

ISSD Uganda



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Towards a vibrant, pluralistic and market-oriented seed sector in Uganda

Integrated Seed Sector Development Programme in Uganda

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The Integrated Seed Sector Development (ISSD) programme started in 2012 to support the development of a vibrant, pluralistic, and market-oriented seed sector. Providing more than 100,000 smallholder farmers with access to affordable quality seed of superior varieties has contributed to increased incomes and an increased number of rural households that are seed and food secure. The programme builds upon the strengths of both the formal (public and private) and informal (farmers and community-based) seed systems and seeks to consolidate them. Specifically, ISSD works to increase availability of quality seed to farmers and to harmonise the policy environment of the seed sector by promoting informal seed production activities and

supporting dialogue to formulate, amend and implement seed related policies respectively. ISSD initiated its work in 2013 with 30 seed producing groups called Local Seed Businesses (LSBs) in the West Nile, Northern and South Western zones of Uganda. By the end of 2015, the number of LSBs has since increased by 70 new groups to make 100 LSB.

This briefing note is the first in a series of ISSD Uganda briefs covering a variety of topics related to the ISSD Uganda programme. The 15 briefs in the series were written by the ISSD team during a write-shop in late 2015 and are based on actual experiences and lessons learned throughout the implementation phase.

ISSD intervening in the Uganda seed sector

Many stakeholders in the agricultural sector in Uganda mention the limited availability of, and access to quality seed as one of the main constraints to increasing production and productivity levels. Additionally, the sector is characterised by a high prevalence of counterfeit seed in the market, limited availability of early generation seed (EGS) for seed producers, an unregulated informal seed system and a lack of seed-related data to guide decision-making and planning by both public and private sector (see ISSD Uganda brief 2 for more details on the seed sector).

ISSD guiding principles

Interventions are directed by ISSD guiding principles for creating systemic change in the seed sector. They have been adopted in countries where ISSD-related activities are being implemented including Burundi, Ethiopia, Ghana, Mozambique and Uganda. These principles include:

- 1** ISSD Intervention programmes are built upon a variety of seed systems to encourage pluralism in the seed sector. This is based on the fact that farmers access seed through various sources with each source having its own values and limitations. ISSD therefore works to strengthen the different seed systems.
- 2** ISSD works according to the structure of the seed value chain, engaging in activities from management of plant genetic resources to seed distribution and marketing. This is to ensure that strategies are designed to enhance the efficiency of the seed value chain as a whole.
- 3** ISSD promotes entrepreneurship and market orientation in both formal and informal seed systems, for private as well as public actors in the seed value chain.
- 4** ISSD recognises the relevance of informal seed systems in development of the seed sector as a whole. This is vital because informal seed systems continue to dominate in most developing countries, supplying more than 80% of the total seed used by farmers. Informal seed systems are therefore crucial for smallholder farmers in relation to food security and promoting resilience in the face of increasing uncertainty.
- 5** ISSD facilitates interactions between formal and informal seed systems by linking farmers and seed sector professionals to the different components of the seed chain through various ways. For example, in genetic resources management, the two systems may be linked through supporting community biodiversity management. Such linkages are promoted at all stages of the seed value chain.
- 6** ISSD recognises that in spite of the public and private sector having different objectives and interests in the seed sector, they also have complementary roles to play. At a superficial level, we look at the public sector following a developmental agenda on seed and food security; focusing on the production of quality seed of improved varieties for the main food crops. On the other hand, the private sector strives for efficiency and effectiveness in product development for maximising profit, and thus has a generally good understanding of what the market demands. For the seed sector to function effectively, the objectives of both the public and private sectors have to be combined.
- 7** It is principle that ISSD ensure seed policies are coherent with practices and realities of farmers. For this to be achieved, we advocate for evolving policies that support a dynamic sector. Policy frameworks

should therefore support strengthening of multiple seed systems, while appreciating the need to accommodate the changing circumstances in the agricultural sector.

8 Last but not least, the ISSD approach promotes evidence-based seed sector innovation. This is done by supporting research and studies providing evidence for the design and implementation of seed sector interventions. Furthermore, there is the need to facilitate stakeholder partnerships to jointly experiment with innovative approaches towards solving key seed sector bottlenecks. Accordingly, knowledge institutes are natural partners for ISSD.

