



SUPPORTING LOCAL SEED BUSINESSES

A Training Manual for ISSD Uganda

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Commissioned by the Integrated Seed Sector Development
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Wageningen UR





Supporting Local Seed Businesses

Training Manual

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Photo cover page: The chairman of Latyeng LSB in Gulu explains rice seed production skills to a visiting LSB team from Amolatar District (August 2014)

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Acronyms

AFOSEN	Agency for Food Security Network
APF	Agri Pro-Focus
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ATAAS	Agricultural Technology and Agribusiness Advisory Services
BMC	Business Model Canvas
CBO	Community Based Organisation
CDI	Centre for Development Innovation
CIAT	International Centre for Tropical Agriculture
CIP	International Potato Centre
CYMMIT	International Maize and Wheat Improvement Centre
DSIP	Development Strategy and Investment Plan
EAAPP	Eastern Africa Agricultural Productivity Programme
EKN	Embassy of the Kingdom of the Netherlands
ERI	Environmental Research Institute
FAO	Food and Agriculture Organisation (United Nations)
FGD	Focus Group Discussion
GAL	Gender Action Learning
IFDC	International Fertilizer Development Centre
IITA	International Institute of Tropical Agriculture
IQCC	Internal Quality Control Committee
ISSD	Integrated Seed Sector Development
LSB	Local Seed Business
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MBADIFA	Mbarara District Farmers' Association
MFI	Micro Finance Institution
MSIP	Multi-Stakeholder Innovation Platform
MSP	Multi-Stakeholder Process
NAADS	National Agricultural Advisory Services
NARI	National Agricultural Research Institute
NaCRRRI	National Crop Resources Research Institute
NARO	National Agricultural Research Organization
NaSARRI	National Semi Arid Resources Research Institute
NASECO	Nalweyo Seed Company
NGO	Non-Governmental Organisation
NSCS	National Seed Certification Services
OPV	Open Pollinated Variety
PELIDO	Promotion of Enterprises and Livelihood Development Organisation
PMR	Participatory Market Research
PPB	Participatory Plant Breeding
PVS	Participatory Variety Selection
Q&A	Questions and Answers
QDS	Quality Declared Seed
SACCO	Savings and Credit Cooperative Organizations
SF	Success Factors
SPV	Self-Pollinated Variety

UGX	Uganda Shillings
UPOV	Union for the Protection Of new Varieties of plants
WUR	Wageningen University and Research Centre
ZARDI	Zonal Agriculture Research and Development Institute

Glossary

Association: An entity comprising of members in a given area and is usually legally registered either at the sub-county, district or at national level.

Basic seed: Seed produced from a breeder's seed under the control of the plant breeder or his or her agent.

Breeders seed: Seed of a particular variety produced by the breeder (owner) of the variety or his or her agent, under the plant breeder's supervision and the seed is the source of the initial and recurrent increase in seed production of a variety.

Business model: A plan showing how a business competes, uses its structures, relationships, interfaces with customers, and creates value to sustain itself on the basis of the profits it earns.

Business plan: A business plan should lay out your basic idea for the venture, describe where you are now, indicate where you want to go, and outline how you propose to get there with clear evaluation of the viability of the venture as well as success factors.

Cash flow: Movement of funds through the business in the form of receipts and payments over a defined period.

Certified seed: A class of seed produced under a certification program from basic seed and can be of two generations namely: C1 or C2.

Creditor: The party to whom a debt is owed. In the case of a loan, the lender is the creditor.

Crop establishment activities: Activities undertaken from germination of seed until the crop is physiologically mature.

Debtor: The party who owes a debt to the business. In the case of a loan, the borrower is the debtor.

Depreciation: The amount of money kept aside each year as a fixed cost to represent the loss in value of a fixed asset with the passage of time.

Detassling means the removal of tassels (male flowers) from a maize plant. A tassel is a male maize flower and it is found on top of the maize plant.

Distribution channel or mechanism: The route or means used to distribute a good from the producer to the consumer of that good.

Enterprise: One or more easily identifiable parts of a business under common ownership or control, for which there are specific potential returns.

Expenditure: The money spent in the business in running a number of operations.

Farmer group: This is an organized group of farmers that has a relatively low number of members very often ranging from about 15 to about 40 people. It may or may not be registered.

Field inspection: An examination of a seed crop, including checking for isolation, hectareage of the seed field, off types, foreign varieties and diseased plants as part of a seed certification program.

Financial management: Refers to the efficient and effective management of money (funds) in such a manner as to accomplish the objectives of the organization.

Foundation seed: Pure seed stocks grown by or under the supervision of a public agency for use in the production of registered and certified seed.

Germinated seeds: Seed lots in respect of which in the course of a germination test have produced seedlings with normal growth characteristics of the shoot and root systems.

Goal: A goal is a high level desired result that the LSB wishes to attain once their business is considered a success.

Gross Margin: Value of an enterprise's output less its variable costs.

Group dynamics: Is the study of interactions and forces within small face-to-face groups? This interaction may help or hinders the function of the group.

Harvest and post-harvest activities: Activities undertaken from harvesting to processing of seed until it is ready for the market.

Income statement: A financial statement that shows how the business is fairing by showing how much net profit is earned.

Isolation distance: The required distance or time between two crops of the same species or between two crops of too closely related species to prevent contamination either mechanically or by pollination.

Label: A tag or identification tag or mark affixed on a container to identify a seed.

Labeling: The process of affixing a tag or identification mark so as to ensure correct identification of any container of seed.

National Seed Certification Service: The body established by section 8 of the Seed and Plant Act 2006 and is responsible for all matters related to seeds.

National Seed Testing Laboratory: An official seed testing laboratory, which is designated by the Minister to carry out official seed tests and to issue seed test results in respect of national and international seed trade.

Off type: A plant of the same species which does not exhibit the characteristics of the variety being grown for certification.

Organisational development: This is a process of building the capacity of different members of the group such that they are able set a common vision and plan activities towards attaining their common vision.

Parental material: The propagating material from which a breeder's seed is produced.

Pre-harvest activities: Activities undertaken from the selection of planting material to actual harvesting.

Post control testing: The growing of plants from seed lots which have been certified to further determine and confirm varietal purity and freedom from disease infection and verify the effectiveness of a certification program.

Purity: The percentage by weight of pure seeds in a given sample as determined by a purity analysis in an official seed testing laboratory.

Profit: Money earned in a business after expenses made in the business have been removed.

Relief seed: Seed needed by and provided to farmers affected by disaster.

Resources: Resources are the financial and non-financial supplies that help to fulfill LSB needs to deliver its business objectives/targets. These include money, the skills, time contributions and services of humans, equipment and materials.

Resource Mobilization: Resource mobilization is the process of identifying and obtaining resources for the Local Seed Business. Local Seed Businesses need both financial and non-financial resources.

Roguing: the act of removing undesirable plants from a seed field.

Seed: Part of the crop used for propagation either as a seed in a botanical sense which is developed from a fertilized ovule or a seedling or other parts such as a corn, cutting, bulb, root, scion, tuber or stem, which is not a seed in a botanical sense and which is used for vegetative propagation.

Seed crop: A crop that is grown for the specific purpose of producing certified seed.

Seed Crop budget: A Planning tool used to record the costs/expenses and revenue in a Local Seed Business. It helps the LSB to calculate the profitability of a seed enterprise at Individual seed grower or LSB group level.

Seed grower: An Individual or a body that grows a crop intended to produce seed.

Seed health: The degree of freedom from seed borne diseases and pests.

Seed inspector: A person authorized by the Minister to inspect seed.

Seed lot: A specified quantity of seed which measures to a maximum weight prescribed by the ISTA and which is represented by one sample in laboratory seed testing or in

control plots, and which is homogenous and physically identifiable by a unique reference number.

Seed processing: All the treatments that the seed is subjected to other than laboratory seed testing between harvesting and sale.

Seed production: All the operations leading up to and including final harvesting of the seed from the seed crop field.

Seed quality: The sum of all factors such as varietal purity, seed health, germination, moisture content and vigor which affect the performance of the seed crop.

Seed Replacement Rate: The practice of purchasing the seed of a given variety to protect against yield loss associated with accidental mixture and seed-borne diseases. Seed replacement is one of the two sources of demand for purchased seed, the other being varietal change.

Seed sampler: An officer designated by the Ministry of Agriculture to carry out seed sampling under these Regulations.

Seed storage: A stage in seed conditioning in which seed is maintained under conditions that minimize deterioration.

Seed testing: The laboratory examination of a sample of seed to determine its quality.

Seed standard: Any seed which is not grown under a certification program but which may enter the market in case of shortage of certified seed and meets the same laboratory seed testing standards as certified seed.

Test report: A seed testing laboratory report made after testing a sample of seed submitted officially or privately.

Tested seed: An official seed lot in respect of which there are valid laboratory test certificates.

Tilth refers to the soil's general suitability to support plant growth, or more specifically to support root growth. Tilth is technically defined as the physical condition of soil as related to its ease of tillage, fitness of seedbed, and impedance to seedling emergence and root penetration. A soil with good tilth has large pore spaces for adequate air infiltration and water movement and holds a reasonable supply of nutrients.

Twinning visit: Also called "exchange visits" seeks to improve knowledge and practices and integrate the experiences gained into their daily lives in the seed business.

Value proposition: This refers to something of value that the LSBs will provide to their customers to solve their problems.

Variety: A population of plants which have common ancestors and which have certain characteristics and when reproduced sexually or asexually, retain their distinguishing characteristics.

Vision: A vision is an expression of what we want to see and how we would like ourselves to be in the future. It is a desired state that we aim to achieve.

Weed: Any plant or type of species different from a crop species growing in or near a registered seed crop so as to constitute a threat to the registered seed crop or the seed produced from it.

Weed seed: Seed of any plant or type of species different from a crop species appearing in a registered seed lot so as to constitute a threat to the registered seed lot or the seed to be produced from it.

Introduction to ISSD Uganda

The Integrated Seed Sector Development programme in Uganda (ISSD Uganda) aims to support the development of a vibrant, pluralistic and market-oriented seed sector, providing smallholder farmers access to affordable quality seed of superior varieties. This will contribute to increased income for small-scale farmers and an increased number of rural households that are seed and food secure. The government of Uganda prioritizes agricultural development as the key approach for poverty reduction, food security and economic development. In its Agricultural strategy (DSIP), it focuses on enhancing agricultural production and productivity, access to markets, creating an enabling environment and institutional development.

An integrated seed sector development (ISSD) 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. The programme guides specific interventions in identified seed systems; linking food and seed security to private sector development and aligning and harmonising seed policies, laws, regulations, interventions, programmes and practices.

Local seed businesses (LSBs) fill a gap in quality seed production for crops in which the commercial seed companies are not interested. LSBs may start from the informal sector as farmer groups or entrepreneurial farmers who see business opportunities in the production and marketing of quality seed. At the end of the programme these farmer groups produce and sell quality seed of locally preferred crops and varieties to local markets and operate as local businesses. They are technically equipped, professionally organised, market oriented and strategically linked to achieve commercial sustainability.

The ISSD Uganda programme started in 2012 and operates in three geographical areas based on agro ecological zones; namely West Nile, Northern Uganda and Western Uganda. There is close collaboration with the National Agricultural Research Organisation (NARO), a seed expert, an agribusiness expert and a driver based at the zonal research stations of Abi ZARDI, Mbarara ZARDI, and Ngetta ZARDI. Each team works with 10 LSBs. In the second phase of the programme, this number will increase to approximately 100, which will be supported by partner organisations.

At the end of the ISSD Uganda programme, and with the support of Public sector organisations, a process shall be created that will introduce new methods of enhancing effectiveness and efficiency; define complementary roles and create a sustainable mode of operation in supporting other stakeholders in their efforts to produce and market quality seed of superior variety.

It is expected that MAAIF, NARO, NSCS, NAADS, Universities, and others shall increase their collaboration with and work in partnership with commercial seed companies, local seed businesses, farmer organisations and civil society organisations. This collaboration and partnership will specifically be in relation to seed quality control, access to foundation seed, inclusive policy development and the uptake of quality seed by farmers.

Through innovative approaches, a number of bottlenecks in the seed sector, such as seed quality control, access to foundation seed and variety release will have to be resolved at an institutional level. . In these three issues, the above mentioned and other public sector organisations have a clear role to play.

What makes ISSD Uganda and the LSB approach unique?

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

The ISSD programme targets farmer groups that are entrepreneurial and have experience in growing the crops for which they want to produce seed. The programme is realistic in looking at the potential of the groups it works with. If it appears that the group has more social objectives, rather than entrepreneurial, the programme and groups part ways.

The ISSD programme invests time in getting to know groups, conducting diagnostic surveys with groups and jointly making action plans to address the weakest aspects through mentoring and coaching. It also offers continuous coaching on key aspects of technical seed production and marketing based on the LSB capacity building plan.

Inspections and verification are done by LSB internal seed quality control committees supported by ISSD and MAAIF to ensure that seed production by LSBs meets quality standards in the field, during processing, storage and marketing. LSBs are linked to other strategic partners such as research organisations for access to foundation seed, markets, credit and extension. ISSD does not provide free inputs. LSB members raise the money to buy foundation seed and other inputs, place orders with breeders themselves, and also find their own markets.

2. Promoting the concept “producing what you can sell”, using customer analysis and planning based on analysis

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

3. Strategically linking the groups with service providers

The programme invests a lot of time in linking the groups to service providers and allows the groups to make mistakes and learn from them. The linkages with the breeders are important and several groups are at the level where they can maintain the relationships by themselves.

4. Formalising the seed class “quality declared seed” and creating its own label for recognition of LSB seed

Unlike many community based seed multiplication initiatives ISSD also works on bottlenecks in the seed value chains, including quality assurance and providing Government recognised seed labels for the use of LSB seed. Together with the National Seed Certification Service 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 the different zones where the programme operates, ISSD brings stakeholders together at LSB level, to specify the roles and responsibilities of each partner of the LSB in addressing weaknesses within the LSB. This brings out the strengths of each partner and becomes a collective action rather than the ISSD “owning” a group. At District level local MSPs are used to identify bottlenecks in the use of Local Seed Businesses and to come up with joint action and innovative ways to address these bottlenecks.

At the zonal level, MSPs focus on seed sector bottlenecks and seed value chain bottlenecks that affect the region and the multi stakeholder platforms bring together the different stakeholders and jointly define innovation projects to address the issues raised at that level.

At the national level, the same process is taking place. The different stakeholder processes are interlinked highlighting the uniqueness of combining the bottom up approach with national level engagement in identifying and addressing issues that hamper the creating of a vibrant, pluralistic and market oriented seed sector.

Why this manual?

This manual is developed as part of the support to local seed businesses in Uganda and to facilitate the future scaling of the LSB component. Foremost, this manual is based on real experiences from the experts in working with local seed businesses and it provides practical examples based on true stories.

To help illustrate the practical experiences during the first two years of the programme, the seed and agribusiness experts used existing manuals and tools on seed entrepreneurship for smallholder farmers in SSA, and seed. The manual can be used as a training manual but also as a coaching tool for LSBs in their day-to-day need for support. This is why we use the word manual instead of training manual.

To develop the manual two write shops were organized in Kampala in February and October 2014. The ISSD agribusiness experts and seed experts analysed the tools they had used in their training and coaching sessions in 2013 and did a mapping on what was available and what was missing. After the mapping, the experts discussed the format of the manual, the format of each topic, session and the tools to be used, including practical field examples/cases. After the format was agreed on, the experts worked individually and in subgroups to incorporate each training activity (they used in 2013 and 2014) to basically fill in the manual.

Who is this manual for?

This manual is meant to be used by ISSD experts and trainers/coaches from partner organizations that support the local seed businesses in the out-scaling phase. It focuses on supporting local seed businesses to become commercially sustainable. The manual is self-explanatory, and only requires support through a “training of trainers”. In the manual all the different sessions are developed in such detail that a trainer with a reasonable background in agronomy could follow it step-by-step.

The manual targets farmers and farmer groups interested in agricultural seed production for commercial purposes. The goal of a seed business is to produce and sell good quality seed and to generate income through services delivered to the community. Whatever quantity of seed an entrepreneur can produce, his business is doomed to financial ruin if he doesn't have adequate management skills.

How is the manual organized?

Module 1: Selecting, coaching and sustaining LSBs

The manual starts with a module 1, which describes the ISSD program in general, how to select, coach and sustain LSBs, how to set up an effective M&E system and multi-stakeholder processes at program level. The target groups of this first module are the trainers/coaches from partner organizations who need some background on the approach of the ISSD program before starting to work with the LSBs. This first module is followed by four modules dealing with the four building blocks of sustainable LSBs:

Module 2: LSBs are technically well equipped

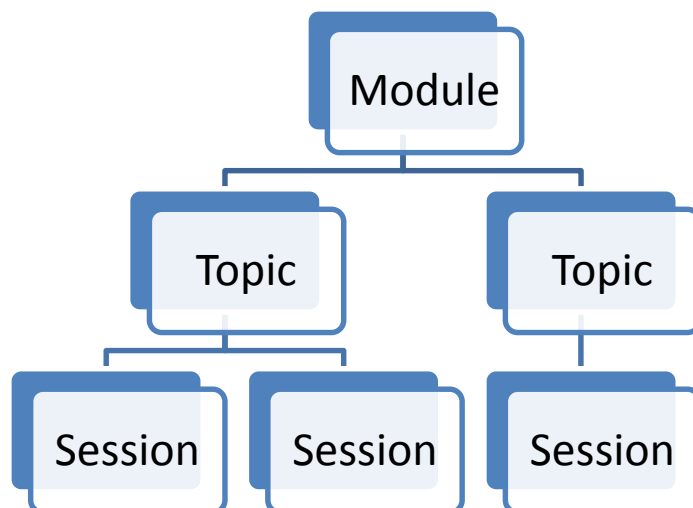
Module 3: LSBs are professionally organised

Module 4: LSBs are market oriented

Module 5: LSBs are strategically linked

The target groups of modules 2 to 5 are members of Local Seed Businesses in Uganda and any other person interested in ISSD topics.

Each module is subdivided into topics; each topic is composed of different training sessions:



Topics are presented as follows:

- Topic No. and name (*developing, enhancing, stimulating* etc.)
- Short topic description (key messages)
- Case story, lesson learned/example from Uganda
- Session overview table:

Session No	Session name	Duration

Sessions:

- Session No. and name (*how to, why.....?*)
- Learning objective (*at the end of this session participants will have learnt...*)
- Case, lesson learned/example from Uganda
- Content (what is this session about?) + key messages (list of issues not to forget)
- Training methods (Q&A, plenaries, group work, field visit etc..) + tools (+ example of tool use from Uganda)
- Materials (flipchart, markers etc.)
- Advice / notes for the facilitator
- Resources (bibliography)

How to read/use this manual?

This manual is a guide for trainers/coaches who support the development of local seed businesses. It offers content, case stories, examples from the field in Uganda and guidelines/advice to facilitators to prepare and conduct their sessions. The manual will never be used from A to Z. Trainers may propose sessions depending on the progress of the LSBs or the specific needs of LSBs at a particular point in time.

Icons are used throughout to the document to provide guidance to the facilitator:



Example from the field



Practical tools



Important content information



Stories, cases and quotes from the field



Methods and games



Plenary session



Group work



Field visit

Module 1: Selecting, monitoring and sustaining LSBs

Topic 1.1: Promoting integrated seed sector development

Key messages:

1. Using Local Seed Businesses (LSBs) is one of the ways to increase the availability and access of affordable quality seed to farmers and to contribute to a vibrant, pluralistic and market oriented seed sector.
2. No seed system is better than the other. All systems contribute to the seed sector.
3. The seed sector itself has a value chain as opposed to the produce value chain.



On the 13th of May 2014, an ISSD Uganda delegation met with the Members of Parliament on the agricultural committee to explain the ISSD concept and the role that local seed businesses can play in addressing the shortage of affordable quality seed in Uganda.

"ISSD is determined to help farmers. Reports indicate that only 13% of the farmers use seeds from formal seed companies, while 87% use their own seeds. We build the capacity of farmers to produce their own seeds", the Chief of Party of ISSD Uganda elaborated.

MPs hailed the intervention: *"Seed production in Uganda has been puzzling our committee. Grooming and training farmers in seed production will greatly help us. We really welcome this intervention by the Dutch Embassy", MP Vincent Ssempijja stated.*

The committee chairman, Mathias Kasamba, said: *"Uganda needs such interventions to empower farmers in all the key agricultural processes".*

New Vision, May 14, 2014, p.7

Session overview:

Session No	Session name	Duration
1.1.1	What is the ISSD program in Uganda about?	1 hour
1.1.2	What are the ISSD guiding principles?	3 hours

Session 1.1.1 What is the ISSD program in Uganda about?

Learning objective

- At the end of the session participants will be able to explain what integrated seed sector development stands for and what the ISSD approach in Uganda implies.



Ngetta ZARDI Director interacting with an LSB in the seed fields in Obanga Ber in Lira district during his monitoring visit to ISSD supported LSBs held in June 2014

LSBs told the Director that, before, they never knew that the ZARDI can be accessed by farmers. *“When we passed Ngetta ZARDI by road, we are sure we have arrived in Lira Town”,* Okot Oball, a farmer of Wot Anyim, *“but now we enter the gate as it as a centre of technology, agricultural information and a source of foundation seed amongst others”.*

ISSD Uganda newsletter, issue 2, 2014.



Content

Most seed companies in Uganda, forming the formal seed sector, are only interested in crops with high profit margins (higher multiplication ratios). Self-pollinated crops, which are the major food crops, are not normally considered by the formal sector. ISSD Uganda looks at the opportunity of bridging these gaps by engaging farmers in seed entrepreneurship through the Local Seed Business model. When farmers are technically equipped, strategically linked, professionally organized and market oriented, they can sustainably provide quality seed to smallholders farmers at affordable prices. The Local

Seed Businesses can therefore, engage in multiplication of crops of self-pollinated origin (simsim, groundnut, beans, rice etc.) with linkages to research to provide early generation materials (Foundation seed), a basic input for any quality seed production. With linkages to the Ministry of Agriculture (MAAIF), the LSBs can guarantee the quality of seed they produce and market through proper inspection and quality assurance procedure.

ISSD contributes to agricultural development

Quality seed is a key input for agriculture with an immediate effect on agricultural production and productivity. Integrated Seed Sector Development (ISSD) is an inclusive approach that recognizes and builds upon a diversity of seed systems in the sector. The ISSD approach guides in the design and implementation of seed sector interventions that are coherent with farmers' agricultural practices. The main objectives are to enhance farmers' access to quality seed of superior varieties, and to contribute to food security and economic development.

A seed sector is composed of different seed systems

To work with the ISSD approach we need to understand and acknowledge the coexistence of the seed sector's multiple seed systems. Seed systems can be characterized on the basis of the domains in which they operate (public, private, informal, formal, mixed); the type of crops involved (food crops, cash crops); the type of varieties used (landrace, improved, exotic, hybrid); the type of seed quality assurance mechanisms operational (informal, QDS (quality declared seed), certified); and the active seed dissemination mechanisms (local exchange, agro-input distribution schemes, agro-dealers).

Informal, intermediary and formal seed systems

We can generalize from the diversity of seed systems, three clusters, namely: informal seed systems; formal seed systems; and intermediary systems that are on their way towards formalised regulation. Examples of informal seed systems are the farmer-saved and community-based seed systems. Formal seed systems include public and private seed companies, which may operate at national and at international levels. Local seed business are systems operating in the intermediary cluster. Every country has its own landscape of informal, intermediary and formal seed systems.

Aspect	Informal	Intermediate	Formal
Source of seed	Positive selection from previous harvest	Foundation seed from breeders for released varieties. Positive selection for local varieties	Foundation seed from breeders
Demand for variety	Demanded within community	Varieties with a regional demand	Varieties with a national demand
Type of seed	Open pollinated or self-pollinated varieties	Self-pollinated varieties and some open pollinated varieties	Hybrid and open pollinated varieties
Quality assurance	Within groups - informal	Internal by quality control committees, National Seed Certification Services – Quality Declared Seed	National Seed Certification Services – Certified seed
Exchange	Gifts, barter, local markets	Quality declared seed sold by LSBs Bulk sales to institutions such as NAADS	Retail, agro-dealers, bulk sales to government and NGOs

Source: ISSD Uganda



Training methods

- Interactive PowerPoint presentation on the ISSD approach
- Q: What is the main new learning point that you got from the presentation?
- Q: How do you see your organisation fit within the ISSD approach?
- Write answers on flip-chart
- Close with a session for questions and clarification

Materials

- Power point presentation on ISSD approach
- Flipchart and markers to write down the answers

Advice

- This session can be used as introduction during a Training of Trainers session of several days. Depending on how exposed the participants are to ISSD and LSBs, the duration of the session may vary.

Resources

- ISSD Uganda webpage: www.issduganda.org

Session 1.1.2: What are ISSD guiding principles?

Learning objective

- At the end of the session participants can mention the eight guiding principles and understand how they are interrelated.



"There is not one way of producing quality seed; each seed actor has its own niche and function"



The ISSD guiding principles are:

1. Build programs upon a variation of seed systems and foster pluralism

Farmers gain access to seed from different seed systems. For example s/he has his/her own stock of groundnut seed, buys bean seed from the local market, buys hybrid maize seed from a seed company, and buys hybrid cabbage seed from an international seed company. Each system has its own values and limitations and requires a unique approach in strengthening it.

2. Work according to the structure of the seed value chain

A seed value chain covers the process from management of plant genetic resources, variety development, basic seed production, foundation seed production, seed multiplication and distribution and marketing. Operators, services providers and institutions of the enabling environment of the seed value chains differ among crops and between different seed systems.

3. Promoting entrepreneurship and market orientation

Entrepreneurship means making a business out of seed production and distribution. It is market oriented and hence an important incentive for sustainable development. Entrepreneurship can be promoted both in the formal and informal seed systems for private and public actors.

4. Recognize the relevance of informal seed systems

Despite all past public and private efforts in seed sector development, informal seed systems continue to dominate in Uganda, supplying more than 87% of the total seed used by farmers.

5. Facilitating interactions between informal and formal seed systems

Interactions can be facilitated through participatory variety selection, strengthening farmers seed management practices at home through seed extension and linkages with formal research and seed technology centre development

6. Recognize complementary roles of the public and private sector

Following the development agenda on seed and food security, the public sector strongly focuses on the production of quality seed for improved varieties for the main food crops. The private sector strives for efficiency and effectiveness in product development for maximizing profit. The private sector has a generally good understanding of what the market demands and responds by producing high value seed. The government's role is to

create an enabling environment for quality seed production by combining food security and economic development objectives.

7. Support enabling and evolving policies for a dynamic seed sector

The policy framework should support the strengthening of multiple seed systems and not strive single-mindedly for an evolution towards one general presupposed norm or ideal. Appreciating the dynamics of the agricultural sector, these policies need to be able to accommodate changing circumstances.

8. Promoting evidence based seed sector innovation

Through the ISSD approach we promote evidence based seed sector innovation as a guiding principle. We support research and studies providing evidence for the design and implementation of seed sector interventions. Furthermore, we facilitate stakeholder partnerships to jointly experiment with innovative approaches towards solving key seed sector bottlenecks.

Training Methods



- PowerPoint presentation: 1 slide per guiding principle showing the guiding principle and an example from Uganda
- Discussion on the guiding principles and how to apply these in the Ugandan context.

Materials

- ISSD Africa Guiding Principles hand-out
- Power point presentation

Resources

- ISSD Africa Guiding Principles (<http://www.wageningenur.nl/en/Expertise-Services/Research-Institutes/centre-for-development-innovation/show/Comprehensive-programme-integrated-seed-sector-development-in-Africa.htm>)
- www.issduganda.org

Topic 1.2: Defining LSB

Key messages:

1. A LSB is a farmer organisation producing and marketing affordable quality seed of varieties that farmers prefer.
2. A LSB has a niche market and a niche within seed systems in producing quality seed.
3. A LSB is has an entrepreneurial spirit when it is motivated to succeed, has a business mind, is able to sell seed and is not afraid to try out new things and take risks.



Example of a LSB profile:

Kigaaga Farmers' Cooperative Society Limited officially registered at national level as a primary cooperative in 2010. It comprises of 44 members (26M and 18F). The group has a constitution and is governed by the bye-laws of the Co-operative Societies in Uganda. The group has worked with several organisations including Mbarara Farmers Association and NARO (NaCRRI-beans programme), among others. The group is currently involved in the production of two seed crops; potatoes and beans. In addition, the group actively produces and markets bananas collectively alongside other grains.

Seed production & sales: The group planted 6 acres of seed potato (Kachpot 1 & Rwashaki) received from MBADIFA in 2013A. They only harvested 47 bags (as opposed to the expected 150 bags) of seed potato due to drought. They sold 25 bags of seed potato at UGX 65,500/= per bag, giving total revenue of UGX 1,637,500. The other 22 bags were kept for input seed in 2013B. Members of this LSB mobilised funds and were ready to buy foundation seed potato, but it was not available at Kachwekano ZARDI. The ZARDI also faced challenges from the drought that set in unexpectedly last season (2013A) affecting their foundation seed production fields. Thus members of this LSB used seed saved from 2013A as input seed to plant 4.1 acres of seed potato in the present season. Otherwise, they would have planted more, had they received foundation seed potato from KaZARDI. They expect to harvest 102.5 bags of seed potato in 2013B.

Session overview:

Session No	Session name	Duration
1.2.1	Why LSBs?	30 min
1.2.2	What is an LSB?	1 hour
1.2.3	What is seed entrepreneurship?	3 hours

Session 1.2.1: Why LSBs?

Learning objectives

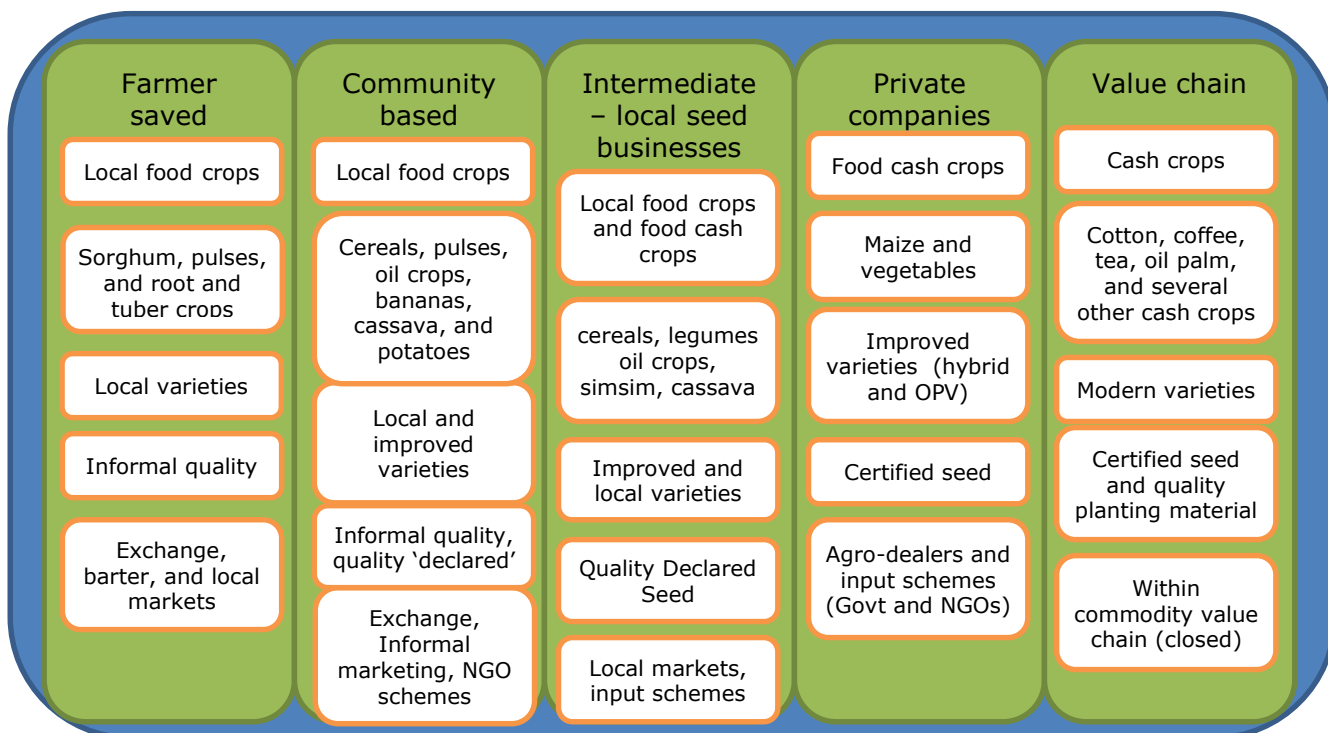
At the end of the session the participants shall appreciate the role that LSBs can play in the production and sale of quality seed of superior variety in Uganda.



