

Getting quality seed to maize farmers in eastern and southern Africa



Despite strong growth in the private seed sector in eastern and southern Africa over the last decade, most of region's millions of small-scale farmers lack easy access to affordable, quality seed of maize, the number-one food staple. A major study by CIMMYT shows the need for active investments in the region's seed sector and for policies to support its development.

Since the mid-1990s, when many countries in eastern and southern Africa opened maize seed markets to private enterprise, registered seed companies have proliferated—now numbering almost 80—along with other types of seed producers. Previously, improved maize seed was produced chiefly by public organizations or parastatal companies. In the 2006-07 cropping season, registered companies produced the bulk of just-over 100,000 tons of improved maize seed that were marketed in the region—enough to sow 35% of the region's maize lands.

"This implies a significant, unmet demand for seed," says CIMMYT economist Augustine Langyintuo. "The farmers who don't purchase fresh seed are recycling from the previous harvest, meaning they

are losing out on potential yield, or sowing unimproved, low-yielding local varieties." Experts cite average yield losses of 5% for recycled seed of open-pollinated varieties, and more than 30% in the case of hybrids. In addition, more than half the maize area in the region is still under low-yielding traditional cultivars, partly because farmers lack knowledge of or access to affordable, quality seed of improved maize varieties.

Finding bottlenecks in seed supplies

As part of research by CIMMYT and the International Institute of Tropical Agriculture (IITA) on drought tolerant maize for African farmers, Langyintuo led a joint study to characterize seed providers and bottlenecks to seed supplies in eastern and southern Africa. A total of 116 representatives from 73 seed companies and 35 national agricultural research systems (NARS) and non-governmental organizations (NGOs) participated, and information was gathered on the seed sectors in Angola, Ethiopia, Kenya, Malawi, Mozambique, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. "There

was an extraordinary 100% return on questionnaires sent, evidence of partners' trust in CIMMYT and interest in addressing the problem," says Langyintuo.

The main finding was that investment capital requirements and a shortage of qualified staff hinder the growth of small, local seed companies that have emerged on the continent over the past decade, according to Langyintuo. "The costs of setting up and running an office, recruiting and retaining qualified personnel, and procuring and operating production, processing, and storage facilities are beyond what many local businesses can afford, and access to operational credit is limited or nil," he says.

One operating expense that virtually no companies in the region have been able to take on is that of marketing seed. "Most companies rely on third-party agents such as agro-dealers, large retail stores, NGOs, or the government to retail most their seed," says Langyintuo. "The bulk of the agro-dealers in turn lack funds to purchase seed, and so must take it on consignment,

forcing companies to retrieve unsold seed at cost. The dealers are normally not knowledgeable enough about the seed they sell to promote it effectively, and have also been known to adulterate seed with mere grain."

Other hurdles include poor infrastructure (bad roads and storage facilities), cumbersome varietal registration and seed certification regulations, restrictions on foreign trade or investment in seed, and low adoption rates of improved varieties.

Getting farmers the seed they want

Langyintuo suggests that governments, development investors, international centers like CIMMYT and IITA, and the region's universities need to assist and support current seed companies to improve their seed outputs and profits. "They would benefit from access to credit, improved experimental maize, good seed production sites and affordable inputs, and training in effective business practices," he explains. CIMMYT normally distributes its germplasm freely to everyone, but Langyintuo says that granting companies some degree of exclusivity in the use of CIMMYT inbred lines would facilitate branding and promote sales.

"Moreover, as long as seed companies are reluctant to invest in retail networks, agro-dealers need support with targeted loans from governments and development investors to buy and sell seed and maintain good storage facilities," he says. "Farmers' awareness of useful new varieties can be raised through extension messages, better retail networks, and access to credit." Sharpening business acumen

As part of its support to the seed sector, CIMMYT organized a course in the region in 2007 on good business practices for maize seed companies. As part of this,



representatives from leading companies in Zimbabwe allowed participants to visit their facilities and learn how they operated. "We essentially asked them to show key parts of their business to 25 future competitors, and they agreed to it," says CIMMYT maize seed systems specialist, John MacRobert, who organized the course. "Strengthening internal seed laws and regulations to police fake seeds, policies that stimulate the private seed trade, and avoiding undue delays in the release of cultivars could benefit the seed industry tremendously," says MacRobert.

Where applicable, carrying out the distinctiveness, uniformity and stability (DUS) tests alongside national performance trials (NPT) could speed up the release to farmers of new, improved varieties, according to Langyintuo. "For rapid spillovers of cultivars released in one country to similar agro-ecologies in different countries, the regional harmonization of seed laws and regulations initiated by the sub-regional organizations, CGIAR centers, development investors, and other relevant stakeholders should be expedited."

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