Access to Early Generation Seed: Promoting commercial and sustainable supply of EGS for food crops in Sub-Saharan Africa

ISSD Africa and international convenings in London (23 March 2015) and in Addis Ababa (25-27 February 2016)

This technical note shares insights from different activities aimed at finding sustainable solutions for the bottleneck of EGS in seed value chains of food crops in Sub-Saharan Africa. Access to EGS is one of the topics addressed in ISSD Africa, under the theme of increasing access to varieties in the public domain.

**ISSD Africa and EGS**

In the context of ISSD Africa’s theme of access to varieties in the public domain, we are currently analyzing the production and delivery of early generation seed (EGS; breeder and foundation seed), which is a key bottleneck to the performance of seed value chains in Sub-Saharan Africa (Rwomushana and Heemskerk, 2015). In practice, EGS production in the public domain generally follows a supply chain model, ignoring relations between demand for quality seed and demand for EGS; EGS production is merely driven by the availability of varieties in the public domain.

In one of our ISSD Africa action learning projects, we address the following research question: “What are the innovative models of getting EGS and other forms of quality starter seed of public released varieties and locally adapted germplasm to seed producers?” Taking a value chain perspective we take into consideration the following three key elements:
- **Availability** – is EGS actually available?
- **Access** – can EGS be accessed in terms of price, space, information and time?
- **Use** – are seed producers interested in using the EGS which is available and accessible, in terms of varieties, quality etc.?

**EGS convening in London on 23 March 2015**

At the same time the topic of EGS has been addressed in an interesting study of Monitor-Deloitte, funded by BMGF and USAID (BMGF and USAID, 2015). Based on this study, international and African experts joined in a workshop in London on 23 March 2015 to look at the availability of EGS for different crop types (Lion et al., 2015). Availability of EGS was looked at in terms of excludability, i.e. the degree to which seed producers must rely on a given EGS producer, and rivalry, i.e. the degree of pluralism expected in the market, and the number of seed producers demanding quality EGS of specific varieties in order to distinguish between different public and private business models. EGS business models were further determined by market demand and cost of production of EGS. In the Monitor-Deloitte study four market archetypes have been distinguished:

- **Private sector dominant** – quality seed of crops high in demand, and attractive for the private sector; crops like hybrid maize and vegetables;
- **Public-private collaboration** – quality seed of crops high in demand, but public investment needed because of the cost of production or demand risks; crops like maize OPVs, common bean and rice;
- **Public sector dominant** – quality seed of food crops not highly desirable or profitable but important for food or seed security; crops like sorghum OPVs or cowpea; and
- **Niche private sector** – quality seed of crops with a niche market demand; often closed seed value chains in which seed production is integrated into the commodity value chain; crops like cotton or sorghum for beer brewing.

**Observations of the meeting**

In Sub-Saharan Africa, EGS users comprise private as well as public seed producers. Private seed producers include international and national seed companies, but also local seed businesses, seed producer cooperatives
and community-based farmer seed producers. Informally organized seed producers are demanding more informal types of EGS like accessions of local varieties from genebanks or even certified seed to be used as starter seed.

EGS is generally produced by either the seed producers themselves, or the developers of the variety (mostly public research organizations and some private companies with own breeding programs). EGS production as a standalone activity seems not to be profitable, but may be combined with other services like business development services.

Most seed producers, be it national companies, SMEs or farmer communities, are concerned about access to EGS or starter seed, and hence interested in getting involved in EGS production, either directly as producers, i.e. seed value chain integration, or indirectly in advance planning and chain management, i.e. seed value chain empowerment (KIT et al., 2006). Whereas principles of seed value chain integration and seed value chain management are similar for seed producers in all four market archetypes, the level and type of interaction between public and private actors in the chain determines how the chain can best be supported.

The study of Monitor-Deloitte shows that some market archetypes require an active role of the public sector and more public investment than others. This leads to a number of recommendations for investment strategies for governments and their development partners. While currently major public investments are made in the hybrid maize seed value chain, and only limited investments are made in seed value chains of small grains and legumes, the importance of the public sector in these seed value chains suggests need of the reverse.

Market archetypes 2 and 3 include commodities that have a less developed market, but are nevertheless very important for local food security. This means that there is a need for EGS, but the effective demand is limited. This requires adaptation of EGS supply through e.g. lower prices, hence lower quality requirements, local production to reduce costs, or addressing a larger market in order to reduce overhead costs such as direct breeding costs.

**General conclusions of the meeting**

Based on the observations above, we conclude that there is a need for:

- Shifting public investment in EGS production to the archetypes in which the private companies are not interested (e.g. small grains, legumes, vegetative propagated crops), rather than investing public money in the development of hybrid varieties;
- Finding ways of improving availability and use of EGS of non-commercial crops for small-scale and community-based seed producers;
- Seed value chain integration, in which seed producers are involved in EGS seed production;
- Seed value chain empowerment in which seed producers (small- and large-scale) are involved in seed chain management.

**Follow up: national studies and convening in Addis Ababa 25-27 February 2016**

The EGS meeting in London has been followed by in-depth national studies in Ethiopia, Uganda, Rwanda and Zambia. Our national ISSD projects in Ethiopia and Uganda have been involved in these in-country studies. Study results will be presented in yet another regional EGS convening for Sub-Saharan Africa in Addis Ababa 25-27 February, bringing together more than 130 seed professionals, including country delegations from Ethiopia, Burkina Faso, Ghana, Malawi, Mozambique, Nigeria, Kenya, Rwanda, Tanzania, Uganda and Zambia; African organizations engaged in seed sector development; key development partners; and donor organizations. Convening organizations are BMGF and USAID in collaboration with Ethiopian and regional organizations.

Objectives of the meeting are to share experiences and insights relevant to commercial and sustainable EGS supply in a context of specific crops and seed systems; and to determine how to advance sustainable solutions at scale and for using demand-driven (versus supply driven) interventions to promote seed sector development of food crops in Sub-Saharan Africa. The objectives and approach fit very well with ISSD Africa. ISSD Africa is one of the sponsors to the meeting.

**References**


KIT, Faida MalI and IIRR. 2006. Chain empowerment: Supporting African farmers to develop markets. Royal Tropical Institute, Amsterdam; Faida Market Link, Arusha; and International Institute of Rural Reconstruction, Nairobi.


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