Good seed comes from far....

During one of the local stakeholder meetings at one of the sub-counties in Acholi region, Okello was lamenting that: "good seed comes from far". The last time he planted his seed saved from the previous harvest it was not enough and he had to go all the way to the nearest town by bicycle. This was 10 km. He bought 25 kilos of seed but on the way back he got a flat tire and had to walk all the way home. The year before he had bought seed from the local market, but only half of the seed germinated and his harvest was low. He was very happy to hear about the farmer group that is going to produce seed and he immediately asked: "can I buy 36 kilos next season?"

Content



Thirteen percent (13%) of the planted area in Uganda is planted with seed from commercial seed companies (formal organisations) (MAAIF, 2012). This leaves eighty seven percent (87%) of planted area being served by the informal and intermediate seed system including farmer-saved seed and community-seed production schemes such as local seed businesses. As the figure below shows, most farmers obtain their seed from the informal seed system (home saved seed, from neighbour, and local markets).

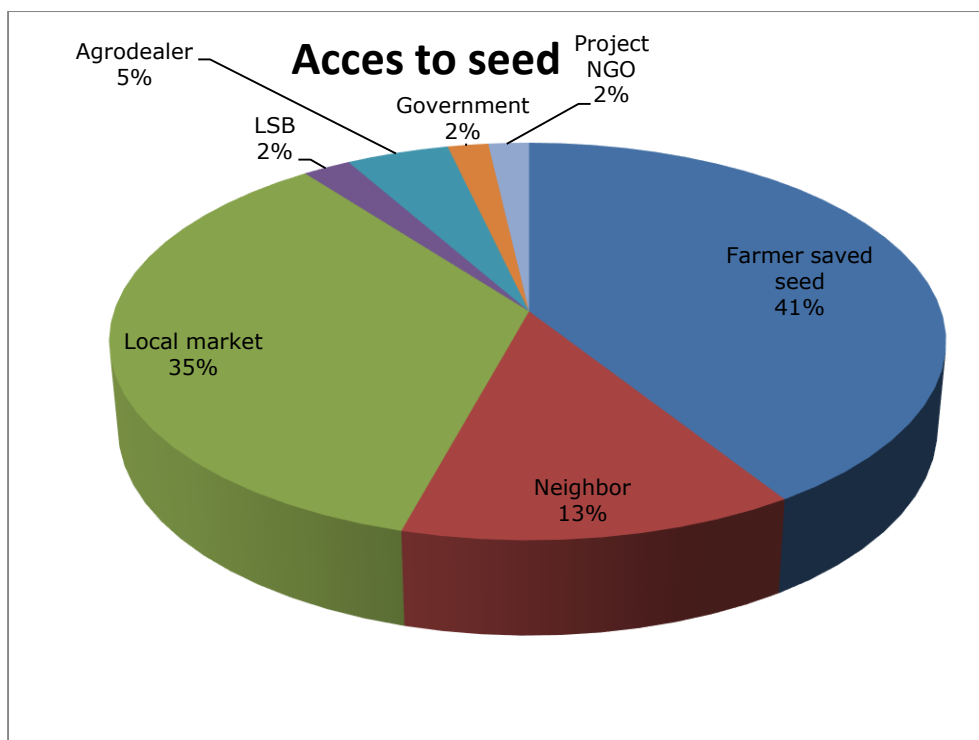


Figure: ISSD Uganda access to seed household survey report

The sustainability of the local seed business (LSB) approach depends on access to required inputs, acknowledgement of the informal and intermediate seed systems under the Seed Act, and being able to understand and act upon the market demand. The circulation of fake and counterfeit seed has hampered farmers' uptake of quality seed and reduced consumer confidence in commercial seed and as a result, farmers are generally reluctant to buy improved seed at all. Fortunately, the fact that LSBs are closer to the farmers than commercial companies and that they are known with the sub-county governments and NAADS, creates a farmer preference to buy from LSBs.

The intermediate seed system builds on the strengths of the formal and informal seed systems. The intermediate seed system works on entrepreneurial and market based principles producing quality seed that has local demand. This seed could either be formally released varieties or indigenous varieties. The quality control is both done internally through committees and externally by NSCS. The seed will be certified as quality declared seed; but apart from the formal recognition, informal recognition, such as reputation of the seed grower, is just as important.

Niche for LSB seed

There is a trade-off between the aim of food security and business perspective since the most profitable seeds are those with a high commercial value, such as hybrid maize. These seeds are produced by commercial seed companies, while LSBs serve a much more local market. The key added value features for LSBs in seed production at lower commercial value is the proximity to farmers and being able to serve niche markets (low volumes or seed too bulky for seed companies to be profitable). Crops that are suitable for LSB seed production are vegetatively propagated crops, legumes, millet, sorghum, rice, simsim and pasture seed.

The services that Local Seed Businesses provide to a community are: access to good quality seed of preferred varieties, availability of quality seed at planting time and the introduction of new varieties.



Training methods

- Using idea cards, provide an overview of the seed systems, crops, target customers, quality control mechanisms, strengths and weaknesses as in the figure above and then discuss where local seed businesses can fit. For example the farmer saved seed system focuses on “food security crops”. This can be written on the idea card and placed in the matrix. Another example of type of crop is “cash crop” for closed value chain. Major crops are: beans, maize, etc. Type of varieties: improved, indigenous, OPVs, Hybrids etc. Type of system: informal, intermediate, formal. Dissemination system: barter, exchange, agro dealers etc. Quality control mechanisms: informal, QDS, certified seed, internal and external. Target clients: Farmers, NGOs, processors, Government, etc.



Use a matrix tool to place the cards:

Seed system	Farm-saved seed	Community-based (associations)	Community-based, NGOs and public	National companies	International companies	Closed value chain
Type of crop(s)						
Major crops						
Type of varieties						
Type of system						
Dissemination system						
Quality control mechanisms						
Strengths of the system						
Weaknesses of the system						
Target clients						

Materials

- PowerPoint, flipchart, cards to write aspects of seed systems, markets

Advice

- The matrix can be used during a plenary meeting or in group work if the number of participants is more than 10.

Resource material

- ISSD Uganda seed sector assessment <http://www.wageningenur.nl/web/file?uuid=d4d73c45-f022-4eba-a479-08c448c7a5ad&owner=1a616bd7-d3c1-493f-9533-d5d61aa53e4a>)
- Louwaars N.P. and W.S, de Boef, 2012. Integrated Seed Sector Development in Africa: A Conceptual Framework for Creating Coherence Between Practices, Programmes, and Policies. Journal of Crop Improvement, 26:39–59.

Session 1.2.2: What is an LSB?

Learning objective

After the end of the session the participants shall be able to:

1. Define a Local Seed Business
2. Explain the importance of each building block and how they come together



One of the LSBs in West Nile started in 2007 as a group of ex-poachers that were looking at opportunities to improve their livelihood, they were 15 members; 8 women and 7 men. When they started in 2013, they did not have any prior experience in seed production and marketing. During the first season, they were hesitant to invest, but in the second season they planted 20 acres of simsim seed. They were able to produce 8 tons at a time when the demand for the seed was high. They sold the seed at UGX 4,000 per kilo. The group is getting more and more experience and realise that if they plan their sales better they could even get higher prices per kg as the demand for simsim seed rises until planting time.

Content



A Local seed business is a group of farmers that are able to produce and market quality seed of varieties that are preferred by other farmers and is able to sustain the business through reinvesting capital and effort in the business.

For an LSB to be sustainable it needs to be commercially oriented and able to make the investment. This means that the ISSD programme does not provide free inputs to the groups and is entirely based on capacity building by a seed expert on production aspects of seed and by an agribusiness expert for the market aspects. Some groups that lack entrepreneurial spirit are not able to become sustainable local seed businesses and the programme that supports these groups needs to critically reflect on whether to continue with them.

An LSB is able to be commercially sustainable when they are technically equipped, market oriented, professionally organised and strategically linked to inputs, extension, credit and markets (see picture below). Looking at the LSB with regard to its product, it should be technically well-equipped to produce and add value to its seed. Looking outward, that product should have demand from the market. Looking again at the LSB with regard to its organisation, it should be professionally organised, well managed and with access to appropriate infrastructure. Looking outward from the LSB to its environment, it should be strategically linked to important, reliable and cost-effective inputs and service provision.

		Looking ...	
		Inward	Outward
With regards to ...	Product	Technically equipped well-	Market oriented
	Organisation	Professionally organized	Strategically linked

Technically well-equipped

Being technically well equipped includes having the capacity for (1) the production of quality seed products; and (2) processing/adding value to those products. Capacity to produce includes LSB members having the knowledge and skills for site selection, field clustering, land preparation, sowing, weeding, roughing, demarcating isolation distances, fertiliser application, crop protection and harvesting.

Market oriented

Market-orientation means that the LSB has the marketing capacity, including assessing markets and developing products which are in demand and satisfying customer needs.

Marketing involves finding out what your customers want and supplying it to them at a profit. In order to do so the LSB needs the capacity to collect and evaluate market information, and develop a marketing strategy as part of a business plan.

Professionally organized

Describing how well the business is organised follows a basic distinction between both general organisational (including governance) and financial management, and infrastructure.

The principles of general organisation management include 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).

Strategically linked

LSBs that are strategically well linked benefit from the availability, accessibility, efficiency, affordability and reliability of input and service provision. Therefore, being well linked to inputs and services is more strategic than it is essential. An analysis of the availability, accessibility, efficiency, affordability and reliability of the input or service should be critically reflected upon accordingly to the specific capacity needs and business plan of the LSB. Essential links include access to germ plasm, agronomic inputs (inc. 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.

Training methods



- Start with the “Blue Bean Test” for Baseline and Evaluating Behavioural Change

For a better understanding of a farmer group’s knowledge about marketing approaches, a simple test can be applied to find out how they approach the idea of a new product. Do they systematically work with the market or do they simply follow instructions from a service provider. The group is asked if it would be interested in producing “blue beans”. A typical response might be, “Yes, if you will buy them”, to which the facilitator may respond, “No problem, I’ll take all you can grow”. For farmers who do not have a systematic approach to marketing, their response is often a very positive yes, that they will start growing the beans tomorrow!

However, they make this response even though they have never seen a blue bean, nor do they know if it grows in their area, or which market they are targeting, or if alternative and better market options exist. Where the group shows no clear approach to marketing, the facilitator has to start from the beginning. In contrast, if the farmers do have a strategy in dealing with the market, the facilitator should listen carefully and see how well this fits in with the planned seed approach. He or she can then build on the group’s current skills.

As a monitoring tool, the “blue bean”, or other invented product, the question should be asked again after the farmers have undergone some training on how to engage the market. If the farmers have taken on the new skills, their response to such a question would include questions such as Does the crop grow here? Can you give us a sample so we can test it to see if it grows under our conditions? What is the price of the blue bean in the market? Is this price higher than the best bean market varieties? Is the bean being sold for a local or international market? Who is buying the product? Can you give us names of some buyers so we can survey the market ourselves? Do you have any information about the product, its price trend, quality requirements, or market trends? If we go into production, will this be a contractual agreement? Will you provide any additional inputs to assist in production? If the market fails, can we eat this crop? (CIAT 2008 A Market Facilitator’s Guide to Participatory Agro enterprise Development p.49)



- Power Point presentation on the building blocks
- Q&A around the purpose of the building blocks and the content of each building block

Materials:

- Power Point; flipchart; markers

Advice:

- All four building blocks play an equally important role in supporting LSBs to become commercially sustainable. Therefore make sure that each building block receives equal attention.

Resources:

- CIAT Handbook 3 chapter 1

Session 1.2.3: What is seed entrepreneurship?

Learning objective:

at the end of the session, the participants will have a general understanding of characteristics of seed entrepreneurship in Uganda and experienced the spirit of an entrepreneur through discussions.



"Entrepreneurship is a strong incentive for investment and development in the seed sector, and can be a catalyst to improve the functioning and performance of seed value chains."

Content:



Defining seed entrepreneurship

Seed entrepreneurship in Uganda is perceived differently by stakeholders working in the informal, intermediary and formal seed system clusters. In the informal seed system, entrepreneurs are identified as farmers who identify and explore opportunities for seed production of different crops and varieties that are of high demand within the community, and not produced by others. True farmer entrepreneurs, driven by experience, specialization and traditional knowledge, are innovative and creative in their seed selection and conservation practices, as well as in their seed value addition. They look into profitability as well as structures for financial management and support (e.g. group savings).

In the intermediary seed system, entrepreneurs are farmers operating in groups. They gather and share information on seed demand, seed supply and seed prices; information sharing and networking within the group and outside is considered one of the key aspects of entrepreneurship. The groups target specific marketing and distribution channels; they are able to determine market potential, understand the different seed markets, and determine which seed products are profitable and can create income for the community. Marketing as a group also enables better price negotiation. Persistence in seed business efforts is key to entrepreneurship; only groups with a passion will succeed in it. Entrepreneurship in this cluster also includes taking risks as a group and learning from failure.

Key aspects of seed entrepreneurship are:

- Innovation and creativity in product development;
- Commercialisation of technologies;
- Opportunity seeking in relation to market demands;
- Seed value addition and seed quality;
- Information dissemination; business skills development;
- Systematic planning;
- Calculated risk taking; and
- Profitability and income generation.

The topic of innovation was mentioned many times as being key to entrepreneurship. Innovation in all systems is related to the product, i.e. quality seed of unique varieties. In the informal system, the product often concerns quality seed of local varieties; in the other

system clusters, producing quality seed of improved varieties with a high market demand is key to successful entrepreneurship.

Several incentives have been identified which are believed to promote seed entrepreneurship in Uganda. The key incentives, irrespective of the seed system, are:

- (i) Good profit margins for quality seed;
- (ii) Access to improved varieties;
- (iii) An efficient quality assurance system;
- (iv) Capacity building of seed producers;
- (v) Access to information; and
- (vi) An enabling business environment.

(Copied from Uganda seed entrepreneurship assessment)



Stimulating women entrepreneurship

- Constitute equal numbers of men and women in participatory market analysis training. This implies including women from outside the leadership. It also implies a sensitive approach to avoid conflict between male and female members.
- Increase/include women participation in variety selection (to ensure that characteristics of women interest are captured)
- Integrate role plays when hosting field days and encourage both men and women to participate equally.
- Make use of role models of successful women entrepreneurs to interact with LSBs and inspire women in business.



Basic information on the characteristics of entrepreneurial spirit

- 1. The desire to succeed:** In the first days of a business, the enthusiasm generated is very big. The desire to succeed is strong and you benefit from a lot of support. You feel good because of the new seed varieties and the way to produce them. However, you will later have to face some problems which could be droughts, torrential rains, insufficient sales, financial problems. At these moments, you will ask yourself questions on how to maintain your business. If you have strong desire for success, you will quickly find out that such difficulties sometimes emerge and that they can be overcome. Your faith in yourself will allow you to succeed.
- 2. The ability to take risks:** To create one's own business is always risky and not everybody is ready to take risks. For some people, taking risks even for common things is difficult. These people prefer to count on what they now best instead of trying new things. Others are disposed to take small risks, only after a long reflection and when they can afford it. It is possible to considerably reduce the amount of risks taken in your business with a good knowledge of your business, the market that you supply and the competition. However, some risks like climate, government politics, changes in the nature of the demand, diseases, insects and thefts are out of one's control.
- 3. Creating a business sense:** You need to understand the business aspects of your activities and learn to manage them. Natural skills to see opportunities and to negotiate are all essential parts of the entrepreneurial mind.

4. **Selling skills:** One can learn selling techniques, but it is important to have a certain natural aptitude to sell. You should be able to convince potential clients to choose your seed over other supplying sources (CIAT manual 2 p.19-20).

Training methods



- Introduce the topic through a PPT on entrepreneurship



- Engage in group discussions covering the following questions
 - Taking each key aspect of entrepreneurship, provide examples of entrepreneurship in your sub-county.
 - Identify a number of entrepreneurs in the vicinity of the group. Which entrepreneurs would you want to visit and why?

- Develop questions for the visit to the entrepreneur



- A visit is organised to the entrepreneur's work place and participants ask why he has so much success, how he manages his business and if they can visit his business. The group needs to prepare questions in advance.
- After the visit, the trainer facilitates a discussion on the fundamental characteristics of the entrepreneurial spirit

Materials:

- flipchart, markets

Advice:

- It is also good to discuss differences in seed entrepreneurship in different seed systems so that participants realise that LSBs do not necessarily need to develop in formal seed companies, but that there are different skills and capacities required for different types of seed.

Resources:

- Uganda seed entrepreneurship assessment
(<http://www.wageningenur.nl/web/file?uuid=308d83c0-8943-4020-b911-dc8aa3f17edb&owner=1a616bd7-d3c1-493f-9533-d5d61aa53e4a>)
- CIAT handbook 2. Chapter 1 p 16-18

Topic 1.3 Selecting local seed businesses

Key messages:

In topic 1.2 we learned what an LSB is and that entrepreneurship is an important aspect of a successful LSB. This topic covers the selection process to find farmer groups with the potential to become commercially sustainable LSBs and identifies strong points and areas of improvement for an LSB using applicable success factors. It also covers the process by which, together with the LSB, the facilitator defines the action plan to address weaknesses during the course of the year.



"Ending up with the right farmer group for a local seed business is a good thing to start with", says Mbarara Seed Expert. "We used different means to make people aware that we needed farmer groups to participate in the ISSD project such as ZARDI notices, APF-Agri Pro-Focus website and visits to district production departments both at district and sub-county levels in the 8 districts of South Western Uganda. The results were overwhelming with many farmer groups expressing interest. We were careful not to attract conflict of interest from community leaders and politicians and this made our work transparent and well appreciated and all groups were aware they were picked or dropped based on their merit. We used some key indicators to judge these groups such as leadership structure being visible, groups' experience with seed production, access to land and willingness to invest among others."

Session No	Session name	Duration
1.3.1	How to make a short list of potential LSBs?	1 hour
1.3.2	What is a diagnostic survey?	3 hours
1.3.3	How to plan for addressing LSB weaknesses?	3 hours

Session 1.3.1 How to make a shortlist of potential LSBs?

Learning objectives:

At the end of the session the participants shall know how to make a quick assessment of farmer groups and come up with a list of potential LSBs.



"The whole process of selecting LSBs was thorough and transparent and yielded exactly the right groups for us. We received 45 applications from potential groups, says Ngetta Seed Expert. "It was a tough task because we needed only 10 good groups as a project requirement for the inception period. We had to conduct interviews based on set criteria with identified groups followed by a desk analysis to screen and reduce the numbers. We reduced the number to 14 groups and we still needed to reduce them further to 10. We were already receiving lots of phone calls from potentials groups who wanted to know if they had been selected or not. To select the farmer groups we made a matrix with the name of the potential LSBs and selection criteria, such as the location, crops the group was involved in, number of seed growers, the source of the seed etc. Then using post-it stickers we identified the traits of each group based on the selection criteria and provided a voting system to select a diverse set of local seed businesses."

Content



The key selection criteria for potential LSBs

- Willingness and self-motivation to take up seed production as a commercial activity.
- Groups with business thinking, that are looking for business opportunities.
- Availability of land for seed production (Individual farmer's plots or clustered land).
- The group must have been in existence for more than 2 years.
- The group must have functioning structures of leadership.
- They must have the ability to keep records
- They should be experienced in the production of the envisaged seed crop, preferably in producing seed.
- They should have the ability to raise the required co-funding resources

Pre selection activities

The first step in selecting potential LSBs is to define your area of operation. In the case of ISSD Uganda this would be the districts in the three zones where the programme is based. Once you know the area of operation, you would ask NAADS coordinators, ZARDI staff and agricultural district officers to recommend groups that meet the selection criteria. If there are many groups recommended, you would need to do a pre-selection on which groups you want to visit. If time and resources allow, this could be done through a quick visit to each group to get a feeling of the entrepreneurship within the group. Based on these visits, a pre-selection can be done.

The second step is to make appointments with the groups and spend up to two hours per group to get a feeling on how well they meet the selection criteria and get their profiles. The format for the profile is provided below.



Farmer group profile

General information

1. Name of the group/association/cooperative/enterprise
2. Location (zone/region, district, sub-county)
3. Number of farmers involved (members)
4. Type of group (Research group, NAADS group, cooperative enterprise, other)
5. Level of organisation at this moment (Leadership structure, etc.)
6. Years of existence

Seed production

1. Number of seed growers
2. Crops being grown for grain production
3. Crops being grown for seed production
4. Amount of seed produced (per crop) last season
5. Source of the foundation seed
6. Years of experience in seed production
7. Buyers of the produced seed
8. Current seed quality assurance mechanisms used

Marketing strategy/business plan

1. Explain in a few sentences the marketing strategy
2. Explain in a few sentences the business plan (vision, production plan, marketing plan, financial plan, investment plan, etc.)

Linkages with other stakeholders (Specify the type of collaboration per actor)

3. Collaboration with government actors (NARO, NAADS, ZARDI)
4. Collaboration with the Private sector (Seed companies, Agro-input dealers)
5. Linkages with Research (NARO, universities, etc.)
6. Linkages with MFIs/SACCOs/Banks
7. Linkages to the market (Local, regional, national, international)
8. Collaboration with NGOs?(local, national, international)

Current challenges

9. Current challenges in relation to seed production and marketing?
10. Any other important information/issues

The third step is to critically look at the profiles and give them a score. The scoring is done by the partner working with LSBs. Those groups that do not meet the criteria are not considered. In most cases there are more groups that qualify than what the programme can take up and then the mapping becomes relevant.

SN	1	2	3	4	5
District	Lango Alebtonga	Lango Alebtonga	Dokolo Block farmers	Okute Private sector Association	Aje me
Crop for Seed	CASSAVA BEANS	CASSAVA, Sunflower	RICE, Simsim, soybean, maize	Simsim, RICE	Simsim, maize, cassava, rice
# growers	25	30	50	50	15
Source	NARO, NAADS, IEC	NARO, Mukwano	MACREI, NARS, JICCA	PEARL SEEDS, VICTORIA II, NARO	NAADS, FAD, UK seeds
Linkages	NARO, NAADS, IEC, CDO	NAADS, NARO, IEC, REHAB, DET, IEC	MACREI, NAADS, MacREI, NARS, ZARBI, MacREI	PEARL SEEDS, NAADS, CAGE, ACF, PLAN, IEC	FAD, NAADS, UK seeds
Working capital	household	Pdn = 300bags Sunflower - 120 bags maize	Input	Input	Input
Business thinking	Prime land	Bulk Sales	Multi-cropping four different seeds for MACREI	Planning to establish seed processing plant	Diversification to fruit trees planting materials
Challenges	Market linkages, Inadequate store	Market linkages, Inadequate store	Transport problem, Market linkage, Over-flooding rice scheme	Limited finance, Transport problem	No proper storage facility, unreliable market prices, poor transport
NAME OF GROUP	SRP Co-operative Society	Netology Multipurpose Coop	AFOSA NARS (part/active)	Can Midiro Women's group	Acwec Om Co-op
District	LANGO Kole	LANGO Kole	LANGO Apac	LANGO Lino	LANGO Oyam
Crop for Seed	maize, millet, soy beans	soya, Sunflower, maize, Simsim, pigeon peas	CASSAVA, MAIZE BEANS	soya, Simsim, maize	Sunflower, beans, soya
Experience in Seed production (yrs)	3 years	14 years	5 years	10 years	10 years
No of Seed growers	70	400 members 1500	125	80	777
Source of seed	UGSPA, NARO, VICTORIA	Source	NARO	NARO	NARO

As shown in the case above, the criteria were written on the rows of the flipcharts and the potential groups on the columns. Each cell gets the relevant information. With colour post-it, groups are selected. ISSD considerations for selecting the groups were: the geographical spread of the groups; type of crop or seed enterprise they are active in; and type of organisation in relation to the effectiveness of their organisational structures for the programme. Partner organisations can have their own criteria to take into consideration.

An example of a filled in table is given below:

 Name of group	Jing komi farmer group	Pugwang growers cooperative	Anaka Modern Farmers Association	Latyeng Farmers group	Lukole FFS Network
District	Kitgum	Amuru	Anaka	Gulu	Agago
Crop for seed production	Cassava	Rice	Cassava	Rice, beans	N/A
Experience in seed production	9 years	10 years	2 years	5 years	N/A
No. seed growers	60	75	45	120	N/A
Source of FS	NARO, AVSI	NAADS and NARO	NARO and WFP	FAO,NAADS	N/A
Linkages	FAO, AVSI, NARO and NAADS	NARO, LEAD USAID, NAADS, World Vision	NARO, NAADS and Gulu University	FAO,NAADS	FAO and CESVI
Working capital	Ware house Bee project	Production- 300 bags of rice	Processing machine for cassava Cassava stems plantation	Production- 300 bags of beans -200 bags groundnuts -180 bags rice	Saving account Membership fees
Business thinking	Commercializing seed production Supplying Juba Opening marketing office in Juba	Installing rice huller machine	-Packaging cassava products for super markets	-Planning to construct a warehouse for storage	Production for Bulk marketing
Challenges	-transport problem -Drying facilities for seed -Moisture machine lacking Limited finances	-Poor road access to the market -Limited capital	-Limited finance -Underutilization of their land	-Poor storage -Limited finances	-lack of finances -Poor market linkages -No access to foundation seed



Training methods

- Q: What do you think of the identified selection criteria? Do they match the objectives of your organisation/programme?
- Q: Which ones would you want to change? What do you think of the farmer group profile questionnaire?
- Use the matrix and cards to write down the characteristics of the assessed LSBs.
- Coloured cards can be used for positive, neutral or negative characteristics to easily distinguish the suitable candidates.

Materials

- Mapping charts; Flip chart, pens, pencils, markers, coloured cards.

Advice

- Mapping is critical for quick diagnosis of groups with respect to the selection criteria.
- Communicate to the farmer groups the results of the selection process.

Resources:

- CIAT handbook 3 chapter 4, farmer group profiling tool developed by ISSD programme; ISSD farmer group selection reports.

Session 1.3.2: What is a diagnostic survey?

Learning objective

- At the end of this session, participants are able to use the diagnostic survey tool to set the baseline for LSBs and identify areas of strengthening within the LSB.



Focus Group Discussions (FGD) and group interviews were used to collect data for the diagnostic survey. A total of twenty one participants comprising of committee members and farmer representatives of Kyamulama Mixed Farmers' Group were interviewed. The participants present were divided into two groups whereby the seed expert handled factors of "governance", "land", "quality assurance" and "access to inputs" while the agribusiness expert dealt with the remaining success factors that include; "market", "unique product", "marketing strategy", "customer feedback information mechanisms" and "access to finance". These success factors were generated during the staff training with some ISSD experts, ISSD Coordinators from Wageningen UR CDI and other participants that had been invited from partnering organisations and institutions.

The interviews took about four to six hours in addition to the time taken while visiting the fields. It was an interactive discussion where all participants freely expressed their views. The ISSD team tempered the dominance of the chair person and some committee members by involving the ordinary members/farmers. This was done by the interviewer randomly selecting specific members to answer some specific questions. However, the chairperson appeared to have a lot more information about the group and its activities than the rest of the members. She was thus continually consulted in the case of questions that could not be answered by any of the other participants present. After the interview session, the production fields of some of the group members were inspected.

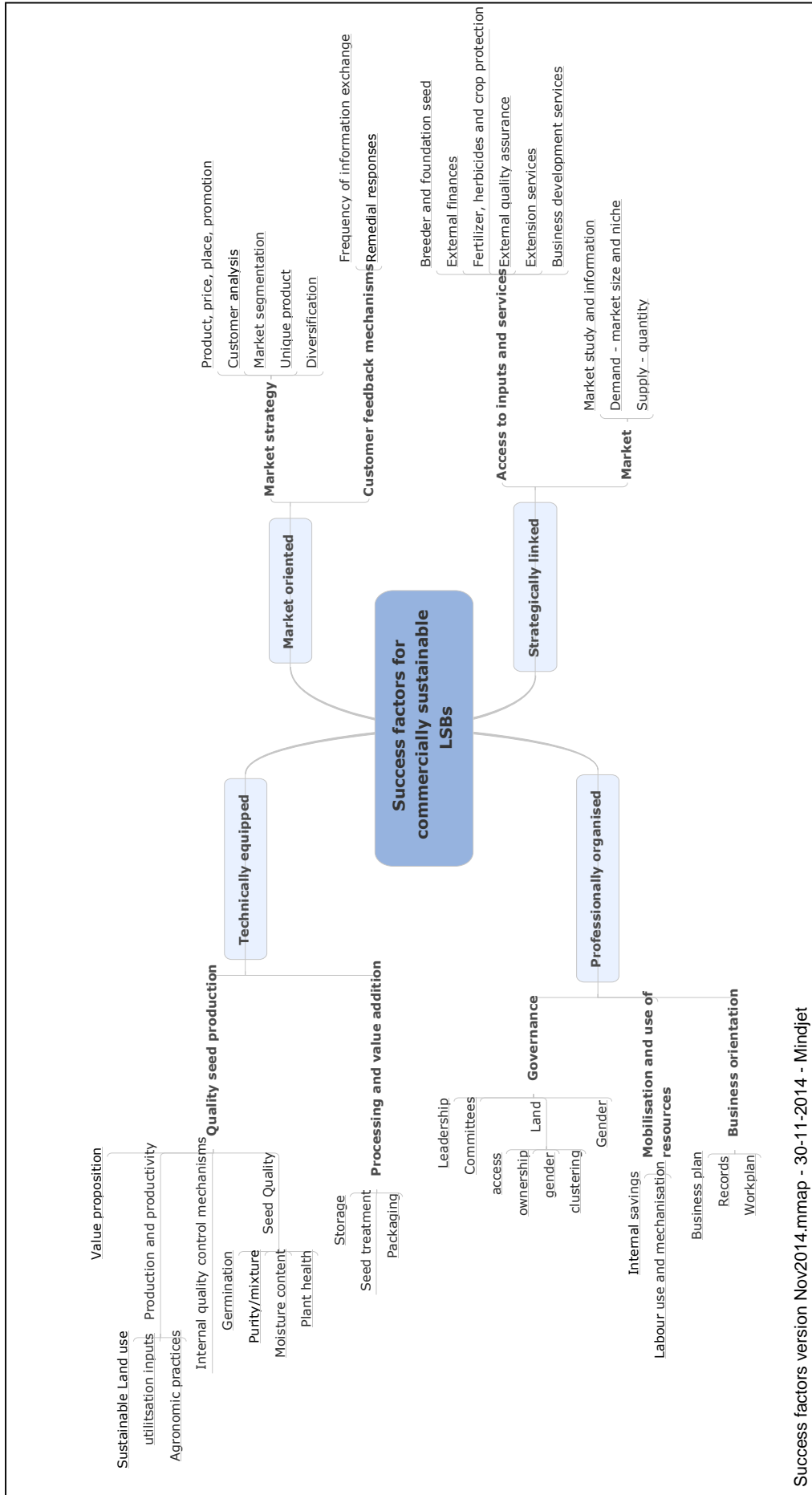


Content:

"Success factors" are used to monitor whether the LSB is on the right track and are necessary to become successful in their seed business. During the first workshop of ISSD Uganda (August 2012) a team of stakeholders (recruited staff, ZARDI directors, agronomists and socio economists) sat together to discuss the factors that make or break a local seed business. The success factors have been updated in November 2014 based on the experiences gained in the programme. The success factors are linked to the building blocks and are:

Building blocks	Success factors
Technically equipped	1) Quality seed production 2) Processing and value addition
Market oriented	3) Market strategy 4) Customer feedback mechanisms
Professionally organised	5) Governance 6) Mobilisation and use of resources 7) Business orientation
Strategically linked	8) Access to inputs and services 9) Market

The figure on the next page provides some more detail on the success factors and sub factors. These success factors form the basis for the diagnostic survey and the use of the scoring card.



