



SEMI-ARID FOOD GRAIN RESEARCH AND DEVELOPMENT
RECHERCHE ET DEVELOPPEMENT DES CULTURES VIVRIERES DANS LES ZONES SEMI-ARIDES

MISSION REPORT*
(15 TO 25 MAY 2001)

**Consultation Study Tour for Developing
Small Grants Program on Agricultural Technology
Transfer and Commercialization in Nigeria**

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A USAID Funded Project/Nigeria

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May 2001

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* Taye Bezuneh, International Coordinator, OAU/STRC-SAFGRAD

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COORDINATION OFFICE / BUREAU DE COORDINATION **OUA/CSTR-SAFGRAD**
GADOUGOU 01 - BURKINA FASO - TEL. 30 6071/31 15 98 - FAX 31 15 86 - TELEX 5381 BF

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**Consultation Study tour for Developing
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Purpose of the Study Tour has been to:

1. Undertake consultation with stakeholders engaged in the generation, transfer and utilization of agricultural technologies
2. Dialogue with NARIS, Universities and Development Organizations with regard to establishing the Focal Unit (through Memorandum of Understanding between OAU/SAFGRAD and appropriate institution and organization). Focal Units follow-up project implementation in sub-regions.
3. Conceptualize Satellite Community Based Certified Seed Production Schemes in collaboration with Private Commercial Seed Producers, ADPs and National Seed Service.
4. Provide further explanation on the guidelines and formats distributed to develop and submit small grants proposals to promote agricultural technology transfer and commercialization.
5. Sensitize and orient NARIS, NGOS, etc. that the central focus and ownership of the grants should be the beneficiaries themselves i.e. farmers, small-scale food processors, women groups, rural communities etc.

The visit of the International Coordinator is an outcome of the stakeholders workshop consultation workshop that took place on 9 and 11 April 2001, at IITA, Ibadan.

The following organizations and institutes were visited

i) USAID Mission at Abuja, Nigeria

On 16 May, briefed the USAID Nigeria and Africa Bureau Representatives on the progress being made to launch the above project. These are:

- a) The distribution of guidelines and formats for developing proposals by project beneficiaries
- b) The scheduled meeting of National Technical Steering Committee (NTSC) to screen and approve proposals during the first week of July 2001.
- c) The establishments of Focal Units at strategic zones - to monitor implementation of project activities.

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ii) Consultation Meeting at Lake Chad Agricultural Research Institute, Borno State

Briefed the Director of the Institute and members of the research staff (annex 1) on the project activities. During field visit and follow-up discussion, four major areas of project activities were identified:

- Community based certified seed production of improved millet varieties
- Increase of hybrid millet seed by the Research Institute
- Improvement of technical skills in post harvest technology and utilization of millet and irrigation practices to enhance horticultural crop production.
- Improved production of bitter melon for oil extraction.

While millet is the major staple crop in the North Eastern States (Borno, Yobe and Jigawa) seed increase and distribution has been one of the major limiting constraints for improving the yield of millet in the sub-region. This activity will complement the USAID funded project on Accelerated Dissemination of Improved Agricultural technologies in Nigeria (ADIATN - was not operational in this region).

iii) Consultation meeting at Kaduna and Kano States

At Zaria, consultation continued with the IAR, Ahmadu Bello University and with two commercial seed growers.

The field visits and the consultations that followed identified the following agric-enterprises that this project could promote:

a) Sorghum

Several breweries and related industries use sorghum/and sorghum malt. The preferred sorghum varieties for breweries are SK5912, ICSV400, ICSV111 and KSV8 with 1.1%, 4.1%, 4.4% and 8.9% malting loss, respectively. The International Beer and Beverages Industry Nigeria Ltd use sorghum grain as raw material to the level of about 50,000 tons per annum. JOS International Breweries uses 100% sorghum about 8,000 tons/annum. Malt drink production uses sorghum and accounts for 55% of Guinness turnover. Furthermore, 42 beverages and baby weaning food products contains sorghum malt base. Labande Cereals Ltd. A malting company uses sorghum of up to 21,600 tons/annum.

b) Ginger Production and Marketing

There are apparently several trading companies involved in the export of dry ginger to Holland, South Africa, France, Britain and for local market (i.e. medicinal value, used in food as spices, ginger instant tea, ginger juice with and without garlic, etc.). The Oleoresin (oil) of ginger is also used in the pharmaceutical and beverage industries.

The following constraints have been identified for expanding the ginger industry:

- Harvest and post harvest handling to improve quality of ginger
- Lack of research support to develop/introduce high yielding cultivars with higher oil content
- Lack of well-organized farmers association to collectively produce and market ginger.
- Developing and stabilising the export and domestic market.
- Fluctuation of prices between seasons, (dry and fresh ginger).

