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Sustainable Seed Systems in Sub-Saharan Africa

Many countries in Sub-Saharan Africa (SSA) have invested considerable human and material resources in strengthening their research and extension systems through projects supported by the World Bank and other donors. These systems are now actively generating and disseminating technologies for adoption by farmers. However, the lack of good quality planting material, particularly of vegetatively propagated crops such as cassava, yam and sweet potato, is now emerging as a serious constraint to farmers' adoption of technology. The estimate of the percentage of farmers who purchase seed produced by formal institutions such as parastatal seed organizations and private seed companies in Sub-Saharan Africa ranges from 5% to 10%. A large percentage of farmers use their own saved seed or seed obtained from other farmers in their communities. This study, **Seed Systems in Sub-Saharan Africa : Issues and Options**, focuses on the development of an effective, farmer-centred seed strategy.

Not many countries have adequately addressed the question of providing farmers with access to good quality planting material, particularly of the modern varieties. The seed systems in most SSA countries focus on a narrow band of crops, principally maize and sorghum. Less attention is paid to strategies which are appropriate to tuber crops, grain legumes, and horticultural crops. In most countries, government policies relating to the regulation of seed production and price-setting inhibit the emergence of private initiatives in seed production and distribution. Further, the public sector or parastatal agencies largely control the multiplication and marketing of many varieties of seed.

The issues

The central issue for many countries in the region is to adopt appropriate strategies for increasing the availability and use of good quality planting material by farmers. Farmers' needs can be classified according to the crops grown by them, their resource endowments and risk-tolerance capacities. An

effective seed system - comprising breeding, marketing and the use of seed by farmers for growing crops - must have a strategy for each category of farmer. For example, while some farmers can afford to buy hybrid seeds, some others would be satisfied with good quality seed of the modern, open-pollinated varieties which they could buy from neighboring farmers.

Another issue is the delivery of the results of plant breeding by the National Agricultural Research System (NARS) and/or the International Agricultural Research Centers (IARC), to farmers as quickly as possible. At present, the time taken from the breeding stage of a variety to the seed production stage is impractically long, sometimes as long as 5 to 7 years.

A third issue is the evolving (where necessary) and implementing of a legal framework which would enable the countries to adopt a basket of seed production and marketing strategies to meet the seed needs of each category of farmers. Some seed regulatory mechanisms are too restrictive and not only retard the process of germ plasm release to farmers but also narrow the options available to them regarding obtaining good quality planting material of modern varieties.

Suggested approaches

A flexible seed system is crucial to effectively respond to these challenges. The ways in which such a flexibility can be brought about are analyzed in the present study. Documented experiences across SSA indicates that the seed production systems in most countries should encourage the informal sector, which can meet the seed needs of a wide spectrum of farmers. The formal sector can continue producing hybrids and other high value seed along with the informal sector.

Since, in most countries, informal farmer-to-farmer spread of seeds is the single most frequently used source of seed by farmers, it is necessary for governments to recognize the informal sector as an important low-cost source of quality seed, and to use it as a vehicle for providing resource-poor farmers with improved seed of modern varieties at affordable prices.

Governments can encourage the growth of such an informal sector by:

- Providing it with access to NARS/IARC-bred foundation (and/or breeder seed);
- Extension advice on seed production, processing, treatment and storage; and
- Supporting a legal framework that permits the marketing of uncertified, "truthfully labelled" seed which would conform to the prescribed standards regarding the genetic purity, germination and the moisture content laid down for the variety, except that it would not carry an official certification tag.

Governments themselves should pay particular attention to:

- The production of breeder seed, and , in some cases, also the foundation seed;
- Quality control, maintenance of reserve stocks of seed; and
- Implementation of the national seed policy.

According to the study, every seed system should provide a gamut of farmers with access to good quality seed within easy distance, in time and at affordable prices. However, many governments have put in place seed systems which do not satisfy the above criteria. Most of them cannot produce seed at prices which most farmers can afford without a continual infusion of subsidy. This study argues that such a subsidy would inhibit the growth of the private sector, including the private sector, in seed

production.

The study also argues for deregulation of the seed industry with both the formal and informal seed systems providing quality seed to the consumers. Such a "bundle of strategies approach" to the seed system will increase the awareness of seed consumers of seed quality and price, and lead to an overall increase in seed use and consequently to agricultural production.

There is a perception that the informal seed system is "low-tech" and would delay the adoption by farmers in the SSA of "high-tech" comprising (mostly) certified hybrid maize seed from formal systems and fertilizer. This argument is often used to delay the deregulation of the seed industry in SSA which is now mostly in the formal sector. However, given adequate training, farmers can be taught to produce good quality seed of even hybrids. This is now borne out by the fact that in many countries, contract seed growers produce most of the hybrid seed for the private and public sector seed companies and even sell such seed to neighboring farmers.

The interplay between the legal framework and the seed system is also analyzed in the study. A very restrictive legal framework involving mandatory varietal notification and seed certification cannot help the growth of the informal, decentralized sector. The difference between seed certification and quality control which is overlooked in many SSA countries is explained. Seed certification is the "official" seal declaring that the "certified" seed has been grown from a proven, tested and recognized genetic source, and that it has the stipulated germination percentage, purity, health and moisture content. Quality control checks adulteration of seed by seed marketeers and should be enforced regardless of whether certification is mandatory or not.

Role of the World Bank

Two specific areas of support seem relevant for the World Bank in this area.

- Working more closely with NGOs who have undertaken successful farmer-based seed production programs; and
- Convincing governments in the region that encouragement to the informal seed system is a necessary precondition to the healthy growth of a private sector seed industry which is sustainable, both financially and institutionally.

The experience of the Bank shows that many countries have realized the need to have broad-based strategies for seed production and distribution, backed by appropriate seed laws. Nigeria is one of them. In a seed seminar held in March 1994, the local officials have recommended a strategy with characteristics similar to those recommended in the study. Uganda is planning to have a seed system comprising a basket of strategies depending upon the nature of the crop and the farmer clientele. Zambia has plans to start a farmer-based seed production program for some crops. Thus, many countries in SSA are becoming aware that increased food production depends critically upon country-specific and crop-specific seed systems which meet the seed needs of a range of farmers, particularly smallholders.

V. Venkatesan. 1994. Seed Systems in Sub-Saharan Africa: Issues and Options. Discussion Paper No. 266. Technical Department, Africa Region. Washington, D.C.: World Bank.

SEARCH

FEEDBACK

SITE MAP

SHOWCASE