Diagnostic surveys

Diagnostic surveys are meant to analyse the current status of the pre-selected Local Seed Businesses. The surveys provide largely qualitative data and are the basis for the development of LSB specific action plans. In all 30 LSB communities went through FGDs and key resource person discussions.

A format is being used mainly for the collection of qualitative data for the main success factors. Also a scoring table (1= poorly developed, 5+ well developed) is being developed for the following success factors. See annex 1 for the details of the scoring table which will be the basis for the development of an action plan.



Training methods

- Q: What do you think of the success factors? What do you understand by each of the success factors?
- Discuss in groups: Go over the scoring table and discuss if the criteria definitions are clear.
- Print enough copies of the questionnaire scoring table to have a number of farmers look at the scoring table as well.



Materials

- Mapping charts; Flip chart, pens, pencils, markers, coloured cards, printouts of the scoring table and questionnaire

Advice

- Taking time with the group to do a proper scoring is important to identify the weak areas in the group. These weak areas will be the basis of the action plan development (session 1.3.3)
- Communicate to the farmer groups the results of the diagnostic survey at the beginning of the session on action planning.
- Immediately after the diagnostic survey, take time to record your findings and make a short description on the current status of the success factors and which actions should be taken to address issues under any particular success factor.

Resources:

- Scoring table developed by ISSD programme;
- ISSD diagnostic survey questionnaire.

Session 1.3.3: How do you plan for addressing LSB weaknesses?

Learning objective

- At the end of this session, the participants should be capable of developing an action plan for addressing LSB weaknesses.

Participatory action planning enhances ownership and commitment of group members and other stakeholders in addressing the bottlenecks affecting a particular LSB.



Action	Activities	Partners	Seed EXPERT	Agribusiness EXPERT	MACE Days	Start	End
1. Organisation at RPO level.	- Establishing Committees - Defining roles & responsibilities. - Assigning roles - Train Committee members	- NAADS (CDO). - UCA - SG 2000	✓	✓		MAY	
2. Strengthen internal seed quality assurance system.	- Establish internal QA Committee. - Assign roles - Coach Committee.	- SG 2000 - CDO - NARO	✓			MAY	
3. Inputs & services <small>- mit information</small>	- Link to Foundation seed sources	- NARO - UCA	✓	✓		JUNE.	
4. MARKET RESEARCH & ANALYSIS	- Design questions - Data Collection & Analysis - Report writing. - Recommendations - Establish links	- SG 2000 - UCA - NAADS		✓		AUG/SEPT	
5. Business planning <small>- info</small>	- Train committees - Train members - Record keeping & Cost-benefit Analysis.	- NAADS - DCO		✓		APRIL/MAY.	
6. Promotion & customer feedback mechanisms	- Setup dems. - Plan field days - other promotional activities.	- SG 2000 - NAADS -UCA		✓		2014.	
7. Finance management.	- Savings/Credit	- Two Kamba SACCO - COSIL		✓		2014.	

An action plan for one of the LSBs in South Western Uganda developed through a participatory process.

Content

The LSB concept is broad, focusing on four key building blocks (as highlighted in session 1.2.2) with nine success factors (as described 1.3.2). It is not possible to work on all the nine success factors at a go. Action planning then becomes critical in this situation. Action planning is intended to translate the intervention strategies into concrete activities, targets and timeframes and assigning roles and responsibilities to stakeholders. Action planning is also intended to identify the relevant and interested partners that will jointly address the bottlenecks faced by the LSBs. It is at this point that partners make commitments to jointly work together to support the development of the farmer groups into viable local seed businesses. It is also important to note that the diagnostic survey is the basis for the development of the action plan.

The diagnostic survey reveals which aspects need to be strengthened in each farmer group, and will direct the design of intervention strategies. Note that these strategies will differ from one farmer group to another. It is also important to note that action planning is done at two levels, first at the start, immediately after recruiting the groups (as described in this session) and then, seasonally. Seasonal action plans are basically conducted at the start of every production season to prepare the farmer groups for the new season. Discussions on what well in the previous season (production & sales), the challenges experienced and the lessons learned are shared and strategies for improvement proposed. Typical activities conducted during the pre-season planning meeting include yield assessment from on-farm demos, profitability analysis, seed sampling, foundation seed procurement for the next season, etc.

Why do we need partners?

As mentioned above, the LSB concept is broad and requires joint efforts to effectively support the local seed businesses. Partnerships are particularly important for sustainability services to the local seed businesses. For example, a programme/project may be designed with a specific timeframe, say 4 years. LSBs may still need support even after the four years, for example, extension services, among others. Therefore linking the farmer groups to relevant stakeholders (especially government agencies and private sector) that offer assorted services would be critical for sustainability.



Which partners and why do we involve them in the planning?

For the action planning exercise, it is important to identify and invite local partners that are closely working with the farmer group. Identification of the partners is done during the group selection (session 1.3.1) or during the diagnostic survey (section 1.3.2). We need to involve the partners in action planning to get their commitment to work together. Joint/participatory action planning also helps the partners to integrate the capacity development activities of the LSB into their work plans. The commitments are affirmed by signing the partnership agreements (Annex 4).

Participatory action planning should follow the five key steps below:



The first step is to share the results of the diagnostic survey (as described under session 1.3.2) with the farmer groups and their local and regional partners. The presentation should clearly highlight what is going well and the bottlenecks faced by the farmer group per critical success factor (CSF).

The second step is to validate the challenges/bottlenecks through plenary discussions. This step is meant to accommodate any other emerging issues and also to update/validate the challenges/bottlenecks in the presence of all the stakeholders. This step is very critical because not all the stakeholders or group members of the farmer group may have participated in the diagnostic survey.

The third step is to prioritize the bottlenecks. Here all the bottlenecks are written down on flip charts and participants are allowed to prioritize the key ones. This can be done in plenary or group discussions or by ballot (voting) using coloured cards.

The fourth step is to develop a comprehensive action plan with concrete activities, targets and timeframes. For each action, outline specific activities to be undertaken and the responsible/lead persons. If an organization/stakeholder is working with several farmer groups/LSBs, then the action plans from the individual groups should be harmonized with the organization's other activities to develop a general capacity development plan.

The fifth and last step is signing of the partnership agreement. The roles of the partners are defined, discussed and clarified during action planning. The partnership agreement is then drafted and signing can be done during the subsequent meetings. An example of a partnership agreement is shown in Annex 4.

An example of an action plan for one of the LSBs supported by the ISSD Programme

	Key issue/actions	Time of implementation	Responsible	Implementing partner
1	Training in seed quality control	May, 2013	ISSD Seed Expert; ISQCC	NAADS/CDO, UCA, SG2000
2	Creating linkage with foundation seed sources	June, 2013	ISSD Seed Expert; ISQCC	NARO, UCA
3	Coaching and supervision of seed production	July-Dec, 2013	ISSD Seed Expert/ ISQCC	NAADS, NARO/ZARDI, SG2000, Seed Companies
4	Leadership/organizational development training	May, 2013	LSB Executive Committee/ISSD Seed Expert + Agribusiness Expert	NAADS, CDO, UCA, SG2000
5	Business planning	April-May, 2013	LSB Executive committee/ISSD Agribusiness Expert	NAADS, DCO
6	Financial management	Jan-March, 2014	ISSD Agribusiness Expert/LSB Finance committee	Twekambe SACCO, COSIL
7	Market research and analysis	Aug-Sept, 2013	ISSD Agribusiness Expert/LSB marketing committee	SG2000, NAADS, UCA
8	Promotion and customer feedback mechanisms	Feb-April, 2014	ISSD Agribusiness Expert/LSB marketing committee	SG2000, NAADS, UCA

Please note that the implementing partners should work closely with the responsible persons in organizing/preparing for the training sessions with the farmer group. The responsible persons mostly play a coordinating role. Actual implementation is done with the implementing partners.

Training methods

Action planning should be organized at the premises of the farmer group. It is undertaken through a meeting between the farmer group and the relevant partners as specified in the sections above. The meeting should flow as illustrated in figure 2.



Task 1: Present the results of the diagnostic survey focusing on what is going well and the bottlenecks per success factor using a PowerPoint presentation. Or simply write them down on flip charts prepared in advance by the facilitator.



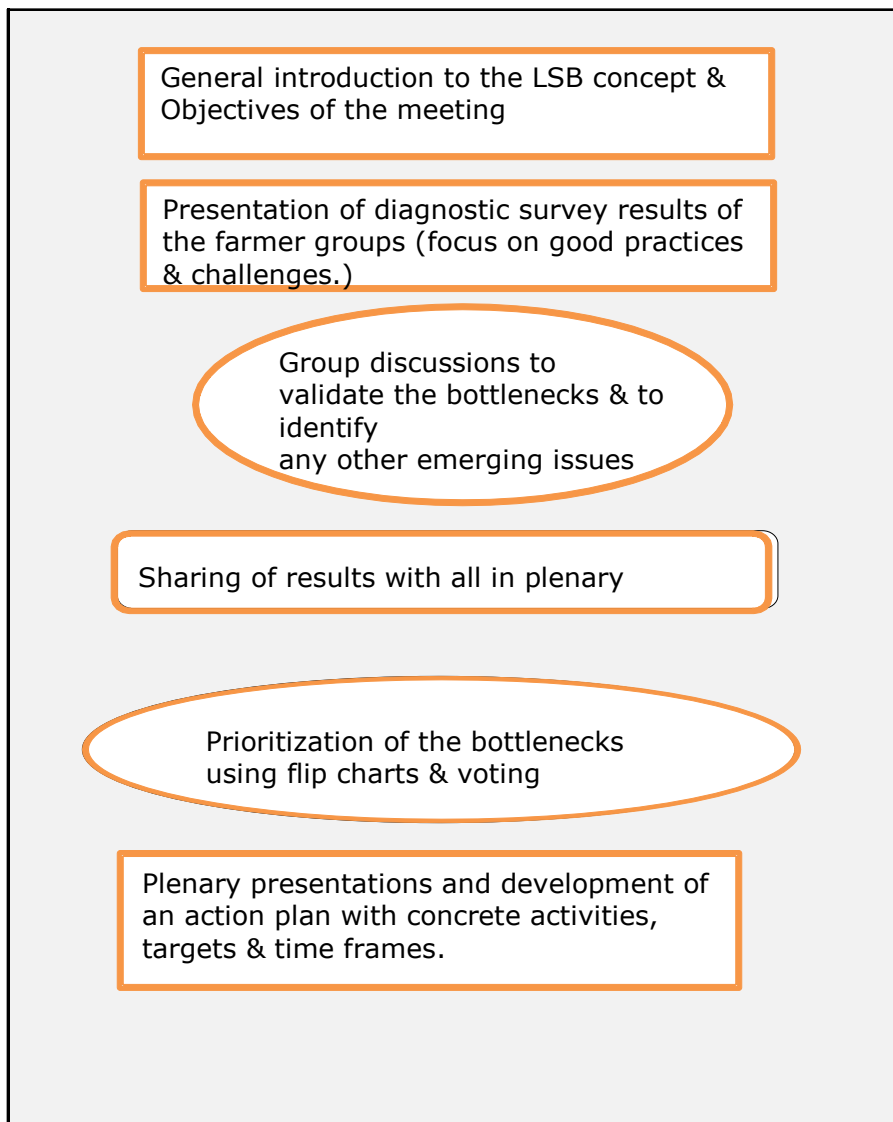
Task 2: After the presentation, make the participants sit in a mix of stakeholders. Make at least 3 sub-groups depending on the size of the audience.

Task 3: Participants should reflect on the presentation through a Q&A session.

This session is meant to validate the findings of the results of the diagnostic survey.

- Q: What is going well with respect to the CSFs?
- Q: Basing on the presentation, do you confirm that these are the bottlenecks you are facing?
- Q: Of these, what are the main challenges? Ask participants to analyse the challenges and prioritize at least 5 key ones. Please remember, it is impossible to address all the challenges at a go.
- Q: What can you do yourselves to address these bottlenecks? Ask participants to propose at least two interventions per bottleneck.
- Q: What support can partners/others offer?

Fig.: Overall process leading to a matrix with possible actions



Please note that step 3 and 4 may be combined if the audience is small. However, if the audience is big and sufficient grouping can be done, then the group presentations can be done through World Café.

Materials

Flip charts, markers, coloured cards, pencils

Notes to facilitator:

- Make sure that all the stakeholders closely working with the farmer group as specified in the diagnostic survey are present during the action planning.
- Present the positive points from the diagnostic survey first.
- If you are using flip charts, summarize the diagnostic survey results in advance of the meeting/workshop

Resources:

- Diagnostic survey report of the farmer group.

Topic 1.4: Developing an M&E system for monitoring performance of local seed businesses.

Key message:

- The topic describes the purpose and scope of monitoring LSB performance by technical teams. The topic sets out the “what” and the “how” of M&E.



The ISSD programme prepares planting returns per season of all LSBs in the region. The planting returns indicate the crop grown, the variety, acreage, planting date, expected yield and remarks. The technical team has been very ardent in preparing the returns which are also submitted to the National Seed Certification Services to facilitate timely external inspections and timely ordering of seed packaging labels. The planting returns are compiled during the growing season when the seed has reached flowering stage. The planting returns also aid the groups to project their expected seed quantities to facilitate them to seek for markets in time.

Field inspection of one of the LSBs in Western Uganda by ISSD early in the season (2013A) indicated that the group would have planting returns of up to 5,000kg from their bean seed garden, after investing in good quality foundation seed and maintaining the agronomic practices as observed then. Sales projections by the group indicated that they would earn up to UGX15 million from seed sales at a rate of UGX3,000 per kg. However, when the ISSD team visited the group towards harvesting, it was discovered that many of the group members had tended to intercrop some maize and sorghum in the bean seed garden. The farmers said that shortage of land was the reason they were doing intercropping. The field was condemned as a seed garden and the farmers were not able to achieve their target in terms of volume of seed produced and income from seed business. The group members blamed the quality assurance committee for not following up with the farmers to ensure that the right practices were adhered to.



Left picture: well managed bean seed garden. Right picture: bean seed garden intercropped with maize. The latter was rejected as seed and farmers sold their output as grain, fetching lower returns.

Session no.	Session name	Duration
1.4.1	How to monitor the performance of LSBs?	1 hour
1.4.2	How to analyse and report performance?	1 hour
1.4.3	How to facilitate LSB self-assessment	2 hour

Session 1.4.1 How to monitor and evaluate the performance of LSBs?

Learning objectives

- By the end of the session, the trainers will understand:
 1. How to monitor and evaluate LSB performance using different concepts and tools;
 2. LSB performance measures and targets;
 3. Systematic data collection and reporting on LSB performance.



"In order to know what the LSBs are doing, how far they have gone and if they are moving towards the direction of becoming successful seed entrepreneurs, we have put in place effective monitoring and evaluation systems so that the program can check at all times if it is moving in the right direction, making progress and having the desired effects. While collecting data from the LSBs, the purpose has to be clear to the LSBs so that they don't hide some beneficial information. Use the monitoring results effectively and give feedback to the LSBs. Information coming from the monitoring and evaluation helps to us to address the weaknesses within the various LSB groups".

ISSD Uganda M&E Department

Content

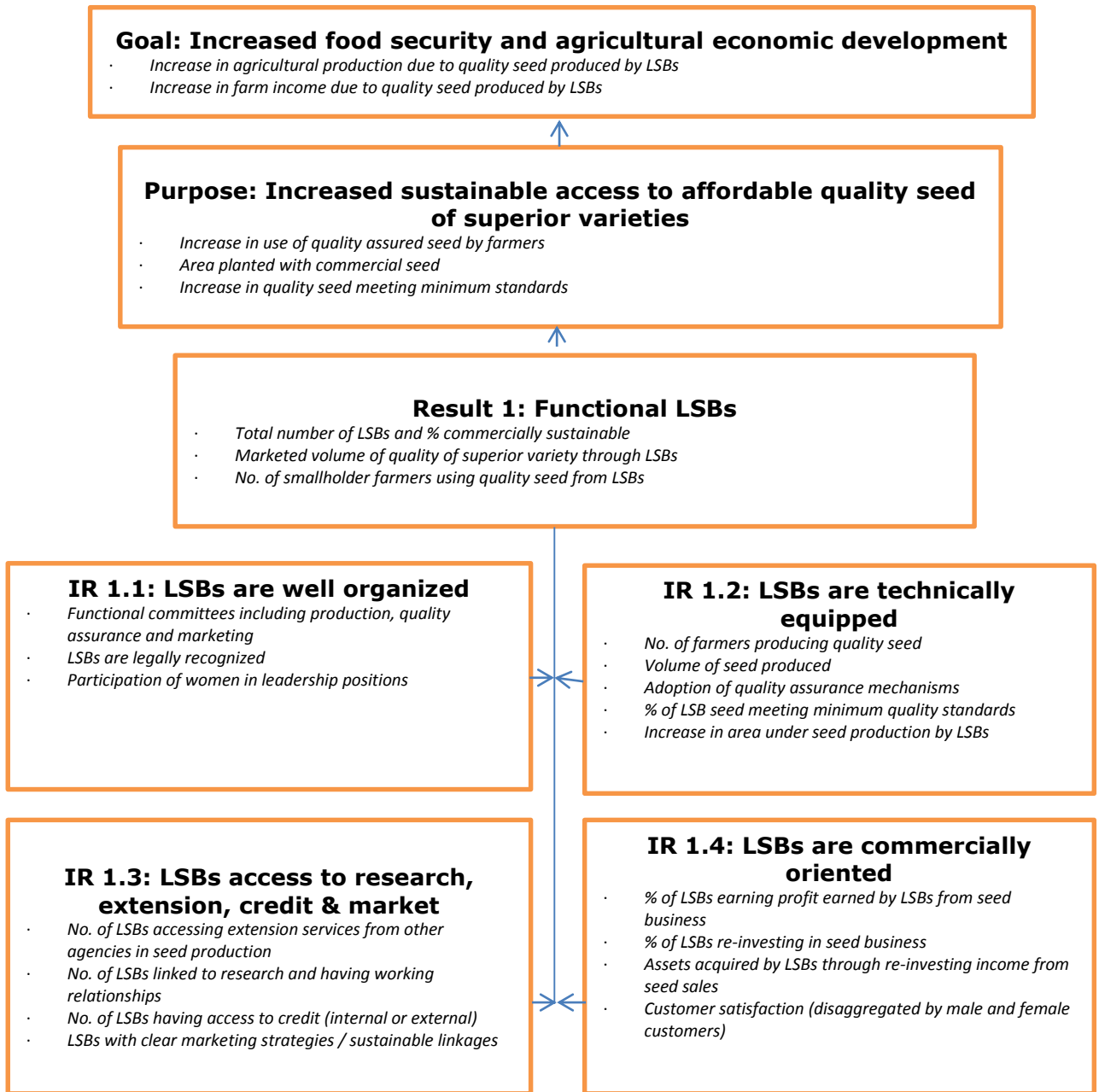


LSB results and indicators

The ISSD programme ultimately aims to contribute to increased food security and agricultural economic development, through increasing sustainable access to affordable quality seed of superior varieties for smallholder farmers. To achieve sustainable access to affordable quality seed of superior varieties, a vibrant, pluralistic and market-oriented seed sector is necessary. One precondition for creating a well-developed integrated seed sector is the existence of functional Local Seed Businesses (LSBs) with smallholder market-oriented farmers organized for and employed in quality seed production and marketing. This requires:

- Commercially sustainable Local Seed Businesses, producing and marketing quality seed of locally adapted crops and varieties for local markets.
- LSBs need to be well organized, technically equipped, commercially-oriented and have access to research, extension, credit and markets.
- ZARDIs and other development partners to support and implement the LSB model.

For each of the results indicated, standard performance indicators have been developed by ISSD Uganda programme in the context of the zones in which we operate. LSB results and indicators and the contribution of these to the overall development agenda in Uganda is shown in the figure below:



What to monitor – strategic evaluation questions

We need to define the most important strategic questions, which we need to answer to know the extent to which we are making progress in achieving our results and contributing to the functionality of LSB, and ultimately achieving ISSD programme impact. The strategic evaluation questions are related to the LSB building blocks and success factors as described in Topic 1 and 2. The strategic evaluations are therefore categorized according to the following specific questions:

Question	Description	What to monitor?
Performance questions	How will we know we are doing the <u>right things</u> ?	Check compliance with work plans, implementation management, effectiveness of strategies
Progress questions	How will we know we are <u>making progress</u> towards achieving the functionality of LSBs?	Achievement of results – against the LSB building blocks and success factors (short and medium term). Achieved results against target
Effects questions	How will we know our efforts (activities and outputs) are <u>having effects</u> that relate to the overall functionality of LSBs?	Changes occurring as a result of LSB development – individual, LSB and community levels
Context change questions	How will we stay alert about <u>changes in the context</u> which may potentially undermine or create opportunities for the success of our efforts?	Periodic context analysis, staying up-to-date (through strategic networking with different stakeholders) about new seed related developments.
Critical process conditions questions	How will we know whether critical success factors for the <u>change process</u> are being catered for (e.g. stakeholder motivation, good relationships, appropriate capacities/competencies of partners and stakeholders, supportive leadership)	LSB scoring on success factors, strategic networking with different stakeholders.



M&E matrix and filled examples

Result	Indicator	Baseline value	Annual targets			Data sources	Collection methods	Frequency	Who to collect?
			Y 1	Y 2	Yn				
Result 1: Functional LSBs	Total number of LSBs and % commercially sustainable	0	30 ISSD LSBs	30 ISSD LSB, 40% reinvest	30 ISSD LSB, 60% reinvest 50 LSB (up-scaling)	LSBs	Review of records, interviews with LSB members	Annually	Project staff
	Marketed volume of quality of superior variety through LSBs	0	530 tons, 37000 bags.	1,600 tonnes (aggregated for cereals, legumes and tubers)	1900 tonnes	LSBs	Review of records, interviews with LSB members	Twice a year	Project staff
	No. of smallholder farmers using quality seed from LSBs	0	10,000	40,000	80,000 (40% women)	LSBs	Review of LSB sales record, survey of seed users at end of project	Seasonally, and end of project	Project staff, external evaluators
IR 1.1: LSBs are well organized	Participation of women in leadership positions	Women comprise at least ¼ of LSB leadership but often at lower decision making levels	Women fully understand their roles and responsibilities as LSB members including leadership	At least each LSB has a woman who has been democratically elected in one of the top leadership positions	Women participation in various LSB committees increases by 50%	LSBs	Interviews with members, interviews with committees, review of records	Annually	Project staff

Notes: ISSD / LSB contribution to outcome and impact levels should be measured at national level due to the existence of other factors that affect the final observed change. ISSD implementing partners are therefore encouraged to ensure appropriate monitoring at result and intermediate result levels.

Data collection tools



A number of tools can be used to monitor performance of LSBs. These tools will be described in detail in the subsequent sessions. Here we indicate briefly the LSB pillar and tools that can be used to monitor related indicators

	LSB pillar	Monitoring tools
1	LSBs are technically equipped	<ul style="list-style-type: none"> · Planting returns · Production plans · Knowledge attitudes and practices survey · Infield inspections · Demonstrations
2	LSBs are professionally organized	<ul style="list-style-type: none"> · Seed crop budget analysis · LSB self-assessment · LSB scoring on success factors
3	LSBs are market oriented	<ul style="list-style-type: none"> · Participatory market research · Business plans · Customer feedback · Farmer field days
4	LSBs are strategically linked	<ul style="list-style-type: none"> · Contacts with service providers or markets · Twinning or exchange visits · MOUs with institutions

Training methods



- The facilitator explains the ISSD approach and LSB logic of results. The facilitator then describes the indicators of performance and participants discuss and agree or adjust them to suit their context. The team then practically fills the M&E matrix.
- Refer to the lessons learnt and participants agree on what could have been done differently. This will aid the group to think critically on the frequency of monitoring, based on the indicator.
- Q: How do we monitor and evaluate LSB performance?
- Q: What are the different concepts and tools for monitoring LSB performance?
- Q: Against what criteria do we measure LSB performance and targets?

Materials

- Flip charts, markers, masking tape, reference documents (project proposal, LSB work plans, diagnostic survey)

Advice

- It's important to include the programme technical staff, partners and LSB (where possible) in defining performance targets, measurement tools and frequency for data collection.

Resources

- LSB Scoring Matrix (Diagnostic Survey tool)
- M&E matrix

Session 1.4.2 How to analyse and report LSB performance?

Learning objective

- By the end of the session, participants shall understand the principles of performance reporting and can use reporting tools to effectively represent performance observed.



"As a result of low income, most of my children have not been able to acquire good education. My first son dropped out of school at S.4 because I could not afford to take him to high school. But with this new hope of improving my income stream from local seed business, am sure to support my children's education!" narrates Orombi a middle aged man and member of Watembo LSB in Nebbi District.

Orombi is married to Atyang and the couple has 8 children aged between 6 and 17. Like others in this village, Orombi's family is mainly engaged in production of food crops such as cassava, sweet potatoes, maize, beans and ground nuts and grows sesame mainly for cash. However, the family usually prioritizes growing of food crops because of the relatively large family, and on average grows about ½ acre of sesame earning about UGX 200,000 per year. Orombi also earns about UGX100,000 a year from doing casual labour in the village. Being an active LSB member since 2013, Orombi participated in all the trainings and was even elected on the quality assurance committee. As a result he opened 2 acres of sesame seed, instead of the usual ½ acre sesame as usual. He maintained best practices in production and post-harvest activities and during the field inspections, his seed garden was the best. He harvested 400kg of sesame seed, sold each at UGX5500 earning UGX2,220,000.

"I have never received such a big money at once, and not even in one year!" exclaimed Orombi. "In the next year, I will double my production, since I see the benefits, my wife and children will help as well" concluded Orombi.

Content

Use of performance data

1. To manage LSB performance: *Is the LSB achieving the desired results?*
 - Determining whether activities and strategies by the LSBs are appropriate
 - Shows if LSBs are meeting their targets e.g. production, sales, profit;
 - Helps LSB leaders make administrative decisions
2. To plan
 - Can determine future LSB activities and strategies;
 - Can pinpoint LSB performance 'trouble spots', i.e. where the problem is, how it came about and how it can be addressed.
3. To inform budget decisions
 - Helps to relate results produced *vis a vis* resources allocated. Resource could be money, human capital or time allocated to LSB.
 - Not always straightforward due to other realities in the environment
4. Performance Data for Advocacy
 - Advocate for Action: Producing good information e.g. success stories about how a program is improving people's lives can generate a will to act. For example,

stories about LSB successes can be used to lobby the government to support LSBs

- Attribute change to interventions to generate resources: Data documenting program success can increase funding & bring in more resources for M&E



What data to collect / document?

Data collection should be guided by the M&E plan. For each of the results and indicators, the ISSD implementing team should develop a clear plan of what data they will need to collect to answer the performance questions. Data collection should be followed by the data source and collection method (Ref to M&E plan). An example is given below of data required, data source and collection methods. The plan should also indicate the type of report in which the data will be required.



Result	Indicator	Data required	Data sources	Collection methods	Type of report
Result 1: Functional LSBs	Total number of LSBs and % commercially sustainable	Number of LSBs, LSB membership, profits made by LSBs, LSBs that re-invest in seed business, access to foundation seed	LSBs	Review of records, interviews with LSB members	Annual report, success stories
	Marketed volume of quality of superior variety through LSBs	No. of LSBs producing seed, crops/varieties grown, quantity of seed produced per season, quantity of seed sold per season, price per unit and income obtained by LSBs	LSBs	Review of records, interviews with LSB members	Quarterly report, annual report
	No. of smallholder farmers using quality seed from LSBs	No. of farmers who bought seed from LSB (men/women), other places (institutions) that LSBs sold seed to	LSBs Smallholder farmers	Review of LSB sales record survey of seed users at end of project	Quarterly report, annual report Baseline and end of project evaluation reports

Tools for documenting or reporting LSB performance



The selection of tools to use for reporting or documenting LSB performance is guided by the target audience and the intended purpose of sharing information. Below are some proposals of the tools that can be used, purpose and target audience. Note: the documentation / reporting tools are supported by data collection tools as described in session 1.4.1.

No.	Reporting tool	Aim	Target audience
1	Monthly reporting format	Share progress of activities against plan – e.g. (Simple Planned Versus Actuals sheets these should cover the aspects of activities, time, cost, and quality)	Internal document to aid decision making on activity progress and prioritization
2	Quarterly reporting format / quarterly reviews	Share progress of LSB against set results. Compare plan and actual results, reflect on results identifying the lessons, challenges and propose mechanisms for improvement	Internal document to aid decision making; ZARDI partners to understand LSB progress / achievements, NARO
3	Annual reporting format / annual review	Progress against outcomes of LSB, review of context and assumptions, lessons learned, and effectiveness of LSB strategies	Internal document to aid decision making; ZARDI partners to understand LSB progress / achievements, NARO, general public
4	LSB self-assessment	Internal assessment by LSBs to review their performance against targets and success factors, action planning by LSBs	ISSD, ZARDIs, other partners such as NAADS, S/County extension
5	Documentation of successes and lessons learned	Create awareness of the successes of LSB, how LSB works, and documenting evidence for decision making. Tools used here can be case studies, position papers, policy briefs, impact briefs, or photo documentation.	Potential out-scaling partners, ZARDIs, MAAIF, general public

How to organize the data? – telling the performance story

In organizing and reporting performance data, the following considerations should be made:

- Reporting shows the evidence of achievement, comparing expected to actual results
- To tell a performance story:
 - Set results in context – status before, changes in current situation, implications for result achievement.
 - Measure & report on progress and achievements (actual results) vs. expected results stated in the project/program results framework.
 - Use performance information you have collected related to indicators to support reporting on achievements.
 - Combine both qualitative and quantitative, be sure to provide facts.
 - Explain variance between planned & actual results (e.g. discuss challenges and issues)
 - Integrate reporting on cross-cutting issues: gender and capacity-building (e.g. gender, others as applicable). Accurate gender disaggregated data in reporting will allow comparative analysis about realities of men and women and track the progress appropriately.
 - Process reports show progress of various activities e.g. policy analysis, awareness, advocacy, formulation; stakeholder engagements and agreement on key issues etc.
 - Suggest lessons learned & improvements.
 - Use reporting internally to strengthen performance management and externally to provide ISSD with the information to track investment progress.
 - Critically reflect on the results achieved in relation to LSB building blocks and success factors.

Training methods



- Q: How to manage LSB performance?
- Q: How do you plan LSB activities?
- Q: How do you make informed budget decisions?
- Q: What are other uses of LSB data?
- Reflection on successes, challenges, lessons learned and critical issues of concern
- Propose new strategies for enhancing performance of LSBs

Materials

- Flip charts, markers, masking tape, reference documents (M&E plan, LSB scoring table, progress reports, activity reports, storytelling)

Advice

- Performance reporting to be done preferably on quarterly basis
- Performance reports form part of the management reports prepared by implementing teams. Since information is generated from LSB level, it's important to feedback to the team on key performance issues identified by the trainers.