Technologies that can be introduced through the small grants program:

- Assist research and communities for the fabrication of slicing machines since the prototype is available
- To improve drying of ginger using solar energy use/or gas energy (technology used for drying mango, fruit and spices in Burkina Faso, and Senegal)
- To introduce storage techniques and facilities to control price collapse between January and May.

c) Other major commodities are: maize, rice and groundnut

- . Maize - for food, production of gritz and livestock feed
- . Groundnut - for production of oil
- . Rice - Milling is an important enterprise

iv. Visit to commercial seed producers in Zaria, Kaduna

Two commercial seed companies were visited in Zaria, Kaduna. These are:

The Premier Seed Company Ltd. Nigeria

Main commodities of the Premier Seed are maize, sorghum, millet, soybean, and cowpea and vegetable seeds. About 60% of turnover are from maize (hybrid and open pollinated varieties). About 30 to 35% of its revenue are from rice seed. The processing plant has capacity from 25,000 tons/year. Currently 1,000 to 1,500 tons/years is being processed and sold.

Alheri Seed Ltd. Nigeria

This seed Company was established in 1997. Major commodities or seed grown include maize, rice, soybean, millet and cowpea. About 70 per cent of the turn over has been from maize. Sales increased from 30 tonnes in 1999 to 2001 tons/year in the year 2000.

These seed companies also identified the following constraints that affected the growth of the seed industry in Nigeria:

- Government bureaucracy and inconsistent policy have limited seed distribution
- Lack of immediate market and accumulated of seed occasionally accrued costs
- Lack of linkages to regional markets.

Recommendation:

a) The establishment of Satellite Community based Certified Seed Production Scheme

There is apparent need to establish Satellite Seed Production Scheme by strengthening support to farmers at community level. The scheme involves forging partnership with commercial seed companies, NARES, farm associations including women groups, the ADPs and the National Seed Services.

Some of the advantages of the Satellite Certified Seed Production Scheme are:

- Increased awareness by farmers of the need to use improved seeds and hybrids

- Improve the distribution network and marketing of seeds
- Minimize the fluctuation of prices of seed since seed price pre-determined in advance by agreement
- Generation of income by small-scale seed growers.

The Satellite Seed Production Scheme can be started in the major regions of Nigeria. Support from the West African Small Grants could be made available to private seeds producers through the satellite scheme.

b) Enhancing National and Regional Market and Exchange of Advance Information on improved seed availability

The USAID supported small grants program could also facilitate market linkages to seed enterprises

Visit to the Kano State Agricultural Development Authority (KNARDA) took place on 22nd May. The following viable agricultural enterprises were identified:

- Groundnut cultivation for production of oils. The annual production of the crop ranges from 93000 to 193,800 tons/year
- Promotion of soybean production for nutrient enrichment of basic diets through fortification, extraction of the oil and the cake for livestock feed.
- Ginger processing and marketing
- Rice milling - The millers have organized themselves into seven cooperatives. The key problem noted is to introduce new technology/or machine for an efficient milling. Improved varieties of groundnut and soybean have been made available to growers
- Vegetable crop production and processing
- Community based certified seed production with emphasis on sorghum, maize (early and extra-early varieties) and of vegetable crops (tomatoes, onions, garlic, pepper, Okra)

Twenty-one innovative individual farmers were documented (13 of them in crop production and 8 of them in livestock production)

Twenty multipurpose women groups are engaged in farming, processing, raising of poultry. Membership of each association varied from 25 to 80 women

OAU/STRC-Lagos Office

The discussion held on 24 May at OAU/STRC Lagos Office finalized arrangements for the establishment of "Liaison Office" to strengthen support services and monitoring of the project implementation in Nigeria.

South West Region

The major crops of the zone are cassava, maize, grain, melon, Okra, Tomato, pepper, coco-yam, plantain, oil palm, coffee, rubber, Irish potato, cowpea, soybean and kolanut, sheep, goats, pigs, rabbit and poultry are important livestock production activities.

The visit has been to:

a) *The University of Agriculture ABEOKUTA's Agricultural Media Resources and Extension Centre (AMREC)*

The mandate of MAREC include on the developing approaches and methodology to efficiently transfer research results to farmers; to identify technologies that minimize drudgery of work particularly for women, to train farmers and extension agents in various agricultural practices etc;

Consultation with some staff

AMREC (Annex 3) have identified the following priority areas for possible support by the West African SMALL grants Program:

- Improvement of cassava production and processing - There is need to introduce/develop machines/technologies to improve processing.
- Soybean harvesting and processing into production of soy milk, improvement of nutrition of basic diets through fortification.
- Production of video on selected technologies for diffusion through the media, and production of leaflets or fliers (in local language) to improve technical know-how of farmers

b) *The Ogun State Agricultural Development Program (OGADEP)*

OGADEP is charged for improving farmer's knowledge and skills, to enhance the adoption of agricultural production practices with main focus to increase agricultural productivity for attaining food security.

