performing so well were only 4, arising mainly from not implementing activities as stated in the approved proposals. Nevertheless, there are prospects of salvaging these through re-arrangement of expenditures, and filling in identified gaps. One of the projects, however, is in dire need of financial rescue arising mostly from price inflation between time of project proposal and release of funds.

So far the implementation of the West African Small Grants SAFGRAD Projects in Nigeria is a worthwhile activity for all stakeholders. Some best practices emerged. For instance, two projects, namely, the 'Upgrading Local Sheep and Goats for Improved Production in Ogun State' and

'Certified Seed Multiplication and Dissemination Among Farmers of Oyo State', excelled in stakeholder sensitization and participation; as well as in record keeping by participants, cost recovery and revolving funds to other farmers. Other factors that contributed to the general good performance were observed to be good understanding of the technological packages being commercialized and experience from previous similar programmes. The combination of the best practices, good performances and the few poor implementations provide a pool of experiences for wider replication of similar projects in the country.

**Summary of Report on Monitoring of West African Small Grants Programme – Nigeria by PCU in December, 2002**

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
1.	<b>A. <u>Seed Increase and Distribution</u></b> Improved Pearl Millet Seed and Multiplication to Enhance Food Security	LCRI (US\$10,000.00)	Contract Seed Growers, Women Farmers Association and Millet Growers. (Borno State)	5 Ha. Breeder Seed; 6 Ha Foundation Seed; 16 Ha Certified Seed	1 Ha Breeder Seed  11.5 Ha Foundation Seed. N.A.	In spite of communication gap with FCU office, project implementation is on course.
2.	Production, Distribution and Marketing of Sorghum variety Samsorg 17.	IAR (US\$15,000.00)	Contract Seed Growers (Kaduna State)	100 Outgrowers 2ha, Foundation seed 100ha certified seed. 5 bags fertilizer.	50 outgrowers selected. 1ha foundation seed. 30ha. Certified seed. 3 bags of fertilizer supplied	Project implementation is fairly satisfactory.
3.	Improved Fruit and Vegetable Budding and Seedling Production	NIHORT (US\$5,200.00)	Horticultural Farmers Association Members (Ekiti and Oyo States)	80 farmers from four locations: 15000 budded citrus seedlings; 36000 pineapple suckers.	80 farmers trained from Ogotun location; 3000 citrus seedlings in pre-nursery; 800 budded seedlings in nursery; 100 stands of 8 varieties in	Project implementation needs improvement

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
					progeny orchard all at Ogotun location.	
4.	Certified Seed Multiplication and Dissemination among Farmers in Oyo State.	OYSADEP (US\$12,750.00)	Seed Out-Growers Association; Seed Sale Agents; Farmers at large. (Oyo State).	20 Seed Out-growers; 36MT of certified seed of maize, cowpea and soybean from 38 Ha.	19 Seed Out-growers selected and trained; 34 Ha of certified seed of maize, cowpea and soybean varieties multiplied and being processed.	Good linkage of key stakeholders in community-based seed production with high prospect of sustainability.
5.	Production and commercialization of sugarcane and cane sugar production by rural and urban farmers in Nigeria.	NCRI (US\$9,000.00)	Bida Sugar-cane Farmers Multi-purpose Cooperative Society Limited. (Niger State).	*4 ha seed farm for improved industrial cane planting materials  *20-25 ha Commercial Sugar-cane farm. *Fabrication/ installation of one unit 5-ton capacity brown-sugar processing plant.	2-ha seed farm for improved industrial cane established. * Fabrication of the processing plant has commenced. *Construction work on the building to house the processing plant has commenced through communal effort.	Project implementation is on course. The support to the project by the community through raising of N1 million for the construction of factory house is commendable. Cost recovery for the processing equipment should be worked out.



S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
6.	Dissemination of improved soybean technologies and commercialization of soybean-based products.	NCRI (US\$8,900.00)	Tunga-Maje Women Cooperative Society (FCT-Abuja).	<p>Cultivation of 2ha each of: TGx 1448-2E, TGx 1440-IE; TGx 1485-10 &amp; TGx 1019-2EB.</p> <p>Reactivation of the structures and facilities of the daddawa cottage industry.</p> <p>Development of efficient market structure.</p>	<p>1.5 ha for each of the varieties was established.</p> <p>Little progress recorded in the construction works of the multi-purpose centre.</p> <p>Fabrication of processing plant has not begun.</p>	<p>Project implementation needs refocusing in respect of soybean seeds and grain production.</p> <p>Construction of the multi-purpose centre is critical to the overall success of the project. Effort should be made to source fund for the activity.</p>
7.	Enhanced productivity of Sesame Cultivation and Efficiency of processing into commercial products.	NCRI (US\$7,450.00)	Kwandare Women Multipurpose Association. (Nasarawa State).	<p>About 8-tons of certified seeds from 10-ha farm cultivated by women.</p> <p>Installation of oil processing equipment.</p>	<p>7.5 ha was cultivated as against 10ha targeted hence yield will be below 8 tons anticipated.</p> <p>*Lack of skill in sesame production by women may further lower the yield.</p>	<p>The project implementation is on course. Men should be encouraged to assist the women group in sesame seed drilling in order to acquire the skill.</p>

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
				Establishment of Sesame demonstration plots by NCRI	*Fabrication of oil extraction equipment is in progress.	
8.	Enhancement of value added in Ginger Production and Marketing.	NCRI (US\$10,600.00)	Kwoi, NOK and Kafanchan Ginger Farmers/Marketer Cooperative Groups (Kaduna State).	Training, Supply of inputs, (fertilizer, herbicide and Planting material), fabrication of slicers, supply of tarpaulin, Linkages for marketing and group empowerment.	-100 bags of fertilizer were supplied. -Order placed for tarpaulin but not yet supplied. -FIIRO could not fabricate the prototype slicer due to poor funding. IAR to designed a prototype. -NRCRI was not contacted for improved planting materials. -Herbicides were not supplied to farmers. -Linkage has been made with major ginger industrial	-Project implementation is not satisfactory. -Much funds were directed at ancillary activities to the detriment of core activities meant to improve farmers productivity. -Fabrication effort for the slicer should be stepped up.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
					processors but farmer groups are not very strong.	
9.	Groundnut Oil Production in cooperation with women groups.	IAR (US\$9,100.00)	Givani Gora and Yarkasuwo (Kaduna State, Bebeji (Kano State) and Unguwan Madaki (Katsina State).	Training of women on use of motorized oil extractor, fabrication of equipment, Evaluation of product for aflatoxin.	-Training was conducted for the groups. -IAR fabricated and supplied the motorized oil extractor. -Local artisans are already familiar with routine maintenance of equipment.	Project implementation is satisfactory. -The success of the project appears guaranteed, hence IAR should prepare to meet the demand for groundnut oil processing equipment as they arise. -Recovered cost for equipment should revolve around other groups.
10.	Improved village-level yam flour processing for micro-enterprise development.	Partners for Development (PFD) (US\$7,500.00)	Utabar Women Development Association (Benue State)	- Training on project management and use of technology. - Purchase and installation of equipment by UAM:	- UAM is currently fabricating an equipment for production of high grade "Amala" as against yam flour. Reason for	Project implementation is satisfactory. Moratorium for credit given to the women group should be extended for project sustainability.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
				- Opening market linkages and project commissioning.	change is based on high energy requirement for the former. - A total credit facility of N200,000 has been administered to the farmers at 12% interest rate for 6 months.	
11.	Establishment of cassava processing industry.	Leventis Foundation Nigeria (US\$5,000.00)	Wepp and Leventis Farmers Multi-purpose Cooperative Society (Edo State).	- Sourcing, purchase and installation of cassava processing equipment. - Training on use of equipment and enterprise management. - Production and grading of gari. - Production of cassava chips and starch. - Market Linkage.	- Project fund of N558,000 has been received and transferred to the group. - Desired equipment was purchased and installed. - Training and test-running of equipment were done simultaneously. - Gari production has commenced.	Project implementation is satisfactory.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
12.	Ikorodu Cassava Processing and Marketing	Divine Daughters Multi-purpose Cooperative Society (US\$9,000.00)	Divine Daughters Multi-purpose Cooperative Society, Ikorodu (Lagos State)	<ul style="list-style-type: none"> <li>-Procurement and installation of the flash dryer and other item/grater, hydraulic press and sealing machine.</li> <li>-Secure the processing center and service of a laboratory for testing moisture content and microbial safety of product.</li> <li>- Training women group to produce improved quality wet fufu cake for fufu powder.</li> </ul>	<ul style="list-style-type: none"> <li>-The project has already received N800,000 from SAFGRAD out of the approved N900,000.</li> <li>-A project site has been acquired and processing shed erected.</li> <li>- The fabrication of flash dryer and hammer mill have been commissioned.</li> </ul>	Project implementation is not satisfactory. The beneficiaries need to be bailed out of their heavy financial problem before they can fully realize the profitability of this project.
13.	Improving Beekeepers Practice for Enhancing Production and Commercialization.	Biye Beekeepers Society. (US\$11,300.00)	Biye Multi-purpose Cooperative Society Giwa and Sabo Gari LGAs (Kaduna State)	<ul style="list-style-type: none"> <li>- Survey, selection and training of 50 farmers.</li> <li>- Establishment of demonstration bee farms at the sites.</li> <li>- Dissemination of technology</li> </ul>	<ul style="list-style-type: none"> <li>- Training of farmers generated much interest.</li> <li>- Five farmer groups including a women group have received various start-off items</li> </ul>	Project implementation is satisfactory and yielding the desired results.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
				through farmer to farmer approach	(Bee Hive, hive tool, Bee suits and smokers) for the establishment of Bee farms.	
14.	Transfer of Cane Rate/Grasscutter Rearing technology for commercialization by smallholder farmers (Establishment of a small-scale entrepreneur in cane-rate production).	IAR&T (US\$5,000.00)	Oyo State Cane-rat Farmers' Association (Oyo State).	<ul style="list-style-type: none"> <li>-Training on Cane-rat rearing and management of small enterprises.</li> <li>- Establishment of 2 pilot activities.</li> <li>- Supply of rearing equipment and animals.</li> </ul>	<ul style="list-style-type: none"> <li>- Training was conducted for both practicing and prospective cane-rat farmers.</li> <li>- Two farmers were selected for the pilot project and each provided with two (2) three-tier cages, one isolation cage and one carrier cage among others.</li> <li>The cages at each of the pilot centers were stocked with 6 does and 2 bucks.</li> </ul>	Project implementation is satisfactory and on course.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
15.	Utilization of Cassava plant-based rations for poultry and small ruminants by Aba Ara Oyo and Jamade Cooperative Farmers Groups.	Technological Vision Organisation. (TECHNOVISOR) (US\$6,250.00)	The Ara Oyo Atese Farmers Association and the Jamade Owolowo Cooperative Society (Oyo State).	<ul style="list-style-type: none"> <li>- survey of Project sites.</li> <li>- Purchases of equipment, facilities and stocks.</li> <li>- Training on feed and livestock production;</li> <li>- Introduction of improved varieties of cassava and marketing of products.</li> </ul>	<ul style="list-style-type: none"> <li>- The poultry component has taken-off.</li> <li>- Project base-line survey was on-going.</li> <li>- About 0.3ha of improved cassava variety (TMS 4(2)1425) multiplication plot has been established to produce planting materials for the cassava farm in each location.</li> <li>- Two cassava graters and 1000 day old chicks were distributed against point of lay pullets.</li> </ul>	All counter-productive hitches should be quickly removed during the implementation of this project in order to fully realize its profitability.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
16.	Upgrading and fattening of local sheep and goat for improved production.	Ogun State ADP (OGADEP) (US\$14,975.00)	Sheep and goat farmers LGAs (Ogun State).	<ul style="list-style-type: none"> <li>-Baseline survey, training and selection of animals with desirable characteristics.</li> <li>- Provision of simple feeders and drinkers.</li> <li>- Supply of breeder stock, improved nutrition and animal health care.</li> <li>- Funds recovery mechanism and revolving to other farmers.</li> </ul>	<ul style="list-style-type: none"> <li>- Baseline survey has been conducted but results being expected.</li> <li>- A project inception-training workshop was held for participants and Facilitators (EAs and Subject-Matter-Specialists).</li> <li>- for the upgrading component, 49 rams and 9 bucks of Yankassa and Red Sokoto respectively were purchased and appropriate health measures taken before distribution to farmers.</li> <li>- Plastic drinkers, wooden feeding troughs and compounded</li> </ul>	Project performance is very satisfactory. Profitability of this venture is assured.