Resources

- LSB Scoring Matrix (Diagnostic Survey tool)
- M&E matrix

Session 1.4.3 How to facilitate LSB self-assessment?

Learning objective

By the end of this session, participants will have used the self-assessment tool to review LSB performance against set results and success factors.



In 2013, when the ISSD programme started working with LSBs, a diagnostic survey was done which included LSB scoring against the success factors. The LSB scoring culminated into development action plans by ISSD to support LSBs to improve on the weak factors. In 2014, ISSD Abi ZARDI technical team piloted LSB self-assessment. The team explained the success factors and guided the LSBs to score themselves. It was interesting to note that where the LSBs had been scored high initially, they were actually below that level. The LSB members displayed honesty in rating themselves giving reasons why they gave certain scores. The groups were able to develop their own action plans to address the least scoring factors. All the 10 LSBs in West Nile completed the exercise. The lesson was that the LSBs know themselves better and self-assessment would add more value to them.

Content



Introduction to LSB self-assessment

Purpose: a LSB self-assessment takes place at LSB level among project participants at least twice a year. This is the primary level of accountability. Self-assessment is a process in which the LSB reflects on performance against the project results and the success factors. In addition to fulfilling the purpose of a review, self-assessment is also a powerful exercise for strengthening the group dynamics, enhancing greater interaction and learning.

Participants: All LSB members are expected to participate in the self-assessment, plus anyone else who has been an integral part of the project, such as village leaders, extension workers, ISSD technical staff, district extension personnel, ZARDI technical staff etc. LSB leaders decide who should be invited. If a LSB membership is large, the group might want to consider breaking into smaller groups for self-assessment.

Facilitator: The facilitator should be from the local area, so she/he is familiar with the language and culture of the participants. The facilitator should be trained in ISSD methodology and LSB concept.

Costs: costs for the self-review should be covered by the LSB

Review of LSB results and targets

Using the M&E plan, the LSBs reviews its performance against set targets.

LSB scoring against the success factors

Using the scoring matrix, LSB rates its performance against the success factors. Rating on the success factors shows where the LSB is strong and where improvement is needed (see annex 1)

Prioritizing, voting and analysing, planning for the future

The LSB analyses the results, what went well, what did not go well and how different they want to operate. The self-assessment ends with a celebration of the success achieved.

Training methods

Field visit



It is recommended that a field visit precedes the self-assessment. The visit to individual farmers helps in mutual learning and support, and also individual assessment of the progress they are making. During the field visit, all farmers will make observations and record them. The monitoring committee also makes observations, and asks other participants for their opinion which they record to feed into the review meeting.



Self-assessment can be introduced by one or any combination of the following illustration(s):



Bread example

Imagine baking a loaf of bread. There are several key ingredients in baking bread. Salt, flour, leavening, and other ingredients are not very significant alone, but together create something wonderful.

The project plan represents the recipe for making the bread. This recipe gives the general plan for what components are necessary for progress towards the goals. Project activities, like kneading dough, shape the project. The various ingredients represent the individual strengths of the project members and partners. Each ingredient is vital to the final outcome, a loaf of bread. Any single ingredient alone is unable to create a loaf. The heat of the oven represents the challenges the group faces in implementing the project plan. Fire, like challenges the group might face, strengthens the project. Any imbalance of ingredients makes a loaf that is less than desirable.

Chain example

- Think of a chain in which each link represents one LSB success factor.
- When all is going well, the chain is intact and all links contribute to supporting the LSB activities.
- But in times of stress, when the chain experiences extra stress, where will the chain break?
- This self-assessment is designed to make sure that all links in the chain are equally strong. So we use the strong links to analyse what the LSB is doing very well, so that we can strengthen those links that are most likely to break in times of stress.

Appreciative inquiry - storytelling

The self-review should include storytelling, where members share their individual successes and what they are proud of about being LSB members. The facilitator should emphasize the Appreciative aspects of Storytelling. Storytelling is designed to pull out pertinent LSB details and a common understanding of LSB contribution to members' successes that the farmers may/may not have considered, i.e. how we started, where we are today. Storytelling should also focus on the progress of LSB in general.

Overview presentations

An overview presentation can be done by LSB leadership. Major events in the LSB history, overview of current work, geographic areas of focus, groups of people with whom the LSB is working, current priority issues of the LSB, and organizational structure.

The monitoring team presents a summary of findings from the monitoring visits and field visit, mentioning what is going well, what is not going well and proposals for improvement.






Review and analyse LSB results

One of the monitoring team members presents the LSB M&E plan to remind all members of their commitments.

Based on stories shared and progress presented by the various committees, members rate their performance against the planned results and targets. For each result, members should discuss what the project looked like at the beginning and how it is now. Scoring of progress should be made. Table 3.1.3 proposes a ranking tool that can be used by LSBs. The seed means that very small or no steps have been taken, while the fruiting tree means that all the targets have been achieved. The group can rate its self, based on the scale giving reasons for the score given.



LSB self-rating on performance of results and targets

LSB Results					
Produce 3 tonnes of seed per season					
Increase number of LSBs producing seed from 20 to 50 in year 1					
Increase LSB seed sales by 50%					
Earn UGX30 million in profits					

LSB scoring against the success factors

LSB scoring is informed by performance review. The facilitator explains the ranking and scoring system used in the scoring matrix. The monitoring committee presents the previous scores and reasons. In plenary, the LSB scores its self against the various success factors. This is done using the LSB self-assessment matrix. **Note:** if the review is done at programme level, the summary scores per LSB should be presented showing how the LSBs have progressed over time.

Analysis of results

Divide into small groups and discuss these two questions related to results and success factors:

1. Considering the highest-scoring results / success factor, what has the team done to contribute to these results/factors being ranked high? Write these factors/activities on cards of one colour.



2. Considering the lowest-scoring results / success factor, what can the team do to make these results/ factors stronger? Write these factors/activities on cards of another colour.

Each small group presents its cards. As each group presents, like cards are grouped into clusters.

The cards from each group are consolidated into lists of initial issues and plans, avoiding duplicates. The whole group should look at the clumping and make changes if needed, until all the ideas are clear and no duplicates exist. This list is then written in the form of recommendations.


The group then votes on which ones are most important for the project to implement first, and comes up with a list from highest to lowest priority. Based on reporting requirements of the respective ISSD implementing partners, the LSB is responsible for communicating its results to the implementing partner for follow up.



Plan for the future

Instruct the groups to consider what's next, what still needs work and to achieve these results / success factors, what does the group need to do? After a brief discussion/reflection, fill out the following grid with the specifics.

Planning tool



Success factor / LSB result	Targets	Activities to be completed	When (Time Frame)	Who (Persons Involved/ Responsible)	What (Resources)

Materials

- Flip charts, markers, masking tape, reference documents (M&E plan, LSB scoring table, progress reports, activity reports, storytelling)

Advice for the facilitator:

1. Note: in most cases, the performance targets relate to LSB success factors, so it's important for the facilitator to lead group discussion around this review without causing confusion to the group. The facilitator needs to be well versed with LSB assessment scoring tables, progress reports, context in which the LSB is operating, LSB targets and gender issues in the location.
2. Quarterly performance reports, and other internal assessment reports form an input into the monitoring reviews
3. The facilitator should preferably not be a person that has been working closely with the groups to aid objective self-review and scoring
4. The tool can also be adapted to programme level self-assessments or progress reviews

Resources

- LSB Scoring Matrix (Diagnostic Survey tool)
- M&E matrix

Topic 1.5 Initiating Multi Stakeholder Processes

Key messages

- An MSP is not an end in itself but rather a means to achieve clearly defined common objectives.
- Multi stakeholder innovation platforms for seed are a key vehicle for building capacities of different actors in the seed value chain. They promote shared understanding, collaboration, and innovation. It is important to establish an effective platform at national, regional platforms and even district level so that all actors in the seed value chain are engaged. The key seed platform actors to engage should include seed producer organizations, other formal input suppliers (UNADA and seed companies), Seed Users/farmers, government extension workers and MAAIF, research organizations, higher learning institutions, financial institutions, business development service providers, and development organizations. MSIP facilitate technology uptake and better coordination.
- Starting a seed MSIP is one thing but sustaining it is another. It must therefore be planned at the beginning how the MSIP shall be sustained but more important is that it should be focused to achieve a certain set agenda and then can even be dissolved.
- Multi stakeholder innovation platforms for seed must start with identifying promising entry points for facilitating innovation, then composing networks and then facilitation of interaction.



"We like the contribution of ISSD in the seed sector discussion" says Dr. Abbey West Nile Oil Seed Sub-sector Platform coordinator', "Seed multi-stakeholder's innovation platform is an interesting forum to engage partners in the seed sector to discuss issues on quality seed. To initiate one in North Western Uganda (West Nile region), ISSD Abi team consulted a number of agricultural platforms which already existed to understand what kind of discussions are going on. The agenda of all these platforms consulted never addressed the seed issues in the zone as others were very specific; for instance the Oil Seed Sub sector platform. We decided to take the lead in setting up a new seed sector platform which was highly welcomed by the different stakeholders and one year later an innovation project was conceived through this platform and many more are expected".

Session overview table

Session No.	Session name	Duration
1.5.1	What are MSPs?	1 hour
1.5.2	How can you organize multi stakeholder meetings?	1 hour

Session 1.5.1: What are MSPs?

Learning objectives:

- At the end of this session participants are able to define and facilitate seed MSPs.



A multi stakeholder meeting was held in Mbarara district in south western Uganda on 10th December, 2013. The meeting sought to develop strategies for LSB groups to increase production and marketing of quality seed; develop strategies for MSPs at district and regional levels to support LSBs; and to develop an action plan for operationalizing the MSP strategies. The meeting was attended by representatives of LSBs, non-LSB farmers, research institutes, district agricultural offices, district farmer's associations, agro dealers, processing companies, non-governmental organisations and media. Participants had identified specific challenges that could be handled at the regional level, who was responsible for handling them and what exact role they would play in handling the challenge. It turned out that some of the stakeholders nominated to handle the challenges were not present either because they had not been invited to the meeting or because the meeting could not meet all their expectations. By the end of the meeting, it was not clear how the different nominated stakeholders would work together in addressing the identified challenges. Why was this so?

Content

Definition of MSPs

MSPs can be defined as forms of social interactions that enable different individuals and groups, with a stake in a specific issue to enter into dialogue, negotiation, learning, decision making and collective action to improve a given situation. It is important to note that an MSP is not a goal in itself but rather a means to achieve a given objective. Further, the life of an MSP is limited to the existence of the challenges or issues that the MSP was initially set up to improve.

Characteristics of an MSP

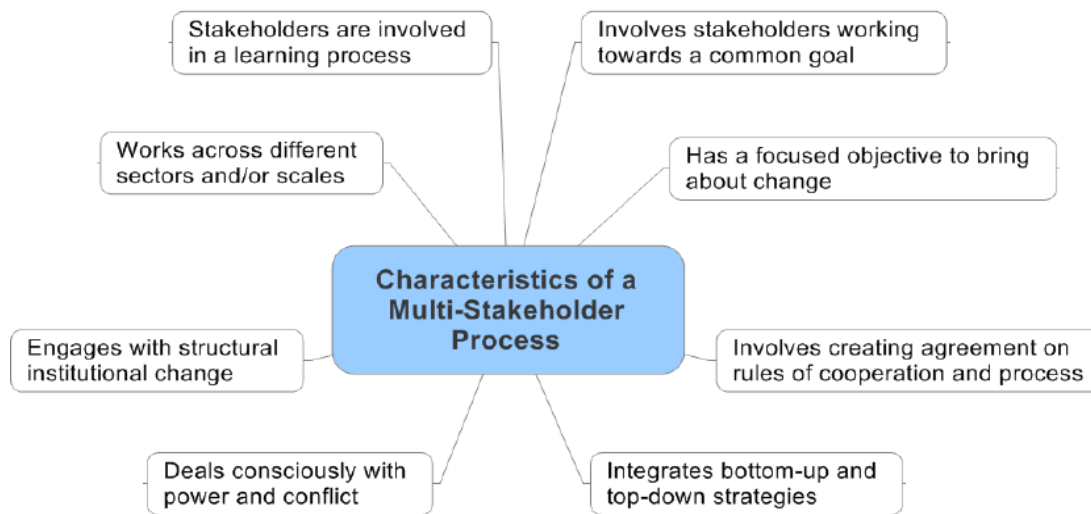


Figure 1 Characteristics of MSPs



Importance of MSPs

1. Build cohesion: MSPs build cohesion between the actors; focus individual interests towards a common goal and facilitate innovative actions.
2. Innovative approaches: Establishing innovative approaches to solve the challenges in the seed sector becomes possible when MSPs are built.
3. Legitimization: If people's concerns and opinions are taken into account and the problem appreciation is shared widely adaptive interventions will receive more legitimacy.
4. Democratic, integrated forms of resource management ("dialogues, platforms, partnerships" are new buzzwords among policy-makers)
5. Efficient and effective management; Interventions will be more carefully planned and executed (cost effective) if the people are involved (reduces costs incurred in irrelevant or unaccepted interventions).
6. Increase in the success of policy and appropriate management. Top-down approaches fail to deliver well-coordinated and embedded management.
7. Sustainability: Interventions will be more sustainable in the long term if the people who have to sustain them are involved and have participated to come to needed and appropriate interventions (ownership over decision-making and daily management practices). Encourage sustainability of seed platforms regardless of complexity.
8. Empowerment. Through MSPs vulnerable groups of society can be emancipated to speak up and be heard.

Conditions for a successful MSP

- Clear mandates and legitimacy of the platform and process.
- Engagement of all key stakeholders.

- Intrinsic motivation for participation.
- Transparency.
- Integration with existing institutions and processes.

Designing an MSP

MSPs should be designed based on a sound rationale for the change that the MSP hopes to contribute to. In doing this, a clear understanding of the existing problem and the objectives of the participating stakeholders is essential. With this understanding of the context, the MSP should have a well-defined and agreed upon mission and vision. The core of MSP philosophy is a demand that the involved stakeholders themselves are actors in the design and creation of the MSP which incorporates not only the needs of these stakeholders, but also their capacities to contribute to and sustain the process.

The practice of designing an MSP has three key elements:

- A process model that outlines the main phases of a MSP and the key process considerations for effective stakeholder collaboration;
- A set of facilitation skills required by those designing, managing, leading or facilitating MSPs, and;
- A set of participatory methodologies and tools that can be used help create interactive learning processes which manifest the principles and qualities of effective multi-stakeholder engagement.

The MSP model

The MSP model has four major components: initiating MSPs, adaptive planning, collaborative action and reflexive monitoring. Table 1 below shows the MSP model and steps followed in setting up an MSP. For more details on the steps for setting up an MSP, refer to the CDI manual on “The Generic Multi Stakeholder Process Model”.



1. Initiating MSPs	<ul style="list-style-type: none"> • Clarify purpose of the MSP • Initial situation analysis • Establishment of structures to facilitate the MSP • Building of stakeholder support • Establishment of the scope, mandate and stakeholder expectations • Outline the process, time frame, institutional requirements and resources
2. Adaptive planning	<ul style="list-style-type: none"> • Stakeholder understanding of each other’s values, motivations, concerns and interests • Generation of visions for the future • Identification of issues, problems and opportunities • Examination of feasible options • Agreement on key strategies • Set objectives, timeframes, responsibilities • Document planning outcomes and communicate them
3. Collaborative action	<ul style="list-style-type: none"> • Development of integrated initiatives and detailed action plans • Securing resources and technical support • Developing capacity of stakeholders been • Establishment of required management structures and procedures • Managing implementation process • Maintaining stakeholder commitment
4. Reflexive monitoring	<ul style="list-style-type: none"> • Has a learning culture and environment been created? • Have success criteria been defined? • Have monitoring mechanisms been developed and implemented? • Has progress been reviewed and evaluated and lessons been identified? • Have lessons learned been feed back into strategies and implementation procedures?

Facilitation of MSPs

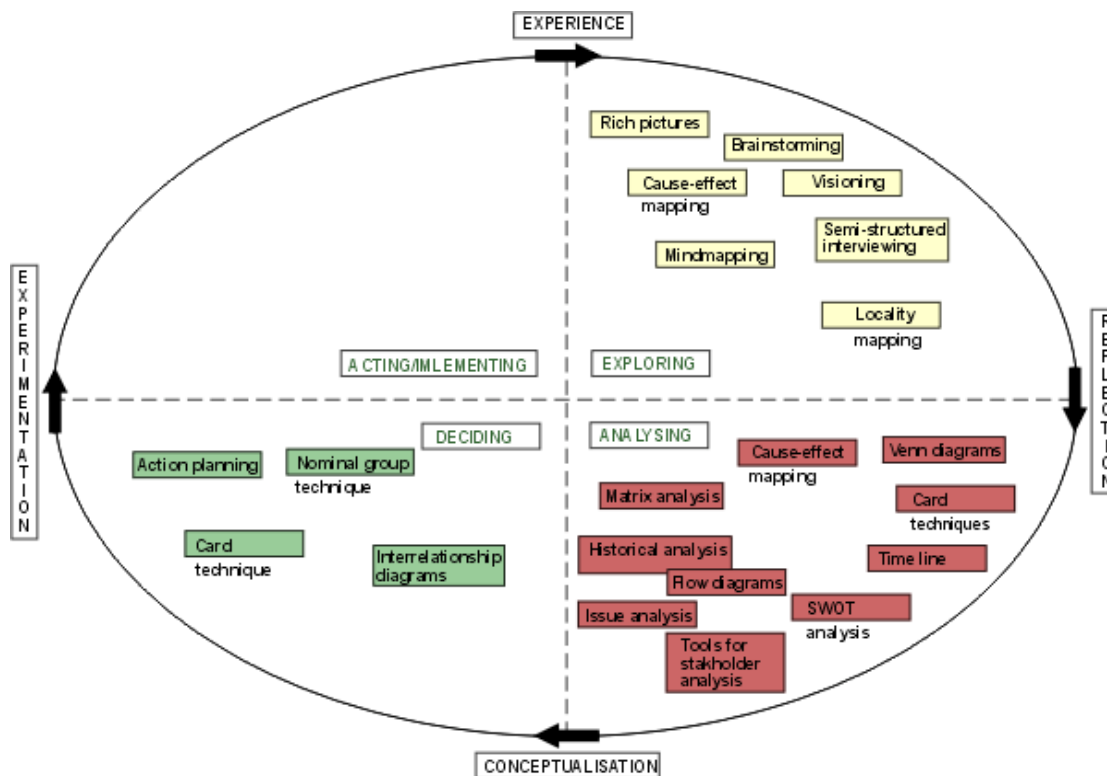
Facilitation is about creating and holding the space in which interaction between people can take place: it is the role and function which works towards making processes effective at achieving their aims, focusing on the quality of the process itself, rather than the content of the process. Facilitating MSPs demands particular skills and attributes such as capacity to work with individuals and groups in a way that enables them to challenge themselves and each other in the quest for new approaches and collaborative learning. To accomplish successful facilitation of an MSP, a broad understanding of the process is essential. Refer to the MSP process model for CDI-Wageningen UR.

Selecting MSP tools

Before selecting which MSP tools to use, it is important to consider the situation at the time in the process. Some considerations in making these choices include:

- Whether the process is at a moment where exploration and generating new ideas is the priority, or analysing, refining and choosing between options or it is time for planning (i.e. divergence, emergence or convergence).
- When to share and reflect on past experiences in order to adapt the strategies or upscale the activities.
- How power relations and conflict dynamics within the stakeholder group may play out when different approaches are used: for instance, highly stylised and heavily managed processes such as a formal debate, ritualised or time-constrained contributions, and responding to fixed action learning questions require a lot of effort but can be quite effective in levelling participants and de-personalising the issues.
- Whether people have to understand each other better and accept their differences before they are able to consider building on each other's' strengths.
- What is culturally and politically appropriate: for instance choosing methods that enable women or youths to find their voice and become comfortable with playing a different role than their habitual public role, rather than suddenly exposing them to a format in which they are expected to assert a very different role in public.

MSP tools are selected depending on the purpose. For example if the purpose is to generate ideas, the brain storming tool can be used. The figure below shows how different MSP tools can be used under different circumstances. For more information on the tools, refer to Wageningen UR's MSP portal: <http://portals.wi.wur.nl/msp/?page=1211>



Training methods



- Provide a power point presentation on MSPs
- Q: Who is a stakeholder?
- Q: What is a multi-stakeholder process? (Ask about five participants and record all the answers on paper cards and hang them on the wall, putting similar responses in the same place)
- Provide the standard definition of MSP in the power point presentation and relate it to previous responses recorded on paper cards
- Q: Have you ever been involved in MSPs?
- Continue with the power point presentation to explain characteristics of MSPs importance of MSPs, conditions for successful MSPs, MSP process model, facilitation of MSPs and MSP tools

Materials

- Pens, note books, paper cards, masking tape, projector, laptop, extension cable.

Advice

- The facilitator needs to clearly understand the MSP model in order to effectively apply MSPs.

Resources

- The Generic Multi Stakeholder Process Model: Guidelines to identify gaps in the planning or implementation of multi stakeholder processes by CDI.
- MSP Resource Portal for Wageningen UR. <http://www.wageningenportals.nl/msp/>

Session 1.5.2: How to organize multi stakeholder meetings?

Learning objective

- At the end of the session, trainers should be able to effectively organize and facilitate a multi stakeholder meeting.



Lessons learnt from local multi stakeholder meetings in West Nile Uganda

"We had a very good discussion today and a very clear actionable road map to tackle issues of counterfeit seed in Arua and Koboko districts" says ACAO of Arua District Local government, "I like the approach used in getting the discussion to deliver actionable points and I think all MSPs should follow this format", says another participant.

A MSP should be well planned so that the right issues are discussed, the right stakeholders are involved, actionable resolutions should be of key interest and therefore commitment of stakeholders should come by easily because the issues concern all. Do not start an MSP when all above is not clear.

Content

Identifying issues to be addressed by a multi stakeholder meeting

Before organizing a multi stakeholder meeting, you need to identify key issues or challenges that you want to address through the meeting. This can be done mainly through literature review or conducting surveys. However, the facilitator needs to seek consensus from the stakeholders to ascertain whether the identified issues are the real issues on ground.

Identification of stakeholders

A stakeholder is someone who has either something to lose or gain from the issue at hand. After identification of the challenges or issues to be handled, there is need to identify people of organisations that stand to lose or gain when the problem is either addressed or not addressed. It is important to identify interests of all the stakeholders through interviews and the need to involve all the stakeholders necessary to achieve the common goals cannot be overemphasised.

Refer to the case in session 1.5.1. The scenario in this case calls for use of the multi stakeholder process to understand the right participants with a common goal, to understand the interests and expectations of the various stakeholders, to agree on the rules of cooperation and the process and to deal consciously with power and conflict.

Objective of multi stakeholder meetings

- To discuss key challenges facing LSBs and innovative ways of dealing with the challenges.



Types of multi stakeholder meetings for LSBs

There are two major types of multi stakeholder meetings for LSBs i.e. local and regional multi stakeholder meetings.

Local multi stakeholder meetings

Local multi stakeholder meetings occur at the district level and the LSBs take lead in organizing. The facilitator advises the LSB on the nature of intended participants, technically advises LSBs in clarifying the objectives and expected outcomes of the meeting, preparing the invitation letter, programme and budget. In addition, the facilitator actually facilitates the discussions during the local multi stakeholder meeting and assigns a rapporteur to prepare minutes for the meeting. The facilitator then reviews the meeting report prepared and ensures that it is shared with the stakeholders that attended the meeting.

Key seed stakeholders to invite for a local multi stakeholder meeting include: representatives from each LSB within the district (at least 50% of the LSB membership), non-LSB farmer groups, relevant political and technical officers within the district and sub counties where LSBs are located such as agricultural officers, NAADS coordinators, secretaries for production and district chairperson.

Regional multi stakeholder meetings

Regional multi stakeholder meetings occur at the regional level. The facilitator takes lead in organizing but invitations are made by ISSD and the respective ZARDI with which ISSD has a partnership. The facilitator prepares the terms of reference for the regional multi stakeholder meeting where he or she develops objectives, expected outcomes, list of participants, programme, invitation letter and budget. The facilitator is also responsible for facilitating discussions during the regional multi stakeholder meeting. Further, the facilitator assigns a rapporteur for the meeting, reviews the meeting report prepared and ensures that it is distributed to all the stakeholders that attended the meeting. Key stakeholders to invite for a regional multi stakeholder meeting include but are not limited to representatives of all the LSBs in that region; agricultural officers and NAADS coordinators from the districts where LSBs are located; seed companies and relevant NGO operating in the district where the meeting is held; farmers' associations; research institutes and the political and/or the administrative head of the district in which the meeting is held.

Facilitating multi stakeholder meetings

Both the local and regional multi stakeholder meetings are facilitated using MSPs discussed earlier in session 1.

Programme for multi stakeholder meetings

Generally, multi stakeholder meetings involve discussion of identified issues, gaining consensus on the issues, presentations, selection of a steering committee, and agreement on how to take the discussed issues forward. Usually opening remarks and closing remarks at multi stakeholder meetings are given by the political or technical heads of the host districts.

Sustaining MSIPs

For Sustainability of seed MSIP consider resources for platform building and maintenance and have a clear resource mobilization plan, try and seek commitment of partners and the

platform should have focus agenda so that it can even be dissolved if objectives have been achieved. A small working group meeting can also help in resource management.

Training methods



- Q: Have you ever participated in a multi stakeholder meeting? If yes, why did you participate? Did the meeting benefit you?
- Q: Have you ever facilitated a multi stakeholder meeting? How did you do it?
- Give a power point presentation on multi stakeholder meetings with reference, where possible, to the responses provided earlier by the participants.

Materials:

- Manila paper, markers, masking tape, coloured paper cards and camera.

Advice:

- Key decision makers need to be invited to meetings where action plans are made.
- The multi stakeholder meeting should always end with a clear follow up plan for the issues discussed and who will follow up what.

Resources

- MSP Resource Portal for Wageningen UR. <http://www.wageningenportals.nl/msp/>

Topic 1.6 Sustaining LSBs

Key messages

- A LSB needs at least two seasons of successful production and sales before it can be considered as sustainable. The LSB is then capable of sourcing foundation seed, producing quality seed, is well organized and able to find markets for their seed.
- The way to sustainability comes with obstacles. Partners promoting ISSD should not stop at failure, there's no quick win in working with LSBs. It takes time and there should be enough room for capacity development.
- LSBs need to get registered at district level to make sure that they get recognised by Sub-counties and the District.
- To sustain and create a conducive environment for LSBs districts should develop seed policies.



"We have realized that seed entrepreneurship is an expensive but profitable venture for committed and well trained farmers. But to really benefit from it, you have to invest yourself and do not expect any free hand-outs. You need to invest in foundation seed. Investing creates more ownership" says Patrick, chairman of Tic Ryemo Can, a Local Seed Business group in Anaka sub county, Nwoya district.

"We have been working with NGOs, humanitarian organizations for the last 3 years following emergency periods in Northern Uganda caused by the civil war. Since we were confined in the internally displaced people camps, all support was given freely to us. Following the return of peace and our resettlement, we continued to receive food and seed aid. Many of these were given free to start our own food production."

"As a group we decided to take on a seed business venture having been trained by ISSD. In the first production year, we made a loss since we had to sell off our seed as grain. This was because we were given seed for free by one of the NGOs who worked with us earlier on. In the second production year, the same NGO offered more free seed, but this time we refused the free seed as they could not tell us the source and quality standard of the seed (whether it was foundation seed or not). We then opted to purchase our own foundation seed from NaSARRI, a research institute. This time, we could justify the source of our seed and hence sell it as seed to obtain a better profit. We learned that the more you invest in a seed business, the more you get out it provided you follow all the production and marketing principles."

Session overview table

Session No.	Session name	Duration
1.6.1	How to sustain the functionality of LSBs?	3 hours

Session 1.6.1: How to sustain the functionality of LSBs?

Learning objective

- At the end of this session participants shall be capable of developing strategies for LSBs sustainability and be able to create an enabling environment for LSBs

Content



Strategies for LSB sustainability

Experience from the ISSD Uganda shows that you need at least two seasons of successful production and sales before a LSB can be considered as sustainable, a LSB is then capable of sourcing foundation seed, producing quality seed, is well organized and able to find markets for their seed. After the first two seasons weeding and ploughing becomes easier.

In addition, sustainability of LSBs also means that they are capable of creating linkages and partnerships with all the stakeholders of the seed value chain. It enables them not only to be confident in the quality of their activities, but also to determine what they really require from their partners, to develop commercial strategies and contribute to their partner's understanding of how they could benefit from the LSB.

In all of this it is important for the LSBs to take the lead, create ownership and to learn from mistakes. The way to sustainability comes with obstacles. Partners promoting ISSD should not stop at failure, there's no quick win in working with LSBs. It takes time. As shown in the case above free hand-outs do not help in sustaining LSBs. Working with LSB's is a huge time investment. Partners should give room for capacity development, realize that the first two growing seasons it is hard to make a profit and that some of the initial investments tend to be quite high. The first cycle for capacity building is one year, subsequently give the confidence in the second year to start investing. The third year let LSBs operate and take the lead, keep your phone numbers open to acts on requests for support and provide monitoring visits.

To create ownership LSBs should be facilitated to start as soon as possible with (internal) credit and resource mobilisation and link this with investment planning. Managing this in a satisfactory way implies good governance at LSB management level, elaborating a constitution and getting registered, transparency in book keeping and information sharing. Much as LSBs are making money, partners also need to help them to manage success and ambitions and invest a lot in capacity development and training. In addition, some LSBs have experience in growing seed yet they still can be over ambitious and only look at the area they can plant, rather than the quantity of seed they can sell. They need coaching and guidance as too many partners promise huge markets for seed for successful LSBs so the LSBs also need guidance on how to deal with partners.

Creating a conducive environment for LSBs

The first official activity in creating a conducive environment for LSBs is to get registered at district level and to make sure that the LSBs are directly linked to and get recognised by Sub-counties and the District. This will expose the LSBs and make them known to the entire district. It will also help to get the CDO and extension workers involved in the programme. This requires a lot of engagement from the partner organisations to get them involved. LSBs need to understand that to get recognised they need to be sincere and

agree on business ethics. Getting known will boost LSB's confidence, district and sub-counties can facilitate the LSBs to extend their market and link them to partners. Besides, seed policies should be integrated in district planning and the DAO could have frequent linkages with LSBs without support of a programme like ISSD.

National level policy is needed to facilitate not only district seed policies but also to make seed testing facilities available at zonal level, to decentralise seed inspections and to put in place efficient ways of getting seed labels.

Training methods

The target group for this session are ISSD partners and their trainers. They need to develop strategies on how to sustain the LSBs they are guiding and coaching and how to create a conducive environment. In other words how to reach out to public and private institutions and NGOs and make LSBs recognised by these structures.

In a plenary meeting the facilitator organises a debate around the following statements:

- A LSB will never become 100% sustainable
- It will take too much time for a LSB to become sustainable, we and they need quick results
- It is not up to the district to develop a seed policy



The facilitator writes the arguments, the pros and cons on a sheet and summarises the debate.

The facilitator presents the case story (see topic 1.6) and asks participants:

- Q: What is your opinion about this story?
- Q: Do you believe that a LSB can develop a sustainable business without free hand-outs?
- Q: What are your suggestions to create more ownership of LSBs?

The facilitator presents the content of the session and asks participants:

- Q: How to sustain LSBs in their way of doing? What would be your role?
- Q: In what way can sub-counties and districts support LSBs? What would be your role?
- Q: How do you see a conducive environment to sustain seed production by LSBs? What would be your role to promote such a conducive environment?
- Q: What could be your role/input in developing a national seed policy that includes LSBs?

