In Tsholotsho, rainfall at the start of the season was reasonably good, and most of the trials were planted in December. However, there was a severe drought in January. Much of the maize died. In the experiments, most of the crops survived, but yield potential was reduced. Analysis of results of the second year, and a combined analysis across years, will be completed in August 2001.

In October 2000, a "Farmer Field Schools" (FFS) program was initiated, with support from extension personnel and other partner institutions (financial support has been provided by the Rockefeller Foundation). FFS groups (with 15 to 30 farmers each, the majority of whom are women) were formed in Tsholotsho (3 groups), Gwanda South (2 groups), and Zvishavane (2 groups). The groups meet weekly with a "facilitator" to discuss issues on principles of integrated soil fertility and water management and the related technology options to test. Each group's members decide on topics to examine, and jointly implements trials on a designated site.

The objective of the FFS program is to help farmers understand the basic principles of integrated soil water and nutrient management. The program also includes other relevant technology options. Participating farmers are encouraged to experiment on the management of resources which they already have, based on an understanding of certain underlying principles. A greater understanding of the principles of integrated soil water and nutrient management is expected to enhance farmers' ability to make rational management decisions in response to changes in their biophysical and socio-economic environment, and to make them less dependent on receiving specific technical recommendations from external sources. In the same target areas, SMIP is also initiating collaborative programs with NGOs and private sector companies to simultaneously improve farmers' access to input and output markets.

To date, implementation of the FFS program has gone well, and it is particularly popular with farmers. However, the current system is also fairly expensive (per farmer reached), particularly with regard to the training of FFS facilitators (extension officers). At a recent workshop, partners in the program discussed methods for reducing costs, increasing the number of FFSs and beneficiaries, and improving the sustainability of the FFS approach. Some innovative ideas developed will be tested in the coming season.

Seed Policy in Mozambique

DD Rohrbach (SADC/ICRISAT Sorghum and Millet Improvement (Program, PO Box 776, Bulawayo, Zimbabwe) d.rohrbach @cgiar.org

Sorghum and Millet Improvement Program (SMIP) recently completed a review of seed policies in Mozambique in collaboration with the national Ministerio da Agricultura e Desenvolvimento Rural and Michigan State University. This study estimates Mozambique is annually losing up to US $77 million in productivity gains from the failure of the national seed system to disseminate new varieties of grain and grain legume crops currently identified on the national registration list. This includes an annual loss of US$14 million resulting from the failure to disseminate improved varieties of sorghum and pearl millet. Substantially larger sums are being lost if one considers the complementary costs of continuing food insecurity and poverty.

The study offers a number of recommendations for strengthening the national seed system. For example, several recommendations are provided for the simplification of procedures for variety registration and release. Formal release procedures are suggested for varieties developed within Mozambique. However, the country would benefit by allowing the simple registration of varieties released in neighboring counties.

The analysis recommends the allocation of a specific budget to maintain breeder seed stocks of all released varieties. Cost recovery is recommended through sales of foundation seed to seed companies and development projects.

Mozambique is advised to encourage the entry of additional seed companies into the market. Companies producing seed locally can be favored in tenders for seed destined for emergency and development programs. However, free distribution of seed should be limited. If concessionary seed distribution through relief and development programs is necessary, strategies should be employed to promote the development of seed markets. Options include the use of small pack sales, and voucher programs linking seed delivery with the expansion of retail trading networks.

The study notes that emergency seed requirements are commonly over-estimated in Mozambique. Better procedures are needed to more accurately estimate these requirements. The analysis identifies areas of the country most prone to drought and flooding, and estimates approximate seed requirements in these areas. This analysis will be pursued in more detail when ICRISAT hires a seed system development specialist for Mozambique under a new project targeting the development of strategies for improving the efficiency of emergency seed supply.