S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
					supplementary feed were given to farmers.	
17.	Fish Feed and Seed Production venture to sustain fish farming in catchment areas.	National Institute for Fresh-Water Fisheries Research (NIFFR) (US\$4,500.00)	Gboko Fish Farmers Cooperative Society. (Benue State).	<ul style="list-style-type: none"> <li>- Training of Fish Farmers.</li> <li>- Supply of brood stock and feed production equipment.</li> <li>- Identification of ready markets.</li> </ul>	<ul style="list-style-type: none"> <li>- Training of fish feed compounding and fingerling production has been organized.</li> <li>- The society took delivery of one grinder, five mixers, one pelleting machine, overhead tank, two bowls, hormone, seven bags of maize, two bags of fish meal and 20 brood stock.</li> <li>- Society has commenced production of Fish feed with supplied equipment.</li> </ul>	Apart from the issue of cost recovery for items supplied, project performance is satisfactory. This should be put in place.

S/N	Project Title	Facilitator & Approved Budget	Beneficiaries and (State)	Targets	Achievements	Remarks
18.	Commercial Production of fish Crackers	The Nigerian Institute for Oceanography and Marine Research (NIOMR) (US\$53,500.00)	Ebute Afuye Women Fish Crackers. (Lagos State)	- Training, Supply of processing equipment and facilities.	<ul style="list-style-type: none"> <li>- Female members of nine fish cooperative societies at the Ebute Afuye Fish Estate were brought together to form Epe Women Fish Crackers Association.</li> <li>- A demonstration shed was constructed and fish processing equipment installed.</li> <li>- Training of fish crackers production has been conducted, while trial production has commenced.</li> </ul>	This project is yet to find its feet. The beneficiaries need to be properly trained in group organization and fish cracker production processes in order to fully realize the profitability of this venture.

## CONTENTS

	<u>Page</u>
ACKNOWLEDGEMENT	i
EXECUTIVE SUMMARY	ii
SUMMARY TABLE OF REPORT	v
TABLE OF CONTENTS	xvii
1.0 INTRODUCTION	1
2.0 PROJECTS	5
2.1 SEED INCREASE AND DISTRIBUTION OF HIGH YIELDING CULTIVARS AND MULTIPLICATION OF IMPROVED PLANTING MATERIALS.	5
2.1.1 Improved Pearl Millet Seed Increase and Distribution to Enhance Food Security	5
2.1.2 Production, Distribution and marketing of Sorghum variety SAMSORG 17	8
2.1.3 Improved Fruit and Vegetable Budding and Seedling Production	12
2.1.4 Certified Seed Multiplication and Dissemination Among Farmers of Oyo State	15
2.2 POST HARVEST AND FARM PRODUCE PROCESSING	19
2.2.1 Production and Commercialization of Sugarcane and cane sugar production by Rural and urban farmers of Nigeria	19
2.2.2 Enhanced Productivity of Sesame Cultivation and Efficiency of processing into Commercial Products	22

2.2.3	Dissemination of Improved Soybean Technologies and Commercialization of Soybean based products in Nigeria	26
2.2.4	Enhancement of Value Added in Ginger Production and Marketing in Nigeria	30
2.2.5	Groundnut Oil production in Cooperation with Women Groups	33
2.2.6	Improved Village level Yam Floor processing for Micro-enterprise Development	36
2.2.7	Establishment of Cassava processing Industry	40
2.2.8	Ikorodu Cassava processing and Marketing project	44
2.3	LIVESTOCK AND FISHERIES RELATED PROJECTS	47
2.3.1	Improved Bee keepers Practices for Enhancing Production and Commercialization	47
2.3.2	Establishment of a Small-scale Entrepreneur in Grass cutter production	50
2.3.3	Utilization of Cassava Plant-based Rations for Poultry and Small Ruminants	52
2.3.4	Upgrading Local Sheep and Goats for Improved Production in Ogun State	56
2.3.5	Fish Feed production venture to sustain Fish Farming in Catchment Area	59
2.3.6	Commercial Production of Fish Cracker	61
3.0	GENERAL OBSERVATIONS	64
4.0	CONCLUSION	69
	Appendix.	70

## 1.0 INTRODUCTION

The Semi-Arid Food Grain Research and Development (SAFGRAD) of the Scientific Technical and Research Commission of the African Union has the mandate to facilitate the improvement, production and utilization of food grains; the development of sustainable farming systems, as well as technology verification and transfer in rural Africa. Specifically, SAFGRAD has the responsibility of advancing agricultural research, development and natural resource management in the semi-arid ecology in more than 30 countries of sub-Saharan Africa.

One of the main thrusts of the SAFGRAD programme is promoting the transfer, adoption, and commercialization of agricultural technologies to generate income and employment in sub-Saharan Africa. This thrust had been articulated in the West African Small Grants Programme involving technology transfer and commercialization. The Programme has already been implemented in Burkina Faso, Senegal and Ghana. In Nigeria, SAFGRAD, through financial support of the United States Agency for International Development (USAID) is collaborating with the National Agricultural Research and Extension Systems to implement the Agricultural Technology Transfer and commercialization programme.

It is recognized that technology options that could substantially increase agricultural productivity of the various commodities (crops, livestock, fisheries, agro-forestry, etc) do exist in Nigeria. However, farmers and other end-users of agricultural technologies have yet to

fully benefit from results of research to improve their livelihood. A way of filling this gap is transferring the knowledge of the technologies to prospective beneficiaries. Therefore the purpose of the SAFGRAD programme is to promote and accelerate the transfer and commercialization of agricultural technologies by creating partnerships between research and extension systems, the private sector, Non-government Organisations (NGOs), communities and farmers' organizations.

The programme is also to strengthen the capacity of rural small holders and micro entrepreneurs to develop agri-business enterprises. Through competitive grants, proven, economically viable and environment friendly technologies are to be made accessible to end-users. The SAFGRAD projects are to serve as pilot activities to commercialize technologies in order to generate income and employment as well as enhance food security. It is expected that success stories could be scaled up at community and national levels.

Implementation arrangements include the establishment of two focal units, located at the Institute for Agricultural Research, Zaria and the Institute of Agricultural Research and Training at Ibadan for the northern and southern agro-ecologies respectively. Each focal unit has a Coordinator responsible for the implementation of the SAFGRAD Programme. To facilitate project execution the National Technical Steering Committee (NTSC) is established with the Head of Unit of Projects Coordinating Unit (PCU) as Chairman. Other members of the committee are, representatives of national and international research and extension organisations, the private sector,

USAID and SAFGRAD. Some of the functions of the committee are to screen and recommend for approval grant proposals based on established criteria; provide guidelines to enhance efficiency of the implementation of programme activities and monitor implementation of project activities.

The SAFGRAD managed USAID-funded West African Small Grants Programme in Nigeria has a life span of two years starting from March 2000 and ending in September 2003. Guidelines were issued for proposals to develop projects that enhance transformation of technologies into value added agricultural products. Emphasis was placed on small projects or enterprises with good chance of success towards food security as well as income and employment generation.

Project proposals for funding were received from varied agencies and organizations such as research institutes, Agricultural Development programmes (ADPs), NGOs, women's groups and farmer's organizations across the country. The NTSC screened the proposals and made recommendations for approval and funding. On the whole, a total of eighteen small projects with grant sums ranging from \$3,500 to \$15,000, were approved and funds released for their implementation. Among these projects, four were on multiplication of improved planting materials; eight on post-harvest enterprises, while six were on livestock and fisheries related enterprises.

The SAFGRAD Programme was launched nationally on 19 April 2002 at the Tungan Maje village of the Federal Capital Territory Abuja, the location of one of the projects namely, the "Dissemination

of Improved Soybean Technologies and Commercialization of Soybean-based Products in Nigeria.”

PCU was commissioned to monitor the projects in October 2002. The purpose of the monitoring was to assess the implementation of the projects towards stated objectives. In particular, deviations, constraints and problems in implementation were to be identified with a view to offering suggestions that can improve implementation. The monitoring exercise took place from 31 October to 3 December 2002 involving a total of nineteen days. All the projects, distributed in six States in the North (Niger, Nasarawa, Borno, Kaduna, Benue and the Capital Territory) and five States in the South (Edo, Ekiti, Oyo, Ogun and Lagos) were monitored.

Copies of the project proposals were obtained from the Focal Unit Coordinators and studied. Information was gathered from Facilitators and beneficiaries on contributions of each in implementation inputs, activities and results. Gender-specific information of the project activities and the participation of men and women in the projects were clarified.

Generally, observations were discussed with beneficiaries and facilitators. Agreements were reached in some cases, on necessary improvements to project implementation. In a few others, decisions on desirable improvements might have to be taken by the SAFGRAD International Coordination Office.



## **2.0 PROJECTS**

### **2.1 SEED INCREASE AND DISTRIBUTION OF HIGH YIELDING CULTIVARS AND MULTIPLICATION OF IMPROVED PLANTING MATERIAL.**

#### **2.1.1 Improved Pearl Millet Seed Increase and Distribution to Enhance Food Security - \$10,000.**

**Location:** Maiduguri – Borno State.

**Purpose:** Improved variety of pearl millet seed, namely SOSAT-C88 is to be multiplied and distributed to farmers, who would in turn increase their production of the millet grain. Processors and industrialists are to be linked to farmers for the uptake of the grains. Women farmers association would be taught diversified use of the millet grain to add to their traditional food products.

**Technology:** SOSAT-C88 is one of the improved varieties of millet released jointly by the Lake Chad Research Institute, Maiduguri and the Institute for Agricultural Research (IAR) Samaru, Zaria. Its qualities are early maturity of between 70 to 80 days, high yields of between 3-3.5 ton/ha as opposed to 0.8-1 ton/ha of local variety. It is also said to be very resistant to downy mildew and moderately tolerant to stem borer. Other qualities are the light colour of the food produced, which is preferred by consumers.

### **Collaborators**

- a) Contract seed outgrowers, women farmers' associations and the generality of millet growers are the direct beneficiaries.
- b) The National Seed Service (NSS) of the Federal Ministry of Agriculture and Rural Development would be involved to certify the seeds produced and possibly buy off surpluses from farmers.
- c) Lake Chad Research Institute is facilitating the project. Dr. O. G. Olabanji leads the Scientist's team.

**Activities:** 5 ha breeder seeds and 6 ha foundation seeds would be produced in the first year. 16 ha of certified seeds would be produced in the second year using 10 out growers. Training would be provided to participants on improved seed production, grain processing and utilization skills.

**Performance:** Although the project was in the first batch that was approved in 2001, funds were received in July 2002 due to some banking problems. In spite of the lateness, it was possible to have collaborating farmers for the foundation seed production at three locations. The foundation seed farms established were as follows: (i)

4 ha at Maiduguri; (ii) 3.5 ha at Benninshok; and 4ha at Kauri. These amounted to 11.5ha as against the 6ha proposed. However, only 1ha out of the 5ha of breeder seed farm targeted was planted. Training was conducted on millet production. Field days were held at the 3 locations at which 20, 25 and 20 farmers respectively attended.

The project supplied to participating farmers all inputs namely, seeds, fertilizers, including money for various farm operations. The 4ha foundation seed farm at Maiduguri was visited. The crop performed well and harvesting had started. The farmer's contribution was the provision of farmland to which the pearl millet was also inter-cropped with cowpea. There was no discussion prior to millet establishment on the sharing ratio between the project and the farmer. According to the Facilitator, the ratio would be determined after the harvesting and the yield weighed. He rationalized that the actual yield should be known before determining the sharing ratio.

Participants, however, indirectly benefited by acquiring the improved pearl millet seeds for their farms. The Facilitator assured that in the certified seed production plan, women out growers would be selected.

