

The National Agricultural Research Organisation (NARO), is the main source of Early Generation Seed (EGS – pre basic and basic) of new and released varieties of most food security crops majorly cereals, small grains, oilseed crops, food legumes and vegetatively propagated in Uganda.

Shortage of basic seed required to scale up production of quality seed (certified & Quality Declared) has been identified as a major bottleneck hampering availability of and access to quality certified/Quality Declared Seed (QDS) to smallholder farmers. This results in low crop productivity whose consequence is negative impact on food security, nutrition and overall livelihoods. NARO as an institution responsible for EGS production and supply is overwhelmed by the increasing demand for quality basic seed from multiple seed producers such as seed companies and other seed entrepreneurs. Thus, putting an enormous burden on breeders to produce sufficient volumes to satisfy the demand.

An economic analysis of EGS production of selected crops showed that non-hybrid crops have low-profit margins and present an investment challenge for the seed companies whose objective is to make profits from the seed business. In particular, legumes such as beans, soybean and groundnut have low multiplication ratios (10-150) requiring multiple cycles of bulking to generate enough quantities of EGS to meet the demand. They are self-pollinated and therefore farmers can recycle the initial seed stock for several seasons.

The unavailability of quality basic seed also hinders access to new productive varieties from research thus limited returns to investment in crop improvement.

To address the erratic availability of basic seed of non-hybrid crops, seed sector stakeholders believe that the most appropriate and sustainable pathway is to establish a non-profit social basic seed enterprise. NARO has a social obligation to make the available quality basic seed of its new crop varieties to the farming community as a public good. Unfortunately, NARO Institutes do not have adequate capacity to set up and run a sustainable basic seed enterprise. The current high demand for quality seed of all food crops presents a unique business opportunity to produce and market basic seed of improved public varieties to seed companies and other seed entrepreneurs. This will further boost the visibility of NARO in its contribution to agricultural development in Uganda.

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Seed Processing Plant

To raise its visibility, NARO established a private wing to promote its research products through a wide range of enterprises under the umbrella of NARO Holdings Ltd (NHL). The Integrated Seed Sector Development-Plus (ISSD-Plus) Project in Uganda, sought to partner with NHL to establish a social basic seed enterprise as a long-term strategy for sustainable supply of basic seed of less profitable crops /varieties that are not adequately served by the small and medium scale seed companies in the country. A start-up investment of USD 1Million with each partner contributing 50% was obtained from different donor agencies including the Embassy of the Kingdom

of the Netherlands in Uganda and direct contribution by NHL. The process of establishing a non-profit enterprise under NHL required extensive consultations to set up a legal structure and final registration.

The main seed production hub of NHL is located in Kigumba Kiryandongo District; where a seed farm, seed processing facilities, storage and offices have been established. This will act as a coordination center for basic seed production at the Zonal Agricultural Research and Development Institutes (ZARDIs) to bulk the necessary volumes to meet demand on time.

- The S4S(U)Ltd is primarily established as a social enterprise producing and selling quality basic seed on a cost-recovery basis. It will focus initially on beans and groundnuts while maize and other crops will be added in subsequent years to help generate adequate revenues to sustain the social enterprise whose profit margins are low.
- In the past, quality assurance for basic seed was the responsibility of the breeders. However, S4S(U)Ltd will develop an efficient and effective quality assurance mechanism whereby the National Seed Certification Service (NSCS) will inspect seed fields, sample processed seed, and laboratory test the seed for quality standards of basic seed. This will be followed by packaging in branded sizes and clearly labelled. This will build trust among the basic seed buyers.
- Breeders' resources for on-station basic seed production can be channelled to pre-basic seed production and variety promotion and maintenance. Revenue from pre-basic seed if kept, can be used to finance some breeding activities.
- S4S(U)Ltd will use climate-smart varieties and life-saving irrigation to mitigate production risks arising from climate variability manifested by irregular onset and end of the rainy season, pests and diseases.
- Attractive pricing and periodic introduction of new farmer-and market-preferred varieties will enhance willingness to pay for quality seed by the seed and endusers thus, reduce market risks.

The main objective of S4S(U)Ltd is to produce and market only high-quality basic seed for certified and Quality Declared Seed producers within Uganda and regionally. To assure quality, the enterprise will liaise with NSCS for inspection and certification of basic seed production. Further, a tracking and tracing system will be integrated into the quality assurance system to eliminate

fake seed. To ensure production efficiency, and minimize inconsistent and unpredictable demand from seed producers; a transparent pre-booking system will be put in place. This will be achieved through seasonal meetings of stakeholders to forecast demand and develop realistic seed roadmaps. S4S(U)Ltd will develop procedures for these processes in consultation with stakeholders.