For the Uganda programme, ISSD focuses on two outputs: 1) developing functional LSBs, and 2) supporting the development and implementation of policies promoting a dynamic seed sector.

Developing functional Local Seed Businesses

Most seed companies in Uganda - comprising the formal seed sector - are mainly interested in crops with high profit margins (higher multiplication ratios) such as hybrid maize. Self-pollinating crops, which are the major food crops, are not normally considered by the formal sector. ISSD Uganda hopes to bridge this gap by engaging farmers in seed entrepreneurship through the LSB model. ISSD Uganda is working both directly and indirectly with about 100 LSBs to produce quality seed of locally adapted crops and varieties for local markets; this seed falls under the quality declared seed (QDS) class. The LSBs fill the gap in quality seed production for crops such as beans, groundnut, simsim and sorghum, which commercial seed companies are not sufficiently involved in.



LSB farmers vote for their favorite varieties during on station field day organized by ISSD at Ngetta ZARDI

LSBs start as farmer groups or entrepreneurial farmers who see business opportunities in the production and marketing of quality seed. The purpose is to develop them into commercially sustainable local businesses. At the end of the programme, these LSBs are well organised and technically equipped for quality seed production. They have improved their access to research (for varieties and technologies), extension (for advisory services), markets (to sell their produce), quality assurance by the Ministry of Agriculture Animal Industry and Fisheries (MAAIF) (to guarantee seed

quality) and finance and credit (to support their local business operations). With such mentoring, the groups can sustainably provide quality seed to smallholder farmers at affordable prices.

For an LSB to be sustainable, it needs to be commercially-oriented and able to invest in seed business. This means that the ISSD programme does not provide free inputs and relies on capacity building by a seed agronomist/expert, and marketing by an agribusiness expert. The four building blocks for sustainable LSBs are presented in figure 1.

An LSB is commercially sustainable when:

- 1 It is technically equipped** to produce, add value and market quality seed products. This requires the group to have knowledge and skills on site selection, demarcating isolation distances, field clustering, land preparation, sowing, weeding, roughing, fertiliser application, crop protection, harvesting, seed treatment, packaging and storage.
- 2 It is market oriented** i.e. it has the capacity to assess the market and develop in-demand products which satisfy customer needs. Marketing involves finding out what your customers want and supplying it to them at a profit. The LSB therefore requires the capacity to collect and evaluate market information to develop a marketing strategy as part of a business plan.
- 3 It is professionally organised** following basic guidelines and task divisions between both general organisation (including governance), financial management and infrastructure. General organisational management includes decision making, participation, communication, transparency, task division, coordination and specialisation in the form of truly cross-functional teams (e.g. quality control committee, marketing committee, block farm management, monitoring and self-assessment).
- 4 It is strategically linked** to benefit from the availability, accessibility, efficiency, affordability and reliability of inputs and service provision. Essential links include: access to germ plasm; agronomic inputs (including fertiliser and pesticides); seed certification; finance; information; technologies; guidance/supervision; materials and machineries; administrative documentation, stationary and furniture; water and electricity; transport; licencing; legal rights; security; lobbying; and other important institutional links.

Figure 1: LSB Building Blocks



Measuring LSB performance is based on a diagnostic tool referred to as the 'Success Factor Tool'. This instrument encompasses the four building blocks that constitute an economically sustainable LSB and is based on the rating scores for each factor. The tool helps to guide LSB training plans with the ISSD experts (ISSD brief 9).

Supporting the development and implementation of policies for a dynamic seed sector

In addition to supporting local seed production, the ISSD Uganda programme contributes to increasing the efficiency and effectiveness of seed production and marketing by respective public institutions. Through collaborations with public organisations such as the National Agricultural Research Organisation (NARO), MAAIF, national seed certification services (NSCS) and other stakeholders, three priority areas are being handled by the ISSD programme: (1) operational and viable seed quality assurance mechanisms (ISSD brief 6); (2) sustainable access to foundation seed of requested varieties in the required quantity and

quality (ISSD brief 15); and (3) seed policies and regulations are developed and/or enforced (ISSD brief 4). To achieve this, the programme is working in partnership with NSCS, NARO and its national agricultural research institutes (NARIs), whose mandate is seed quality assurance, variety development and EGS production respectively.