## **Observations and Recommendations**

- i. The lack of prior agreement between the participating farmers and the project on the sharing ratio of the foundation seeds being produced is capable of jeopardizing the effective organization and management of the seed production enterprise. It is hereby recommended that before the next phase of certified seed production, agreements on inputs and outputs be reached, documented and signed by participants (Facilitating Institution and Seed Outgrowers/Farmers).
- ii. To enhance the purity of seeds being produced, it is necessary that intercropping be discouraged at the seed farm. If possible, sole cropping should be made a condition for participating in the out grower seed production scheme.
- iii. As agreed during the monitoring visit, women farmers should participate in the next phase of certified seed production.

### **2.1.2 Production, Distribution and Marketing of Sorghum variety-Samsorg 17. - \$15,000.**

**Locations:** Samaru, Saminaka, Maigana, Samaru-Kataf, and Ikara Maigani all in Kaduna State.

**Purpose:** Farmers in Kaduna State have accepted the Samsorg 17 sorghum variety. Inadequate supply of the seeds is identified as a

serious bottleneck to the diffusion of the improved variety. The project is to develop a strategy of production, distribution and marketing of the Samsorg 17 improved seeds among small and medium scale farmers in Kaduna State.

**Technology:** IAR, Zaria is the source of the Samsorg 17 (SK 5912), which is an improved variety of sorghum. The yield is said to be between 2.1 – 3.5 ton/ha. The grains are adjudged to be best for malting, while the food quality is preferable to local varieties. Thus the variety is in demand for food, beverage and brewing raw material.

#### **Collaborators**

- a) Kaduna ADP (KADP) is collaborating in the selection of participating farmers, provision of a small seed house facility at the ADP zonal office, serving as focal point for promoting the seed production and as collection center for seed buyers. In addition the ADP also provides technical guidance.
- b) National Seed Service is to provide field inspection to ensure the production of quality seeds.
- c) 100 out-growers in 5 locations based on specific criteria such as, possession of 1ha farm, and relevant cropping system are to be participants. Each farmer is to be both producer and seller in order to integrate production with marketing and hence facilitate financial sustainability and continuous delivery of seeds by farmers.
- d) IAR is facilitating with Dr. D. A. Aba as team leader.

**Activities:** Training of trainers (technicians and extensions staff) and farmers was to be conducted in year one – 2001. Other activities were to be the same for other years (2002 and 2003). These would mainly be distribution of inputs; establishment of 2ha foundation seed farm; and 100 ha certified seed farms by 100 out-growers; other activities would be the supervision of seed production, seed certification, linkage to seed companies, input recovery and marketing of seeds.

**Performance:** In collaboration with NSS, training was provided to farmers and technicians to improve their technical and managerial skills in the production, processing and marketing of improved seeds. Participating farmers were supplied with foundation seeds and 3 bags of fertilizers instead of five proposed. These were to be recovered in kind or cash at the end of the season as revolving capital. Farmers were requested to supplement the remaining two bags/ha. The project stepped down from the proposed 100-50 participating farmers in five locations due to budget cut. Actual performance was six farmers per location, who cultivated 1ha each of certified seeds. That gave 30 ha as against 100 ha of the certified seeds proposed. For the foundation seed production, 1ha out of the 2ha proposed to feed the farmers' programme was achieved.

Two of the project sites were visited: 1ha foundation seed farm by the Institute at Samaru and 1ha seed farm of participating seed out-growers. Samsorg 17 at both farms was planted sole, had grown well and were ready for harvesting. The other location was Saminaka in Lere zone of KADP. The seed farm visited belonged to a woman seed out-grower. Her farm was as good as the others earlier seen.

Discussions had been held with reputable seed companies such as Premier Seeds as well as other industries that utilize the sorghum variety for the various products; to purchase excess seeds produced. Guinness and Jos International Brewery have been contacted. They had all indicated interests in the output and participating farmers were advised to send their products to the buying centers.

One problem encountered was 'policing' the seed farms located at diverse sites in Kaduna State. At least twice monthly visits were required for quality control. The Facilitator felt that the provision of a project vehicle would solve the problem. The feasibility of a project vehicle alongside other alternatives were considered. Eventually it was agreed that the more effective use of the KADP staff that were deployed to all the nook and crannies of Kaduna State was a more viable option.

### **Observations and Recommendations**

The agreement with sorghum out-growers is better than that of the pearl millet project where every input was supplied free, and the sharing ratio of the output between the out-grower and the project was not determined before takeoff. However the expectation that the farmer provided the remaining two bags/ha should be part of the agreement and be enforced so that the required quality of seeds is produced. Furthermore, a signed memorandum of agreement between the project and the participating farmer is necessary for the project objective to be realized.

Nevertheless, it would be interesting to find out later if this arrangement leads to the availability of high quality certified seed of Samsorg 17 and the establishment of small-scale private seed companies in and around the project areas provided in the proposal.

### **2.1.3 Improved Fruit and Vegetable Budding and Seedling Production - \$5,200.**

**Locations:** Ogotun Ekiti, Ekiti State; Baayaoje, Egbeda, and Akufo, Oyo State.

**Purpose:** To promote the adoption of improved planting materials of citrus and pineapples. Vegetable crops were dropped from the proposal.

**Technology:** Budding and seedling production technologies were from the National Horticultural Research Institute (NIHORT), Ibadan.

#### **Collaborators**

- a) Three farmers associations and an individual farmer.
- b) NIHORT is the facilitator with Mr. L.O. Olajide – Taiwo as the Team Leader.

#### **Activities**

- i. Training 80 farmers on improved nursery techniques, maintenance of nursery equipment and farm enterprise record keeping.
- ii. Nursery and progeny orchard establishment.
- iii. Supply of nursery equipment and gardening tools.



- iv. Production and distribution of 15,000 buddlings of assorted citrus varieties and 36,000 pineapple suckers by participants as shown below.

	<b>CITRUS</b> (No. of buddlings)	<b>PINEAPPLE</b> (No. of Suckers)
Ogotun Group	5000	-
Egbeda Group	5000	15,000
Baayaoje Group	3000	6,000
Akufo (individual)	2000	15,000

**Performance:** The team visited the Ogotun site, where the Ogotun Horticultural Growers Association was the direct beneficiary. Membership was 80 comprising 45 males and 35 females, drawn from the 4 quarters making up the Ogotun community. The association started in year 2001, had a bank account and protem officers but was yet to register as cooperative society. Individual members were farmers who were mainly cocoa, kola nut, plantain and citrus growers. According to their coordinator, Chief Awopetu, budded citrus was introduced two years ago from NIHORT. However, transferring the budded seedlings from NIHORT Ibadan to the community resulted in loss of some of the materials due poor handling during transportation. Therefore the association was enthusiastic to be able to produce the planting materials near their farms.

The Monitoring Team was shown a pre-nursery with 3000 recently sown seeds, nursery with 800 budded seedlings of seven varieties and a progeny orchard with 100 stands of 8 varieties of citrus. The pre-nursery had just been planted while the nursery and progeny orchards were among the existing infrastructure in the community that were

available to the association for the production of budded seedlings. However the progeny orchard was poorly maintained. On enquiry, the orchard was said to belong to the chief of Ogotun who agreed to allow the association harvest the bud wood.

A presentation of nursery equipment comprising 5 watering cans, 8 budding knives, 8 secateur and 2 bags of fertilizer was made to the group. The cost of these items was not made known to the beneficiaries for possible cost recovery.

### **Observations and Recommendations**

- i. From the activities on ground at Ogotun, which happened to be the most advanced implementation site, it did not appear the objectives of the project would be met. Since, according to the project proposal ADPs were recognized throughout the country as the market outlet for citrus seedlings and pineapple suckers, the facilitators should formalize ADP's collaboration in the project. The ADP would also assist in group organization as well as technical supervision of the budding and pine-apple rapid multiplication.
- ii. Due to the poor management of the progeny orchard, the benefiting association should participate in its maintenance in the meantime, so that the required bud wood could be obtained.
- iii. The beneficiaries indicated that they could provide their own land on which the progeny bud wood could be established. To facilitate the process it was agreed (Facilitators/Monitoring

Team beneficiaries) to disperse the association's progeny farm to be established to each of the 4 quarters of the community. The agreement should be implemented and efforts made to execute project activities better at the other locations.

- iv. The Monitoring Team took up the concerns of the project with the Director of NIHORT Prof. J. O. Babatola. Assurance was given to improve project implementation at Ogotun and other sites.

#### **2.1.4 Certified Seed Multiplication And Dissemination Among Farmers In Oyo State - \$12,750.**

**Location:** Saki, Oyo State

**Purpose:** To induce higher production of certified seeds by out growers and encourage more use of improved seeds by farmers.

**Technology:** Improved seed varieties sourced from research institutes and the National Seeds Service; production techniques for certified seeds.

##### **Collaborators**

- a) NSS for quality Control
- b) Research Institutes for seed improved varieties
- c) Sale Agents, to sell produced seeds

d) Oyo State ADP as the facilitator with Dr. Amao leading the team.

**Activities:** Procurement and distribution of inputs namely foundation seeds, fertilizers and agro-chemicals; multiplication of the foundation seeds on 16 ha, 12.5ha, and 10ha for maize, soybean and cowpea respectively; buy back of certified seeds; and sale of certified seeds, through appointed private Seed Agents to farmers.

**Performance:** Training was held for the participating out growers on the goal, objective and activities of the project. Within the training session, farmers' contributions during crop production as well as loan repayment were discussed. The farmers were taken through cultural practices of each crop and the general principles of seed production, processing and certification.

19 out growers (all males) were selected to participate based mainly on past performance and experience in similar projects and availability of farmland. Participants understood that they were being assisted with inputs to produce certified seeds and pay back the cost of the inputs at harvest. The details of the assistance were made known to the farmers. The inputs consisted of seed, fertilizer, tractorization, herbicide and insecticide as determined by the quantity/ha, rate of application and the cost of each input for the three crop enterprises. The out growers signed their agreement with Oyo State ADP before the inputs were supplied according to crops allocated for multiplication.

Participants were further informed of the intensive monitoring to expect in order to produce certified seeds. Hence they were requested to mark out their multiplication plots with distinct labels for ease of identification during visits. On the whole a performance of 88% with 34ha out of the 38.5ha proposed was achieved as shown in the table below. Maize had been harvested and processing was already in progress at the ADP processing center.

Seed Production at Saki, Oyo State

<b>Crop</b>	<b>Target Ha.</b>	<b>Actual Ha.</b>	<b>% of Total Performance</b>
Maize	16	20	
Soybean	12.5	9	
Cowpea	10	5	
<b>Total</b>	<b>38.5</b>	<b>34</b>	<b>88.31</b>

From similar past projects, OYSADEP had organised a team of Private Seed Agents, male and female. The Agents were usually trained provided with identity cards and signposts. Registration with ADP was renewed annually so that non-performing ones were replaced. The function of the Seed Agents was to buy the certified seeds produced by the out growers through the ADP and sell to the farmers. After processing the seeds produced by the participating farmers, the ADP would deduct the cost of the inputs utilized and services and pay the outgrowers the balance. Both the out growers and the Seed Agents expressed satisfaction with that arrangement. For the next farming season the Seed Agents had already indented for the seeds they would like to purchase in February 2003.

A viable seed growers association was in place. Membership comprised male and female seed growers. Among other things, the association had been able to dialogue with government to influence the price of seeds in the State. The Chairman of the association told the monitoring team that although it was more profitable to produce food grains, they were in the business of producing seeds because without good seeds, grains would not be produced. Furthermore, they preferred to sell their seeds to OYSADEP because of the ADP's credibility and their enforcement of quality standards in seeds production.

The sum of N596, 500, being the cost of inputs supplied to the 19 out growers would be recovered in 2003 and ploughed back into the project. Facilitators agreed to include women out growers in the next project cycle and probably add vegetable and other seeds of interest to women.

### **Observations and Recommendations**

- i. OYSADEP has definitely utilized their wealth of experience which dated back to the 1970s during the enclave ADP phase, and more recently, similar projects such as the Accelerated Dissemination of Improved Agricultural Technologies in Nigeria (ADIATN). Combining the experiences with facilities at their disposal, the ADP has been able to effectively organize the production, marketing and distribution of certified improved seeds.
- ii. The packaging of the seeds could be improved upon. Dialogue with Seed Agents is necessary to arrive at convenient seed

packages that buyers prefer. It is recommended that the demand for vegetable and other seeds could be accommodated with the recovered funds and other resources since a sustainable procedure has been developed.