Finally, the facilitator summarises the debate and presents a summary of a strategy to sustain LSBs. Ask participants to confirm the result and their commitment to put it into practice.

Materials:

- Black or white board or flipchart, markers
- Write the propositions for the debate on the board or a flipchart

Advice:

- For the debate the facilitator can also first ask the group who is for and who is against the statement. The ones that are for can stand on the left, the others on the right. Each side can come with one argument only and then the other side is asked to come with a counterargument or a new argument. Make sure that everyone talks and that the debate is not monopolised by a few persons only. It is possible for people to change sides if they are convinced by the arguments put forward by the other group.

Resources

- ISSD Newsletters
- LSB success stories

Module 2 LSBs are well equipped

Topic 2.1 : Equipping LSBs with skills in quality seed production

Key message

- Principles and practices of seed production; technical aspects in quality seed production



"*Wamito wooto kodi ma tung-tung*" a phrase used by Watembo LSB to emphasize that they want to learn seed production procedures and follow to the dot in order to produce high quality seed. Indeed the group followed best practices by being the first in West Nile to procure 90 kg of Sesame II foundation seed from National Semi Arid Resources Research Institute-Serere which is the right source; they planted over 20 acres on time, followed the right agronomic practices for seed, harvested over 1.6 tones and cleaned it well, they later sold it and made good money. The group is more motivated with seed business and planned to go for over 40 acres in 2014.

Session overview

Session No	Session name	Duration
2.1.1	How can an LSB Plan their Seed Production?	2 hours
2.1.2	What are the key pre-harvest and crop establishment skills that a local seed business must possess in order to produce quality seed?	2 hours
2.1.3	Why is it important to set up a demonstration? How do you set up a demonstration?	3 hours
2.1.4	What are the key post-harvest activities involved in preparation of the seed for marketing?	2 hours

Session 2.1.1: How can a LSB Plan their Seed Production?

Learning objectives

At the end of this session, each LSB member should be capable of:

1. Setting seed production targets based on sales targets.
2. Identifying and arranging necessary resources for seed production



"Allianu Cupiria Timbakua Seed Development Association (ACTS) would be very far if we had implemented the plan we made under that mango tree, now we are here with nothing to show", Chairman ACTS LSB told members in 2014 planning meeting. "What went wrong?" asked the chairman. Members said they didn't set good targets for seed production: "we did not consider resources needed for seed business i.e. how much foundation seed we needed, how much money we needed for the seed including the source of the seed as well as delivery means and cost. At the end everything went wrong". This group learnt the hard way that failure to plan is like planning to fail. Only a few members bought foundation seed and even those that bought the seed did it late because of poor planning.

Content

Planning Seed Production means planning, to produce the required amounts of the desired kinds of seed, to have it ready when it is needed for sale, ensuring that all seed is of the highest possible purity and quality, and doing this at the lowest possible cost.



Remember the old "PPP" motto: Prior Planning Pays! To be successful, you must know what you want to do and can do, where/when you can do it, and how to do it most cost-effectively. Plan carefully, avoid being one of the 75+% of small businesses who don't survive. All LSBs must determine how much seed they need to produce in order to meet their sales targets.



Here are a few key questions when thinking about seed production:

Key consideration during planning

1. Do you have land to produce seed? Are your fields fertile and high yielding?
2. Do you have the labour in the family or cheaply available to do the extra work involved in producing and handling seed? During certain seasons in farming, there is a shortage of labour; these are also the seasons when extra work often must be done on a seed crop.
3. Can you afford to use fertilizers, pesticides, etc., required to produce high yields and have fields which look good and impress your customers?
4. Do you have the facilities for harvesting, processing and handling seed in a manner that safeguards the seed's planting quality before it is dispatched to the market?
5. Do you have enough technical knowledge on the crops and varieties, growing them, in order to advise your customers on the best cropping practice and convince them of the value of good seed?

Key issues to consider when planning for foundation seed

1. Which crop?

2. Which varieties? NB: We should consider land races also i.e. varieties which may not be known to formal research as long as it has market in the community (Who are the key custodians of certain crops in this community?)
3. Price of Foundation seed (how much per kg)
4. How much seed is required per individual group member?
5. When should seed be booked by the production/internal seed quality control committee?
6. Where is the source?
7. Cost of transport
8. Should be procured by when?
9. Seed should be delivered to the respective LSBs by when?
10. Where is the money coming from (Each member contributes? or group has money in account to buy and distribute as seed loan to members?).
11. Money should be collected by when?



Seed production targets

- Produce only what you can sell!
- There is no profit if the enterprise produces or purchases goods which never leave the storage!
- Never produce or purchase goods unless there is a good chance they can be sold. The potential for selling the goods is determined by a thorough, realistic Market Survey which results in a Marketing Plan. Both Market and Production committees should work hand in hand. The Markets set sales targets and the production committee then must produce the required volumes.

Production requirements

		2009	2010	2011	2012	2013
Certified	Production				400 t	
	Area reqd.				93ha	
Basic	Production			2.4 t		
	Area reqd.			0.6 ha		
Breeders	Production		14kg			
	Area reqd.		31 sq. m			

With a realistic market survey, accurate forecasts of what/how much seed will be sold can be made. To forecast sales and produce seed according to what can be sold to farmers, the seed enterprise must know:

1. What seed, crops and varieties should be used by farmers?
2. What is the real and potential demand for higher-cost/quality purchased seed-- what kind, how much, when, by whom, where, at what price?
3. What seed crops and varieties should be produced? How much? Where? When? How? At what quality? At what cost?
4. To whom can the seed be marketed? Where? How? How much? In what package size? At what price? At what promotion and distribution cost?

Advantages to manage a seed business individually

- The owner can decide on everything without asking for the opinion of anyone else.
- All revenues generated belong to the owner.

- Possibilities to try new ideas, new methods and new marketing techniques without the approval of anyone else.
- No problems of mistrust or clashes when a business is managed individually.

Disadvantages of producing individually:

- The owner must support all the financial costs by himself.
- One can obtain external support for decision-making but it is costly and takes a lot of time.
- One can feel more isolated as a single owner rather than being part of a group.
- The owner must support all the risks related to equipment, inputs...

Advantages of operating a seed business as a group:

- Costs of transport, marketing and distribution of both seed and fertiliser can be shared.
- Purchase of large quantity of inputs such as fertilisers, pesticides and seed treatment chemicals reduce costs.
- Groups often have access to lower credit rates.
- When a large number of persons work together, it is easy to guide them to reach a high level production, which also means a high level of income. The increase in production will generate more opportunities for saving, which can later be used to increase production or fulfil other needs.
- People learn to work together, analyse problems they are facing together and plan the future together.
- Women will have more chances to get access to land and other resources if they are organised.

Disadvantages of producing in groups:

- Conflicts between team members can occur for various reasons.
- Sometimes, the group depends too much on external assistance instead of being financially self-sufficient.
- When group leaders are not efficient, the group runs the risk of not achieving the objectives which had been set and the number of adherents might diminish.
- A bad recording of transactions can create confusion within the group on the state of expenditure, marketing and sales.
- If a minority of members take all the decisions, the other members will become dissatisfied as they may not have the chance to voice their opinions.

Training methods

Open the training with a welcome message and brief presentation of the objectives of the training. The trainer then evaluates the participants' expectations. The facilitator presents his/her own experience followed by that of the participants.



Start by reviewing last season's or year's performance through a question and answer approach:

- Q: What was done well last year/season?
- Q: What was not done well last year/season? Did you meet your production and sales targets?
- Q: What lessons have you learnt?
- Q: What adjustments do you propose in order to have a better season this time?

- Q: Which resources do you need? Which ones are already available? Which ones are missing?

Then guide the participants to set their seasonal/annual targets by asking the following questions:

- Q: How much seed do you plan to produce with the available resources?
- Q: How do you plan to achieve your production and sales targets? Do you plan to produce individually or as a group?

If participants plan to produce seed in a group, it is necessary to facilitate discussions on how the group would function while working together:

- Q: what are the advantages and obstacles of team work for your future activities?
- Q: What are the potential problems and opportunities that could arise (an analysis of strengths, weaknesses, opportunities and threats)?
- Explore the organizational options available for groups producing seed:
 1. Team members come together only to buy material and inputs in order to reduce costs.
 2. Team members produce seed individually but work in group on some activities such as storing or marketing.
 3. Team members all lead the production activities together and share the benefits.

Important points to be agreed on

1. Each LSB must have a minimum of 20 acres per season for seed production.
2. At least 75% of all members must have seed gardens per season.
3. We should consider block gardens (clustered seed production) for easy inspection.
4. Each seed growing member should consider having at least 1acre for seed multiplication/production

Materials

- Flip charts, markers

Notes to facilitator

- Make sure updated production and sales records are available with the participants for reference.

Resources

- CIAT manual 3 p.19-21;
- Harry van den Burg. & Nina de Roo. 2013. Seed Entrepreneurship manual session 1.3, page 16-17.

Session 2.1.2: What are the key pre-harvest and crop establishment skills to produce quality seed?

Learning objectives

At the end of the session participants shall be capable of:

1. Understanding the principles and practices for growing a crop for seed.
2. Understanding the implications of applying the recommended seed production practices on seed quality.



"If we had not planted in time, we wouldn't have harvested anything".

"If we had not selected/used superior varieties of beans, we would have totally lost just like the other farmers in the community".

These quotes were made by members of Kyazanga Farmers' Cooperative Society Ltd (one of the pilot LSBs under the ISSD programme) at the end of 2013B when drought severely affected their seed production fields. Whereas other farmers in the community that had used local/traditional varieties were lamenting with total crop failure/loss, members of Kyazanga Farmers' Cooperative society Ltd were able to harvest a total of 17 tons of bean seed against the 54 tons anticipated at the start of the season. These cases illustrate the importance of selecting crops and varieties that match with the agro-ecological conditions as well as ensuring timely operations such as early planting.

Content



What is seed?

- "Seed is life".
- It is a vehicle for the spread of new life from place to place and from a particular period to another.
- It is the indispensable input for all agricultural production.
- It is a unit of plant propagation.
- It is the basis of the genetic potential of crop species.
- It is a dormant non-defective embryo.

What are the characteristics of good quality seed?

- It has a high germination rate.
- It is well dried.
- It is pure. All seed are of the same variety and of the same size.
- It is clean. The seed is not mixed with foreign matter such as stones, dirt, other seed, etc.
- It is not damaged, broken, shrivelled, mouldy or insect damaged.
- It is not rotten (If so, it may be diseased)
- It is not discoloured or faded (If so, it may be diseased)

Comparison between seed and grain:

Seed	Grain
Any plant part used for planting purposes only	It is final produce of grain crops used for consumption.
Usually treated with preservatives	Not treated with fungicide and pesticide.
Sizes must be uniform	Not necessary
Seed must be alive. Viability is important.	Viability never considered. Not necessary to be alive
Seed must be genetically pure.	Genetic purity not necessary
Subject to seed and plant regulations	Not necessary

Principles of seed production

Seed production is not any different from the production of any other crop for other commercial purposes except for the strict care and systematic undertaking of the different activities prescribed in the seed value chain. The carefulness is meant to maximize on the resources set aside for the production of seed for a particular variety of a given crop. It is also aimed at ensuring quality, at the highest level, of the so produced seed. A genetically pure and good quality seed of an improved variety that meets the required minimum standards set and satisfies the final consumer in terms of performance must be produced.

Seed is a living biological product, which requires special attention and care to ensure its physiological quality. The general agronomic operations used in growing a crop for seed, are rather similar to those used in producing grain for consumption or feed. Such similarity of operations may discourage farmers from taking the extra necessary measures required to produce good quality seed. Seed production should be quality oriented, compared with grain and forage production.

Although there are similarities in some field operations, the production agronomy of a seed crop is beyond that of a normal crop in the following ways:



- Planting densities may be lower for seed to achieve maximum development (normally pure stands)
- Production fields have to be isolated.
- Additional costs involved in roguing, detassling (for hybrids), field supervision and inspection.
- The usual poor seed bed preparation giving patchy stands doesn't work in seed production
- High input usage

In general, field management of a seed crop emphasizes five principles:

- Economic use of resources to generate maximum profit.
- Specialized skills beyond that of a normal crop. Seed production is technical and must follow strict guidelines and regulations.
- Timeliness of operations.
- Quality standards must be strictly adhered to e.g. roguing, isolation, etc.
- Involvement of others (field inspection and certification).

Key pre-harvest practices in seed production and their implications to seed quality

Seed production is undertaken through the following careful steps:

1. Selection of adapted varieties

Selection of an adapted variety is the first step in the production of a good seed crop. Apart from its adaptation, the variety should have high yield potential, tolerance to biotic (fungal, bacteria, viral) and abiotic (cold, frost, heat, drought, salinity) stresses and have good marketability and consumer preferences. Unless the variety meets the requirements of farmers and consumers, it is less likely to be widely adopted and grown, and, therefore, there will be no demand for the seed.

2. Source of quality parent seed

The source of Basic/Foundation seed must be known and traced to Pre-basic/Breeder Seed. Proof of origin of basic/foundation seed must be shown. If you start out with good stock seed, the field will be pure and your work will be less; if you start out with poor stock seed, the field will have many off types, weeds, etc., and you will have much more work to clean up the seed field.

3. Selection of seed production sites

Agricultural lands vary in terms of altitudes, topography, soil types, climate, etc., and these influence the geographic distribution of crop species and varieties. Thus, sites for seed production must be selected basing on the following key criteria:

- Apart from agro-ecological and climatic adaptation, the area selected for seed production should be free from natural hazards like floods, drought, frost, salinity, diseases and insect pests, etc., to prevent any damage to the seed crops.
- The area should be fertile, well-drained and levelled; because most crops are successfully produced on soil types that are well-drained and productive.
- Accessibility and proximity of the land for supervision, and suitability for transporting the seed quickly and economically is also essential.
- The fields must be also suitable for the specific crop management practices required for high quality seed production. E.g. irrigation where possible.

4. Selection of seed production fields

Selection of fields with the right cropping history and suitable crop rotation is necessary to avoid genetic, mechanical and pathological contamination in seed production. Crop rotation is mainly practiced to maintain soil fertility and control soil and/or seed-borne diseases. In seed production, previous cropping specifies the crops that should not be grown before the seed crop.

- A seed crop should preferably follow another crop species to avoid admixtures (e.g., cereals after legumes or vice versa).
- The field selected for seed production should be free from varieties of the same crop species for at least one year prior to planting unless the previous crop is of the same variety. This is because some crops are very difficult to purify by roguing if contaminated with excessive mixtures of other varieties.
- A field used for seed production should also be free of noxious weeds and seed/soil-borne diseases.

- The seed production field should be properly isolated (in space and/or time) from other cultivars of the same species (to avoid mechanical admixture and/or cross-pollination).

5. Agronomic practices

- a) Land and seed bed preparation
 - Land preparation should start early to ensure suitable tilth at sowing.
 - The seedbed should be thoroughly prepared and levelled to ensure that sufficient moisture is available in the soil.
 - A finer tilth is necessary for small seed than for large seed.
- b) Sowing Date, Sowing Rate and Method
 - Planting should be done at the onset of the rains.
 - Always plant in rows according to the recommended spacing for a particular crop. Row planting is most appropriate to enable early weeding and enhance general management of the crop.
 - Mono-cropping is a must for seed crops
- c) Fertilizer application
 - Modern crop varieties are reasonably responsive to fertilizers and the yield potential cannot be fully realized without inorganic fertilizers.
 - A well-balanced supply of nitrogen, phosphorus and potassium is essential for seed production, as it has an influence on seed development, seed quality and yield.
 - Fertilizer application to seed crops should be based on local recommendations.
 - The extension service or the nearest research station should be consulted for the recommended packages.
 - Special attention should be paid to timing and rate of application.

6. Crop protection

Protection of seed crops against biotic stresses is one of the key practices emphasized in seed production. Control of weeds, pests and diseases does not only ensure quality of the seed produced but also enhances crop yield. Accurate diagnosis of pest and disease problems is critical in their management. Both cultural and chemical methods may be employed in managing these field problems.

- a) Weed control
 - Seed is one of the most important means of introducing common, noxious and parasitic weeds into agricultural lands. Hence, freedom from weed seed is a very important seed quality attribute.
 - In seed production, contamination of the seed crop with other crop or weed seed of similar physical characteristics must be reduced to the barest minimum because cleaning alone will not sufficiently remove such contaminants.
 - A well designed integrated weed control package combining crop rotation, inter-row cultivation and hand pulling, coupled with herbicide application should be encouraged among seed producers.
 - There is zero tolerance to *Striga* spp. and wild oats in sorghum and finger millet seed production.

- In pasture seed production, the tolerance level of couch grass (*Digitaria* spp.), black jack (*Bidens pilosa*), devil's horsewhip (*Achyranthus aspera*), mexican marigold (*Tagetes minuta*), wiregrass (*Pennisetum schimpen*), love grass (*Eragrostis* spp.) and pig weed (*Amaranthus* spp.) is 1 plant per 100 sq. meters.

b) Management of seed-borne diseases

- Freedom from pathogens, especially seed-borne diseases, is one of the most important seed quality attributes and standards.
- The production of a healthy seed includes a combination of different practices: (i) use of disease free planting material/seed lots, (ii) zoning of seed production areas, (iii) off-season seed production, (iv) proper rotation and isolation of seed fields, (v) roguing of diseased plants, (vi) spraying to avoid disease build-up, (vii) field inspection and testing, (viii) efficient cleaning of lots, and (ix) seed treatment with chemicals.

c) Management of pests

Pests can be managed through timely planting (e.g. stalk borers), crop rotation, seed treatment and the application of recommended pesticides.

7. Isolation

Isolation, the growing of a seed crop separately from all sources of contamination, is one of the fundamental seed production techniques. An appropriate isolation distance should be maintained to prevent contamination due to the pollination habit of the crops. Self-pollinating crops need small distances while crops with high percentage of outcrossing require large isolation distances. If it is not possible to get the required isolation distance, plant your seed crop at a different time, so that your seed crop will not be flowering when other fields of the same crop are shedding pollen.

8. Roguing

Roguing, the act of removing undesirable plants is another fundamental aspect of seed production. Roguing is carried out to maintain varietal purity and keep the seed crop free from contamination by other crop species and seed-borne diseases. Undesirable plants, commonly known as 'rogues', are:

- Off types (genetic variants of the same variety)
- Other varieties of the same crop species
- Other crops with similar growth habit and seed characteristics
- Noxious weeds difficult to remove during cleaning, and
- Plants infected with seed-borne diseases

Seed fields should be rogued before undesirable plants cause genetic or physical contamination, especially at flowering, post flowering or maturity, when it is easier to see important morphological characteristics (inflorescence type, flower colour, ear shape) that will help differentiate between the variety and the rogues.

Training methods



Discuss and write responses on a flip chart.

- Q: What are the characteristics of a field for growing a seed crop?
- Q: Why is it important to keep the seed pure?
- Q: How is seed contaminated?
- Q: How do you keep seed pure during the field production process?
- Q: Where do you obtain your foundation seed from? Why that source?
- Q: When do you weed your seed crops? How do you manage weeds in your gardens?
- Q: Which are the common pests and diseases encountered in your seed crops? How do you manage them?



This training should be concluded with a practical session in the field. While in the field task participants to do the following:

In groups of 4-5 participants, identify 2-5 pests/diseases common in your fields.

- Q: When do these pests/diseases occur on the crop?
- Q: How do they appear on the crop? What kind of damage do they cause on your crop? Here participants describe the symptoms.
- Q: How do you manage these pests/diseases?

In case a field visit is not possible, the facilitator prepares samples in advance of the training. Divide participants into groups, allocate samples of plants with symptoms of pest/disease damage and ask the above questions. Ask participants to present their findings in plenary.

Materials:

- Flip charts, markers, samples of plants exhibiting symptoms of pest/disease damage.

Advice/notes to facilitator

- Learning by doing.
- The field is the best learning ground.
- The training should be conducted when crops are still in the field for the practical sessions.
- If a field visit is not possible, make sure to have plant samples with symptoms of pest and disease damage.
- The trainer can prepare the session by asking one or more participants to bring samples (of common weeds & plants showing symptoms of pest/disease damage).
- There are many crop diseases. Make sure you have pest and disease identification guides/manuals of different crops for reference during the training.

Resources

- Bishaw, Z., Niane, A.A., Van Gastel, A.J.G. 2006. Technical Guidelines for Quality Seed Production. ICARDA, Aleppo, Syria. 23pp.
- CIAT handbook 1 page 2

Session 2.1.3: How to set up a demonstration?

Learning objectives:

At the end of this session participants shall be capable of:

- Understanding the importance of setting up demonstrations.
- Setting up a demonstration and managing it.



Seeing is believing

Members of Promotion of Enterprises and Livelihood Development Organisation (PELIDO), one of the LSBs in South Western Uganda, had never used a superior variety until they started working with the ISSD programme. But in their first production season, 12 farmers bought 150kgs of input bean seed to plant 5 acres of the crop. They were amazed by the yields despite the drought that severely affected all other farmers in the area that had planted local varieties. One of the group members said: *"I only planted 8 Kgs of this 'new variety' but harvested 120 Kgs, yet I only harvested 10kgs of the local variety from the 10kgs that I planted"*. These farmers were also able to sell this new variety at a price they had never received. Other farmers in the group appreciated the performance of the particular variety and responded by ordering for 1000kgs of foundation seed. The number of farmers interested in producing this variety for seed increased and the demand for this variety also increased in this area as information on the attributes of this variety had circulated within the community.

Content

What is a demonstration?

In seed production, farmers may be interested in learning about planting techniques for different crops, or how yield evaluation is done, and all these questions can be answered through demonstrations. A demonstration may involve identifying something new (for example a new crop variety) and comparing it to what you have. The demonstrations should be established under farmer's conditions by farmers themselves, aiming at demonstration of the advantage in using quality seed produced by the local seed business. In a demonstration, a farmer or extension officer shows improved farming practices like varieties and methods to farmers, and also facilitates comparison of improved practices to farmers' practice (usual practices). The demonstration also aims at comparing the performance of the improved crop varieties and/or quality seed produced by the LSBs against locally saved seed used by the farmers. It is important for the group to seek technical support from the sub county, research or other stakeholders in establishing and managing the demonstration.



Importance of a demonstration to a local seed business

A demonstration serves the following purposes:

- Getting yield data of commodities for which farmer saved and quality seed has been used under farmers' conditions.
- Provides an opportunity for demonstration of quality seed produced by the LSBs to potential buyers (community, other stakeholders) and discussion on the performance of the acquired quality seed. Through discussions and sharing with others, farmers also receive new information and ideas from others during the field day.

- Used as a learning ground to enhance the capacity of farmers in observing and following best practices of quality seed production. A demonstration actively involves all group members, including women, and helps them in critically observing the best farming practices.
- Helps to improve farming practices and make farming more sustainable through demonstration of new farming techniques.

Setting up the demonstration

Identify the reason for establishing the demonstration. For example, farmers may want to get knowledge on production and production requirements of a particular crop, or to identify the best variety for home consumption and for market, or they may want to compare different varieties in order to see which one performs best in their area.

After defining your intention/purpose for the demonstration, there is need to plan the details. You identify what you want to do in order to get the expected results. The following section discusses how exactly one can set up a demonstration (methods).



Examples of details on methods and materials:

- Seed and varieties: types (local/traditional, improved), number of different types (for comparison), source (from own multiplication, fellow farmers, research centre), amount (kg of seed per acre)
- Inputs, practices and technologies: mulches, compost, fertilizers (type and application rate), irrigation schemes.
- Plots: number of test plots, distance between plots.
- Replication: number of repetitions.
- Spacing: space between rows, space between seed.
- Pest and disease management: type of control measure, frequency of application.
- Weeding schedules: frequency, responsibility.



Example of a demo set up protocol

Title	Example: Assessment of the performance of different bean varieties for food security and marketing.			
Location	Village, sub-county, district Exact location of experimental site.			
Implementation	Farmer group; Research institution (if applicable); Extension staff			
	Research question	Expected result	Materials & methods	Indicators
	What is the performance of improved bean varieties (required by the market) in comparison with local ones?	<ol style="list-style-type: none"> 1. Identify the best variety for home Consumption and for market. 2. Get more knowledge on production and Production requirements of beans. 	<ol style="list-style-type: none"> 1. 1 local & 4 improved varieties of beans. 2. 3mX3m plots replicated 3 times. 3. Spacing: 50cmX10cm with 2 seed per hole at a rate of X kg per Ha 4. Cattle manure applied uniformly to all plots at a rate of X kg/ha 5. Weed & pest control to be done when required. 	<ol style="list-style-type: none"> 1. Yield 2. Pest/ disease tolerance 3. Maturity period 4. Drought tolerance 5. Palatability 6. Cost involved

Management of the demonstration

It is the responsibility of all members of the local seed business to manage the demonstration plots/garden. All members should participate in all the activities from field preparation to harvesting of the demonstration. Members should also bear all the production costs including the cost of seed and other inputs, labour, etc. Members should also keep and maintain records of all activities and outcomes of the demonstration. It is useful to share responsibilities in the group to ensure active participation and learning by all the group members.



Data Collection

It is very important to plan for data collection. An example of data that can be collected is shown in annex 2.

Utilization of the results from the demonstration

Farmers need to organize for discussions on the results obtained from the demonstration with relevant stakeholders. This can be done in fora such as farmer field days.

Training methods

Discuss the following aspects through questions-answers:

- Q: Why is it important for your group to conduct a demonstration?



- Q: Do you know any research organizations or other stakeholders who have conducted demonstrations in your area? What did you learn from them?
- Q: Why do we also have to include the local, traditional varieties, technologies or practices? Why is it good to compare them with new ones?
- Q: What could be the advantages and disadvantages of using these new varieties, technologies and practices?
- Q: Why do some of the practices (e.g. manuring) need to be applied uniformly on the various plots?
- Q: How will you follow up the progress of your crops in your demonstration?
- Q: How do you plan to utilise the results from your demonstration? How do you plan to communicate/share your results? To whom? And why?

Materials

- Flip chart, markers, measuring tapes, sisal rolls
- Cups and dry beans or stones (optional)

Notes to the facilitator

- During implementation, let farmers have the lead.
- Make sure they follow the experimentation design they have developed. Only intervene if you feel the farmers are losing track.
- Advise the group to communicate/discuss their findings to the target audience by organizing, for example, farmer field days.

Resources

- Session 4.2 (Mango Tree)----ERI Manual
- Session 4.3 (Mango Tree)----ERI Manual (page 13)

Session 2.1.4: What are the key harvest and post-harvest activities involved in preparation of the seed for marketing?

Learning objectives:

At the end of this session participants should be capable of:

1. Understanding the causes of post-harvest losses
2. Understanding the ways of preventing/minimizing post-harvest losses



"We cannot be stopped from properly processing our seed by lack of machines. We shall winnow our seed using locally made baskets so that we can separate rubbish from clean seed and we shall use the sun to dry our seed" says Nyio Ajia LSB in Arua. When they visited Equator seed during a twinning exercise they saw complicated automatic machines for drying, cleaning, treating and packaging seed but they said they are determined to use locally available materials to process their seed and achieve high quality standards. The members know it is not about complicated machinery but about following the procedures of post-harvest handling. They followed training and delivered clean, dry and high quality bean seed (Variety K132).

Content

Key steps in harvesting a seed crop:

- The seed should be harvested when it reaches physiological/harvest maturity. Different crop species have specific indicators of physiological and/or harvest maturity.
- However, the moisture content of the seed can be used as an indicator of when the crop is ready for harvesting.
- Cereal and legume seed reach physiological maturity between 35-45% and 45-50% moisture content, respectively.
- Keep different varieties separate to avoid admixture.
- Use new bags while harvesting and ferrying the crops from the field.
- Avoid leaving the crop in the field overnight and do not mix dry and wet crops together.



Some indicators for optimum harvesting time of specific crops for seed

Rice	<ul style="list-style-type: none"> • When the rice has reached the exact date of maturity or numbers of days after heading (usually 28-35 days) • When 80% of the grains have changed from green to straw colour • When at least 20% of the grains at the base have a hard dough stage. • When the grain moisture content is between 21-24%. • When the hand-dehulled grain, as indicated by daily tests near the projected harvested date, is clear and hard
Maize	<ul style="list-style-type: none"> • When the stalks have dried and moisture of grains is about 17-20%.
Ground nuts	<ul style="list-style-type: none"> • As pods mature, the inside portions become brown to black, while immature pods retain a fresh white appearance. • The cellular layer (mesocarp) just below the outer layer of the pod undergoes several colour changes during maturation. From orange to yellow to brown and finally black as the pod matures. This colour distinction can be used to estimate crop maturity with the 'hull scrape' method.

Post-harvest handling of seed

Post-harvest handling is the stage of crop production immediately following harvest. It, therefore, involves processes that stem from the time and place of harvest to the final presentation of the finished product ready for the market, with minimum loss, maximum efficiency and maximum return for all involved.

Seed processing:

This involves such activities as drying, threshing, cleaning/sorting, sizing/grading, chemical treatment, packaging and storage. Seed processing can be handled either by hand or machines depending on the stage of processing. A set of equipment is necessary to achieve the processing operations. These include: Seed cleaner/grader, seed dresser, threshers/shellers, moisture meters, tarpaulins, etc. The sole aim of seed processing is to remove contaminants and prepare it for marketing and planting. Such contaminants include:

- Inert material- stones, soil, plant debris etc.
- Over-sized or small seed.
- Weed seed.
- Other crop seed or other varieties and diseased seed.

Receiving the seed

Seed should be clearly identified by grower number and variety name and come in clean containers properly sorted.

Drying

- In principle, drying in the field is less expensive, easier and ensures better seed quality. Nevertheless, it is not often possible because of bad weather conditions, pests, diseases, rodents, birds or thefts. It is also important to harvest in time to avoid seed deterioration and preserve good quality.
- Dry seed on a plastic sheet (tarpaulin), on a raised platform or in a crib.
- Dry the seed to the recommended safe moisture levels (varies by crop)
- You should test the moisture of the seed before threshing/shelling, treatment and storage
- High moisture will reduce storage life, viability of seed (due to increased respiration), allow the activity of storage moulds, create a medium for storage pests (weevils), cause "heating up" of seed due to respiration of seed and micro-organisms.

Threshing/shelling

- You should test the moisture of the seed before threshing/shelling using your teeth or pinching with your fingers or using a moisture meter.
- When you have decided that the seed is dry enough, it can be threshed.



Threshing beans by beating with a stick

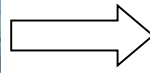
- Remember that seed that is too dry or too wet can be easily damaged during threshing/shelling
- Threshing can be done either by hand or machine. Usually, small-scale businesses can work in a cheaper and more flexible manner when they use labour. Less than 2000 kg can be processed by day with five to six people.
- In threshing, it is important: not to break and damage the seed; not to mix the seed with dirt and rubbish; not to lose seed. Seed must always be handled carefully, bags should not be thrown and seed must not fall on the ground, potato, groundnut and bean seed are especially fragile. In general, no seed should be handled without care like if it was stones or fertilisers.

Cleaning/sorting:

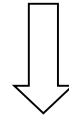
- Winnowing should be done to remove chaff, dust and other rubbish from the seed.
- After winnowing, sorting is done to remove shrivelled, diseased, broken seed and seed of other varieties by sorting.



Winnowing of threshed beans



Hand sorting of bean seed



Well cleaned, sorted & pure bean seed

Testing for germination

- After cleaning and sorting, a sample of seed should be tested for germination.
- Seed should be tested for germination before it is stored. If the seed has been stored for more than five months, another germination test should be performed before it is sold.
- The results of the test will tell farmers how much seed they need to plant to get good yields. For example, if you know that 90% of your seed will germinate (i.e. it has a 90% germination rate), you can work out how much seed to plant, taking into consideration if you have seed with a 60% germination rate, you will need to plant more seed than that with a 90% germination rate.