ISSD Uganda also works in collaboration with other seed sector projects, such as US-AID FtF, enabling environment for agriculture (Chemonics) and policy action for sustainable intensification of cropping systems (IITA) on seed related policies; with US-AID FtF AgInput (TetraTech) and AgResults (Lutheran World Relief) on access to foundation seed and quality assurance.

To facilitate policy-related discussions, the ISSD Uganda programme supports seed sector platforms consisting of high level professionals representing key stakeholders from the public sector (NARO, NSCS), private sector (USTA), civil society, knowledge institutions, and farmer organisations (ISSD brief 4, 14).

Uniqueness of ISSD and LSB approach

1 Selection of entrepreneurial farmer groups and building their capacities without using free hand outs

ISSD Uganda targets farmer groups that are entrepreneurial and have experience in growing the crops for which they want to produce seed. The programme is realistic when considering potential groups to work with. If the group appears to have more social rather than entrepreneurial objectives, the programme and groups part ways. Careful study of a group's capacity means joint action plans can be made to address weak areas. LSBs are supported by ISSD and MAAIF to produce, process, store and market seed following approved quality standards. Though ISSD links the groups to strategic sources of inputs and services, they raise their own funds for purchase of all inputs required for seed business. They also find their own markets for the seed produced.

2 Promoting the concept 'producing what you can sell', using customer and planning based analysis

The common practice in Uganda is to support farmers to produce in bulk then link them to markets. Most community-based seed multiplication projects focus on seed production but not the marketing component. The unique ISSD approach of first analysing the market has led to the production of more realistic volumes that can be sold. This manages the expectations of farmers in terms of their role and the role of ISSD in finding the market.

3 Strategically linking LSBs with service providers

The programme invests a lot of time in linking groups to service providers. Linkages with the breeders for foundation seed and NSCS for quality assurance services are essential, and

several groups are at the level where they can maintain these relationships independently.

4 Formalising the quality declared seed class and creating its own label for recognition

Unlike many community-based seed multiplication initiatives, ISSD works on bottlenecks in seed value chains, including quality assurance and facilitating the provision of QDS seed labels for LSB seed. Together with the NSCS under MAAIF, ISSD is piloting a QDS system that is efficient and affordable.

5 Promoting innovations by bringing stakeholders together to address bottlenecks in the seed sector

In zones where the programme operates, ISSD bring stakeholders together to specify the roles and responsibilities of each LSB partner in addressing any weaknesses. This highlights the strengths of each partner and becomes a collective action rather than ISSD 'owning' a group.

At district level, local multi-stakeholder processes (MSPs) are used to identify bottlenecks in the local seed situation, including LSBs, and to come up with joint actions and innovations to address identified bottlenecks.

At the zonal level, MSPs focus on seed sector and value chain bottlenecks that affect the region. The multi-stakeholder platforms bring together the different stakeholders and jointly define innovative projects to address the issues raised at that level (ISSD brief 14).

At the national level, the same process takes place. Stakeholder processes are interlinked, highlighting the uniqueness of combining the bottom up approach with national level engagement to identify issues hampering the creation of a vibrant, pluralistic and market-oriented seed sector (ISSD brief 4).



DAO Dokolo District Inspect sesame seed Field in Aye Medo Ngeca Dokolo district

ISSD institutional framework

A local Wageningen UR office in Kampala coordinates and manages the ISSD programme responsible for projecting results and reporting. The project is implemented in collaboration with MAAIF and its subsidiaries include NSCS and NARO. The programme operates in three geographical areas based on agro-ecological zones; namely West Nile, Northern Uganda and South Western Uganda. The LSB component is hosted by the three zonal agricultural research and development institutes (ZARDI) of NARO. A seed and agri-business expert are based at each ZARDI in

Arua, Lira, and Mbarara. In addition to hosting the ISSD project activities, NARO is also a source of foundation seed for LSBs. The collaboration with NSCS is specifically related to seed quality control, inclusive policy development and the uptake of quality seed by farmers. Other programme partners are district extension personnel and sub-county officials in project areas. Wageningen UR Centre For Development Innovation (CDI) and the Royal Tropical Institute (KIT), provide technical backstopping to ISSD in Uganda. ISSD Uganda is financially supported by the embassy of the Kingdom of Netherlands.