- iii. Women farmers need to be encouraged and also assisted as seed growers.

## **2.2. POST HARVEST AND FARM PRODUCE PROCESSING**

### **2.2.1 Production and Commercialization of Sugarcane by Rural and Peri-Urban Farmers in Nigeria - \$9,000.00**

**Location:** Gbajigi Area, Bida, Niger State.

**Purpose:** Local farmers had for years been engaging in the production and sale of chewing sugarcane, which has less economic value than industrial sugarcane. The project is to introduce the production of improved variety of industrial sugarcane and its processing into brown sugar and by-products, using locally developed and fabricated mini-brown sugar processing plant.

**Technologies:** Two technologies developed by NCRI, Badeggi being disseminated are high-yielding pest and disease-resistant industrial sugarcane variety and the brown sugar plant designed and fabricated by the Institute. The processing plant had been patented by NCRI through the National Office for Technology Acquisition and Promotion under the Federal Ministry of Science and Technology, hence is ready for commercialization.

### **Collaborators**

- a) The immediate beneficiary is the Bida Sugar-cane Farmers Cooperative Multi-purpose Society Limited, with a membership of 25 persons. Out of these 4 are females.
  
- b) Niger State Agricultural Development Programme is to establish official channel to involve farmers in the project, and provide Subject Matter Specialists and Extension Agents for farmer training.
  
- c) Multiplication of the industrial cane seed, fabrication of the processing plant, and training on production and processing are the responsibilities of the NCRI, co-coordinated by Dr. Ogunreni . Head, Sugarcane Research Programme.

**Activities:** The participating farmers would grow the industrial sugarcane to feed the plant and be responsible for the crushing and production of the sugar products. Furthermore, the farmers and their community would construct the shed that would house the plant and its accessories as their contribution to the project.

The National Cereals Research Institute (NCRI) would introduce the improved industrial cane for planting by farmers; Fabricate and install one unit of 5-ton capacity mini-brown sugar plant; train farmers on industrial cane production and processing into free flowing granular brown sugar, liquid sugar, molasses and bagasse. NCRI would also facilitate the running of these enterprises (farm and plant operations) as profitable ventures.



Year one (2002) activities comprised the planting of a 2ha seed farm of improved sugarcane varieties; training participating farmers on commercial production of sugarcane; construction of the structure to house the plant plus accessories; as well as installation and testing of the plant. Establishment of 20-25 ha. commercial sugarcane farms, continued testing of the plant, and training on sugarcane processing would take place early in the second year of 2003. The project would be commissioned in March 2003 while the production and marketing of brown sugar and other products would commence from April 2003.

**Performance:** The project was among the second batch of approved projects that received funds in August 2002. The NCRI facilitated the sensitization of major stakeholders, which included the Bida Sugarcane farmers' cooperative, local and state government officials on the project purpose and its contribution to poverty reduction. The members of the cooperative society in particular appeared to have clearly understood the project purpose and their role. This was evident in the enthusiasm shown to embark on commercial industrial sugar production and processing as a rural enterprise. Two ha. instead of the four ha. proposed sugarcane seed farm had been established, while the fabrication of the processing plant had commenced.

Through the guidance of the Facilitator, the Cooperative organized a fund-raising activity at which over N1 million was raised. With the money realized, construction of the sugar-processing factory had commenced and was at the 'dpc' level at the time of visit.

### **Observations and Recommendations**

- i. The sugarcane project was running on course. However, only 2 ha of the seed farm as against 4ha proposed was achieved. It is recommended that the remaining 2ha seed farm be established next planting season to ensure the projected 20 – 25ha of commercial sugarcane farm is realized.
- ii. Based on the impressive performance in the first year, there is hope that all activities set out for year two will also be completed on schedule. These activities include training of farmers on brown sugar production to be conducted in February 2003; commissioning planned for March 2003; and, the production and marketing of brown sugar by the Cooperative to start from April 2003.
- iii. So far no constraint that might impede project implementation has been identified by the participating farmers and project facilitator. Therefore, there is likelihood of the project being completed on schedule. However there is need to work out cost recovery mechanism especially for processing equipment which could be revolved to another promising cooperative for faster dissemination of the technologies being popularized.

#### **2.2.2 Enhanced Productivity of Sesame Cultivation and Efficiency of Processing into Commercial Products. \$7,450.**

**Location:** Kwandare, Nasarawa State

**Purpose:** To strengthen the capacity of sesame farmers to produce more certified seeds and more grains for domestic and export market; assist women process sesame into oil, soap and confectionaries.

**Technology:** Replacement of farmer's old varieties with improved, high yielding NCRI variety – NCRI BEN-OIM and E8; Fabrication of improved soap making and oil extraction equipment; and training women on how to operate these equipment.

### **Collaborators**

- a) Direct beneficiary is the Kwandare Women Multipurpose Association.
- b) Nasarawa ADP to, among others, provide desired technical follow-up activities at the expiration of the project.
- c) NCRI is facilitating with Dr. Iwo as Team Leader.

### **Activities**

- i. Improved varieties of sesame to be multiplied on 10ha farm by women; about 8 tons of certified seeds to be harvested.
- ii. One oil extraction equipment to be installed in the community.
- iii. Twenty women to be trained on various procedures of oil extraction and improved methods of preparing soap from the by-products.
- iv. Establishment of sesame demonstration plot by NCRI.

**Performance:** 25 kg of improved seeds of NCRI BEN-OIM and E8 were distributed to each of the 20 members of the women association. For ease of field planting, the women were divided into five groups and each group allocated 1.5 ha land by the village head. A

demonstration plot of about 1ha was also established at the same period.

Two of the women's farms were visited. One of the farms was flourishing better than the other. The explanation was that seed drilling was the critical activity in sesame production. From experience, men had better drilling skill. When it was observed that seed drilling by women on the first farm was poor, men assisted with drilling on the second farm and obtained a better result.

There was strong community support for the project and this was evident by the large turnout of the community members to receive the monitoring teams. There was also a lot of enthusiasm on the project. For instance a farmer informed that he produces 3-4 tons of sesame yearly, and had started harvesting while the oil processing aspect was yet to start. He wanted to know what to do in the circumstance. When he heard of the forth-coming project, he decided not to sell his produce in anticipation of the project taking it up. Another farmer wanted to know if men had to apply to women to have their sesame seeds processed.

Appropriate answers were provided. Farmers were told they could go ahead to dispose of their produce until the modality for procuring sesame for processing and the processing component is determined and takes off. Information on availability of sesame seeds, not applications would be needed for women to buy the sesame for processing. Alternatively, processing could be done for a fee if the

association so decides when processing aspect of the project commences.

Fabrication of equipment had advanced. However, the structure to house the equipment was not yet started. Although the community had been sensitized about the project it was not clear to them that the construction of the equipment house was to be part of their contribution. When the monitoring team put it squarely to the community members, they pledged to have the structure ready before the arrival of the equipment. To facilitate the construction, it was suggested to embark on community fund raising. That was accepted, and the fund raising was proposed to take place in December 2002.

Nasarawa ADP lead by the Director of Technical Services participated actively in the Project. Their support to implementation contributed to the progress made at the project site.

### **Observations and Recommendations**

- i. The expectation of cultivating 10 ha of sesame seeds by the women group appears difficult to achieve. Since men in the community are skilled in sesame production, assistance to production should be targeted at the male members of the community.
- ii. The focus of oil processing, soap and confectionaries should remain with the women who could buy the grains produced by their male counterparts. The smooth collaborative relationship between male and female members of Kwandare community should be encouraged. It would be most advantageous to

support each gender in activities to do what they can do better where comparative advantage exists. Benefits of the project would be distributed to women and men and at the same time, synergy and complementarity in the activities of both genders would be enhanced.

### **2.2.3 Dissemination of Improved Soybean Technologies and Commercialization of Soybean-based Products in Nigeria. \$8,900.**

**Location:** Tungan-Maje, FCT, Abuja.

**Purpose:** The project is to facilitate the multiplication of improved soybean seed varieties for sale to farmers and other stakeholders; reactivate soybean 'dadawa' industry; provide training on seed production, grain production and on utilization technologies; and create market outlets for soybean seeds and 'daddawa' product.

**Technology:** 4 high-yielding and adapted soybean varieties are to be selected from the collaborative breeding and multi-locational activities between the NCRI, the International Institute of Tropical Agriculture (IITA) and other relevant Institutions within the National Agricultural Research System (NARS). These varieties have been identified to be in high demand across various agro-ecological zones.

#### **Collaborators**

- a) FCT ADP is to provide extension services and other necessary technical support.
- b) Tungan-Maje Women Cooperative Society and the Community at large to provide land and labour for appropriate project activities.

- c) NSS to provide seed certification and assist in selling the certified seeds.
- d) Private sector stakeholders, such as the Premier Seeds, to be linked up to farmers to buy the certified seeds to be produced..
- e) NCRI facilitating with Dr. A. A. Idowu as Team Leader.

### **Activities**

- i) Baseline Survey on soybean production, utilization and marketing at Tungan-Maje community.
- ii) Tungan-maje Women Multi-purpose Cooperative Society to be assisted to cultivate 2.5 ha each of four improved varieties – a total of 10 ha. Of TGx 1448-2E; TGx 1440-1E, TGx 1485-1D and TGx 1019-2EB.
- iii) Reactivation of the building and facilities of the ‘daddawa’ cottage industry.
- iv) Improved soybean production technologies; improved processing and utilization technologies as well as bookkeeping to be imparted to women and their facilitators through field days, train the trainer’s workshop and informal training.
- v) Development of new market outlets by selling products in urban and semi-urban markets.

**Performance:** The baseline survey, and the processing and utilization workshops had been conducted. The women cooperative had begun producing various value added soybean products such as soybean milk, chin-chin, doughnut, cheese etc with soybeans either supplied by the project or purchased from N10, 000 advanced from project funds for that purpose.

Soybean milk was being sold in the plastic bottles supplied by the project. The selling price of a bottle of soymilk was N10 excluding the cost of the plastic container, which was about N15 apiece. The project also provided a kiosk where the women sold their products. Money realized was used to purchase other ingredients such as oil, salt, sugar etc.

To produce certified soybean seeds, five male farmers' groups each received 20 kg of only one variety (TGx 1448-2E) of soybean. Women farmers (number not specified) also received 2 kg each of the same variety. Changes were made on the targeted 2.5 ha of each of four soybean varieties to be cultivated at the project location in the proposal. The project established only 1.5 ha of each soybean variety outside proposed project activity, was meant to serve as a demonstration plot.

The monitoring team visited the women's farm goats and other domestic livestock ate up most of the farm due to its location at close proximity to residential area. The demonstration farm fared better, while the male farmer's farms were not invaded by domestic animals. The farms were located in the community's distant farming area.

Not much progress was made in the construction of the multipurpose center, in spite of the awareness created during the national launching of the programme and other subsequent efforts. Fabrication of the soybean processing equipment had not started. Direct participants (Tungan-Maje community, women cooperative and ADP staff) did



not appear to have the full picture of the project from the on set. Rather they were being involved as the project unfolded.

### **Observations and Recommendations**

- i. It appears that successes were recorded in conducting the baseline survey and in imparting processing and utilization skills to women. The sale of soybean products is obviously going on at a loss when all the costs of production are added. A re-orientation on enterprise management, particularly on costing and determination of sale price of products should be carried out, as a matter of urgency for the women cooperative. Furthermore, cheaper packaging material for soymilk, such as small polythene sachets for which a sealing machine is to be provided, should replace the plastic bottles.
- ii. The production of certified seeds of four improved varieties of soybeans is failing. It is obvious that the projected 10 tons of each of the four improved varieties of soybean (a total of 40 tons) cannot be realized with current activities on ground. Therefore it is recommended that the remaining three improved varieties be introduced to the community and experienced out-growers be contracted to produce certified seeds.
- iii. Interaction with the women association on many occasions tended to indicate they would have difficulty combining seed production, grain production and operating a cottage industry in addition to their other numerous activities. This was confirmed during the monitoring where the women showed preference to buying soybean grains at harvest, storing, and then using them for their commercial products as the need arises. The project

should consider supporting bulk purchase by giving the association credit to buy when grains are cheapest. Members of the association also made a request for two potable coolers for holding the soymilk during sales. The coolers should be supplied on cost-recovery basis.