It was noted that adoption rates of improved varieties of maize, cassava and cowpea were 76%, 84% and 17% respectively by 1994. Similarly the adoption rates of use of raised platforms for sheep, goats, rabbitry and feed gardening were 37%, 22% 26% and 16% respectively.

Principal actors in agro technology transfer South West Zone:

- State ADPs (8 States)
- PCU Regional offices (Benin City and Ibadan)
- Agricultural extension Units of NARIS
- Zonal office of NAERLS
- Media Resources and Extension centre (AMREC) of the Abeokuta University of Agriculture

The consultation meeting with OGADEP technical directors, multipurpose experts and some staff from the Abeokuta University of Agriculture (Annex 4) identified the following key areas of project interventions:

- a) Assistance in cassava processing (by women groups) into various value-added products. To promote the alternative utilization of cassava, for example, use in bread in combination with wheat by local bakeries; production of starch and ethanol for industrial use; and utilization of cassava chips for raising small ruminants including pigs, rabbits, etc. Also increase production of cassava to meet its flour demands.
- b) Assistance to soybean harvesting, processing to particularly to combat malnutrition through soy fortification of basic diets

c) **Improve rice milling and processing**

Recent survey showed that agro-processing equipment (various prototypes), such as maize sheller; soybean and cowpea thresher; rice thresher, groundnut oil extraction, cassava grater and presser; and fruit juice extractors are fabricated throughout the South West Zone (Dayo Phillip and V.O. Adetimirin 2001)

The assistance of the West African Small Grant Program can, therefore, alleviate the following constraints:

- > **Look into efficient machines for processing**
- > **Promote demand for locally produced products through demonstration by Home Science Experts, the media, including publication of flyers (local languages), video and newspapers, field days etc.**
- > **Introduce technologies of preservation (extending shelf life-period) of locally processed products**
- > **Look into affordable packaging materials**

Linkages

OGADEP has very good working relationship with national research institutes - NARIS and Universities and with State and Local Governments

ANNEX 1.

**Lake Chad Agricultural Research Institute who Attended Consultation Meeting
on Technical Transfer and Commercialization Project
18 May 2001**

NAME	SPECIALITY
1. W.B. Ndahi	Director
2. M.U. Omeje	Soil Scientist
3. A.T.S. Bibiru	Agronomist
4. A.A. Mustafa	Plant breeder
5. Angarawai Ignatius	Millet Breeder
6. R.I. Mordi	Soil scientist
7. Mohammed Isa	Agronomist (Seed Officer)
8. O.G. Mdaing	Agronomist
9. D.A. Anogie	Socio-Economist

ANNEX 2.

**Persons contacted in Zaria, Kaduna/Kano
22 May 2001**

1. Prof. J. Voh	Director, IAR/ABU
2. Prof. O.O. Olufajo	Head, Plant Sciences, IAR/ABU
3. Dr. Ben Ahmed	Head, Agric. Economics, IAR/ABU
4. Prof. A.O. Ogungbile	Deputy Director, IAR/ABU
5. Dr. A. Joshua	Managing Director, Premier Seed Nigeria Ltd
6. Eng. S-D Yakubu Atar	Managing Director, Alheri Seeds, Nigeria Ltd
7. Eng. Usman Sanusi Dambatta	Managing Director

ANNEX 3.

**Experts who attended Consultation Meeting on Technology Transfer
and Commercialization Projects at Agricultural Media & Extension Centre,
University of Agriculture, Abeokuta
25 May 2001**

NAME	SPECIALITY
1. M.O. Ajayi	Livestock Extension
2. Akin Sofoluwe	Development support communications
3. I.A. Adeniji	Crops extension/Farm management
4. I.A. Adesope	Livestock extension
5. E.O. Olajide	Food processing (women-in-development)
6. O.O. Mraiyesa	Crop Extension
7. A.Y.A. Adeoti	Director, AMREC, UNAAB
8. Dr. Dayo Phillip	Economist, UNAAB
9. Dr. V.O. Adetimirin	Agronomist, Dept. of Agronomy, University of Ibadan

ANNEX 4.

**ADP Experts of Ogun State who attended the Consultation Meeting
25 May 2001**

1. The Deputy Managing Director - Ogun State Agricultural Development Program
2. Mr. J.S. Oluwole - Director Human Resources
3. Dr. I. Olusoji - Director, Planning Monitoring & Evaluation
4. Dr. Dayo Phillip - Ag. Economists/From above University, facilitator of the meeting
5. The Director of Finance ADP
6. Mrs. Eshalem - Chief, Women in Development
7. The Director of Extension - ADP
8. V.O. Adetimirin - Facilitator of the Meeting

**Contacted persons in Lagos Area
24 and 25 May 2001**

1. Dr. Kolawole Adeniji - Executive Secretary, OAU/STRC
2. Mr. Ahene - Administrative/Finance Officer, OAU/STRC
3. Mr. Sotonye Anga, Executive Director, Gold Chains International Ltd. Victoria Island

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Bezuneh, Taye

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