Challenges met in implementation of the ISSD programme

- Insufficient quantities of basic seed are produced at the research institutes due to breeders lacking both the necessary resources and crucial information on seed demand in the country.
- Limited access to basic seed e.g. West Nile potato seed producers accessing potato seed from Kachwekano ZARDI in Kabale District.
- LSBs rely on seed sales to raise money for basic seed which delays booking of the foundation seed from research institutes.
- External inspection by MAAIF is expensive and the department of crop inspection and certification mandated to perform this task is currently under-staffed.
- LSBs risk management is not adequately handled yet drastically affects performance, especially in seasons with extreme weather conditions.

Achievements made by the ISSD Uganda programme over the four years

1 Thirty LSBs (with approximately 1,500 seed producing farmers in total) have been empowered to produce and market quality seed through best practices in integrated crop management, internal quality assur-

ance, and marketing. Major crops grown are: beans, cassava, groundnuts, potato, sesame, upland rice, sorghum, local vegetables, finger millet, pasture seeds, pigeon peas, and soybean. LSB numbers are being up-increased to 100 through partner organisations in the three zones (ISSD Uganda brief 3).

Farmers involved in LSBs attest to having realised higher incomes since joining the seed business. Table 1 provides an overview of the average income per farmer, the gross margin per farmer and per acre and the returns to labour (RTL) for selected crops.

Many LSB farmers have been able to diversify their income sources to other entrepreneurial activities like animal farming, due to increased earnings. Others have been able to improve their living conditions by constructing permanent houses for their families.

2 ISSD has engaged in policy dialogue that has successfully led to the recognition of QDS as a seed class under the draft 2014 seed policy, draft national seed strategy, and the national agricultural development plan 2015/16 – 2020/21.



Farmers at a field day at a LSB demo garden

Table 1 Overview for each crop: the average income per farmer, average gross margin per farmer, average gross margin per acre and average RTL in 2015

Crops	Average income / farmer	Average gross margin/ farmer	Average gross margin / acre	Average RTL
Rice	2,039,600	1,340,100	2,627,925	10,253
Beans	912,000	484,311	609,070	7,517
Green grams	1,260,000	684,200	596,867	10,225
Groundnuts	2,010,585	1,200,735	1,215,378	14,053
Simsim	1,274,312	781,619	615,235	20,317
Soybean	953,857	467,876	369,428	6,838
Cassava	3,275,750	479,813	126,471	14,076
Potato	2,108,750	1,132,150	1,382,817	8,658

- 3** Through innovative engagements with NARO research teams, ISSD is supporting breeders at Abi ZARDI to test the feasibility of the institute producing basic seed as a business. This could help resolve the issue of producers' limited access to basic seed.
- 4** ISSD Uganda is also partnering with MAAIF in an innovative pilot study aiming to put in place a cost effective quality assurance system for QDS. The main components of this system are: delegation of field inspection to district agricultural officers; sampling and testing of LSB seed for germination and purity percentages by the Kawanda laboratory team and accredited zonal labs; and, the issuing of green tamper proof labels for QDS. So far this is being implemented in only three of the ISSD zones. Since implementation of this pilot, LSBs in the zones of South Western, Northern and West Nile have been issued with a total of 2,548 green tamper proof labels by MAAIF over the 2015A and 2015B production seasons.
- 5** ISSD Uganda is working in collaboration with USAID, NARO and USTA to carry out an EGS study that will support formulation of policies for scaling production and delivery of EGS. EGS include basic seed from which QDS and certified seed is produced, and breeder seed from which foundation seed is produced.
- 6** In an effort to curb the sale of counterfeit seed, ISSD Uganda supported NilePro Trust Co in an innovative activity together with the district local governments (DLG) of Koboko and Arua. This activity led to the formulation and enactment of quality seed resolutions in both districts. The ordinances enable the enforcement of measures against counterfeit seed within districts. Through these resolutions, Arua and Koboko DLGs both rejected consignments of fake cassava and beans inputs from NAADS secretariat, under the operation wealth creation (OWC) in 2015. However, the same consignments were received in districts of West Nile, where they lacked a basis for refusal of the inputs (ISSD brief 14).