Treatment

- The purpose of treating seed is to protect it from damage by insects, rats and mould when stored for long periods of time.
- Seed can also be treated to protect the crop against diseases and field insects such as bean stem maggot.
- Use recommended seed dressing chemicals and the right doses.
- Bag in packets that are not airtight.
- Store in a well-aerated store.

The ideal seed treatment should be:

- Very effective against seed-borne pathogens,
- Relatively nontoxic to animals and plants, even if misused,
- Effective for a long time during seed storage,
- Easy to use,
- Acceptable and
- Economical.

Packaging and labelling

After processing and treating are completed, the seed is packaged into containers of specified net weight. Packaging or bagging is essentially the last operation in which seed is handled in bulk flow.

The packaging consists of the following operations:

- Filling of seed bags to an exact weight.
- Placing leaflets in the seed bags regarding improved cultivation practices.
- Attaching labels, certification tags on the seed bags, and sewing of the bags.
- Storage/Shipment of seed bags.

Why is seed packaged?

- Seed is packaged to prevent absorption of water from the atmosphere after drying, to keep each separate and to prevent contamination of the seed from insects and diseases.
- Other Reasons: to contain products, to define the amount the consumer will purchase; to protect products from contamination, from environmental damage and from theft; to facilitate transportation and storage of products; to carry information and colourful designs that make for attractive displays.
- Packaging gives an indication of seed quality.
- It allows one to differentiate between your seed and other seed available.

When should seed be packaged?

The best time to package seed is directly after the moisture content has been determined and found to be within the required limits for safe storage. Seed will always show equilibrium between their moisture content and the relative humidity of the environment and therefore, if possible, seed should be packaged into containers and hermetically sealed in the drying room or without delay on being removed from it.

What is the goal of a label?

A label should fulfil three main purposes:

- To identify the type of seed (harvest, variety, classification, treatment if any)
- To give information on seed quality, germination and purity
- To supply information on seed production place (producer and lot number)

According to the country's laws and regulations, some information must appear on the label and others on the bag. It is important to obtain information on what laws apply to your case.

Labels or bags must include the following information:

- Logo mentioning the name and address of the producer/vendor
- Name of variety (some information on the variety's characteristics is facultative).

- Quantity.
- A Warning that the seed has been treated.
- Seed category.
- Harvest date and place of production.

The label is mostly necessary for information which changes, such as the lot number. Permanent information can be printed directly on the bag.

Storage

Good storage conditions can maintain the initial quality, but cannot improve the physiological quality of poor seed. Therefore, only high quality seed should be stored. Adequate planning and management are essential to avoid losses and keep seed free from insect pests during storage. The following preventive and remedial measures should be taken:

- Keeping the store clean, cool and dry is the best management practice because this reduces physiological processes, fungal and insect activities.
- Clean and spray all storage structures thoroughly with insecticides, followed by a regular spray of residual insecticide.
- Maintain proper sanitation in and around seed stores to deny insects any shelter for multiplication, and to control rodents.
- Clean the seed and reduce its moisture content to a level that will allow safe storage for the required period.
- Use new bags to avoid both insect infestation and mechanical mixtures. Seed should be bagged in a thick weave cloth bag without loose weaves.
- Keep seed bags on wooden pallets at least 50 cm away from walls, with aisle space of 1 m, to ensure adequate aeration.
- Inspect seed upon entry. They must be free from storage pests. Check stored seed at least once a week, for insects, and if found, fumigate immediately
- Apply sound rodent monitoring and control program during seed storage.
- Store seed of high germination and vigour only. Immediately dispose of poor quality seed.
- Maintain seed identity by labelling each bag, keeping up-to-date records, and using stack cards.

Seed storage is different from grain storage in the following ways:

- Seed is alive.
- It must be stored for a longer period.
- Each lot must be carefully identified so that there is no chance of mixing them.
- Excellent conservation and constant quality monitoring to ensure there is no quality loss.
- To avoid quality loss because of ageing, the "FIFO" (First In, First Out) principle should always be followed. This means that a lot which entered in the warehouse before another one must always leave the warehouse before the other one.

Training methods

Divide participants into groups and ask them to discuss the following questions:

- Q: What are the different causes of post-harvest losses? Ask: What do you already do to prevent loss of quality and quantity after harvest?



- Q: Do you know other post-harvest handling technologies? If yes, why are you not using them? What could you do more to prevent post-harvest losses at both individual and group levels?
- Q: Why should seed crops be left to dry in the field? What are the risks?
Explain: Artificial drying can be dangerous for the quality of the seed if incorrect methods are used.
- Q: What key equipment is necessary in harvesting and processing your seed after harvest? Which ones are you already using? Are they sufficient to achieve seed quality? If not what are the challenges and what mitigation measures have you put in place?
- Q: How do you shell/thresh and clean your seed? By hand or machine? When is it necessary to mechanise?
- Q: Why should seed be treated?

Explain: There are precautions to take before seed treatment. Discuss the possibilities to treat seed against diseases or pests in the field and in the warehouse, if necessary. Treated seed can offer an extra profit margin to the seed business, because seed can be charged more due to the use of products ensuring protection against pests and diseases in the field. It is important to use treatment products with vivid colour and respect other security procedures to ensure safety for farmers and the staff of the seed business.

- Q: Why is it necessary to package seed?
- Q: When should seed be packaged & how should it be packaged? Ask participants to give the types of packaging that they are using.

Explain: Have them understand that packaging with different quantities must be proposed to the clients, based on the results of the market research.

- Q: Why is it important to label seed?
- Q: Why is seed storage different from that of other consumption products?
- Q: What is your opinion on ideal conditions for seed storage?
- Explain: It is important to distinguish a warehouse for potato seed from a warehouse for other seed like cereals or legumes (dry seed).

Materials

- Seed samples (raw/cleaned seed; treated/untreated seed)
- paper, pens, pencils, flip chart.
- Samples of seed packages or packaged seed.
- Samples of labels.

Advice/notes to facilitator:

- Since this module deals with practical topics, bring samples to show.
- The trainer can prepare the session by asking one or more participants to bring samples.
- A visit to a seed business warehouse is recommended.
- Show examples of different packaging materials.
- At the end of the session, do a drawing exercise for the packaging of one of your organisation's products.

Resources

- Producing bean seed handbook 1 (page 18-51)
- Rwanda seed Entrepreneurship manual (Sessions 7.1, 7.2 & 7.3; page 59-66)
- Producing bean seed handbook pp. 17-21, 23-24, 27-28
- Producing bean seed handbook pp. 21-22, 25-26
- Producing bean seed handbook pp. 37-44
- Producing bean seed handbook pp 45-50
- Establishing a bean seed business handbook pp 64-65

Topic 2.2 Ensuring Quality Control in seed production

Availability and affordability of seed was one key factor hindering agricultural productivity in Northern Uganda. As many farmers have now shown interest in engaging in seed production as a business to address this and related challenges, quality has become the centre of interest to ensure that the seed produced meets and/or exceeds the customer's expectation.

Key messages

- Nothing can be more discouraging to a seed business than a reputation of poor-quality seed.
- It is important to get the quality right, first-time, every-time
- Outside of the field, quality cannot be improved, it can only deteriorate.
- There are several quality-control strategies, internal and external systems that can help a seed grower/group/LSB to improve quality.
- To control quality in a particular seed crop, it is important to know the descriptors of the crop.
- It is important to have a quality standards as a reference check during quality control.
- It is easy to control quality when few varieties are grown at the same time.
- Every grower is responsible for the quality of seed produced;
- Seed lot may be approved as acceptable quality or rejected as substandard quality.



"Quality in seed production is something we expect from the outsiders. For us as farmers we need to produce the seed and someone will bring quality".

A quote from Obanga Ber (meaning *God is good*), one of the local seed business farmer group in Lira District northern Uganda. This perception did not go well with the group in their initial experience in seed production before the introduction of LSB concept. The farmer group was in partnership with a formal seed company for contract growing. Despite giving foundation seed to the farmer group on credit, the seed company could not buy back the produced seed. This was because of the poor quality of the seed. However, on introduction of the LSB, the group established a quality control committee who supported members in ensuring quality parameters were followed as required. Quality improved, the market widened, and even the seed company which had abandoned them returned to discuss business opportunities again. Additionally they are now in command of the business talks because they are sure of the quality of their seed.

Session summary

Session no.	Session name	Duration
2.2.1	What is quality control and why is it important in seed production?	30mins.
2.2.2	How to control seed quality at field and at processing-postharvest handling level?	1hr 30mins.
2.2.3	What are the available seed quality control systems?	30mins.

Session 2.2.1 What is Quality control and why is it important in seed production?

Learning objectives

At end of this session, the participants shall understand;

- What Quality control is
- The importance of controlling quality in seed production.



"Farmers continue to face problems of using bad seed; this is because farmers themselves do not know what defines quality seed. This has enabled many middlemen in the seed business to manipulate us and sell us grain for seed".

A member of a local seed business explains the quality dilemma among farmers in Nwoya district in Northern Uganda. Unless farmers understand the attribute that they may look for in quality seed, it may not be easy to buy quality seed even if it is available.

Content

Definitions

Quality seed is defined as pure variety with a high germination percentage, free from disease and disease organisms, and with a proper moisture content and weight.



Pictures showing attributes of quality seed; High yielding (in the Field), uniform seed sizes after harvest and uniform seed colour among others.

High yielding, pure, uniform quality seed

Seed Quality control is the process of verifying or determining whether seed meets or exceeds consumer expectation.

Inspection is the processes of visiting and confirming the procedures followed by seed growers in ensuring quality during seed production. This is normally done by technical persons in the case of external inspection.

Seed Quality controllers

Internal Quality Control; this is done within the seed growing group by Internal Quality Control Committees (IQCC); IQCC are members within the group who are elected, trained and committed to supporting seed growers in following quality guidelines during seed production.

External Quality Control; this is done by National Seed Inspectors or technical persons delegated by them. External quality control is a mandate of Ministry of Agriculture Animal Industry and Fisheries under the Crop protection department. Their services result into certification of the seed produced.

Seed quality attributes (seed quality parameters)

- Physical (shape, colour, size)
- Physiological (Molecular, biochemical status, germination %, maturity period)
- Phyto-sanitary (pests, weeds and diseases)
- Purity (genetic, physical-presence of inert matter or seed of other variety/crop)

Importance of producing quality seed by LSB

- Meet consumer demands for specified qualities.
- Provide basis for healthy competition among seed traders.
- Ensure that the best quality seed is produced & sold to farmers.
- Increase customer confidence.
- Increase seed producer's credibility/reputation- marketing tool.
- Support proactive management.
- Prevent the spread of weeds, pests and diseases.

Training methods



- When all the participants have gathered, ask if they can distinguish between seed and grain?
- If quality is one of their answers, ask them how they can notice that in a given sample.
- If the aspect of quality does not come out, ask again why some planted gardens do not germinate well and others do? What causes the difference?



- Divide participants into a convenient number of groups. You can simply do this by asking them to count from number 1, 2, 3 if you need three groups.
- Ensure that men and women have equal representation in both groups. Provide both seed and grain samples for each small group. Each group discusses the visible differences in the seed and grain samples; identify which samples represent quality seed and why? Later show pictures of quality seed from picture 1 above.
- Q: What is seed quality?
- Q: What is quality control?
- Q: Why is seed quality control important in seed production?
- When all the groups have completed their discussions. Allow a representative of each group to present their findings.
- Ask the other group members to ask questions, clarification, addition and points of correction to the group presenting.

- At the end of the group presentation, make a summary of key words (take home message) from the training.
- Ask the participants to list what they have learnt from the training.

Materials to be used

- Seed and grain samples; ensure you have a number of samples from each.
- Manila cards.
- Markers.
- Flip charts and stand.

Note for the facilitator

- It is important to prepare some seed and grain samples to facilitate the discussion of how to define quality seed. Bean seed and grain is normally good because of their easy visibility and quality differences.
- Give sufficient time for the members to come up with their views on how to consider quality.
- Let each group identify a secretary to write down their findings
- Encourage members to participate in the small groups. You may change members if a group is only one gender (by chance). It's important to have a mixed gender.
- When using small group discussions, ensure that each small group is not more than 5 participants since other members may feel shy to give repeated views.

Resources

- Seed certification procedures, pg. 7 by Uganda National Seed Certification Services
- For field inspection walking patterns, refer to the illustrated in the Seed certification procedures pg. 10, by Uganda National Seed Certification Services

Session 2.2.2 How to control seed quality at field and at processing/postharvest handling level?

Learning objective

At the end of this session, participants shall be capable of;

- Field Quality control of the seed crop.
- Postharvest quality control of the seed lot.
- Seed conditioning and treatment.

Seed quality control is a process which starts from siting production field, planting, up to harvest of the seed crop. It is important all these stages are well followed to ensure quality. A full quality control is a combination of all these stages.



"Ogwal acel obalo wang pii" (meaning: "just one frog can contaminate the whole water point") a saying of LSB farmers used to regulate quality checks among their growers.

LSBs in Uganda have instituted internal quality controllers, known as Internal Quality Assurance Committees. The major task of each committee is to make sure that not even one member is permitted to submit poor quality seed because in so doing it will affect the entire quality of seed bulked by the LSBs. This would affect future markets and reputation.

Content



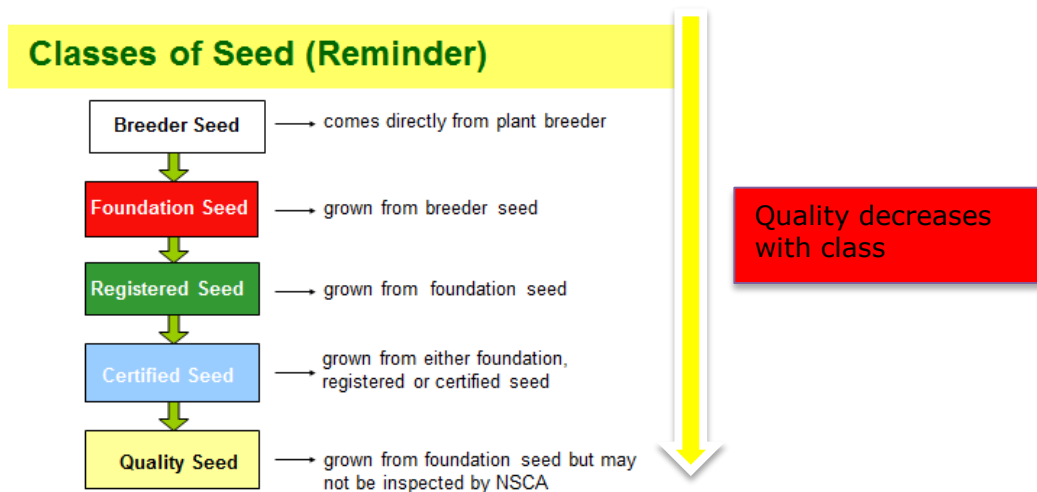
Quality control at field level

Suitability of site

A good site for planting seed crop must be fertile, flat or gently sloping, free from pests and diseases, with a known cropping history, free from noxious weeds like *striga* (also known as *witch weed*), accessible for easy transportation, near a water source for irrigation in case there is need and with enough space for isolation.

Source of Foundation seed

Starting the production process requires the use of high quality seed, normally Foundation seed. Seed quality lowers when you move from upper classes of seed to lower classes;



Foundation seed must be obtained from a reputable source, normally an agricultural research station or an authorized producer. Purchasing Foundation seed must be well documented for quality resources.

The origin of the seed sown for quality seed production must be known and linked to the breeders' seed. The proof of origin of the seed is a certification label. When necessary, a letter from the breeder can be accepted as confirmation of the origin of breeder's seed.

Isolation distance

Isolation, the growing of a seed crop separately from all sources of contamination, is one of the fundamental seed production requirements. An appropriate isolation distance must be maintained to prevent contamination due to the pollination habit of the crops. Self-pollinating crops need small distances while crops with a high percentage of outcrossing require large isolation distances.

There are differences between self- and cross pollination. For crops which need isolation (crops which are cross pollinated, it is important for the growers to understand the minimum distances which need to be observed to avoid contamination. (Annex 3: List of crops with isolation distances)

Right planting practice

Using the right planting practice and row spacing determines the quality of seed at harvest. The right plant population will determine the uniformity of seed sizes produced and the ease with which one can conduct some of the quality check practices such as off-type, disease & pest identification. Using the rightful row spacing is one aspect of monitoring and controlling seed quality. One determines the spacing used at the time of planting of the field.

Roguing/removal of off types

The off type plants i.e. plants differing in their characteristic from those of the seed variety is another source of genetic contamination. Their continued presence would certainly deteriorate the genetic purity of the variety. The removal of such types of plant is referred to as "roguing". Roguing off-types and volunteer plants from seed field is very important to maintain purity of seed. Purity of seed is the highest priority for the production of quality seed.

Main sources of off-type plants in the seed gardens

- Off-type plants may arise from the presence of recessive genes in heterozygous condition at the time of release of the variety. (The recessive genes may also arise by mutation).
- Off-type plants are also due to volunteer plants or from seed produced by an earlier crop.
- Mechanical mixtures in the seed planted also constitute a major source of off-type plants.

Preparing for rouging exercise (Rouger's check list)

- Planting information of the crop; crop, variety, planting date.
- Detailed knowledge of the crop being multiplied/grown.
- Knowledge of the right age of the crop.

- Descriptors of the crop/variety being multiplied; for instance flower colour, leaf pigmentation (production handbook may be preferred if it's accessible)
- Required isolation distances to re-validate the position of the field (refer to isolation standards in annex).
- Sketch map showing location of the garden.
- Contact details of the owner of the garden and he/she should be present during inspection.
- Experienced members, Quality assurance/control committee to lead the process

Appropriate period to conduct roguing

- After first weeding; plants with different leaf pigmentation from that required must be removed. The benefit of roguing at this time is that the off-types will not compete with the desirable crop for nutrients, moisture or space.
- At flowering; some varieties can easily be differentiated by their flower colours. Therefore it is important to remove them before they set seed
- At harvest; this is the last roguing time. Some varieties may better be differentiated by maturity periods. Early maturing and late maturing.

Field inspection

The processes undertaken by a seed grower need to be verified by a qualified and authorized person from the Ministry of Agriculture. The authorized persons to verify the quality of the procedures followed in seed production and processing are the Seed Inspectors.



IQCC LSB members prepares LSBs for field inspection in Wot Anyim Farmer group, Pader district

The main purpose of field inspection is to:

- Confirm that the cultivar/variety is true to type.
- Verify the source of the seed.
- Check the cropping history of the seed field.
- Verify compliance with field standards. E.g. Exclusion of noxious weeds, admixtures from other plants of the same species (roguing), cross pollination (isolation), Freedom from diseases/pests.
- Make the necessary recommendations to growers so that seed crops in their fields meet the quality standards.



Table showing seed field inspection stages, when to do and what to inspect

Inspection stage	When to do	What to do?
1. Pre planting inspection.	Before planting	Verify site, cropping history and isolation required
2. Seedling inspection.	This is done 2 to 3 weeks after planting (when seedlings have emerged).	At this stage, varietal characteristics can be identified and confirmed true or not to the description of the variety (Varietal identity).
3. Preliminary inspection	This inspection is done 1 to 2 weeks before flowering.	This is to give time for roguing off types and take any other corrective measures before contamination occurs
4. Flowering inspection	At flowering	Make cultivar identification, Off-type counts to determine the degree of contamination, assessing pest and disease occurrence
5. Pre-harvest inspection	Before harvest	Checks diseases and pests that occur late in the season, further cultivar identification, Checks on off types and make counts, ensures total removal of male lines in hybrid seed production (hybrid) and Assesses yields.
6. Post-harvest inspection/Farm stock approval	After harvest of seed	Checks on sorting, storage facilities, estimates and confirms yields and takes samples for laboratory testing.

Source: Seed certification procedures, pg. 7 by Uganda National Seed Certification Services

For field inspection walking patterns, refer to the illustrated in the Seed certification procedures pg. 10, by Uganda National Seed Certification Services.



Ngetta ZARDI Seed expert (3rd left) guide LSBs during internal inspection

Quality control after harvest

After harvest, seed quality needs to be maintained otherwise it may deteriorate to unacceptable quality levels. The quality parameters which need to be monitored are:

Seed testing

Important tests are carried out once the seed samples reach the laboratory. The tests will last about ten days before the results are made available. These includes: Moisture, germination, phytosanitary tests, purity tests are important to ascertain the quality of the seed.

Moisture tests

The importance of achieving the right moisture level in seed is to ensure safety in storage. High moisture level results into rotting of seed. Very low moisture level may result in damage seed and lowering the germination potential.

Many methods of determining moisture content of seed exist for different types of seed. However, the most precise method is to verify the moisture level of the seed lot by using moisture machines.

Germination tests

It is very easy to conduct a germination test. This can be done at home, just follow the procedure below;

1. Count out 100 seed (representative of the sample).
2. Write the date and seed variety in pencil on the corner of the paper towel.
3. Dampen squares of paper towel.

4. Spread seed on the paper towel. Ensure the seed are not touching each other.
5. Cover seed with a damp paper towel.
6. Roll up the towel and place in a plastic bag.
7. Stand the plastic bags upright in a jar and keep at room temperature.
8. After about 5-7 days count how many seed have germinated.
9. Ideally, repeat with a number of samples.

Phytosanitary (for diseases) and purity tests

These tests are only conducted by an authorized seed laboratory. In Uganda, there is only one seed Laboratory at Kawanda Research Institute. After these tests, a test certificate is issued to the seed grower indicating the tests parameters. The seed grower has to submit seed samples for the tests to be conducted. These tests are paid for; therefore, during production planning, the seed grower should remember to include costs related to seed testing.

Seed treatment, labelling and storage

Seed treatment is applying a chemical (either as a dust, or as a solution mixed with water) to seed, to protect the seed from insects or diseases. The treatment can be application of fungicide, insecticide, or a combination of both, to seed.



"Seed are living organisms that require specific conditions in order to remain capable of producing healthy, vigorous plants."



Different chemicals can be used to achieve good seed treatment

Importance of seed treatment.

- Prevents spread of plant diseases.
- Provides protection from storage insects.
- Controls soil insects hence better germination.
- Treated seed germinates better, so less seed gives a better stand in the field.
- Seedling vigour and early crop growth are usually better. This helps smother weeds, and also helps increase yields.

Training methods

- When the participants have gathered, ask to check whether any member can still remember what "quality" is in seed production?
- Does everybody like to have quality seed that is the best in the market?
- If they have said yes, what do they normally do to ensure quality in seed production?
- Let the participants form 3 groups by counting 1,2,3 (all the people who counted 1, form group 1 , then 2 and lastly those that counted 3 form group 3)



- Guide the groups to discuss why it is important to control quality during seed production and storage. This should be done in relation to seed business.
- Let the groups present their findings (each group only five minutes, they may even present only one strong point)
- Now, share out the key messages about this session.
- When everybody has understood the key messages of the session, let the members of the small groups get back to their groups and discuss how they normally control the quality of seed right from the field to storage. Give the group some time and later on allow them to present their views.

After the presentation share the content of the sessions. Present most of the session content at this point

Organize a simple experiment to demonstrate germination tests, use cotton wool if soft absorbent paper is not available.

Follow the procedures below:

At home, you can make a germination box from wooden frames. Make a germination box with 10 small boxes

<i>Crop 1</i>	<i>S1</i>	<i>S2</i>	<i>S3</i>	<i>S4</i>	<i>S5</i>	<i>S6</i>	<i>S7</i>	<i>S8</i>	<i>S9</i>	<i>S10</i>
<i>Crop 2</i>	<i>S1</i>	<i>S2</i>	<i>S3</i>	<i>S4</i>	<i>S5</i>	<i>S6</i>	<i>S7</i>	<i>S8</i>	<i>S9</i>	<i>S10</i>

- Fill the germination box with black soils, where possible sawdust.
- Moisten the soil/sawdust with clean water. Do not wet the soil or sawdust
- Take 100 seed samples and divide them into 10 lots
- Put each lot into the germination box as described below
- Place your samples. 10 seed per sample box. S1=10, s2= 10 etc. up to S10=10
- Get samples of different qualities or sources e.g. Foundation seed, certified seed, farmer saved seed/grain. For seed treatment refer to Session 2.1.4

Materials to use

- Flip chart, markers, manila papers, exercise books, pens, wooden box for germination test, seed samples for planting, black soils, clean water.

Note for facilitator

- This activity requires thorough preparation and consultation.
- Seed treatment is not a must, although it protects seed during storage and when planted in the soil.
- Germination tests may also be conducted in a well prepared piece of land.

Resources

- Seed certification procedures for Uganda, National Seed Certification services Quality Assurance protocol for Uganda p8-10
- For detailed seed lot sampling criteria refer to Afghanistan manual pg. 78.



Session 2.2.3 What are the available seed quality control strategies?

Learning objectives

At the end of this session, members of the local seed business shall be able to

- understand and appreciate the different seed quality control strategies (internal and external quality assurances);



"We do not have enough land to consolidate for seed production".

People in this village are unwilling to share their land for others to use for production. Land consolidation or clustering is not an easy thing to undertake amongst farmers with very small land holdings. However, land clustering is still possible to reduce the scattered fields which may make quality monitoring difficult. In northern Uganda, Agency for Food Security Network, (AFOSEN) in Atana-Apac district has identified the logic of land clustering. Request the farmers with higher land holding to invite members whom they feel comfortable with, to use their gardens for seed production. By regulating the number of farmers with higher land holding, clusters can be formed around them. The land owner is motivated by the privilege of being a host farmer/ cluster leader. This was also found to work in another Local Seed Business group AYE MEDO NGECA, in Amwoma sub county Dokolo district.

In Aye Medo Ngeca, one member (host farmer) had more land suitable for seed production. Other members of the LSB had small scattered fields. Scattered fields do not favour processes of quality monitoring in seed production. A section of the host farmer's land he offered for seed production. He was compensated with another field in another location for food production by the hosted farmers.

Content

External seed quality control strategy

External control is actually only performed to confirm that the seed producer has done his job and to give credibility through a certification class. External quality control service is provided by the National Seed certification Services in Uganda, under Ministry of Agriculture Animal Industries and Fisheries (MAAIF). These services are normally paid for by the seed grower; individual grower, groups or association involved in seed production.

External certification is generally expensive. Particularly for a seed producer group/associations as well as individual seed producers. It is better to develop an internal quality control system.

Internal seed quality control strategy

Internal control is meant to indicate times and precise criteria to decide the seed quality level. If seed does not comply with the norms at that times, they are rejected and cannot be sold.

Internal Quality control committee (IQCC)

It is the duty of the IQCC to regularly inspect the seed producer group/association members' fields..

Participants may or may not form a quality control committee.

The committee should determine at what times/periods in the year it should operate its controls and which aspects require control.



Roles of the IQCC, as developed by LSBs IQCCs from Northern Uganda

- Determine seed requirements (crop/variety) & land size.
- Distribute seed to members.
- Register seed production fields —Keep records of all Foundation Seed planted in each production field. (Planting returns.)
- Supervise seed production - Follow up the seed production activities of members.
- Farm stock approval (recording the actual yield compared to earlier projections).
- Identifying for the group the fields which have not been rouged and have not met the isolation requirement.
- Recommended fields to be rejected for quality seed production.
- Support the production committee in forming clusters.
- To report any abnormal disease and invite technical persons from sub county district, research, ISSD for verification.
- Keep a good contact list of resourceful persons in seed quality e.g. sub county NAADs coordinators, Extension works, regional agronomist etc.

Sample of the planting return format:



Name of farmer	District	Sub County	Parish	Crop	Variety	Kg of seed planted	Acreage	Date of planting	Expected yield (kg)
Okot Ben	Gulu	Bungatira	Latyeng	Upland rice	Nerica 4	30	1	15.8.2013	1,600
Lamunu Lucy	Gulu	Bungatira	Latyeng	Upland rice	Nerica 4	30	1	17.8.2013	1,600

Internal regulations: a driving force for quality control

Solid regulations help members to produce in a uniform manner to obtain good quality seed. Regulations should be validated in a meeting where all involved members/producers are present and where everybody agrees on common regulations for production and quality control.

For example, in a Local Seed Business group with well-defined regulations, there will be sanctions for members who do not perform the necessary activity at the right time (i.e. planting, giving inputs, weeding) or for those who do not work in conformity with the norms. The group can decide to impose on them a pecuniary fine (for example 10,000 shillings) or other sanction. In addition to the sanction the essential agricultural activities would be entrusted to other, more reliable members to avoid further harmful episodes.

Land clustering/consolidation and a quality control strategy

This is one of the means of ensuring that good quality seed is produced by the seed growers. Imagine if three members of the IQCC in LSB group were to supervise 50 gardens of members in 6 parishes, six times per season? This sounds close to impossible. But what can be the solution here? Another situation is if the same three members of the IQCC in LSB group were to inspect 50 gardens clustered in three locations? This sounds very possible because the IQCC members can plan to make 3 visits; one per cluster/location.

Grouping of adjacent agricultural land by producers is another mechanism for seed quality control. Land clustering allows the producers to produce the same crop with the same cultural practices and follow the same quality control procedures as they have the same seed with the same characteristics.

Before starting the consolidation, the first step should be to make the producers sensitive to the importance and advantages of consolidation.

Advantages of consolidation:

- Producers who have consolidated their land and produce the same crops can produce seed that is not contaminated.
- Land consolidation will facilitate the tasks of monitoring and control for the IQCC and agent responsible of seed inspection and certification.
- Land consolidation also generates advantages for marketing of products since it is easier to find common clients.



land clustering for seed production

Training methods



- When the participants have gathered, ask them to form three groups by counting 1, 2, 3.

Each group discusses the guiding questions below;

- Q: Do you have any experience with a quality control committee IQCC (if not they may form one)?
- Q: What does the IQCC do to guide the seed growers in quality control?
- Q: What is involved in controlling seed Quality?
- Q: Which times during the year should the committee operate its controls and what aspects should be controlled?
- Q: What are the conditions for a committee to work well?
- Q: How do you ascertain the quality of seed you have produced?
- Q: What farmers' strategies do seed growers use to control quality during production?
- Q: What is land clustering?

- Q: What are the benefits of clustering land in quality seed production? Are there any disadvantages of this?
- Q: How best can farmers achieve land consolidation or clustering to ease quality control measures?

At the end of all these discussions, the facilitator makes a summary of content.



Organize a field visit to a nearby farm where members are practicing clustering.

Materials

- Flip chart, markers
- Templates for planting returns printed

Note for facilitator

- It is important to find out if there is any land clustering for seed production which may be visited by the farmers.
- In case there is one, make arrangements by writing a letter to seek permission to take the farmers for a training visit
- This visit needs to be coordinated at a period of visible plant growth so that the farmers may get a clear impression of the land clustering. Owing to local sensibilities you need to take precaution when talking about land.
- Farmer's discussions should be guided towards the benefits of the local seed business success.
- To understand how an internal quality control system works, a visit will be paid to a group/business which uses this system in an efficient way. It is important to be prepared and bring copies of national guidelines with you as well as internal basic protocol for the inspection. One can also use norms of other groups for comparison, or international norms like UPOV (International Union for the Protection of New Varieties of Plants).

Topic 2.3: Improving LSBs Access to Land and Land Management

Short Topic Description:

Access to land to all LSBs is very important and it means all members of LSBs, both men and women can own land for their seed production or at least they are allowed to use land for seed production activities.



One member of an LSB called Farson which is located near the Nile asked Mr. Okot (ISSD staff) whether he will inspect his seed field which was across the Nile. He said they use canoes to cross the Nile to go and farm and that it is fertile and abundant but there is serious conflict with Acholi and the risk of crocodile and waves in the water. Mr. Okot said: *"even inspectors from Kampala will not reach that seed field including the internal seed quality control committee. How do you expect an inspector to go to a risky place like that and how sure can members be that you followed all the trainings in your seed garden"*. Members agreed that all seed fields should be in a place which can be accessed without any risk and that all members should try to get land within reach.