- iv. A dialogue of all the stakeholders, especially the community, the cooperative, NCRI and the ADP to find a solution to the construction of multipurpose center is imperative. For instance other sources of financing the building such as fund raising could be exploited. It is possible that the community might provide a temporary space for the equipment so that the project should go ahead to fabricate and reduce the failure risk.

#### **2.2.4 Enhancement of Value Added in Ginger Production and Marketing in Nigeria. -- \$10,600.**

**Locations** - Kwoi, Nok and Kafanchan all in Kaduna State.

**Purpose:** The project is to enable ginger producers increase yield through the adoption of improved agronomic practices; improved post harvest handling and processing; encourage the formation of Ginger Association; and link producers to local and international markets.

**Technology:** Use of production inputs such as improved variety of ginger, fertilizer and herbicide; slicing machine to split ginger; tarpaulin for drying the ginger splits; and the construction of water reservoir or the drilling of wells to provide water for washing harvested ginger before splitting; were the main technologies.

### **Collaborators**

- a) 4 ginger farmer/marketer cooperative groups – two of which are mixed male and female groups, one had males only and the other, all female group.
- b) Local processors and export marketers to facilitate purchase of ginger and the formation of Ginger Association.
- c) The Federal Institute for Industrial Research (FIIRO) Lagos, to fabricate a manual slicing machine.
- d) The National Root Crops Research Institute (NRCRI) Umudike- Abia State for supplying high yielding, high market value ginger planting materials.
- e) Kaduna State Ministry of Rural Development and Cooperatives for group empowerment and the Kaduna ADP to provide extension support to farmers.
- f) IAR team as Facilitators with Dr. Benjamin Ahmed leading.

**Activities:** The key activities were training; supply of inputs; fabrication of slicer; supply of tarpaulin; linkages for marketing and empowerment of groups.

### **Performance**

A baseline survey that would among others, determine the size of the farm holdings of the cooperatives had been conducted. Analysis was going on. A total of 100 bags of fertilizers were supplied to the four groups according to their size as shown in the table below.

#### Supply of Fertilizers to Cooperative Groups

<b>Name of Cooperative</b>	<b>No. of Members</b>	<b>No. of bags of</b>
----------------------------	-----------------------	-----------------------

		<b>Fertilizer</b>
Kwoi Women Coop.	30	24
Belphin Workers Coop.	40	32
Ungwar Pyok	34	25
Byab-Ritsi	20	19
	124	100

The Cooperative societies sold the fertilizers received to their members and retained the proceeds as credit from the project. Members used the fertilizers for the multiplication of planting materials for the next planting season. Two of the cooperative societies namely, the Kwoi Women Multi-purpose Cooperative and the Belphin Workers Multi-purpose Cooperative were visited.

Tarpaulin for drying ginger had been ordered and would be delivered to the cooperatives within one week. Again the cost of the tarpaulin would be recovered and retained by each group as credit. The team leader contacted FIIRO to fabricate the slicer and found that the production of the prototype had been discontinued due to poor funding of the research institute. In the alternative, the project planned to commission the Mechanization Research Programme of IAR to examine the available chopping machine at the Belphins Nigeria Limited, (a ginger processing factory at Kafanchan) with a view to modify as a manual slicer.

The National Root Crops Research Institute NRCRI Umudike was not visited to procure possible improved varieties of ginger. Hence the cooperatives planted the local variety. Herbicides were also not supplied. to the farmers as proposed. Although linkages with relevant stakeholders in the ginger industry were made, cooperative

groups were yet to be organized into an apex ginger farmers association. the formation and launching of an apex ginger farmers association appeared to be at an advanced stage.

**Observations and Recommendations:** A lot of the project resources appeared to have gone into consultations, a survey, and forging linkages. The only direct benefits that reached farmers were trainings, and the supply of 100 bags of fertilizers and tarpaulin when delivered. The plan to commission the fabrication of a manual slicer is not likely to produce the slice within the life of the project due to the time required to develop, fabricate and test before use. It was not acceptable that the NRCRI that has the national mandate for the improvement of the ginger crop in Nigeria was not reached for the resources they have. The Team therefore recommends as follows:

- i. The facilitator visits NCRI, Umudike to obtain the available innovations on the ginger crop and transfer to the participating cooperatives.
- ii. Provide other inputs such as herbicides and source of water to enable the production of clean ginger slices.
- iii. Revolve the funds recovered from inputs to be supplied (tarpaulin and herbicides) to empower other groups of farmers.
- iv. Complete the fabrication of the slicer and disseminate through the national research and extension system.

#### **2.2.5 Groundnut Oil Production in Cooperation with Women Groups. \$9,100.**

**Locations** – Gwani Gora and Yarkasuwa in Kaduna State; Bebeji in Kano State; and Unguwan Madaki in Katsina State.

**Purpose:** To introduce an efficient technology of groundnut oil extraction to women in 3 of the major groundnut producing States in the Northwest agro-ecology.

**Technology:** Based on the traditional mortar and pestle, the Mechanization Programme of the Institute of Agricultural Research (IAR) Ahmadu Bello University (ABU), developed an improved motorized oil extraction system. The technology is capable of extracting up to 54% of oil from groundnut, about 975 ml of oil from 2.5kg groundnuts as against 650ml from the same quantity, using the mortar and pestle.

#### **Collaborators**

- a) 4 women cooperative groups, 2 in Kaduna; 1 each in Kano and Katsina States.
- b) ADPs of Kaduna, Kano and Katsina States, particularly the staff of the zones where the projects are located.
- c) IAR Samaru, represented by Dr (Mrs) D. N. Maigida.

**Activities:** Training women groups on cooperative management and the use of the technology, fabrication of equipment, and evaluating groundnut and oil for aflatoxin were planned activities. Kaduna ADP Lere zonal staff namely, the zonal Extension Officer, Zonal

Agricultural Officer, Assistant Technical Seeds Officer and the Subject Matter Specialist for Women In Agriculture, participated in the monitoring.

**Performance:** The Yarkasuwa Cooperative Association comprising 35 members was visited. Training was conducted as planned. The IAR fabricated equipment had been supplied and groundnut oil processing had been done twice since supply. Although a group member operated the machine, an operator was being sought so that too many hands do not handle the equipment. A local artisan easily rectified a minor fault that occurred during one of the processing operations.

The women stated that the tedium usually associated with pressing oil, which was the most energy exerting aspect, was drastically reduced. The next laborious processes were said to be with roasting and frying. These notwithstanding, the women expressed satisfaction with the equipment, which they confirmed to perform better than the earlier version. In view of the good performance of the equipment, the women had decided to buy additional equipment at the cost of ₦60,000.00.

The women were challenged on what the association was doing to let other non-participating women to know about the technology. The mission was informed about the arrangement made by the women group, independent of the facilitator, to launch the project in December 2002. The launching would involve the demonstration of

the improved groundnut oil processor for the benefit of members of the community and at the same time raise funds for executing their planned activities.

**Observations and Recommendations:** The success of the project appears guaranteed. The group was not only dynamic but also proactive in dealing with problems and issues. The strong presence of ADP Zonal staff was indicative of the provision of technical assistance that would enhance the sustainability of the project. IAR should be prepared to meet demands for the groundnut oil processing equipment as they arise. Particular note should be taken of the feed back on the performance of the equipment and efforts geared towards further improvements. Nevertheless it is recommended that the cost of the equipment be recovered and revolved to other groups. Furthermore, the result of the evaluation for aflatoxin when completed, should be used to impart safety practices to the participants.

#### **2.2.6 Improved Village-Level Yam Flour Processing For Micro-Enterprise Development - \$7,500**

**Location:** Utabar, Gboko-Benue State.

**Purpose:** To promote the use of simple technology for processing yam tuber into yam flour, and develop market linkages for processed yam flour.



**Technology:** The University of Agriculture Makurdi, had developed a simple technology of steam boiling yam and subsequently drying it with a solar dryer and milling to powder, which could preserve for a longer period without much change in texture, colour or nutritive value and requiring only hot water to make yam flour meal. The technology thus removes the stress of energy sapping pounding of yam using the mortar and pestle.

### **Collaboration**

- a) Partners for Development (PFD) is coordinating the technology transfer process. It is an international NGO with headquarters in the USA carrying out various development activities in Cambodia, Bosnia and Nigeria. For the past 2 years PFD had been providing rural communities in Benue State with access to market through the provision of earth roads. Last year, PFD also advanced grants to eight small enterprise development partners (local NGOs) who provide micro-credit to mostly, but not exclusively, women groups.
- b) Anglican Diocesan Development Services (ADDS), Makurdi, one of PFDs micro-credit partners.
- c) Utabar Women Development Association, the direct beneficiary and already receiving credit assistance from PFD through its ADDS partner.
- d) University of Agriculture Makurdi (UAM) providing technical guidance on the technology transfer process.

**Activities:** Training on project management and on the use of the technology; purchase and installation of equipment; opening market linkages and commissioning the project were planned activities.

**Performance:** PFD received funds just one month before the monitoring visit. The Country Director, Ms. Lonela Bloxom expressed appreciation for PFD's participation in the USAID assisted SAFGRAD programme. She indicated that the project has provided opportunity to further assist the rural community. The Country Director suggested that administrative cost for managing the project should be allowed in future projects. The monitoring team was shown the equipment construction going on within the PFD premises under the supervision of a UAM engineer. It was a solar powered drying equipment capable of drying about 50kg/day of yam slices. The resulting product from the equipment would not make the traditional pounded yam but a high grade of 'amala' another product of processed yam.

The Engineer explained that although the pounded yam technology was available, it was not adapted for use in a cottage industry but at factory level due to high electric energy required to power the equipment. Therefore in its place, improved solar powered equipment for the production of 'amala' flour was being introduced. The Engineer assured that the equipment would be test-run to confirm its performance before delivery to the community.

The Utubar women Development Association comprised of about 1,000 women from seven clans out of which 200 members are active.

About 35 representatives of the association received the monitoring team accompanied by the PFD project officer, the ADDS and BNARDA staff. Interaction with the women revealed that they have been producing yam chips for 'amala' of lower quality using longer drying period. Therefore they were keenly looking forward for assistance to produce better quality yam flour for 'amala' which has ready market outlets.

Training of women would commence after the equipment has been introduced to them. The monitoring members team were told of PFD's credit scheme administered by ADDS, which the women had benefited from. So far, a total sum of N200,000 has been administered to the members of the association at 12% interest rate, for 6 months. The women complained about the short duration of pay-back period which compelled sales of produce at harvest and at the same time did not allow processing which adds value to enhance income. Therefore, they appealed for upward review of the pay-back period to allow time for processing into 'amala'.

### **Observations and Recommendations**

- i. The partners, PFD and ADDS were urged to consider the women's plea. Six months was rather short and would still induce farmers to continue selling their farm produce immediately after harvesting when prices are usually lowest. Some organizations have found one-year, and three-month moratorium, and installment repayments ideal for such loans.
- ii. There was evidence that the PFD could deliver results as portrayed from their own development efforts. In particular,

the change of technology to a suitable alternative, which is also in demand in rural communities, is commendable. The switch from one type of yam flour producing equipment to another is a viable option in this circumstance. The output of the alternative equipment is also a valuable processed yam product. PFD deserves to be encouraged to increase the level of assistance to rural communities. However, in future, the state of the technology to be disseminated should be ascertained at the project proposal stage. Meanwhile PFD could on its own, consider commissioning the development of cottage level pounded yam processing equipment in collaboration with other international NGOs.

- iii. There is a need to broaden PFD's choice of partners to include those already versed in rural development. The experience and expertise available in Benue ADP would be invaluable to PFD in providing assistance to rural dwellers whose major occupation is farming. It is therefore recommended that PFD establishes a working relationship with the ADP system.

#### **2.2.7 Establishment Of Cassava Processing Industry. - \$5000.**

**Location:** Weppa – Agenebode, Ovaio in Etsako East Local Government Area of Edo State.

**Purpose:** Establishment of a profitable cottage cassava processing industry using modern equipment and abundant cassava tubers in the project area.

**Technology:** Cassava processing technology into ‘garri’ is widely accepted throughout Nigeria. The processing equipment is already commercialized being produced and installed by local fabricators and artisans. Cassava chips production and its equipment are gradually being adopted in communities.

