

Creating impact oriented bean seed delivery systems for the poor in Mozambique: a baseline study

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Abstract

In Mozambique, farmers experience severe constraints in accessing quality bean seed at planting time, because the seed industry hardly supplies seed of legume crops. To address this issue, a project on bean seed production and delivery systems was launched in the country to improve farmers' access to seeds of improved bean varieties. This poster characterizes the existing seed systems in Mozambique with the objective of identifying how farmers acquire and disseminate bean seed. It explores problems farmers faced in seed acquisition and dissemination before project implementation. A total of 116 smallholder bean farmers were randomly sampled from six pilot sites across Tete and Zambezia Provinces. Results showed that on average farmers realised below 900 kg ha⁻¹ from growing local varieties and using their management systems, which is far below the potential average yield of improved varieties of 1500 - 2500 kg ha⁻¹ under optimal management conditions. The majority of households (90.1%) found it difficult to access seed of improved bean varieties because of limited sources and lack of information on the varieties. The most common means of seed acquisition was farmer to farmer (72.7%), either for free, cash or in kind – exchange for labour or other products. The majority of men (45.9%) preferred varieties with a potential market while women (46.4%) preferred high yielding varieties meeting both consumption and market qualities. Bean production was markedly affected by pests and diseases (47.5%), as well as drought, poor soils, and inadequate knowledge of bean production technologies. Farmers lacked skills and knowledge that could enable them meet expected produce standards for the markets. The majority of smallholder farmers needed basic training (45.0%) and access to improved seed and other new technologies (53.8%) to gain greater knowledge of bean production, and build more productive and sustainable bean seed systems.

Materials and Methods

- The survey was conducted at 7 sites across Tete and Zambezia Provinces (Fig.1).
- The study largely used primary sources of information which included:
 - Surveys of bean producers using semi-structured questionnaires;
 - Focus group discussions with farmers in farmer groups using checklist
 - Key informants interviews with local leaders, government/public institutions, private sector (industries), non governmental organizations using checklists.
- Through use of purposive and simple random techniques (Scott, et al., 2003, Longley, et al. 2001) a total of 116 smallholder bean farmers were sampled.



Fig. 1. Map showing sites where the survey was conducted

Results

Wealth and bean seed self sufficiency

The common indicators used were possession of household assets (hoes; livestock; clothes; bicycle); land and type of house (built with burnt bricks; roofed with iron sheets versus grass thatched). Based on these indicators the majority of the study households (50.4%) were poor.

Results showed that on average farmers realised below 900 kg ha⁻¹ from growing local varieties and using their management systems, which is far below potential average yield of improved varieties of 1500 - 2500 kg ha⁻¹ under optimal management conditions.

The majority of households (90.1%) found it difficult to access seed of improved bean varieties because of limited sources and lack of information on the varieties.

The most common means of seed acquisition was farmer to farmer (72.7%), either for free, cash or in kind – exchange for labour or other products.

The majority of men (45.9%) preferred varieties with a potential market while women (46.4%) preferred high yielding varieties meeting both consumption and cash needs.

It was also learnt that bean production was largely (47.5%) affected by biotic constraints such as pests and diseases.

The other constraints were drought, poor soils, and inadequate knowledge in bean production technologies.

Farmers in the study area lacked skills and knowledge that could enable them meet expected produce standards for the make markets.

The majority of smallholder farmers needed basic training (45.0%) and access to improved seed and other new technologies (53.8%) to gain greater knowledge of and control over their environment and build more productive, and sustainable bean seed systems.

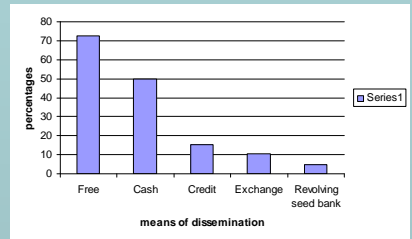


Fig 2. Means of bean seed diffusion

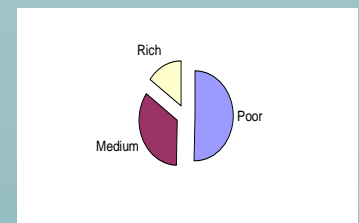


Figure 3: Distribution of Wealth of Farmers



Figure 4: Local Market was one of the Sources of bean seed

Conclusions

The baseline study characterized the existing seed systems; sources of seed; constraints in bean production; means of seed acquisition; and accessibility of improved bean seed.

The study population was dominated by poor households.

The study revealed that on average, farmers realised 915 kg/ha from growing local varieties. Yield of improved varieties varied from 1500 - 2500 kg/ha under optimal management.

In the study area the majority of households (90.1%), find it difficult to access seed of improved bean varieties.

Farmers, particularly small farmers, were involved in multiple kinds of seed systems, which helped them to produce and obtain the seed they needed.

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