Session Overview

Session No	Session Name	Duration
2.3.1	Why is adequate access to Land for seed multiplication necessary?	30 min.
2.3.2	How can LSBs increase their access to land for seed multiplication (individual & Collective)	1 hours
2.3.3	How can you manage your land for seed production?(especially Soil and Water conservation)	2 hours
2.3.4	What are and how to use inorganic fertilizers	2 hours

Session 2.3.1: Why is adequate access to land for seed multiplication necessary?

Learning Objectives

At the end of this session participants will be able to

1. Identify high quality land for seed multiplication when they need to.
2. Understand the fact that women have less access to land.



"We survive on land, we all have all the land to produce all we want", said a farmer of Metu Sub-county in Moyo, "and being an LSB Amadrimaa will produce all required volume".

During the diagnostic survey with Amadrimaa LSB in 2013, access to Land was not noted as a problem. The members said they had all the land they needed to produce seed. However one year later, land issues surfaced with members claiming to have small pieces of land, or that their land was very far, that their land was not fertile or that one's husband had a different plan for the piece that she thought she would use for seed. The women indicated limited access to land as a very important constraint to their seed business. In a 2014 planning meeting we asked them the way forward and among the answers they gave were hiring, clustering or buying. The truth is there was no in-depth look at access to land for seed business before committing to produce seed by Amadrimaa LSB. This is the same case for 2 other LSBs in West Nile i.e. KASI in Maracha, and Agiermach Ogiebu Women Group in Zombo.

Content

Access to land:

Means the ability to use land and other natural resources, to control the resources and to transfer the rights to the land and take advantage of other opportunities. (<http://www.ruralpovertyportal.org/web/guest/topic/definition>)

All members of LSBs, both men and women, should be able to own or at least be allowed to use land for their seed production activities.



Importance of access to land for seed Production to both men and women in an LSB

Importance of Access to land for seed production to both men and women in an LSB

1. High volumes of seed can be produced for sales and with it more profit.
2. Once many fields are clustered together quality assurance work becomes easy.
3. Meeting requirements for seed production becomes possible i.e. isolation distance, rotations regimes, pest and disease control, inspections etc.
4. Future expansion is possible.
5. Reaching production target becomes possible.
6. LSBs can strike a balance between food and seed production.
7. Land may be used as security for loan/credit.
8. Setting up processing factories or stores is feasible when there is land.

Factors to consider when selecting land for seed multiplication

1. The location should allow for Isolation requirements for seed fields to be possible.
2. Preferably flat levelled land to allow for production activities/operations such as traction, planting with machines.
3. The size should be large to meet targets or allow for future expansion.
4. Long term utilization can be considered if possible.
5. Fertile land.
6. Access to water for the purpose of irrigation if needed.
7. Access to roads to facilitate the transport of goods or permit machines such as tractors to come and work, provide access for inspectors to visit and other M&E Visits
8. Conflict free land.



Training methods

- Start with the comment that in many countries there are gender disparities in asset ownership. Land is often the most valued asset, and where women are constrained by law or custom in owning land, they are unable to use land as an input into production or as collateral for credit. This is inefficient and may hamper growth.
- Then ask to find out who owns land among the members i.e. land which is not their wife's or husband's.
- Other questions below can then follow.
- Q: What does access to land mean to you as an LSB and/or Member?
- Q: What factors do you consider when allowed to access land for seed multiplication?
- Q: Why is access to land important?
- Q: Are women also accessing land equally?
- Q: What are the quality indicators of a good land for seed multiplication?
- Q: How do we raise the minimum target acreage?(e.g. Clustering, hiring, borrowing)
- Q: Is planning of land use important at all?
- Q: How can land clustering for seed production be achieved?(e.g. neighbours can cluster)
- Q: In most parts of Uganda, land is mostly owned by men. Women should be allowed to own as well through inheritance. The reason why women have limited access to land is because of cultural norms. This needs to change.

Materials

- Flip charts, markers, notebooks, pens, colour cards.

Advice/notes for the Facilitators

- Make it participatory as much as possible. Many times farmers think they have access to the right land for seed multiplication until the real business comes and then the land is found to be unsuitable.
- Let women give their views on what they think is right on ownership.

Resources, Bibliography

- <http://www.ifad.org/farmer/2012/youth/report.pdf>

Session 2.3.2: How can LSBs increase their access to land for seed multiplication (individual & collective)?

Learning Objectives

At the end of this session LSBs will be able to:

1. Determining acreage available for seed production in their group
2. Understanding and applying the different ways to increase their access to land



Upon realizing that they had limited access to land, Agiermach Ogiebu Women Group (one of the 10 LSBs in West Nile) decided to do a number of things so that they could achieve larger volumes of seed production. First, they accepted new members with large acreages of land to join them. Secondly, they lobbied the Sub-county local government to get access to government land which now has been granted and thirdly, they are now allowing young energetic members to open more land and if possible merge with their neighbours. With these initiatives the ISSD West Nile team is hoping to get more volumes from this group. The team also decided to sell the ideas to Amadrimaa, KASI and other LSBs. Meanwhile, in Ragem Parish at Watembo LSB, the vice chairman has a very large chunk of land and allows members of Watembo to use it so that all the seed fields are in one place.

Content

Access to land is a very important success factor for LSBs development considering that seed production requires relatively large pieces of land. An LSB that has limited access to land risks failure unless they look ahead and plan well. An LSB must know how much land is available per member and how to get more land in case they need more.



Ways to increase access to Land for Seed Production

1. Land clustering; where members cluster their land for the purpose of seed production.
2. Group/individuals can buy or hire land from neighbours.
3. Ask for the right to use free lands from friends, relatives and government.
4. Husbands and wives should plan and work together.

Training methods

- Organize a discussion per LSB and preferably on a Question and Answer basis (This is a fact finding mission). Ensure all members are present. The session can be very tense so it is important to be clear and straight and it should not take longer than 2 hours.

Materials

- Flip charts, markers, notebooks, pens

Advice/notes for the Facilitators

- Be very careful when discussing land issues in rural communities. It must be transparent and non-confrontational.
- Understand the land tenure system of the area i.e. the relationships between people and land, defined legally or customarily. The rules invented by societies to

allocate property rights over land, grant access to the use and control of land, and define the associated responsibilities and restraints. Land tenure systems determine who can use what resources for how long and under what conditions (FAO, 2002b; 2007).

- Building gender-equitable participation is a long-term process that requires planning and interventions at various levels, and the involvement of different groups of stakeholders.

Resources, Bibliography

- <http://www.fao.org/docrep/017/i3114e/i3114e.pdf>

Session 2.3.3: How can you manage your land for seed production?

Learning Objectives

At the end of the session participants shall;

1. Know the importance of soil fertility maintenance, replenishment and/or improvement.
2. Be capable of predicting their soil status by simple methods such as observation of vegetation and the use of test kits.
3. Be aware of the underlying causes of land degradation in their areas.
4. Be capable of using different practices for improving their soil fertility.



"Our sub-county is called the "sub-county between the hills" and when it rains up on the hills heavy running water comes down to our gardens sometimes washing our crops along. We don't know what to do" says Amadrimaa member in Metu sub-county.

Very few LSBs/farmers know about soil and water management practices. The sub-county officials also say they do not have the resources to spend on soil conservation techniques and training and even a specialist in that field. They believe further that farmers will continue to suffer until an NGO comes in. The extension systems also do not pay adequate attention to the issue. As a result soil degradation is evident in almost all the fields of LSBs in West Nile.

Content

Importance of Soil fertility Maintenance, Replenishment and/or Improvement

1. Soil fertility is very important because a fertile soil is food for the crops.
2. High crop yields.
3. Less pest and disease incidence.
4. Long productivity period of land.
5. One can grow wide variety of crops/varieties.
6. Good quality of seed produced.

Importance of knowing your soil fertility status, how to do it and who can help

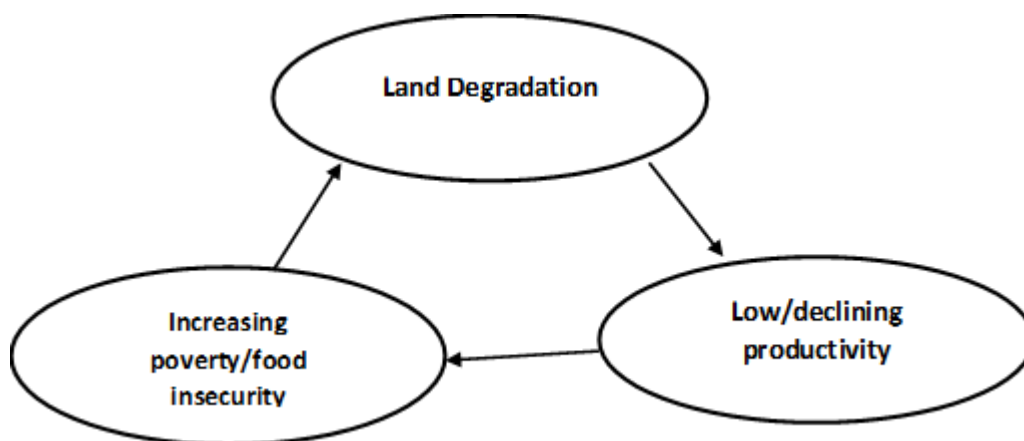
1. Helps you to know which fertilizer to use and when to use it.
2. Helps you to know what amount of fertilizer to buy and apply on your land.
3. Guides you on which crop to plant (planning for rotation regime).
4. Helps you know when to rest your soil.

**Table : Knowing soil status**

Test Name	Description of Test	Who can do it and Cost
Observation of Vegetation and Crop Look in the field	A farmer in routine operation should keenly look are the nature of vegetation and crops to gauge performance. When crops look less vigorous most likely food is lacking in the soil.	Ask your extension worker Any development agency with soil knowledge Cost: Free
Simple Test Kits	There is a soil test kit developed by Makerere University that can be used to test our soil.	This is a user friendly kit that can be purchased by Makerere University soil science department.
Laboratory Soil Test	Samples are taken by specialists from your field and tested in the laboratory in Makerere or Kawanda	You pay per sample

Causes of land degradation in Uganda

1. Soil erosion caused by wind and/or water;
2. Deterioration of the properties(physical, biological or economic) of the soil caused by overgrazing, de-vegetation, crop production on fragile lands without sufficient soil cover or use of conservation measures, declining use of fallow, and limited application of soil nutrients.
3. Long-term loss of natural vegetation.
4. The most important forms of degradation are soil erosion, caused by both water and wind, and soil nutrient depletion,



Interrelated problems of land degradation, low productivity and poverty.

Practices to Improve Soil Fertility

There are a number of activities that can be used e.g.

Use of organic matter:

- Great capacity to retain nutrients.
- Retains a lot of water.
- Improves the soil structure.
- Stimulates the growth of soil organisms.

Mulching (Covering the ground with dry organic material)

- Improves water infiltration.
- Stops soil erosion and soil dehydration.
- Prevents high ground temperatures, favourable for seed germination, root growth & growth of micro-organisms
- Increases the moisture level in the soil.

Green Manuring (ploughing back in the soil green, non woody plants or plant parts). Crops used: Sesbania, Crotolaria, Lablab, Mucuna, Tithonia

- Make nutrients available for the main crop.
- Add extra Nitrogen to soil
- Improves the soil structure.

Agro-forestry: Comprises all forms of land use in which woody species (trees & shrubs) are grown in combination with other crops.

- Prevents nutrient loss through recycling.
- Provides protection from wind and water erosion.
- Provides organic mulch material.
- Produces valuable products.
- Preserves the environment.

Manure application (animal waste mixed with straw or leaves. It is good to compost manure before application.

- Diseases, pests and weed seed are destroyed due to high temperatures.
- Increases the rate of decomposition.
- Preserves organic matter and nutrients from leaching.
- Decomposition reduces toxins and other chemical substances in organic materials.
- A mixture of 25% compost and 75% soil is ideal for most crops.

Crop rotation (successive cultivation of different crops in a specified order on the same fields)

- Prevents soil nutrient depletion.
- Maintains soil fertility.
- Conserves soil moisture across seasons.
- Reduces soil erosion.
- Prevents the build-up of pests, weeds and soil diseases.
- Helps in getting good soil structure.

Soil erosion control (Removal of topsoil due to natural, animal, and human activity

Control measures: Contour ploughing, Contour bands, Terracing, Strip cropping, and Water diversions). Techniques to manage water include Broad beds and furrows, Planting basins or pitting, permanent strips, Contour bands and catchment strips, Bunds and runoff strips, Road catchments and Half-moon micro-catchments

Chemical fertilizers (a fertilizer is a chemical product either mined or manufactured material containing one or more essential plant nutrients that are immediately or potentially available in sufficiently good amounts.



Note:

1. Organic matter is important in retaining the applied nutrients for plant use.
2. Moisture is needed to dissolve the fertilizers for plant use.
3. Fertilizers must be applied away from seed to avoid scorching seed or young roots.
4. Inorganic fertilizers quickly improve soil fertility.

Training methods



The facilitator can divide participants in discussion groups of 3-4 members and each group is assigned a question/two questions to answer and present. Field work should also be conducted to observe terrain, degradation, and management practices within the training areas.

- Q: What is fertile land?
- Q: How do you know your land is fertile?(e.g. through observing growing crops/vegetation, Soil testing)
- Q: What is the importance of Soil fertility Maintenance, Replenishment and/or Improvement?
- Q: How can you keep your soil fertile?
- Q: What are the main factors causing poor land management hence bringing land degradation?
- Q: Do you think poor land management can bring low agricultural productivity, poverty, and weaken sustainability?
- Q: What are the different methods for improving soil fertility?

Materials

- Flip charts, markers, notebooks, pens, Soil map

Advice/notes for the Facilitator

- Emphasize the value of soil fertility management. Be prepared with information such as how to make organic manure, contacts of Makerere/Kawanda soil test units for LSBs that might want the service immediately and also contacts of fertilizer suppliers and prices.

Resources, Bibliography

- Carry soil map for the region

Session 2.3.4 What are inorganic fertilizers and how to use them?

Learning objective

At the end of the session participants should

- Know the different types of inorganic fertilizer available in the Ugandan Market.
- Know the advantages and be motivated to purchase fertilizer for their seed production.
- Know how to apply fertilizer.



"We have seen fertilizer can make a big difference in crop yield from our demonstration" says a member of Amadrimaa, "The crops planted with fertilizers yielded more compared to those without fertilizer in 2013B demonstration and we who can afford shall mobilize our money and buy fertilizer."

Content

Soils in Uganda have been exhausted of their natural fertility through continuous cropping without external inputs addition and are now extremely deficient in phosphorus and nitrogen. The country has one of the highest soil nutrient depletion rates in the world, yet it also has one of the lowest rates of annual inorganic fertilizer application – less than 1kg per hectare. As a result, crop yields have become very low and the incidence of poverty in rural areas is high.

Fertilizer in Uganda is conventionally sold in 50kg bags and farmers are used to thinking that that they cannot afford fertilizer and other improved inputs. Not only are they also unable to obtain appropriate fertilizers and improved seed varieties, but also many farmers are unaware of the correct inputs required to achieve sustainable yields from increasingly depleted soils. But perhaps most important is the common perception that fertilizers spoil the soil.

What are inorganic fertilizers?

Inorganic fertilizers are also known as synthetic or artificial fertilizers. These kinds of fertilizers are manufactured. Inorganic fertilizers do not need a certain time to be broken down or decomposed before usage because they contain nutrients that can be readily absorbed by plants.

Most inorganic fertilizers contain balanced amounts of nitrogen, potassium, and phosphorous to feed plants and to foster growth.

Advantages

When you add inorganic fertilizers to your soil, the plants absorb the nutrients immediately. Unlike organic fertilizers, inorganic fertilizers do not need to be broken down before they can be absorbed by the plants. This is a major benefit if you have a plant that is in desperate need of nutrients.

Another advantage of using inorganic fertilizers is the ability to control what you add to the soil. Inorganic fertilizer is broken down into the basic elements of phosphorous, nitrogen, and potassium. Because of this, you can give your plants the same quantity of

nutrients every time. You also have the option of giving your plant the exact element that it is missing. Inorganic fertilizers are also less bulky.

Applying inorganic fertilizers

Fertilizers can be applied to soil before seeds are sown, at the time of planting and while the plants are growing. Fertilizers can also be added to the hole when transplanting vegetables, flowers, trees, shrubs and other plant types. Root stimulators can be added to transplanted plants to help promote root development and growth



Selecting a fertilizer to apply in your seed field

The numbers on a fertilizer label refer to the concentration (percent) of three major nutrients in the material: nitrogen (or N), phosphate (or P₂O₅), and potash (or K₂O). For example: a 25-3-5 fertilizer contains 25% nitrogen, 3% phosphate (P₂O₅), and 5% potash (K₂O)

Fertilizer labels have been standardized so that the concentrations of nitrogen, phosphate, and potash always appear in the same order on the front of the package. Other components such as iron, zinc, or sulphur may be specified elsewhere on the label.



Different inorganic types for different crops

Training methods



To introduce the subject please ask the questions below and get answers from individual members and write it down.

- Q: What are inorganic fertilizers?
- Q: What are the advantages?
- Q: Who has used in-organic fertilizers before and which types?
- Q: Where can one buy inorganic fertilizer?

Going into details ask the following questions;

- Q: Give the name of the different fertilizers that you know and describe how they look like (colours, texture and smell) e.g. NPK, SSP, CAN, DAP, Urea, TSP etc. Members should also give local nick names if available. Take the chance then to display the samples of the different fertilizers and let farmers feel them adequately.
- Q: ask to know which fertilizer type for which crop, how many kg does one apply and at what stage of the crop? The facilitator should have the chance then here to elaborate in greater detail.

- Q: How do you apply fertilizer? This should be practical so that people can see and learn how to apply fertilizer

Materials

- Flip charts, markers, notebooks, pens, Soil map, fertilizer types

Advice/notes for the Facilitators

- Emphasize the value of soil fertility management. Be prepared with information such as how to make organic manure, contacts of Makerere/Kawanda soil test units for LSBs that might want the service immediately and also contacts of fertilizer suppliers and prices.

Resources, Bibliography

- <http://www.wisegeek.com/what-is-inorganic-fertilizer.htm>

Module 3: LSBs are professionally organised

Topic 3.1: Ensuring functional financial management in local seed businesses

This topic describes what is financial management, who is responsible for financial management and the different tools for its monitoring in a Local seed Business. Before talking of financial management, it is logical to talk of the “seed crop budget,” which is one of tools used to give a background and insight into financial management. It is important to first understand the concept of a seed Crop budget and then its role in LSB enterprise performance and financial management.

Key Messages

- It's important for a Local Seed Business to know who is responsible for financial management.
- What tools for monitoring financial management are used and how they facilitate decision making.
- The ways revenues and expenditures are recorded in cash book/ledger, income statement and balance sheet. This must serve the needs of the business' executives.
- The income statement and balance sheet represent the business' scoring. Like an athlete cannot improve his/her training methods without detailed records of his/her performances, a business cannot be managed and decisions well made without these documents.



"We are very poor people", says a member of Lalyeng farmers group, "We hardly have money to even buy foundation seed to produce seed and if we manage to produce the seed, who will get us the market". We shall keep our money well and spend it wisely to make our business to run. After the training we managed to buy rice seed, produced and got some good harvest and sold our seed and now we are able to invest in the seed production but we need to do proper record management to ensure that we minimize loss of members' money, reduce the cost of production and hence get better money".

Sessions

Session No	Session Name	Duration
3.1.1	Why do LSB need a Seed Crop Budget in financial management?	1 hour
3.1.2	How to mobilize resources? Example of the seed box	4 hours
3.1.3	How to ensure proper Financial Management in a Local Seed Business?	1 hour
3.1.4	What are the different types of capital sources and what are the different ways of raising capital	4 hours

Session 3.1.1: Why do LSBs need a Seed Crop Budget in financial management?

This session aims at assessing the performance of crop seed enterprises using the seed crop budget tool.

Learning objectives

By the end of the session, participants will be able to;

- Identify and compute the essential cost and income data for seed business.
- Fill in the information on Seed Crop budget sheet.
- Calculate the profitability for a given seed enterprise.
- Interpret the results into simple messages to influence LSB economic decisions.



One of the Local Seed Businesses in West Nile, FARSON, participated in bean and sesame seed production in 2013. They harvested 300kg of Sesame and 500kg of beans. Later on, after carrying out seed crop budgeting, they realized that they were operating at profit and able to make decisions on investment and sales, this is illustrated below:

Item	Sesame Seed	Beans
Yield (kg)	300	500
Unit price (sale)	4,400	2500
Total revenue	1,320,000	1,250,000
Inputs	11,000	126,000
Labour	390,000	385,000
Transportation of seed	1,000	40,000
Land Hire	50,000	50,000
Bags	4,500	7,500
Transportation of Harvest (garden to store)	10,000	6,000
Storage	35,000	35,000
Other costs (assorted)	35,000	10,000
Total costs	536,500	619,500
Profit	783,500	630,500

From the example given UGX 536,500 was invested in one acre of sesame seed and UGX 619,500 in bean seed: This means you invest UGX 1,780 to produce 1 kg of sesame seed compared to UGX 1,240 for 1 kg of bean seed.

Issue	Sesame	Beans	Comment
Unit cost of production	1,780	1,240	Beans cost less per kilo
Sales/unit	4,400	2,500	
Profit/kg	2,600	1,260	Sesame gives higher return/unit

Content



A seed crop budget (as shown in the example above) is a tool used for recording the money you put in a business like for purchase of foundation seed, packaging materials, labour, and money from sales. When you make a record of the money spent by the Business (expenses) and money made by the business (income from sales proceeds), this will help you calculate the performance in terms of profit for a seed crop.

The importance of the seed crop budget is that it helps to understand the main activities, the money put in business (costs/expenses) and the money you get out of Business. This tool must be used by every seed grower in a Local seed business to calculate profitability performance of a seed enterprise. Simply take record of every cost incurred e.g. purchase of foundation seed, fertilizer, labour, storage, etc. and the money earned from seed e.g. sales of seed income. You add up all costs to get total costs. If own labour or group labour, and other own inputs are used, attach a cost using prevailing local market rates e.g. family labour in seed, reused foundation seed, etc.

A seed crop budget in a nutshell is a simple tool to measure the seed business performance through capturing and use of quantitative data of LSB and individual LSB members' production and marketing records-acreage, yield, costs, sales prices, volumes sold, etc. Total Costs are compared to total revenues to understand whether operations are profitable or not. That is; Total revenue (sales price/unit x Volume sold) minus total costs=profit

The information on costs and returns is used to make decisions on production of a particular seed enterprise. It helps to influence decisions to allocate resources which are limited to the most appropriate use to maximise returns

Training methods



- Introduce objectives of session
- Q: List all costs actually incurred in seed businesses (refer to individual member record, if possible)?



- Ask the participants to divide themselves into groups of 4-5 each, each group is given guidance questions to discuss and record costs of foundation seed, transport, land opening, planting, weeding, roguing, pest and disease management harvest, transport, storage, packaging, treatment etc.
- Q: Which revenues you got from sales (sales per unit x volume sold)?
- Use the crop seed Budget tool template and calculate the profitability i.e. total revenues-total costs
- Summarise the profitability results and discuss with participants, ask what they think of the profitability? What can be done differently to improve profit level?

Materials

- Fact sheet/seed crop budget templates, Flip charts, markers, masking tape, Coloured paper, LSB Production and Seed market record

Advice to facilitator:

- Use translators where possible to explain how to use the seed crop budget tool.

Session 3.1.2: How to mobilize resources? Example of the seed box

Learning Objectives

By the end of the session, participants will be able to:

- Identify essential Local Seed Business resources needed for production.
- Identify potential resource sources, why these sources and challenges associated with sources.
- Come up with savings strategy and plan of action.



Agieramach Ogiebu Women for Development group participated in Abi ZARDI AGRA seed multiplication project and they received trainings and free foundation seed every season for seed multiplication. After harvest they sold everything. When the ISSD project selected the group, they expected the same to continue. In March 2013, ISSD staff communicated that they would not give free seed. Instead ISSD would train them on seed production, business planning and marketing and linking them to research institutions to acquire foundation seed.

The LSB members wondered whether this was going to work. The members relaxed and were advised to start a savings plan for acquiring seed according to their individual needs and the group's production target. They planned for the 2013B season because they were unable to save for 2013A production season. They agreed on weekly savings of an average of UGX 3,000 per member and at the beginning of second season they had accumulated enough money to buy seed for 5 acres of Beans. These, they ordered from NaCRRINamulonge. Fortunately the harvest was good and they sold over 1 Mt to NAADS programme.

The attitude changed and members are now happy. They have realized that it is important to plan and mobilize their own resources so long as there is a market and profit at the end of the day. *"Now we know it's our business and we are determined to look for resources and invest in it to grow"* says Mzee Nasereno Chairperson Marketing –Agieramach Ogiebu Women LSBs in Zombo District.

Content

Resource Mobilization in Local Seed Business involves all activities in planning for and securing new and additional resources. It also includes making better use of, and maximizing, existing resources. It is intended to allow the business to improve and scale up the seed products and related services that the LSB provides to its customers in a sustainable manner.

Resource mobilization specifically aims at creating the appropriate resource mobilization strategy plan and its effective implementation to establish and grow the business in a sustainable way.

LSB members/ committees have to make decisions about where to invest their energies to mobilize resources. The way in which a Local seed Business acquires the resources it needs and the sources of those resources determines what the Seed Business is and what

it can be. They must decide when to focus on non-financial resources and when to seek financial resources.

When seeking financial resources, they should consider mechanisms to generate internal funds themselves as opposed to seeking funds from external sources which usually carry high risks and make them vulnerable.

As Local businesses grows external funding in the form of loans and grants may be considered to cope with burgeoning resource requirements.



The essential Local Seed Business resources:

- Land that is suitable for seed production, proper isolation and good fertility/crop rotation cycle.
- The optimum quantity of Foundation seed and other productive inputs like fertilizer and crop protection inputs.
- Tools and equipment for land opening, post-harvest handling and field operations.
- Storage to keep products safe and maintain their quality
- Committed Local seed business members.
- Packaging materials, and tarpaulins.
- Adequate working capital in the form of cash to meet operational costs, stationery e.g. production and market record books, ledgers, etc.

Most groups already have a Voluntary Savings Loan Association (VSLA) where periodic savings and loans are acquired by group members for emergency needs, and welfare/social issues (called social fund in others), school fees, etc.

As a first step and the LSB would have to discuss the existing resource mobilization schemes and map out different schemes. The schemes in place may include; merry go round or Rotating savings and Credit association (ROSCAS), VSLA, etc. Then the LSB would have to look at the challenges and opportunities associated with main schemes in place.

Different financial sources for seed business:

- Membership fees, Share capital, annual subscription, penalty fee
- Commission on sales (% range) of seed
- Voluntary Savings and Loans Association
- Crop sales from group garden, individual gardens
- Savings For Investment (SAFI)-use of Seed Box

Resource Need	Source of funds	Why the source?/Purpose	Any challenges associated	Solutions/Mitigation
2,400,000= to buy 200 bags of Foundation seed for Irish potato	VSLA	Already in place All members contribute	-Funds not enough -Other emergency needs -funds diverted	Proper planning and Monitoring
1,500,000 to buy Bean seeds for 10 acres	Crop sales	-Common	-Competitive needs	-

Seed box: Savings for investments plan

LSB's are advised to come up with savings plan-use through the seed box. This will enable the LSBs to understand what they need to do to achieve their goals. The Seed Box runs on the savings for investment principle based on planned investment. It guides the LSBs in defining their specific savings goals according to resource requirements.

LSB Resource Goal	Amount Required	Money due in	Savings per week
Money for 600kgs of Foundation Seed-Beans K132 to plant 20 acres by June 30 th 2014	3,000,000	20 weeks-June 30th 2014	LSB: $3,000,000/20=150,000/\text{week}$ $=150,000/27=5,500/\text{person/week}$
Money for Ox plough and 4 Oxen for land opening to be acquired by 2015 February 28 th	2,800,000	44 weeks- 28 th February 2015	LSB: $2,800,000/44=63,700/\text{week}$ $=63,700/27=2,360$ $=2,360/\text{person/week}$

Monitoring the LSB Seed Box:

The Finance and Resource Mobilization Committee of the LSB is responsible for monitoring the seed box. The LSB needs to acquire a safe with locks and the keys are to be kept safely.



Watembu LSB planned to grow 27 acres of SimSim, each person one acre. They required 81kgs of seed worth UGX 648,000. The seed was due by 10th June 2014. The members agreed that each person savings in a seed Box UGX 4,000 per week consistently for 6 weeks beginning from May. They would meet every Saturday starting from May, by the end of May each person was expected to contribute an average of UGX 16,000=. The use of table below shows the progress and relevant actions need to meet target

LSB Name: Watembu, Seed Box Record SHEET for the period of May 2014.

#	Names	May 2014				Totals Individually monthly	Remarks	Remedial Action Needed
		3/5/14	10/5/14	17/5/14	24/5/14	End of May/Person		
1	Opoka	4,000	4,000	4,000	4,000	16,000	Okay.	
2	Malboro	3,000	4,000	3,000	3,000	13,000	Below target	Eg top up from crop sales
3	James	3,500	4,000	3,000	3,000	13,500	Below target	
	Totals on weekly basis	10,500	12,000	10,000	10,000			

Training Methods

Introduce the Session and its objectives at beginning of training.

- Q: What is a resource? Give examples?
- Q: What resources are required for your Local Seed Business? Which ones do you have? Lack?





Group work: Divide the participants into groups:

- List the different resource mobilization sources? Indicate what strategic actions must be done to acquire resources from each respective source including challenges.
- List the main sources of funds used in the seed business.
- Discuss the concept of savings for Investment, creating a realistic savings plan tailored to specific resource needs.
- Guide the participants to practically use and fill different tools-tables 1-3 to come up with agreed actions in savings for investment plan including how much each person is to save, when and record keeping to track progress.

Materials

- Flip charts
- Markers
- Masking tap
- Coloured manila/paper
- Savings Box- later for safe custody of funds
- Record Book

Advise to Facilitator

- The facilitator should be able to give clear, simple messages without being too technical in order to ensure that LSB members understand him/her and to prompt action from LSBs to take resource mobilization forward to develop their businesses.
- The facilitator should emphasize the significance of human resources, and the need for LSBS to make maximum use of this important resource.
- Stress that an important aspect of internal resource mobilization is the reduction of external dependency, especially dependency on foreign donors and is the foundation for long term success and sustainability.

Resources

- Financial Education Booklet 3 of 4 Section II: savings pages 88

Session 3.1.3: How to ensure proper financial management in a Local Seed Business?

Learning objectives:

At the end of session, participants should be able to;

- Know and appreciate the need for financial management in LSB
- Prepare a financial budget for starting seed business
- Identify the requirements needed to invest in seed Business



A Local seed Business from West Nile initially was doing all the activities but did not know anything about financial management. Whenever they heard about financial management in meetings they took it as something for NGOs /Government or big companies.

In December 2012, they were selected as a Local seed business under the ISSD programme, later in March 2013, the group were advised and supported by the ISSD staff to form sub committees such as production, quality control, marketing and finance with clear terms of reference. Initially, the committees did not know what to do but after orientation on their roles and training, they realized they had a lot of tasks to enable group success. The finance committee was a mix of literate, and illiterate people. With training the illiterate members were able to realize that finance management is an important aspect of business.

Content:

Financial Management

In a Local Seed Business, financial management is about planning how to get money to put in the business to make profit. For, example to produce seed you need funds to buy foundation seed, fertilizers, farm equipment, labour, storage to produce, etc. and produce quality seed which are sold to a local market at a profit.