### **Collaborators**

- a) Leventis Foundation (Nigeria) is an international NGO. It has established four agricultural training schools in Nigeria (Ilesa in Osun, Agenebode in Edo, Dogon Dawa in Kaduna and Panda in Kano States) where young school leavers and young farmers are trained in modern skills of agricultural production free of charge. Trainees are expected to be employers of labour in their farms rather than seek paid employment. One of the schools, the Leventis Foundation (Nigeria), Young Farmers’ Training Centre, Weppa, Agenebode, is facilitating the project.
- b) Weppa-Leventis farmers Multipurpose Cooperative Society comprising mainly ex-trainees of the Leventis school is the direct beneficiary.

**Activities:** Sourcing, purchase and installation of the cassava processing equipment; training on use of equipment and enterprise management, production and grading of garri; production of cassava chips and starch, and linkage to markets for sale of products especially chips and starch.

**Performance:** The Cooperative Society had a membership of 17, comprising 8 females and 9 males. From a series of

meetings and trainings between the cooperative and the school a memorandum of understanding on the management of the project was drawn. An implementation committee made up of the Acting Principal of the School as Chairman, with the Project Coordinator, President and Secretary of the Cooperative as members.

Leventis School received the project fund of N558, 000 and transferred it to the savings account of the cooperative. After a market survey, the desired equipment was purchased, and installed. The cooperative provided the premises of the industry, which included a building and an open courtyard with adequate space for all the equipment, working area and storage for products. Test running and training on the use of equipment went on at the same time. Members of the cooperative divided themselves into 3 syndicate groups to process cassava on allocated days. That generated healthy competition as each group did not wish to produce less than other groups' production.

The project was commissioned on 31 October 2002. Dignitaries from far and near attended the ceremony. Some of these were the Chairman of Leventis Group worldwide, the Executive Secretary of Leventis Foundation Nigeria; Representatives of the Deputy Governor and Commissioner for Agriculture of Edo State, The Chief of Weppa, Chairmen of local Government Areas, and a member of the Presidential

Committee on cassava market development and export. The South Focal Unit Coordinator represented SAFGRAD.

Garri production by one of the syndicate groups was going on at the time of the monitoring visit. Participants complained the low price of garri at that period of time. They were advised to exercise patience, watch the market trend and produce and store accordingly. On the plan for sustainability, the Chairman of the implementation committee informed that some of the cost of the equipment would be recovered and used in assisting another group of the ex-Leventis trainees. He however added that they would not wait for full recovery, that about 50% of the equipment cost could start off another group with the critical processing equipment they might require.

### **Observations and Recommendations**

- i. The project is already well established. Participants were also trained local practicing farmers. With the involvement of the Leventis School in managing the cottage industry, the extension program to ex-trainees, and the different expertise available in the school the flow of technical, management and marketing assistance to the project is guaranteed.
  
- ii. With the current performance there is assurance that projected output and income could be realized. The team recommends that regular monitoring of activities to ensure activities remain on track in order to showcase as

a sustainable commercial enterprise by a rural based cooperative.

### **2.2.8 Ikorodu Cassava Processing And Marketing - \$ 9,000.**

**Location:** Solebo Estate, Ikorodu, Lagos State

**Purpose:** To produce from cassava high value, convenient, odourless fufu with longer shelf life for profit.

**Technology:** The main technology is the use of a modern stainless steel flash dryer to produce dry fufu powder from wet cassava fufu cake.

**Collaborator:** Divine Daughters Multipurpose Cooperative Society is the facilitator and beneficiary. Some of the key officers are Mrs. D. A. Dixon – President, Mrs. T. Odetola - Treasurer, and Mrs. S. Sanni – immediate Past President.

#### **Activities**

Main activities planned were the procurement and installation of the flash dryer and other associated equipment such as the grater, hydraulic press and sealing machine; secure a processing center and the services of an approved laboratory for testing moisture content and microbial safety of product. The project is also training women groups to produce improved quality wet fufu cake, which is the raw material for producing the fufu powder.

#### **Performance**

Prior to the formulation of this project the cooperative usually purchased wet cassava cake and processed same into the fufu powder



at Abeokuta. The fufu powder, which is an innovation over the traditional cassava fufu, is sold at supermarkets in Lagos and has high export potential. The cooperative sought the assistance of SAFGRAD to set up a cottage fufu processing center at Lagos where the raw material is assured as well as the ready market for fufu powder.

A cursory look at the budget proposal submitted for funding indicated that a total sum of N2.651m would be required out of which the cooperative would contribute N1.5m and thus requested N1.1m from SAFGRAD. The project has already received N800,000.00 from SAFGRAD out of the N900,000.00 approved.

However, in the course of project implementation, the cost of the flash dryer (the major equipment in the processing line) increased from N1m to N1.3m, plus additional N120,000 for delivery and installation. Moreover, a hammer mill though not initially provided for was found to be inevitable component and its cost is N180,000.00. A project site had been acquired; a processing shed erected at the total cost of N260,000.00. The fabrication of flash dryer and hammer mill have been commissioned and advance payments made. The table below shows the financial situation of the project.

Financial Situation of the Ikorodu Cassava Processing and Marketing Project.

Item	Cost at Proposal ₦	Actual Cost ₦	Payment/ Deposit ₦	Outstanding Payment ₦
Flash dryer	1,000,000	1,300,000	500,000	800,000
Delivery and Installation	-	120,000	-	120,000
Hammer Mill	-	180,000	40,000	140,000
Grater	60,000	60,000	60,000	-
Processing Shed	260,000	260,000	260,000	-
Rent (2 years)	600,000	600,000	600,000	-
Hydraulic Press	25,000	25,000	-	25,000
Sealing Machine	10,000	10,000	-	10,000
Scale	20,000	20,000	-	20,000
Working Capital (1 week)	120,000	120,000	-	120,000
<b>Total</b>	<b>2,095,000</b>	<b>2,695,000</b>	<b>1,460,000</b>	<b>1,235,000</b>

Thus while the Divine Daughters had invested N1,460,000 (N800,000 from SAFGRAD and N660,000 of theirs) the sum of N1,235,000 was required for the project to take off. As a way out, the Cooperative applied to the Global Bank Plc, Lagos for a N2.5 million loan at the going interest rate of 22%. A lawyer, whose fee was yet to be determined, was engaged to guide negotiations with the bank.

**Observations and Recommendations**

- i. The Divine Daughters Cooperative has a serious financial problem, which could develop into a crisis if not properly handled. The cooperative needs to be rescued so that the already invested N1.46million would not be in vain. Applying for a bank loan is one way out of the financial problem. But

banks hardly grant such big loans (N2.5 million) for first time, untested applicants. It is instructive to note that the bank offered to participate in running the project and not just to lend money. That is an indication of the bank's belief in the profitability of the project. Nevertheless, as much as possible, bank loan could be kept to the barest minimum. The team suggests an additional grant of \$6,000.00 be made to the Cooperative to cushion some of their financial burden.

- ii. It is recommended that the cost of equipment be made recoverable and revolving to stimulate other small-scale commercial enterprises in the community. In this instance linkage with Lagos ADP becomes inevitable so as to facilitate new groups. Lagos ADP can conveniently and professionally fill the role of facilitating new groups. The ADP could also assist in training other women groups to produce the required raw material (odourless cassava cake), which the cooperative had not started.

## **2.3 LIVESTOCK AND FISHERIES RELATED PROJECTS**

### **2.3.1 Improving Beekeepers Practice for Enhancing Production and Commercialization - \$11,300.**

**Locations:** Giwa and Sabon Gari Local Government Areas (LGAs) of Kaduna State.

**Purpose:** Sensitizing local farmers to adopt modern and improved production of honey and other by-products such as bee wax, bee pollen, royal jelly, bee venom, propolis and bee larva for profit.

**Technology:** Technology to be transferred include improved beehive construction using local materials; honey production methodology and use of by-products.

### **Collaboration**

- a) Biye Beekeepers Society, a multipurpose Cooperative society is facilitating the project for its members and three other groups. Membership of the society is 22 with Alhaji Idris M. B. Zaria as president and Project Coordinator.
- b) IAR was providing training as well as monitoring and evaluation.
- c) Kaduna State ADP was to provide extension support for disseminating the bee farming technology to other farmers.

**Activities:** Survey, selection and training of 50 farmers from the selected locations; setting up demonstration bee farms at the sites; and farmer to farmer extension approach to disseminate the technology

**Performance:** Training on bee farming generated so much interest within the community, which led to some individual farmers including a female group, joining as project participants. The groups received materials to start their farms as follows:-

<b>Group</b>	<b>Bee Hive</b>	<b>Hive Tool</b>	<b>Bee Suits</b>	<b>Smoker</b>
Biye	40	5	20	5
Jaja	20	5	10	5
Manu	20	5	10	5
Raida	20	5	10	5
WIFD*	9	1	1	5

\*Women in Farming and Development.

Representative farmers from all the participating groups assembled at the Biye Beekeeper's farm at Samaru for interaction with the monitoring team. Participants enthusiastically explained what they had learnt from the project. They demonstrated how much their newly acquired knowledge and skill differed from their old practice, which partly explained the interest generated about the project. To the participants, bee farming had not only been 'demystified' but also simplified and made an operational activity. Although harvesting was not due, they were sure of obtaining good yields with time.

The leader of the Jaja group and the Village head of Jaja informed the team that the participating farmers invested their own money to purchase additional items to complement supplies from the project. In answer to the request for credit to meet needs during the gestation period, the team explained that farmers should see the project as additional income generating activity to supplement other sources. Although no cost recovery plan was in place, farmers were aware that they would pay back the cost of materials supplied.

**Observations and Recommendations:** The project is commended for exceeding its target and reaching out to the female members of the community, whom the proposal had assumed were not involved in bee

farming. Although not specified in the proposal, training on appropriate packaging and sourcing of appropriate packaging materials could be accommodated within the project. Since honey harvesting would commence in April 2003, the period before harvesting appeared appropriate for training on packaging. Furthermore, action should be initiated on registration of products with the National Agency for Food and Drug Administration (NAFDAC). In view of the enthusiasm exhibited by farmers in the project, the team recommended that a cost recovery scheme should be put in place as soon as possible so that other farmers can benefit.

### **2.3.2 Transfer of Cane Rat/Grass-cutter Rearing Technology for Commercialization by Smallholder Farmers (Establishment of a Small-scale Entrepreneur in Cane-rat Production) - \$5,000.00.**

**Location:** - Ibadan, Oyo State

**Purpose:** To introduce cane-rat farming as a profitable micro enterprise through the establishment of 2 pilot projects.

**Technology:** Cane-rat/grasscutter (*Thryonomus swinderianus Temminck*) has been successfully domesticated. IAR&T has developed cane-rat/grass-cutter rearing techniques for the production of weaners and meat. The technology for propagating a domesticated breed is to be disseminated.

#### **Collaborators**

- a. Oyo State Cane-rat Farmers Association, from which 2 pilot farmers were selected.

b. IAR&T is facilitating with Dr. J.O. Fayenuwo coordinating.

**Activities:** Training on cane-rat rearing and management of small enterprises; establishment of 2 pilot activities, supply of rearing equipment and animals.

### **Performance**

Training was conducted for practicing and prospective cane-rat farmers during which two farmers were selected for the pilot project. Each of the pilot farmers was provided with two (2) three-tier cages, one isolation cage and one carrier cage. Other items supplied included feeding troughs, water containers, wheel barrow, weighing scales, cutlasses, rubber boots and growers mash. At each pilot centre, the cages were stocked with 6 does (female cane-rats) and 2 bucks (male cane-rats).

The two pilot centres were visited. One of the centres was at close proximity of IAR&T with a retiree, Engr. Oderinde as the direct beneficiary. The cane-rats were observed to be healthy and doing well. So far, there were no adverse reports on the housing, feeding and health matters. The farmer was keenly observing the animals, allowing them to familiarize with their new abode, until they reach the prescribed age of 6 months for females; and 8 months for males before matching them for mating.

The second centre was at Ishara-Remo about 55 kilometres from Ibadan and was being managed by a livestock farmer and his wife. The participants were so enthusiastic about the project that they had constructed another 3-tier cage to increase their holding.

