



Improving access to quality seeds potato

KEY MESSAGES

- ▶ The evolution of potato as a cash crop provides the need and the opportunity to invest in its seed systems.
- ▶ Roots and tubers seed systems have specific characteristics that necessitate specific strategies. For instance, the private sector involvement in the production of early generation seeds should be facilitated.
- ▶ The formal and informal seed markets are interlinked. Seed laws, policies and regulations and their implementation strategies should therefore address both.

Growing markets for Irish potato in East Africa

In eastern Africa, demand for root and tuber crops, particularly Irish potato (*Solanum tuberosum*) and its processed products, is growing. As a result, potato is increasingly becoming a cash crop. The area in the region planted annually with the crop has increased from around 370 000 ha in 1999 to around 650 000 ha in 2014 according to FAOSTAT. With increasing population, urbanization and changing dietary preferences, demand is expected to continue to increase, especially for varieties suitable for processing into crisps/chips. Although the region has the potential for increased production of the crop to supply this dynamic market, yields remain low.

Constraints in potato seed value chains

One major constraint is farmers' limited access to quality seed potatoes of the varieties in demand locally.

Thus most seed potato planted in the region originates from the informal seed sector, which includes non-certified seeds and farmer-saved seeds. The bulk of seed transiting through the informal system is of poor quality: that is to say, of non-pure varieties and often infected by pests and diseases.

The primary underlying causes of this constraint include the lack of capacity of plant breeders and staff, usually employed in public sector agricultural research institutes, to provide

enough early-generation seed to private sector seed producers for multiplication and sale. In general, the seed potato value chains – from the production of the early-generation stock, through quality assurance and multiplication steps, to markets – remain grossly underdeveloped in most countries of the region.

A lack of farmer willingness to pay for quality seed of improved varieties has led to low effective demand and, therefore, an overall lack of incentive for private sector investment in seed potato production.

However, the evolution of potato as a cash crop and increasing market demand present an opportunity to invest in a quality seed potato delivery system.

RECOMMENDATIONS

1. Each country should develop and implement a seed policy that, with the supporting regulations and implementation strategy needed, specifically addresses root and tuber crops, including potato. Currently, most countries have a more generic seed law that is oriented to cereals and true-seed crops. As root and tuber crops are vegetatively propagated, their seed system and seed market function differently, and need specific strategies.

2. At the farmer level, the informal and formal seed markets are interlinked. Therefore, national strategies for root and tuber crops need to consider the formal and informal seed systems jointly. This could be done, for example, by stimulating increased production of commercial certified seed potato, while simultaneously improving quality in the informal sector.

OPTIONS FOR POLICY ACTION

Stimulate local commercial production of quality-controlled seed potatoes

- ▶ Improve the capacity of public services by investing in infrastructure and human resources, as well as providing adequate operational funding. Areas of focus include the production of tissue plantlets and early-generation seed to supply private multipliers; inspection and certification; variety testing and release; pest risk indexing; and phytosanitary and quarantine measures.
- ▶ Through adequate provisions in seed laws and regulations, enable the private sector to participate in the more up-stream stages of the seed value chain (e.g. variety testing and production of early generation seed, including pre-basic seed), with adequate supervision and inspection by government institutes, while also minimizing the bureaucracy involved.
- ▶ Increase training for and support to private seed multipliers.

Improve quality in the informal system with a gradual alignment with the formal system

Train farmers in positive selection, i.e. the selection of the best plants for seed production, and the use of seed plots to improve the quality of farmer-saved seed (FSS).

Countries should develop, recognize and support a Quality Declared Seed (QDS) system (or a Quality Declared Planting Material system: QDPM). Two examples include the International Potato Center's (CIP) experience of supporting a QDPM system in Ethiopia, as well as the Integrated Seed

Sector Development (ISSD) Uganda pilot activity on quality assurance for QDS. The Ethiopian experience showed that QDPM is an important means for improving access to quality seed potato, and that farmers recognize the difference in seed quality and overall yield improvements that result from planting QDPM.

Strengthen value chain coordination

Organize national platforms for coordination among stakeholders in the seed potato value chain. Platforms led by private actors can be important tools for sharing best practices.

Develop market information systems to better align supply with demand. For example, the Potato Council of Kenya, through an SMS-based service, disseminates information to farmers on where quality seed can be purchased.

Quality Declared Seed

A Quality Declared Seed (QDS) system is a simple quality assurance scheme for seed production that requires minimum field inspection, with the objective of meeting the needs of small-scale farmers while serving as a basis for future certified seed market development. For vegetatively reproduced crops such as potato, it is called Quality Declared Planting Material (QDPM). Quality declared systems differ from a formal seed certification scheme in that QDS protocols allow for less rigorous and lower cost inspection regimes, by taking into consideration local conditions to ensure they are appropriate for target users. They differ from informal seed delivery systems in that QDS and QDPM originate from seed on an established list of varieties, are produced by registered seed producers and involve quality control and inspections. A QDS system is implemented primarily by seed producers at the community level or by field extension officers. Farmer groups can do the multiplication and provide quality control.

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