The report suggests that community seed production should be explicitly recognized as a component of the national seed system. These programs should aim to complement the development of the commercial seed market by concentrating on seed crops of lesser commercial interest, or by working in areas of the country poorly served by commercial markets. Non-governmental organizations can also support the development of a sustainable national seed system by helping companies test the demand for new varieties and evaluate alternative marketing strategies.

The study notes that Mozambique currently relies on regional markets for more than 95% of the seed flowing through commercial and emergency channels of supply. This is unusually high by historical standards, and more efforts are needed to promote local seed production. Nonetheless, the availability of seed imports has been highly beneficial to the country. In this context, the regional seed market should be viewed as complementary to the national seed system. The efficiency of this link can be improved with the harmonization of regional seed laws, the encouragement of regional stockholding and sale of varieties most suited to Mozambique, and more active efforts to promote sharing of regionally suited varieties and germplasm.

The report notes the need to evaluate trade-offs between the benefits of seed regulation and the costs of delayed seed access to the nation's farmers. Cheaper seed of acceptable quality may be more beneficial to most farmers than expensive seed of extremely high quality. In this context, Mozambique is encouraged to promote truth in seed labeling and allow the sale of quality declared seed.

The study ultimately argues that seed policy should not simply be viewed as a series of regulations designed to protect the seed producer or consumer. Instead, seed policy should encompass a positive investment strategy targeting the delivery of better seeds to as wide a market of farmers as possible. The strength of the seed system should be assessed in terms of higher rates of adoption of a shifting array of improving varieties.

These findings were presented to a national seed workshop in early March 2001. Many of the recommendations were accepted for implementation.

A copy of the report titled "Investment priorities for the development of Mozambique's seed system" by David D Rohrbach, Jan Low, Alfredo Cucu, Jaquelino Massingue, Duncan Boughton, Guilhermina Rafael, Antonio Paulo, and Domingos Jocene, can be obtained from SMIP.

Fighting Food Insecurity through Seed Entrepreneurship at Community Level

MK Mbunji (SHAPES, Programme Against Malnutrition, PO Box 30599, Lusaka, Zambia)
pam@zamnet.zm

One of Africa's biggest problems, in Eastern and Southern Africa in particular, is household food insecurity. In Zambia, lack of access to seed of improved crop varieties by most households has been identified as one of the factors limiting household food security. Seed production and trade has for a long time been a preserve of advanced commercial farmers and financially strong seed companies. Profit motives have continued to undermine the supply of seed of improved food security crops, which generally include non-hybrid seed types, in preference for hybrid seed. The poverty situation of rural people, coupled with formal sector's insistence on cash as the only mode of acquiring seed, have further weakened the position of rural households in benefiting from the advances of science in crop improvement. Other organizations have come up to address the situation; and, in any case, the formal sector meets only 30% of the national seed requirements. One such organization is the nongovernmental organization Programme Against Malnutrition (PAM). Through its Seed Entrepreneurship programmes, PAM aims to transform smallholder farmers into commercial seed farmers so as to increase access to seed of improved crop varieties by the majority of rural farmers. The ultimate goal is to improve food security in rural areas.

The concept of seed entrepreneurship combines the advantages of both formal and informal seed supply systems. It is premised on the fact that producing good seed requires use of improved production practices and attention to detail, and on the assumption that in every community there are farmers, who with proper training and extension, can become reliable commercial suppliers of improved seed to their communities. In terms of marketing, the concept employs the efficiency of the informal sector in distributing seed while at the same time maintaining business acumen. The program encourages the seed acquisition and distribution through commodity exchange transactions, seed for work transactions, and cash purchases. A combination of these exchange modes has proved to be more efficient in distributing seed than the formal sector requirement for cash under the Zambian rural setup.

PAM started the Seed Entrepreneurship program as part of its Drought Rehabilitation Programme (DRP) during the 1997/98 season. The program is implemented in collaboration with the Ministry of Agriculture Food and Fisheries (MAFF) and extension network, which provides