Unfortunately one of the 2 bucks supplied, which the farmer had observed to be the smaller of the two, died. The death was attributed to probably stress of movement from their previous to new abode. Nevertheless, the farmer was not deterred. He was going ahead to stock his additional cage. Again the remaining animals were active and there were no signs of ill health.

A team of professionals accompanied the monitoring team during the visits. It comprised the Project Coordinator - a Wildlife Ecologist and Conservationist, a Veterinary Doctor, an Agricultural Superintendent, a Livestock Attendant and a Cameraman.

### **Observations and Recommendations**

The 2 pilot commercial enterprises for disseminating the technology had been successfully established and were running on course. The availability of various experts at IAR&T is indicative of continuous technical assistance to the project. Therefore the prospect of the project achieving its objective is high. There is need however, for a firm arrangement with these pioneering farmers for the return of an agreed number of animals to the project for distribution to other farmers.. These would be used to set up other enterprises to spread the technology and sustain the project.

### **2.3.3 Utilization of Cassava Plant-Based Rations For Poultry and Small Ruminants by Aba-Ara Oyo and Jamade Cooperative Farmers Groups - \$6,250.00.**

**Location:** Aba Ara Oyo in Atiba LGA and Apete, Ido LGA, both in Oyo State.



**Purpose:**

To introduce livestock feed production technologies using whole cassava tubers and leaves as a viable alternative to maize in livestock rations and facilitate their use in operating profitable poultry and small ruminant enterprises.

**Technology:** To be promoted were: cassava chips and pellets production from whole tubers; dried cassava leaf production; production of cassava based pelletized ration for layers and small ruminants.

**Collaboration**

- a. Technological Vision Organisation (TECHNOVISOR) an indigenous NGO is facilitating the project with Prof. O.O. Tewe coordinating.
- b. Participating farming groups were the Ara Oyo Atese Farmers Association and the Jamede Owolowo Cooperative Society Limited.
- c. The International Institute of Tropical Agriculture (IITA) is to be involved in equipment fabrication and feed analysis.
- d. Oyo State Agricultural Development Programme (OYSADEP) is to provide extension and monitoring services.

**Activities:** Baseline survey of project sites, purchases of equipment, facilities and stock (poultry layers and small ruminants); training on feed and livestock production; introduction of improved variety of cassava; and marketing of products (chips, pellets, and animal products) to local and export markets were the main planned activities.

**Performance:** At the time of the visit, the poultry component was being implemented. The small ruminant component was proposed for January, 2003. The team was informed that the project baseline was going on. About 0.3ha of improved cassava variety (TMS 4(2)1425) multiplication plot was established to provide planting materials for establishing 1ha cassava farm at each project location. Two cassava graters and 1000 day-old chicks as against point of lay pullets were procured and distributed to the participating groups.

The two groups were visited. The Ara Oyo Atese Farmers Association was made up of 58 members comprising 30 males and 25 females. The project supplied the group 500 day-old chicks. These were established in deep litter system instead of the battery cage system used in calculating the profitability of the enterprise at proposal. Appropriate inoculations were provided to the chicks as and when due and the birds were observed to be doing well with low mortality rate.

The cassava grater was supplied during the monitoring visit but its use could not be demonstrated because it was faulty. On close examination, it was found that an old used prime mover had been coupled to the grater. Due to the intervention of the team, the equipment was taken back to the fabricators, and the fault was rectified. The grater was successfully demonstrated to farmers during the repeat visit by the team.

The Jamede Owolowo Cooperative Society had a membership of 100, made up of 35 men and 65 women. The group was more experienced, well organized and was holding its normal meeting at the

time of visit. Some of their members were practicing poultry farmers and some operated grinding mills commercially. The group had already embarked on broiler production activity before the new project came on.

Similar to other group, 500 day-old chicks and the cassava processing equipment were supplied. While there was no problem with the equipment the chicks had outgrown their current space. Construction work on the poultry house was yet to be completed. The consensus of all-present was to move the birds within one week. The cooperative assured that the poultry house which was under construction, would be ready before that period.

### **Observations and Recommendations**

- i. Some aspects of the production package of the poultry component were not adhered to, which could lead to reduced profitability. For instance loss of eggs could be higher in deep litter than battery system. Farmers should be properly guided to minimize the loss.
- ii. New components should have been used in fabricating the motorized grater. To reduce the risk of breakdown, the team recommends the additional supply of manual graters to the two groups. The supply of wheelbarrows are also recommended to enable the conveyance of raw materials, intermediate goods and the final products.

- iii. No cost recovery plan is in place. There is also no plan of activities for implementing the small ruminant component of the project. It is recommended that discussions on cost recovery be held with participants on the poultry and ruminant components. Then the recovery plan as well as the plan for implementing the ruminant component be submitted to the Focal Unit Coordinator.
  
- iv. The NGO as currently constituted does not have the capacity to provide adequate extension services, engage in cost recovery and facilitate transfer of technology to new groups. It is hereby recommended that OYSADEP be made to play the specified collaborative role as proposed.

#### **2.3.4 Upgrading and Fattening Local Sheep and Goats for Improved Production in Ogun State - \$14,975.00.**

**Locations:** Abeokuta, Ijebu-Ode, Ikenne and Ilaro, all in Ogun State.

##### **Purpose**

- i. To improve the quality of local sheep and goats through concentrating desirable qualities such as rapid growth, multiple births, large maturity size and resistance to prevalent diseases.
  
- ii. To promote intensive feeding and good health care to produce sheep and goat of attractive market weights on commercial basis.

**Technology:** Improved breeds of sheep and goats such as Yankassa and Red Sokoto with desirable characteristics are to be obtained from the Nigerian Animal Production Research Institute (NAPRI) - Ahmadu Bello University, Shika, Zaria as upgrading materials for local sheep and goats. Improved animal health and nutrition practices are to be used to fatten local sheep and goats.

### **Collaborators**

- a. NAPRI for the supply of improved breeds of animals.
- b. Sheep and goat farmers in 5 LGAs as direct beneficiaries.
- c. Ogun State ADP (OGADEP) as the facilitator with Mr. I.O. Phillips as Coordinator.

**Activities:** Baseline survey; training; selection of animals with desirable characteristics; provision of simple feeders and drinkers; supply of breeders; provision of improved nutrition and animal health care; and recovery and revolving funds to other farmers.

**Performance:** A 5-person technical committee, which included the Head of the WIA, was constituted to implement the project. The baseline survey had been conducted. Results were expected by the end of the year because the questionnaire method was used.

Fifty farmers, seven of them females, were selected to participate in five LGAs. A project inception-training workshop was held for the participants and facilitators (EAs and Subject-Matter Specialists) during which the project activities and implementation strategy were comprehensively discussed. At the workshop, the farmers indicated

their preference to have more sheep than goat breeders in the ratio of 4:1 as against 1:1 in the proposal. Furthermore, while some farmers preferred either the upgrading or fattening components, others opted for the two. Beneficiaries signed a memorandum of agreement spelling out the conditions of participation, including cost recovery of inputs. A sample of the memorandum of agreement is attached in the appendix. In order to facilitate record keeping of project operation, participants were given record books prepared by the project for this purpose.

For the upgrading component, 46 rams and 9 bucks of Yankassa and Red Sokoto respectively were purchased, quarantined and appropriate health measures taken before distribution to farmers. In a participatory manner farmers were guided on selecting suitable breeds for fattening from their existing flock. The selected small ruminants were identified with tags showing either upgrading or fattening. The participants were provided with plastic drinkers, wooden feeding troughs and compounded supplementary feed.

A sample of each type of enterprise, namely, fattening only, upgrading only and a combination of fattening and upgrading was monitored. The performance of the small ruminants at all the locations were satisfactory and farmers were optimistic that the desired result would be achieved.

**Observations and Recommendations:** This is the best-organized project with management team comprising subject matter specialist in key areas of project activities providing effective technical support to

the participants. A participatory approach was adopted to implement project activities and a good arrangement for cost recovery was put in place to ensure sustainability. The record keeping introduced would assist the farmers to determine the profitability of the venture. The team therefore recommends follow-up action to determine its profitability as a commercial venture and showcase it as a best practice in technology transfer and commercialization.

### **2.3.5 Fish Feed and Seed Production Venture to Sustain Fish Farming in Catchment Areas - \$4,500.00.**

**Location:** Gboko, Benue State.

**Purpose:** To impact the skills for commercial production of fish seed and fish feed by farmers.

**Technology:** Hybrid catfish, improved, fast growing fish seed and cost-effective fish feed have been developed.

#### **Collaboration**

- a. The National Institute for Fresh Water Fisheries Research (NIFR), New Busa is facilitating, represented by Dr. Okaene.
- b. Benue State ADP (BNARDA) is providing extension support.
- c. Gboko Fish Farmers Cooperative Society is the direct beneficiary.

**Activities:** Training, Supply of brood stock and feed production equipment; and identification of ready markets were planned.

**Performance:** Gboko Fish Farmers' Cooperative was holding its normal meeting at the time of visit. The cooperative comprised 100 members, made of 70 males and 30 females who were already practising aquaculture. Each member owned between 1-12 small ponds with the average holding put at 5 ponds. Training on fish feed compounding and fingerling production had been organized for the participants.

The society took delivery of one grinder, five mixers, one pelleting machine, overhead tank, two bowls, hormone, seven bags of maize, two bags of fish meal and 20 brood stock – supplied by the project. The society had started the production of fish feed with the equipment supplied. While feed production was done for members at a discount, non-members paid the full service charge. Fish seed production was however not successful because, according to the participants, they had not mastered the skill. Interaction with the participants tended to indicate preference for producing table fish hence their request for a cooling van for transporting fingerlings from producers to their location.

The team was taken round the farmers' numerous ponds, which were well stocked. Some fish were shown to be attacked by some living worm like pests, which might affect the quality of the table fish being produced. The farmers were advised to compile the details of the infestation for the attention of the project facilitator.



Effective collaboration existed between the project and the Benue ADP. That facilitated on-the-spot solutions proffered to other problems observed and reported, such as collapsing dykes, reduction of water to harvest fish, during the visit. Training on fish feed compounding and fingerlings production had been organized for the participants.

**Observations and Recommendations:** This project exhibited the nearest desirable collaboration with an ADP. There was evidence of BNARDA involvement in the project, albeit in some aspects of implementation. In the absence of the NIFFR Facilitator, the BNARDA Director of Technical Services led the team and participated actively throughout the visit. Similar to some projects already encountered, there was no visible plan for cost recovery and revolving the funds to other needy groups for wider technology dissemination. Apart from owning viable fishponds and securing the equipment there were no other contributions from the beneficiaries. It is possible to make some recoveries for the benefit of other deserving groups.

### **2.3.6 Commercial production of Fish Crackers. \$ 3,500**

**Location:** Ebute Afuye Fish Farm Estate, Epe LGA, Lagos.

**Purpose:** To impart the commercial production of fish crackers to women.

**Technology:** Processing tilapia and other fishes using cassava starch and other ingredients into fried or dried fish crackers.

### **Collaborators**

- a) The Nigerian Institute for Oceanography and Marine Research (NIOMR) is facilitating the project with Dr. (Mrs.) Modupe King as Coordinator.
- b) Ebute Afuye (Epe) Women Fish Crackers – the direct beneficiaries.

**Activities:** Training, supply of processing equipment and facilities were the major activities.

**Performance:** Ebute Afuye is a typical fishing village in Epe Local Government Area of Lagos State. For the purpose of project implementation, female members of the nine Fish Cooperative Societies at the Ebute Afuye Fish Estate were brought together to form Epe Women Fish Crackers Association with a membership strength of 50.

The project constructed a demonstration shed and installed the fish processing equipment. Other facilities supplied to the association included worktables, refrigerator, dryer, mixer, boiling pots, frying pan and ingredients for frying fish to crackers. For effective utilization of facilities provided to the association, women were organized into sub-groups of ten to facilitate rotating fish cracker production activities.

Training on fish cracker production had been conducted, while trial production was carried out twice and the fish cracker produced sold. Electricity supply to the community is erratic causing the facilitator to

transport 'work in progress', fish requiring refrigeration to and from Lagos.