Lessons learned in implementation of ISSD activities

- 1** Many farmers, especially those in the Northern and West Nile zones, were accustomed to receiving free production inputs from development organisations. This made it harder for them to adopt the principle of entrepreneurship in agriculture. It was therefore crucial that ISSD was clear from the start about the nature of support to be provided.
- 2** To formulate tailor-made training programmes for the farmer groups, gaps in the knowledge need to be identified to continuously assess progress through tools like scoring tables.
- 3** To enable farmer groups to function independently, they need to be sustainably linked to strategic partners and service providers including:
 - Business development services.
 - Breeders and NARO institutes for foundation seed.
 - Local government structures at sub-county and district levels.

- 4** In order to respond to daily changes in the business environment, there is need for continuous learning as an organisation.

Conclusion

ISSD Uganda's experience demonstrates the informal seed sector's ability to increase the availability and variety of quality seed for desired crops to local farmers, including those located in areas where formal seed producers are not available. Since its inception, ISSD Uganda has focused its support on seed market supply with little input on seed uptake and the demand side. To maintain an equilibrium in the quality seed market, ISSD is in the process of conducting awareness campaigns on the use of quality seed (both certified and QDS) at the national and zonal level. This will bring the programme even closer to attaining its goals of: 1) increasing quantity of food produced from seed; 2) increasing farm income due to farming households using quality seed; and 3) increasing farm income of LSB members engaged in quality seed production and marketing.



How to use a moisture meter-Kazo LSB

Annex 1 - Profile of LSBs supported by ISSD Uganda since 2013

	Name of LSB	Location		Seed crop (s)
		Sub County	District	
West Nile zone – Abi ZARDI				
1	Agiermach Ogiebu Womens Group for Development	Warr	Zombo	Beans
2	Aliamu Cupria Timbakwa Seed Development Association (ACTS)	Drajini	Yumbe	Simsim
3	Amadrma Farmers Association	Metu	Moyo	Simsim
4	Andevuka Mixed Farm Group	Ofua	Adjumani	Groundnuts
5	Binagoro Women Groups	Midigo	Yumbe	Simsim
6	Kololo Area savings initiative	Tara	Maracha	Beans
7	Marikulu Farmers Group	Kuluba (Keri)	Koboko	Beans and simsim
8	Nyio Ajia Farmers Group	Vurra	Arua	Groundnuts and soybean
9	FARSON	Wadelai	Nebbi	Simsim
10	Watembo Group Association	Wadelai	Nebbi	Millet and simsim
South Western zone – Mbarara ZARDI				
11	Agetereine Rural Farmers' Organisation	Masha	Isingiro	Beans
12	Kazo Dry Land Husbandry Agro-Pastoralists' Association	Kazo Town Council	Kiruhura	Pasture seed
13	Kigaaga Famers' Cooperative Society	Mwizi	Mbarara	Potato and beans
14	Kyamulama Mixed Farmers' Group	Kaliro	Lyantonde	Beans
15	Kyazanga Farmers' Cooperative Society	Kyazanga Rural	Lwengo	Beans
16	Turibamwe Mixed Farmers Rural Producer Organisation	Mahyoro	Kamwenge	Beans, groundnut
17	Kishasha Twekambe Bean Seed Producer Group	Biharwe	Mbarara	Beans
18	Omutima Gwa Ruhiira Group	Nyakitunda	Isingiro	Potato and beans
19	Promotion of Enterprises and Livelihood Development Organisation (PELIDO)	Kinoni Town Council	Lwengo	Beans
20	Kalera Farmers' Marketing Association	Bugongi	Sheema	Finger millet

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	Name of LSB	Location		Seed crop (s)
		Sub County	District	
Northern zone – Ngetta ZARDI				
21	AFOSEN	Atana	Apac	Cassava, simsim, groundnut, sorghum
22	Alito Joint Farmer Group	Alito	Kole	Soybean
23	Aye Medo Ngeca	Amwoma	Dokolo	Simsim and groundnut
24	Jing Komi Farmer's group	Mucwini	Kitgum	Cassava , pigeon pea, Simsim
25	Latyeng Farmer Group	Bungatira	Gulu	Simsim (sesame 2&3)
26	Obanga Ber	Amarch	Lira	Beans, simsim, pigeon pea
27	Agik Dak Rice growers	Agik Dak	Amolatar	Simsim
28	Bedi Irwot farmer group	Okwang	Otuke	Soybean
29	Tic Ryemo Can	Anaka	Nwoya	Groundnut
30	Wot Anyim	Pajule	Pader	Simsim, soybean

Colophon

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