

Highlights

CIAT in Africa

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Bean seed delivery for smallholder farmers in sub-Saharan Africa

Improved bean varieties can make a difference to the livelihoods of smallholder farmers. Adoption studies across five African countries show that improved bean varieties give families yield increases of 30 to 50 percent. Bean variety research advances by the National Agricultural Research Systems (NARS) of Eastern, Central and Southern Africa can translate into increased yields on-farm only if new seeds reach farming families. The challenge is in addressing how to get seed of new bean varieties to the poor and to the more marginal areas. Research shows that relying on individual farmers to diffuse seed of new varieties can be slow and unequal (i.e. the poor may be excluded). Formal seed channels (government or commercially-based enterprises) also have a weak track record in reaching most potential clients because:



The wider impact programme aims to use creative, sustainable and equitable ways to help smallholder farmer households gain access to seed of improved bean varieties.

- certified (formal) bean seed may cost up to four times that of seed found in the local markets
- sales outlets, if they do exist, are generally restricted to more favoured areas
- private seed industry has not found the bean seed business to be lucrative, as once farmers get new germplasm, they usually re-sow from their own harvests for many seasons to come.

On the other hand, farmers across seventeen countries in the Pan-Africa Bean Research Alliance (PABRA) have shown interest in experimenting with, adopting, and even paying for, new bean seed varieties (if seed samples are sold in small affordable quantities). Within the last eight-year period, National Agricultural Research Systems (NARS) have released a considerable number of varieties. However relatively few varieties were multiplied by formal channels and the amounts of seed supplied were minimal in relation to what farmers actually use. Ethiopia is a case in point, while the NARS released twenty-three varieties between 1996 and 2004; the formal sector provided less than 1% of the seed which farmers actually sowed. The bulk of seed came from local seed channels (home saved or from local markets).

The wider impact programme

Our challenge has been to directly link the main seed suppliers (local systems of farmers, traders and service providers) to an ongoing supply of research products. Non-governmental organisations (NGOs), community-based organisations (CBOs), farmer's organisations (FOs), church groups, and traders all have close contacts with farmers. In 2003, PABRA initiated a strategy called the Wider Impact

Programme (WIP) which aimed to catalyse and coordinate efforts among these multiple seed chain actors and to reach ten million people (or two million households) by 2008. This new strategy does not put the full onus of production and delivery on centralised NARS (and their extension systems). It decentralises much of the work to the production zones, and builds on the comparative advantages of diverse actors. Hence, the production of breeder and foundation seed became the responsibility of NARS, seed parastatals and certain commercial companies. Subsequently, decentralised production in target zones became the chief activity of more locally-based groups (NGOs, CBOs, and FOs). The bean networks (ECABREN in Eastern and Central Africa, and SABRN in Southern Africa) took on the roles of technical backstopping and much of the training of partners.

This arrangement has been successful not only because diverse and multiple organisations see advantage in working together, but also as it makes good use of the skills and financial resources of each partner, allowing them to focus on what they know best. Members of the bean networks have forged important partnerships with a wide range of organisations. Some partnerships are with formal channels, (Ethiopian Seed Enterprise) or with commercial enterprises (L'Agrotech Kenya). Others are with NGOs, who have considerable financial resources and a wide geographical spread. Finally, some partners who might normally be considered to be non-seed actors (such as tobacco companies) have engaged in seed transactions, as their clients and employees can benefit from enhanced access to new varieties. Such partnerships have enabled the networks to expand outreach in different ways through scaling up:

- production of foundation seed
- production of more locally-based seed (decentralising to end-user zones)
- the number of diffusion partners
- the type of partners to serve diverse clients and different zones (including the hard to reach)

Achievements

Within a modest couple of years, the wider impact programme has made substantial progress in our quest to reach millions of families with seed of new bean varieties.

Creating partnerships

By the end of 2006, the programme has catalysed 436 complementary partnerships (Figure 1). For example, in

Ethiopia in 2006, the NARS engaged in partnerships with 26 organisations directly and 130 indirectly, allowing it to produce seed to cover 60 % (9,446 tonnes) of the national seed requirement—from 0.8 % two years before. Although progress in the expansion of partnerships has been substantial and widespread in most PABRA countries since 2004, the Alliance is carefully monitoring and learning from shifts in partners' activities, (particularly with emergency aid organisations which operate on short-term time scales.)

Scaling up seed dissemination

The Alliance has recently scaled up seed production and dissemination. In 2005 monitoring showed that eight countries have made substantial progress in significantly increasing the amounts of seed disseminated to farmers. Our network goal was to reach two million households in five years. Monitoring studies at the end of 2007 found that we had reached more than 3.8 million households (about 19 million people) in a three- year period within the six PABRA member countries that have been most closely monitored.

Next steps

The Alliance is proud of its accomplishments, but not complacent. If we are to scale out further we need to understand better the multiple reasons for our first successes. The research component of the WIP has begun to compare the costs of varied seed production modes, the cost and benefits of different delivery channels, and is monitoring seed health along the production and delivery chain. Partnerships are also receiving much needed scrutiny. One of the key network challenges for the coming seasons will be to understand how to maintain viability of partners and we are asking the following questions:

- What incentives are needed to maintain seed supply and delivery?
- What do partners need to be able to scale out quickly?
- What elements can guide key partnerships into profitable seed-related enterprises?

The goal in our wider impact programme goes well beyond seed production and delivery. We want to identify and implement creative, sustainable, profitable and equitable ways to help smallholder farmer households gain access to seed of improved bean varieties—no matter where they live or what their economic means.



For more information contact:
Jean Claude Rubyogo
j.c.rubyogo@cgiar.org
or Louise Sperling
l.sperling@cgiar.org

CIAT
Africa Coordination
Kawanda Agricultural
Research Institute
P.O. Box 6247
Kampala, Uganda

Phone:
+256(414) 567670

Fax:
+256(414) 567635

Email:
ciat-uganda@cgiar.org

Internet:
www.ciat.cgiar.org

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