### **Observations and Recommendations**

- i. Conveying intermediate good to and fro Lagos was considered by the team to be unsustainable and would increase the cost of producing fish cracker. The provision of generating set with capacity to power the refrigerator supplied was therefore recommended as an interim measure.
- ii. The team observed that because the association was put together for project implementation, it lacks coercion and would require intensive training in group dynamics. In addition, training on record keeping and marketing is required to enable the women have better understanding of fish cracker production as a commercial enterprise.
- iii. The contribution from the women group and Epe Community to the project was to provide space for storage and no cost recovery plan on items supplied has been put in place. The commercialization aspect is therefore jeopardized. The team advised the project facilitator to consider delaying the planned commission exercise in order to give more time for team building and better understanding of the fish cracker production as a viable commercial enterprise.

### **3.0 GENERAL OBSERVATIONS**

While individual projects have been discussed in the preceding sections, some observations cut across projects. These border on fund release, choice of participants, gender sensitivity, availability of technologies, linkages between sources and users of technologies, commercialization and sustainability.

#### **3.1 Fund Release**

The Facilitators of almost all the projects were satisfied with the mode of fund release. It was timely for most of the projects, soon after approvals. There were few late releases. These occurred in some cases (1<sup>st</sup> batch of approved projects) due to communication gap and in others, confusion on the bank accounts to be used. Nevertheless the balance of funds, for those concerned were eagerly being awaited.

#### **3.2 Choice of Participants**

Without exception, the choice of participating farmers was ideal in all the projects. These were mainly small scale, limited resource male and female farmers already engaging in the activities the programme is promoting. Not only was the enthusiasm of the beneficiaries obvious, there was readiness on their part to contribute both in cash and kind to realize the project objectives. It would be interesting to evaluate the success of this programme from the beneficiaries' point of view.

#### **3.3 Gender Sensitivity**

Women were observed to be involved in the projects at all levels. There were three female facilitators (two female Researchers and one

female cooperative group). Of greater interest was the participation of women as beneficiaries. The table below shows the participation of women.

Participation of women in the SAFGRAD Projects.

<b>Beneficiaries</b>	<b>No. of Projects</b>	<b>Percentage</b>
Women targeted	5	27.8
Male/Female participants	10	55.5
No direct female participants	3	16.7
Total	18	100.0

A cursory look at the table indicates that women participated in 83.3% of the projects. The three projects where women were not directly involved were those of cane-rat production and two seed multiplication projects of pearl millet in Maiduguri and maize/cowpea/soybean in Shaki. There were no apparent reasons for the non-involvement of women. Facilitators claimed they sought experienced farmers in selecting participants. Nevertheless assurances were given that women would be included in the next phase of activities and/or projects.

The sesame production and processing project presented a sample of good relationship between men and women in a project. The core of the project was oil extraction, an activity dominated by women. Stimulating the increased production of sesame was also part of the project. Although men were more skilled than women in sesame

production, men strongly supported women for the success of the project. Hence it was recommended that while women were assisted with oil extraction, project support to production should be directed to men in order to enhance complementarity and synergies among the genders.

### **3.4 Availability of Technologies**

Most of the technologies being disseminated for commercialization were available. There were hitches in only two projects; namely 'Enhancing Value-Added Ginger Production And Marketing; and 'Improved Village Level Yam Flour Processing for Micro-enterprise Development'. In the ginger project, the slicing machine, which was one of the technologies to enhance the value of ginger, was not available. The Facilitator had to resort to commissioning the fabrication of a slicer, which would not be ready for use during the life of the small grants programme.

The other project fared better. The original proposed technology of producing pounded yam flour was available but not adapted to cottage industry level. A substitute was quickly incorporated. It involved the production of another yam product using solar energy equipment - an improvement to the traditional practice. The outcome of the substitution will make an interesting observation.

### **3.5 Linkages Between sources and Users of Technologies**

More direct than indirect linkages between sources of technologies and users of technologies occurred in most of the projects. Out of 18 projects, 11 were facilitated by research institutes, which were either

the sources of the technologies or took part in the development of the technologies. The researchers who participated in the programme affirmed that the projects provided them the opportunity to observe the performance of the selected technologies under farmers' conditions. In the projects facilitated by NGOs and the extension system, linkages were through the organizations. The remaining two projects namely, 'Ikorodu Cassava Processing and Marketing Project', and 'Establishment of Cassava Processing Industry' had no link with the sources of the technologies because the technologies were already on sale at the market.

### **3.6 Commercialization**

The commercialization aspect of the programme did not receive appropriate focus. In spite of the fact that all the technologies were commercializable, the procedure for developing and managing profit-oriented activities were not transferred in almost all the projects. The major issue was that beneficiaries did not know the cost of the items they received. For instance, in the Soybean project at Tungan-Maje, participants received raw soybeans along with plastic containers for the sale of soybean milk. The cost price of the milk excluded the cost of the container, yet participants felt they were making profit. Nonetheless, a good example of the commercialization aspect was seen in the 'Certified Seed Multiplication and Dissemination Among Farmers of Oyo State'. Participants knew the cost of all inputs, terms of contract seed multiplication, and signed agreement with the facilitating agency – Oyo State ADP. At harvest, the cost of input was returned to the agency, the balance of the yield was income to the participants, which included their profit when all other expenses were

calculated. In future, modules on entrepreneurship and business management should be included at stakeholders' workshops.

### **3.7 Sustainability**

The sustainability of project activities at the expiration of the programme posed the biggest challenge. Different interpretations of sustainability were played out in the field. They ranged from no sustainability activity (as in the 'Utilization of Cassava Plant-based Rations for Poultry and Small Ruminants' and the 'Commercial Production of Fish Crackers'); fluid sustainability (as in 'Production, Distribution and Marketing of Sorghum variety, Samsorg 17'); to concrete sustainability (as in Establishment of Cassava Processing Industry). The predominant feeling pervading the projects was the nature of the project funds, which was a grant, and as such would not be paid back. Fortunately, some facilitating agencies understood that one way of sustaining projects was revolving the funds to benefit more participants.

The 'Upgrading and Fattening Local Sheep and Goats for Improved Production in Ogun State' presented the best example of a project implemented with in-built sustainability. Starting with a management team comprising SMSs, the participatory approach was used to determine project activities. Furthermore each participating farmer knew the value of input received, kept records, and knew when to pay back. The refund would then be used to assist other farmers. In future, there is need to emphasize that revolving grant funds would multiply the benefits and sustain activities longer.

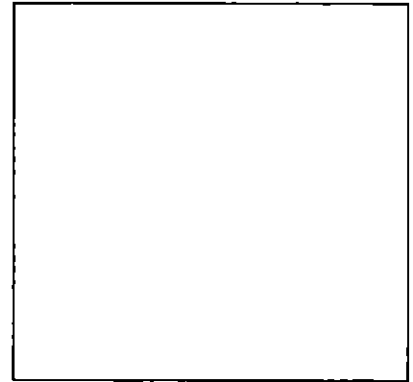


#### **4.0 CONCLUSION**

In spite of these observations, on the whole, it can be said, without fear of contradiction, that the West African Small Grants SAFGRAD programme was moving positively on the right track. More than half of the projects would be completed by the first quarter of 2003. Another one quarter would be finalized by the end of the programme in September 2003. If those having problems (the soybean, ginger and seedling budding projects) are followed up, especially rescuing the 'Ikorodu Cassava Processing and Marketing Project' from financial difficulty, then all would successfully be concluded on schedule. It is further recommended that during the final programme evaluation, priority be given to sites not visited during this monitoring exercise for those projects with more than one location.

**OGUN STATE AGRICULTURAL DEVELOPMENT  
PROGRAMME (OGADEP), ABEOKUTA**

Memorandum of Agreement for the Implementation of SAFGRAD Sheep and goat Fattening Project in Collaboration with **Ogun State ADP.**



**BETWEEN  
SAFGRAD/OGADEP**

**AND**

.....  
This memorandum of Agreement is written to give formal effect to the following arrangement in sheep and goat fattening between the Ogun State Agricultural Development Programme (OGADEP) who shall be referred to as the “implementing agency”, and .....  
..... of .....

Address who shall be referred to as “the beneficiary” under the SAFGRAD assisted sheep and goats fattening project.

**PART ONE**

In this connection, the following stipulations and conditions shall apply to the beneficiary under this agreement:

1. The beneficiary shall possess at least 5 healthy grower animals (male sheep or goat) at the age of about 5 months for each cycle of 4-5 months in a well-secured environment.
2. The beneficiary must be prepared NOT to effect sale or slaughter the project animals throughout the duration of the project except when approved by the implementing agency.
3. Revenue from the sale of project animals represents the take-off grant for the subsequent rounds for the farmers and must therefore be properly accounted for.
- 4a. **OGADEP** on behalf of **SAFGRAD** shall provide the inputs in the attached schedule on credit to the beneficiary for which payment shall be made in full either during or at the end of each cycle, depending on the agreement in 4b below:
- 4b. **MODE OF PAYMENT AGREED TO BY BENEFICIARY**  
  
Number of Installments N.....  
1<sup>st</sup> Installment .....  
Other Installment(s) .....
5. The beneficiary shall undertake to provide adequate security for the animals.
6. The beneficiary shall be willing to co-operate with OGADEP extension staff, which shall regularly visit the farm(s) to supervise, advise and train the beneficiary on sheep and goats fattening. Also, the beneficiary shall be willing to receive at short notice monitoring and supervisory teams from SAFGRAD and other relevant agencies.

## **PART TWO**

Whereas both parties have mutually discussed and agreed to the said details specified in Part One, this agreement is signed for record on this ..... day of .....2002 by the following:

**1. THE BENEFICIARY                      2.WITNESS (SUPERVISING EA)**

**NAME:** .....      **Name:** .....

**LOCATION OF FARM:**              **Circle:** .....

**Signature/Thumbprint** .....      **Signature** .....

**Date**.....              **Date:**.....

**3. SAFGRAD PROJECT IMPLEMENTATION COMMITTEE  
CHAIRMAN**

**Name:** .....

**Signature:** .....

**Date:** .....

**PARTICIPANTS CREDIT FACILITY ADMINISTRATION SCHEDULE**

**FARMER'S NAME ..... LOCATION.....**

Item of Credit/Input		Receiver's Signature	Date	Amount Equivalent ₦	Credit/Loan Repayment		
					Date	Amount ₦	Signature
FEED	Qty (kg)						
1 <sup>st</sup> Installment							
2 <sup>nd</sup> Installment							
3 <sup>rd</sup> Installment							
4 <sup>th</sup> Installment							
5 <sup>th</sup> Installment							
6 <sup>th</sup> Installment							
7 <sup>th</sup> Installment							
8 <sup>th</sup> Installment							
9 <sup>th</sup> Installment							
10 <sup>th</sup> Installment							
11 <sup>th</sup> Installment							
12 <sup>th</sup> Installment							
Total							
MEDICATION TYPE	Qty.						
1 <sup>st</sup> Installment							
2 <sup>nd</sup> Installment							
3 <sup>rd</sup> Installment							
4 <sup>th</sup> Installment							
5 <sup>th</sup> Installment							
6 <sup>th</sup> Installment							
7 <sup>th</sup> Installment							
8 <sup>th</sup> Installment							
9 <sup>th</sup> Installment							
10 <sup>th</sup> Installment							
11 <sup>th</sup> Installment							
12 <sup>th</sup> Installment							
Total							
FEEDER No.							
DRINKER No.							
OTHERS							

GRAND TOTAL							
----------------	--	--	--	--	--	--	--

**AFRICAN UNION UNION AFRICAINE**

**African Union Common Repository**

**<http://archives.au.int>**

---

Department of Rural Economy and Agriculture (DREA)

African Union Specialized Technical Office on Research and Development

---

2003-02

# REPORT OF THE MONITORING OF THE WEST AFRICAN SMALL GRANTS PROGRAMME NIGERIA, USAID/SAFGRAD/FMARD PROJECT ON AGRICULTURAL TECHNOLOGY TRANSFER AND COMMERCIALIZATION IN NIGERIA

OYEBANJI, O.O.

PROJECTS COORDINATING UNIT (PCU) Fed. Ministry of Agricultural and Rural  
Development Sheda,

---

<http://archives.au.int/handle/123456789/5722>

*Downloaded from African Union Common Repository*