



**AGRICULTURE SECTOR PROGRAMME SUPPORT CONTRIBUTION  
TOWARD ESTABLISHMENT OF A SUSTAINABLE QUALITY DECLARED  
SEED SYSTEM IN TANZANIA**

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**INTRODUCTION**

The government of Denmark through the Danish International Aid for Development (DANIDA) finances the Agriculture Sector Programme Support (ASPS). The on-farm seed production component that was launched in July 1998 is one of its major programmes. The programme is being carried out in three pilot regions: Dodoma, Iringa and Morogoro. The pilot phase is expected to end in year 2002. The main problems being addressed by the seed programme are poor seed supply and dissemination of improved national varieties. The 1996 DANIDA study on purchases and distribution of certified seed showed that only 4% of the farming community uses certified seed.

**THE CURRENT SEED SITUATION IN TANZANIA**

Tanzania has all the essential sections of the formal seed sector: a well-established national research system; seed multiplication farms; public and private seed companies; seed quality control services; and seed distribution and sales outlets. However, the distribution and purchases of certified seed has dropped drastically due to the following factors:

- High costs of seed, due to removal of subsidies as a result of liberalization.
- No availability of credit facilities as a result of the demise of co-operative societies.
- Reduced production of certified seed by the seed companies relative to demand.
- Some seed companies have stopped seed production in the country and have resorted to seed importation.
- All private seed companies are interested in producing and selling hybrids, mainly maize.
- The seed companies do not sell seed of crops that are important for farmers' and the nations food security, eg. sorghum, rice, green legumes, etc.
- The new varieties produced by the national research system are not bought and disseminated by seed companies.

As 96% of seed supply is through the informal system, there is a need to upgrade the informal system so that seed of known improved varieties is delivered to farmers. This is provided for in the quality seed supply system.

#### **PROGRAMME OBJECTIVES AND ADVANTAGES**

**Main objective.** To increase food security at the household and national levels and improve income and nutrition among small-scale farmers, through increased yields of food crops. This will be achieved through the use of improved seed and is important to family and national security.

#### **Specific objectives.**

- Promote the complimentary roles of traditional, old varieties with new, improved varieties as they become available through breeding programs.
- Encourage farmers to produce and maintain on-farm seed stocks (i.e. Quality Declared Seed) for improved/recommended crops and varieties, and assist them to improve their traditional village-based production.
- Develop the capacity of smallholder farmers (supervised by extension staff) to engage in seed production, processing, storage, and distribution either as individuals or groups.
- Improve seed supply of traditional crops in rural areas, and ensure that the supplied seed is of good quality, adapted to the local environment, and available on time at affordable prices.

#### **Programme advantages.**

- Strengthened capacity of the seed system, availability of improved seed of target crops.
- Improved yields, nutrition and farm incomes.
- Development of an enabling environment for flow of varieties.

#### **IMPLEMENTATION STRATEGY**

The implementation strategy includes the following steps.

- Identification of crops and varieties.
- Identification of institutes with which to collaborate.
- Selection of crops and varieties by farmers.
- Identification of target groups/farmers who will produce the seed.
- Training of trainers in seed technology.
- Procurement of inputs or production of initial seed through contracts with research stations (breeders) and foundation seed farms.
- Establishment of demonstration plots for comparing improved and local varieties and for field days.

- Seed production.
- Inspection of fields by Tanzania Official Seed Certification Agency (TOSCA).
- Rehabilitation of the necessary facilities at key institutions (TOSCA, foundation seed farms).
- Various studies – inventory, training needs assessment, market assessment, baseline survey and traditional storage methods.
- Food and Agriculture Organization (FAO) Quality Declared Seed program modified to suit Tanzanian situation.

#### **IMPLEMENTATION**

**Choice of districts and villages.** The following target districts were chosen for this programme:

- Morogoro region – Kilosa, Kilombero and Ulanga districts.
- Dodoma region – Dodoma rural, Kondoa, Kongwa and Mpwapwa districts.
- Iringa region – Iringa rural, Njombe and Ludewa districts.

Target villages were chosen through the regions' inventories conducted by the regional offices and extension officers of the respective districts. Information collected was on current agricultural production, farm sizes, crops and varieties grown, and crop preferences of female and male farmers. Seed company retailers, research institutes, and NGO's provided additional information. The important reason for selecting a village to undertake on-farm seed production was non-availability of seed in surrounding villages.

#### **CHOICE OF CROPS AND VARIETIES**

In each respective village, farmers chose crops they were interested in. Food crops selected were mainly maize, rice, sorghum, beans, pearl millet and wheat. The vegetable crops selected were: amaranthus, tomatoes, onions, okra, and African eggplant. The crops chosen by the farmers were for household consumption and the seed was procured through the informal system. Farmers, research staff and extension staff collaborated in selecting varieties for the first demonstrations conducted in the 1998/99 season. Contractual agreements have been made with research institutes and seed farms for the production or cleaning of seed.

#### **TRAINING OF TRAINERS**

Training is conducted to empower district staff who are assigned ASPs duties to supervise seed production by the farmers in their respective districts. In turn, these district staff train the divisional and village extension officers. Training sessions were conducted from September to December 1999. Staff members have been identified to receive training in seed science and technology.

### **SELECTION OF SEED PRODUCERS**

Each village selected two farmers to produce seed. In the case of legumes and cereals, each farmer had to produce seed from a farm of half a hectare. Their fellow farmers selected seed producers, with the following guidelines:

- Farmers should have sufficient land, enough to allow isolation distances for the seed crop.
- The farmer should be hard working and not “rich.”

Seed production started in the 1999/00 season. Every year, new villages and farmers are added for seed production. Seed producers are fully supported in the first year with seed, agro-inputs and the knowledge involved in seed production. Support is reduced or removed in the second year based on the income obtained from the first year’s seed sales. However, if drought or floods occur in the first year, full support is again given. In the third year, support is terminated.

### **TRAINING OF SEED PRODUCERS**

- Seed production manuals have been produced and translated into Kiswahili.
- Two days of residential training, which involves class and field work, have been organized. This type of training is carried out three times a year.
- Field days – the villagers visit the seed production fields twice during the season, first during the vegetative growth and second during the reproductive stage of the crop.
- Study tours – farmers are taken to other districts to learn from their fellow farmers.

### **QUALITY CONTROL AND SUPERVISION**

- The Village Extension Officer is responsible for the daily supervision of the farms.
- The Tanzania Official Seed Certification Agency (TOSCA) undertakes 10% of the quality control.

### **SALES OF 1999/2000 QUALITY DECLARED SEED**

This program has been completed in Iringa region, and is still on-going in Dodoma and Morogoro regions. In this program, the seed producer keeps a list of names of customers and the amount of seed purchased. The extension officer will follow up on whether or not the purchased seed has been sown.

### **THE 2001 STRATEGY**

The ASPS Seed Component will consider a meeting sometime in February or March. The participants will all be NGO’s, donors, government, and other institutional representatives working with farmers on food and seed production. One of the agenda items will be “Having a Common Approach in the On-Farm Seed Production System.” Expansion to other regions might take place in 2002/2003 season.



**Bean/Cowpea CRSP Website** <http://eastafriacrsp.wsu.edu/>

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