Financial management in a nutshell is about:

- How the cash moves into and out of the seed business?
- Determining the profitability of the seed business.
- Ensuring procedures are in place for using tools and enforcement.
- Who is responsible for monitoring and enforcing transparency?

Financial monitoring

This involves knowing the movement of your money into and out of seed business. Key financial monitoring tools that must be used by the LSB are:

Cash book (Ledger book)

It is important for LSB members to know what happens with the money and other goods of the business, each financial aspect must be recorded in its own table, called a book. It can be done with a simple notebook. Each page is an individual book which altogether constitutes the cash book (ledger)

The most important categories to record separately in a seed business usually are:

- Utilities

- Rent for Land/Office/Store
- General purchases e.g. foundation seed, fertilisers
- Labour e.g. planting, weeding, harvest
- Rents (buildings, land)
- Seed stocks (in value)
- General stocks (in value) – i.e. packaging...

The net revenue is the difference between the total revenue and the total expenditures. It can be seen in the income statement. The net revenue can be negative if, during the reviewed period, expenditure has been higher than revenue.

Income Statement

The income statement together with balance sheet represents the business' scoring. Like an athlete cannot improve his/her training methods without detailed records of his/her performances, a business cannot be managed and decisions well made without these documents.

Explain that in the income statement, all the numbers from the individual books indicating money flows are gathered (not those which show capital values or stocks values). With the income statement, it becomes clearer how revenues and expenditures are linked to each other and if the business is making profit.

Income statement for a seed business

	2013 CURRENT	2013 BUDGET	2012 CURRENT
REVENUES			
Sold stock			
Others			
Others			
TOTAL REVENUES			
EXPENDITURES			
General purchase			
Labour			
Rents			
Purchased stock			
Others			
TOTAL EXPENDITURES			
NET REVENUE			

In the income statement, separate columns can also be displayed to compare the current results with those of last years and those of the budget (if you made one). The income statement can be understood as the most important "scorecard" of the treasury.

The income statement must be prepared on a regular basis, for example per month, trimester or semester. An accountant can be hired to do it but with a little bit of experience, it can be done alone.

Balance sheet

Explain that the balance sheet combines all the elements which have a financial value in the business, not only money. It is usually made by a professional accountant. Although

it is a little costly if you're not an accountant yourself, it is important to have a balance sheet done every three months or at least every year.

The balance sheet displays all the assets and liabilities of the business. It is important to compare the balance sheet of the current period with the previous one to understand the development.

A business which is growing must present a growth in assets as well. For owners, it is important that capital and its profits also grow. Loans and debtors should not be too big in comparison the capital. The balance sheet of a young business will be simple, like it is shown in the following example. The balance sheet of a large business can be much more complicated.

Typical balance sheet of a seed business:

	31 December 2013	31 December 2012
Assets		
<i>Current assets</i>		
Cash		
Seed ready to be sold		
Raw seed		
Materials		
- Packaging		
- Chemicals		
- etc.		
Advanced payments		
Fixed assets		
Land		
Store		
Machines		
Equipment		
Total assets		
Liabilities		
Creditor		
Late revenues to be regularised		
Payable taxes		
Short loans (< 1 an)		
Long loans (>1 an)		
Total liabilities		
Capital contributed		
Cumulated profit		
Capital stock/Net value		

The capital stock (also called net value) is the difference between the total of liabilities and the total of assets. It must be positive, otherwise it means the business is bankrupt.

Who is responsible for Financial Management?

In a local seed business, a subcommittee (usually the financial management committee) is responsible for financial management. The roles include; recording all financial transactions and keeping records up-to-date, advising LSB on financial matters and generating financial reports.

They have to plan how much money is needed? How much is available? What is the gap? Who will provide? The sources are either own money or borrowed. Once you have started seed production you monitor to achieve your plans or else you lose money. Ensure that money put into the business is used well to achieve the LSB's mission and objectives e.g. produce big volumes of quality seed for the local market to make more money and build a good name in the community.



Sources of money for businesses

- Own money from savings, sales of produce,
- Borrow/loan from either friends, relatives or a financial institution
- Grants

The LSB should always look for potential funding opportunities and identify and assess the critical terms and conditions of grants

for their Local seed Business activities, ensure compliance with donor terms and conditions including: providing supporting documents; prepare a donor financial report to match with a project narrative report, understanding the components, -How to read and understand proposal guidelines and requests for proposals (RFP), preparation and justification of budgets, Cost-sharing/financing and sub-contracts, Procedures for grants submission and grants start-up and good cover letters

In budgeting, indicate sources of money and use the figures from your daily financial records which involve knowing amounts of money available. It's important to record all your expenses and revenues every day in a cash book.



Training methods

- Introduce the session and the objectives to be achieved
- Q: What is finance?
- Q: What is financial management?
- Q: How do you record your finances? List responses on cards/board
- Introduce the financial record form, explain what brings in money and what takes money out of business.
- Group Exercise: divide the participants into 4-5 people, list the different expenses and revenue sources, and fill these in the financial record templates given.
- Issue the template of ledger books to participants, fill in all the transactions, presentation is done in plenary. After, fill in income statement template.
- Finally the participants in respective groups prepare a cash book/ledger, and then in the plenary prepare the income statement





Cash-flow plan of Mr Baba

	January	February	March
Cash in the beginning of the month	4500	3480	2780
Cashed in through sales	0	0	3000
Cashed in / others	480	500	300
Total cashed in	4980	3980	6080
Cashed out for fixed costs	900	900	900
Cashed out for operational costs	600	300	1200
Cashed out for investments in equipment	0	0	800
Cashed out / others	0	0	0
Total cashed out	1500	1200	2980
Cash available at the end of the month	3480	2780	3100

1. Record the amount that you aim to have in cash and on your bank account (if you have one) at the beginning of March. Write this amount in the row "Cash in the beginning of the month".
2. Examine your plan of sales and expenditures. Identify the projection you made for March. Write this amount in the row "cashed in through sales".
3. Beside your sales revenues, it is possible that you receive money from other sources, such as banks, interests or donations. Write this amount in the row "cashed in / others".
4. Add all the amounts of steps 1, 2 and 3 to obtain the total amount of cash influx. Write this amount in the row "total cashed in".
5. You might have purchased material for your business in March. Check your sales and expenditures plan for this month. Write this amount in the row "cashed out for fixed costs".
6. Check your sales and expenditures plan for March to know how much you projected to spend for labour. Write this amount in the row "cashed out for operational costs".
7. Will you buy equipment in March? Get information on the prices of these pieces of equipment and write this amount in the row "cashed out for investments in equipment".
8. Are there other payments that you project to do, such as the reimbursement of a loan? Write this amount in the row "cashed out / others". Leave the box empty if nothing is planned.
9. Add all "cashed out" of steps 5, 6, 7 and 8. This will represent the projections of "total cashed out" for the month of March.
10. Subtract the total of "cashed out" from the total of "cashed in" to know the amount of cash available (cash and bank) at the end of March. Remember that the available amount of cash at the end of a month represents the amount of cash available at the beginning of the next one.

Example of a balance Sheet for Local Seed Business

Balance Sheet for LSB Name	Amount (UGX)	Remarks
Assets		
Current assets:		
Cash		
Supplies Inventory		Market value of your supplies
Seed Inventory		Market value of your seed inventory
Accounts receivable		Money owed to you not of bad debts
Pre-paid expenses		Something you have paid in advance
Others:		
Total current assets		
Fixed assets:		
Property and equipment		
Leasehold improvements		
Equity and other investments		
Less accumulated depreciation		
Total fixed assets		
Other assets:		
Total other assets		
Total assets(Current + Fixed+other)		
Liabilities and owner's equity		
Current liabilities:		
Accounts payable		Money you owed to vendors
Accrued expenses		e.g money you spent but not yet been billed for
Short term debt		Due within a year or less
Income taxes payable		
Other		
Total current liabilities		
Long-term liabilities:		
Mortgage payable		
Total long-term liabilities		Debt due longer than one year
Owner's equity:		
Contributed capital		Money put in by equity holders
Accumulated retained earnings		Cumulative profit or loss since starting the business
Total owner's equity		
Total liabilities and owner's equity		
Balance		This line should always equal i.e Assets=Liabilities

Materials

- LSB own data
- Flip Charts
- Marker pens
- Masking tape
- Coloured paper
- Templates of Cash book (Ledger book), Cash flow and Balance sheet.

Advice Notes for Facilitator

- Ensure that major learning points are discussed and visualized!
- Conduct the session at the beginning of season.
- The participants should come with their transaction records.

Resources

- Mango Tool Financial management
- African Seed Tool Box 47
- Rwanda Seed Entrepreneurship booklet page 82-94


Session 3.1.4 What are types of capital sources and ways of raising capital?

Learning objectives

At the end of this session participants should be capable of knowing

- The different types of capital sources.
- The different ways of raising capital.
- Which ways will effectively work for them.

"Seed production does not cost but it pays".



One of the local seed business groups in South Western Uganda were very sceptical about investing in seed production as a business venture so they decided to first start with seed production at the demonstration plot. All the group members were engaged in managing the demo plot from planting until harvesting. After harvesting their products from the demo, they discovered that the little they were able to plant yielded so highly. This gave them the confidence to invest in their respective seed production as a local seed business.

Content

Capital refers to financial resources available for use in a business. Any local seed business group needs money whether from within or outside (internally or externally). There are two general sources of financial capital namely internal and external sources of capital:

Internal sources of capital/self-investment

Internal sources of capital are mostly from one's own savings termed 'own investment'. Examples include through group investment- through shares, membership contribution/ fees and also through group savings, retained profits generated from sales and later part of the money used for other activities, sales of assets and utilizing working capital more effectively.



A member of Obanga ber LSB group (in blue shirt) in Lira District, Amach sub-county getting his balance from Mr. Charles Opobo after paying for his foundation seed needs during the planning and resource mobilization meeting 2014A (photo taken by Christine Joyce Adong, Agribusiness Expert)

External sources of capital

External sources of capital are from other sources and not from one's own investment and this can be getting loans usually from banks, venture capitalist and grants usually from supporting partner organizations among others.



All businesses require capital to kick start their activities. It is very important to have self-investment in a business for the different members therefore members are strongly advised to self-invest. Using external sources of capital brings in much needed funding for expansion, but it has its problems or costs. More long term debt will dilute the owner's stake in the business and that of the lenders will rise, affecting to some extent business decision making.

Note: It is important to consider a variety of funding sources and not to become overly dependent on one.

Comparisons of internal and external sources of capital

	Internal sources	External sources
Advantages	<ul style="list-style-type: none"> • No associated borrowing costs. • No direct debt rise in business. • Owners control not diluted and decisions not vetted by lenders. • Share capital has no interest payment hence no drain on company profit. • Shares –no change in control even if you bought more shares. 	<ul style="list-style-type: none"> • Venture capitalist-provide business help and contacts. • If loan has fixed interest rate and interest rates increases in future it is a very smart investment.
Disadvantages	<ul style="list-style-type: none"> • Owners may take out all money from business and have no buffer if they need cash later. • With no one to account to, people may become relaxed. • With shares new investors dilute control. 	<ul style="list-style-type: none"> • Loans has to pay interest even if not made profits. • Loan if not paid can lead to seizure of your assets. • Venture capitalists can impose profits or sales targets.

Raising capital for small business expenses is not the easiest step in starting a small business but it is necessary. One major reason why small businesses fail is because the owner lacks necessary funds. Money is needed for equipment, property and more essentials for your small business. You may wonder how you can raise the money needed to start your small business.

There are two major sources of funding you can seek for your business: internal Vs external capital financing. Listed below there are various methods of raising capital for a small business. Analyse each option below and determine which method/ methods is/are better suited for your particular small business.



Ways of Raising Capital

Saving up your own money. When starting seed production business you may not have all the money needed for start-up costs; however you should have some money saved up for the purpose of starting your seed business. Methods of saving your own money for seed production include buying member's shares, group savings, retained profits and by sale of assets.

Borrow from Friends and Family. Raising capital for seed production business expenses by asking friends and family for money isn't fun, but hopefully you can win them over with your great seed production business idea. To avoid complications in future make sure to have a written agreement stating terms and details of the loan. You wouldn't want to fight with loved ones over money. Be sure to present your proposition in a professional manner. Show them your business plan, explain to them why they should invest in you, and answer all their questions. If someone is giving you money for your seed production business as a gift, be sure you obtain a letter from them stating the amount of money and that it was a gift. This is a precaution to avoid future complications and misunderstandings.

Getting a small business loan. When raising capital for seed production business expenses many entrepreneurs go this route. However before getting a loan you should be aware that there are many factors associated with business loans such as interest rates,

late charges and collateral. Local community banks are often a great place to obtain a business loan.



During a survey conducted in November 2013 in Northern Uganda, the Agribusiness expert of Ngetta ZARDI visited Stanbic Bank in Apac District and also Centenary Bank in Gulu and these were their charges for getting agricultural loans. Centenary Bank-19% interest rate on reducing balance, 0.5% for monitoring, insurance fee 0.85%, loan application 10,000/=, loan processing 2%, minimum loan is 100,000/= and maximum 20,000,000/=. Stanbic Bank- loan interest is not fixed but it ranges from 15-20%. Sometimes it also drops. The maximum is Uganda shillings 20 million.

Find a business partner and use their funds. Another way of raising capital for seed production business expenses is to develop a business partnership with a group which is already established in seed production business and is willing to invest in your seed production business. Make sure to present them with a persuasive explanation for why they should join forces with you.

Incorporating your small crop production business. Some established farmer groups in crop production may decide to incorporate their seed production businesses with an already existing crop production business one for the purpose of raising capital for seed business expenses. They can get some money from the crop production enterprise and invest in seed production as a business.



Raising money through production and sales of agricultural products

Finding a venture capitalist with an LSB. Venture Capitalists are professionals who invest in businesses that show a high growth potential. Not only do venture capitalists provide funding for their clients by investing in their business but they also provide valuable business advice and strategies. If a venture capitalist decides to invest in your business it demonstrates to others that they viewed your chances of success to be favourable. However once a venture capitalist decides to invest in your business they often have a say on how it should be run. Since venture capitalists invest in businesses that demonstrate very high and fast growth rates, many small businesses do not meet their criteria. For example a seed company investing in a seed producing farmer group.

An example of this is AFOSEN going into partnership with a seed company. The seed company provided sorghum seed, other advisory services for its production and also agreed to buy from them at an agreed price. AFOSEN produced the seed and later sold to them and also paid back the cost of seed acquired from the seed company. The seed company is a venture capitalist in this case.

Grants: grants can be given to a business group to finance its seed production activities. However there are usually specific criteria set that a group must meet before it is given a grant.

Training method



Brainstorm on the different types of capital sources and advantages and disadvantages of different types of capital sources and different ways of raising capital

- Q: How much of your own resources will be put into the LSB seed production?
- Q: How much will come from the members' contribution?
- Q: If you are going to look for a loan, how much money will you be looking for and what collateral security will you be able to offer for the loan?
- Q: What are the different kinds of self-investment?
- Q: What experiences do members have in regards to raising funds?
- Q: How do you raise capital as a group for starting a seed production business?
- Q: What are the advantages of self-investment and disadvantages of self-investment?
- Q: What are the advantages and disadvantages of other ways of raising capital?
- Write the answers on the flipchart
- Give time for feedback and other clarifications.

Note: Before raising capital for seed production business it is important that you first determine how much capital you need for your seed production. Create a business budget. Take in consideration that entrepreneurs often underestimate how much money is needed to run a business and fail to expect the unexpected. For example what if your equipment gets damaged and you need replacements...do you have a back-up plan? That is why it is a good idea to always have extra money put aside just in case.

Materials:

- Flip charts, markers, tapes and illustration charts

Advise/notes to the facilitator

- The facilitator should be able to clearly differentiate between internal and external sources of capital

Resources, bibliography

- IB Business & Management, a course companion (2009), Page 146-157 (Clark Edition)
- Lyve lexis Pleshette (2009) Starting-a-small business.com

Topic 3.2: Enhancing organizational management in LSBs

Key messages

- LSBs need to have a joint /shared vision.
- Understand how to formulate a vision for their seed businesses for the next few years; probably two to five years.
- LSBs understand the factors to consider while setting the vision and goals of the business.



During the farmer group selection exercise in South Western Uganda (under module 1, session 1.2.1) a number of aspects were considered. During this exercise it was realised that the LSBs had a number of visions. Examples of these included:

To have increased food security and eradicate poverty among the members by adopting modern crop and animal production. Kyazanga Farmers' Cooperative Society Limited

To improve the livelihoods of farmers through improved livestock management and increased agricultural productivity. Kazo Dryland Husbandry Agro-pastoralists Association

The current situation and context, values and objectives, ambitions and resources guide the process of visioning in the LSBs.

Session No	Session name	Duration
3.2.1	What is visioning in an LSB?	3 hours
3.2.2	How are LSBs organised?	4 hours
3.2.3	What is record keeping and its importance in LSBs?	3 hours

Session 3.2.1: What is visioning in LSBs?

Learning objectives

- LSBs understand their current situation
- LSBs have a clear vision of their desired future situation
- LSBs are able to set a SMART vision, goals and objectives



In a small village of Kabatanagi cell, Mwizi Sub-county, Mbarara district, six small groups of farmers were encouraged to form a high level organisation under the Area Cooperative Enterprise model initiated by Uganda Cooperative Alliance (UCA). These rural producing organizations (RPOs) together formed Kigaaga Farmers' Cooperative Society Limited/ACE with an aim of being able to get better markets and also access inputs cheaply. The two main objectives have been met and at the moment through partnership with Mbarara District Farmers Association (MBADIFA), an inputs shop is giving easy access to inputs.

Local Seed Businesses are unique farmer groups with entrepreneurship interest and commitment to make money from seed production and marketing. However, group governance remains central as strategic decisions may need to be made to move the seed business forward. Decisions are made jointly and faster for pro people leaders.

Content

A vision is an expression of what we want to see and how we would like ourselves to be in the future. It is a desired state that we aim to achieve. It is usually better, more successful, and more desirable than the present situation. Therefore a number of things are supposed to be done to support the group or LSB in achieving the set vision, goals and objectives.

A vision should be realistic and ambitious to keep the LSBs members on their toes planning and implementing their plans. It should be understood by all members of the LSB since their plans and actions affect it. Once individual farmers/seed growers join an LSB they should have a joint vision or a shared objective/goal. Visioning should be done based on the current situation of the LSB; factors such resource, business level, linkages/partnerships among others.

A vision guides the business and it is the basis on which the business goals, mission and objectives are made. Without a business vision, business success is at stake. A business without a clear vision is like a blind man leading another. Furthermore an LSB will gain support from members if their vision is strong and developed by all members of the group. Continuously the monitoring of the seed business performance is based on the vision set as well as goals and objectives.

A *vision* statement is the business's ticket to success as it provides the inspiration for your business's strategic decisions.

The importance of visioning

- It is important for business growth.
- It is important in setting priorities i.e. be able to select between enterprises

- It gives the LSB members the confidence to set priorities in their businesses.
- It helps LSBs choose partners to work with on justifiable grounds.
- It supports decision making in a group.
- Results into efficient and proper utilisation of the available resources in the group.

Factors to consider when making visions in LSBs

- LSB values.
- The context (an enabling environment)
- Ambitions.
- Resources.

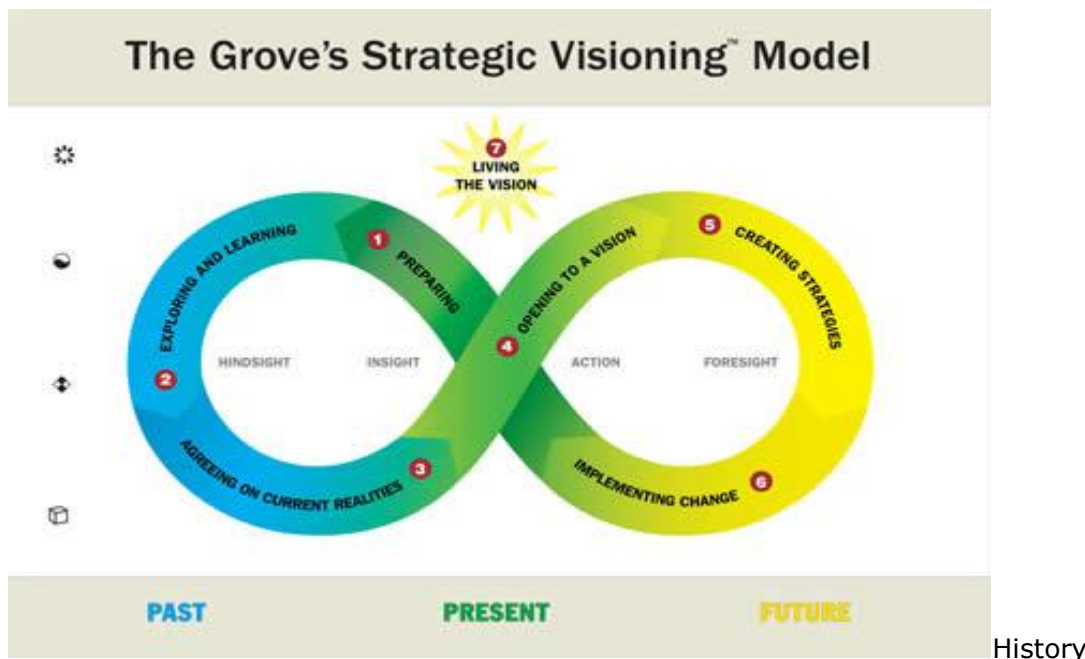
Qualities of a good business vision

A good business vision should be SMART;

- Specific: Unclear visions should be avoided when visioning business.
- Measurable: A good vision should be measurable and thus LSBs should not just set a vision just for the sake of it.
- Achievable: It is important that the vision, goals and objectives set in the LSBs are achievable.
- Realistic: While setting a vision it is important that the context of the business is fully analysed. These are the economic, social, legal, cultural and political factors.
- Time bound: It is necessary that the time factor is taken into consideration when doing the visioning of a seed business.

Therefore while LSBs are setting their business a number of factors should be put into consideration.

Strategic visioning process using Grove's model:



Step 1: History mapping: The LSB needs to look at their past performance and assess what has been both the facilitating and hindering factors to their previous performance. Here the group tells the story of their existence to date and it will help them to think through how the experience has been.

Step 2: Context mapping: In this step, the LSB should map out their current situation i.e. how they are doing their seed production and marketing activities. Basically the LSB needs to look at the social, economic and political factors, technological factors and assess how these have been affecting their performance. This should guide the LSBs to come up with the challenges they face in seed production and marketing.

Step 3: Visioning: In visioning, the LSB should see how it will move from their current situation to the desired future situation. Here the group looks at itself in its best way it could imagine. This brings out the essence of what they really want to become.

Step 4: Taking the “big bold steps” (setting the how): In this step the group looks at how it wishes to bridge the gap between where the group currently is and where they want to be. Actions that have many smaller, more detailed actions embedded in them for instance deciding on the type of seed enterprise to take on. **5:** The final move in the strategic visioning process is to take those ‘big bold steps’ and break them down into more detailed activities. Each bold step is broken down into its overall objectives, the team and resources that are available, the stages and tasks needed to reach the objectives, the success factors that will need to be in place to support the plan, as well as the inevitable challenges that can be expected to be encountered along the way.

Training method



After introductions, tell the story to introduce the subject.



Once upon time in the early 50s, there were two young men namely; Karebahare and Karebahaihi) in the village of Kashanku, in Kazo sub-county, Kiruhura district. The two young men were great friends while growing up and lived in the same village. Although the two were friends, Karebahare was always organised and obeyed his parent’s unlike his friend Karebahaihi. Karebahare was a very determined young man who knew that one day in the future he will turn into somebody important that society could rely on. This made him go to school and was always involved in a number of activities. On a contrary his friend was always misbehaving and fighting young children at school. He was even a thief yet his parents were willing to give him everything he needed. To cut the long story short, Karebahare became the president of Uganda while karebahaihi died at a tender age as result of poisoning after stealing a village witch’s food.

- Q: which message do you get from this story?

List the answers given on a flip chart and keep them until the end of the training. Constantly refer to them during the training.

Depending on the answers given above, ask some or all of the following questions.

- Q: What is a vision/a dream?
- Q: What is your vision as individuals?
- Write opinions on the flipchart.
- Q: What is your vision as an LSB?
- Write opinions given on the flipchart.
- Q: What is your vision as an LSB?
- Write the opinions given on the flip charts.
- Present the content (visioning)
- Q: Why is it necessary to envision your seed business?
- Present the content (why visioning?)



- Group discussions: Randomly divide the LSB members into two main groups depending on the number of participants present. Let them go through the strategic visioning process above and come up with their vision, mission, goal and objectives. They should also be able to highlight their foreseen fears/challenges



- Plenary: Let the two groups present their results, when the two groups have presented allow them to see how they can merge the work to come up with harmonised vision, mission, goals and objectives.

Advice to the facilitator

- Pay keen attention to the answers raised and analyse if they are in line with what an LSB should be (module 1)
- Consider the interest of different gender and age groups during this session especially the youth who are fast thinkers.
- Use group games and plays reflecting the roles of the different leaders and how they affect decision making e.g. elephants, lion, cat, tortoise, giraffe etc. look at the character of these animals and see what make them survive and succeed in the wild.
- Trying to draw the negative characters and transform them to positive characters to benefit the group. Exploit a character for a particular role in the group.
- Also in the summary be able to advise them on how to set a SMART vision for their seed business.
- During the training endeavour to probe further to find out what individual members' visions are and how they can contribute to the overall vision of the LSB.
- Make sure you ask the participating teams if they feel that the vision agreed upon takes care of all their concerns; both at individual and LSB levels.

Materials :

- Flip charts, ,markers, cards,

Resources:

- CIAT handbook, pages Module 1, session 2-Visioning
- http://www.grove.com/site/ourwk_gm_sv.html
- http://www.makemark.com/graphic_facilitation/services/strategicvisioning.php

Session 3.2.2: How is an LSB organized?

Learning objectives:

By the end of the session participants should:

- Understand basic skills in leadership and management of a group.
- Understand and value and respect decision making process in a collective way.
- Understand their organisation structure of a typical LSB.
- Assess the leadership style and the reporting structure in LSBs.
Know the different organisation structures there are and how they contribute towards the success of a seed business.



“*Obwebembezi burungyi hamwe nokukwatanisa nibwo bwa tuhisywa aha itwe nka Omutima gwa Ruhiira Group*” literally translated as good leadership and organisational management among members are the facilitating factors for the faster growth of the group said Mr Tindyebwa Johnson the chairperson of Omutiima Gwa Ruhiira when asked why the group seemed to progress at a faster rate compared to the others in the area.

Content

Importance of being in a group:



- Farmers learn from each other.
- Farmers can market their produce and buy inputs together.
- It eases organizing demonstrations.
- It is easier to organize saving and credit for farmers.
- It simplifies interpersonal communication among members.
- Powerful in changing behaviours, attitude and values.
- It can be used for decision making, negotiation and bargaining.
- It is a door for new innovation.
- It facilitates a broader coverage when implementing developmental activities.

Challenges associated with groups

- They can time consuming for instance in decision making
- Responsibility can be ambiguous.
- Can brood jealousy in case some of the members are progressing faster than others. Possibility of members being negatively affected by pressure from other group members.
- Can lead to loss of focus on an individual since there is a band wagon mentality.

LSB internal organizational arrangements, leadership and teamwork

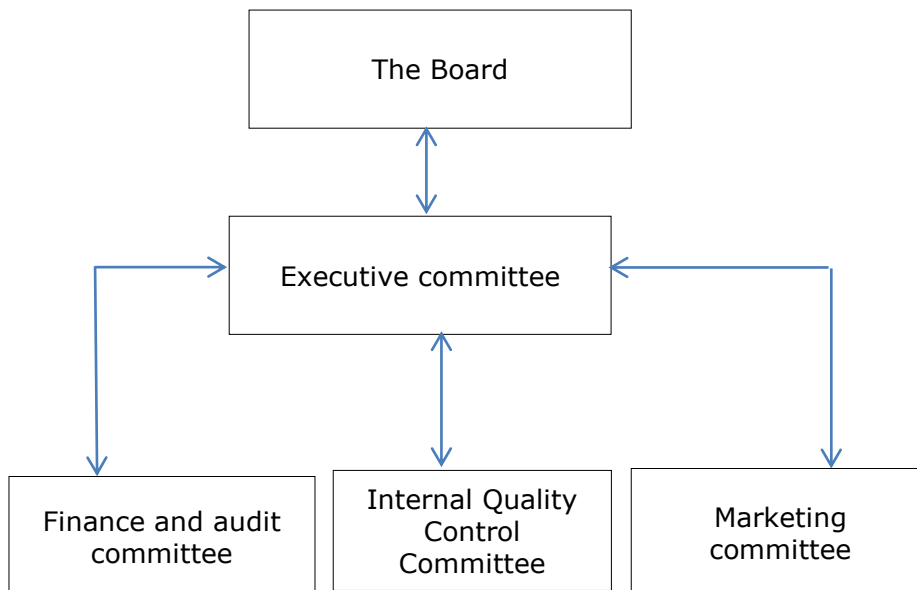
As much as possible, all essential functions and responsibilities of the enterprise should be shared among the members of the group on the basis of capability and interest. If certain essential skills are not available within the group membership, the enterprise may consider hiring and paying for persons with such skills.

Someone must be made responsible for each activity in the enterprise. These persons will carry out or supervise the necessary functions and report on them. The respective responsibilities and duties of the members must be fully understood by everyone in the LSB. Once someone is put in charge of an activity, he should be given the authority to carry out the required functions in consultation. As much as possible, there should be an

even distribution of tasks and responsibilities in the group (see figure below) in order to avoid overburdening few members or the leader with many duties. This is even more important where members may not expect to be paid for the group tasks they perform. The nature of cooperation among the group members will be the key to success of the business. The members should cooperate with each other in sharing work,

Organizational structure of a typical LSB

An organizational structure shows the hierarchy of management and the reporting structure in an LSB. The organizational structure should be as easy as possible such that it is easily understood.



The above figure shows an organizational structure of some of the LSBs. The variation in the organizational structures of LSBs is brought about by the level of growth among them; for instance those at the level of a cooperative have the board at the top while the small farmer groups have members at the top. However a typical LSB has four main committees; the executive committee, the finance and audit committee, internal Quality Control Committee and the marketing committee.

Roles and responsibilities

Board members

- These are selected/appointed members who should oversee the activities of the LSB.
- They offer advice to the LSBs.
- The board should take action in case a committee or a member on any of the committees acts contrary to what is expected of him/her.
- In cases such as embezzlement of funds, they advise the LSB accordingly.
- Participate in the AGM

Executive committee

Composition: The Executive Committee's composition is determined by the Annual General Meeting which elects its members. It is normally composed of 5, 7 or 9 members who must serve a term of two years renewable for two terms only

- Defines mission /vision, strategic objectives and policies of farmer group and ensures that plans conform to them.
- Reviews and approves business plans & budgets before presenting to AGM.
- Supervises management in the execution of approved plans.
- Mobilizes resources for the group businesses on behalf of the members.
- Appoints, appraises and disciplines management.
- Determines rate of interest, on management's advice.
- Monitors the activities of Committee sub-committees.
- In some cases together with the staff, draws up long term and annual plans.

Finance and audit committee

- In charge of keeping LSB finances from both internal and external sources.
- Approves loan applications.
- Disperses credit approved members.
- Monitors members with loans and reminds them to pay.
- Reports to executive.
- Reports farmer group performance to the Executive committee.

Production and internal Quality control committee

- Assesses the LSB foundation seed requirements for each member and makes enquiries/books in advance before the start of the season and orders the seed in time.
- Coordinates the purchase and delivery of foundation seed from authorized providers/institutions.
- Monitors and inspects farmers' seed production fields and offers advice where necessary.
- Prepares and keeps records of planting every production season.
- Keeps record of the different cycle activities like planting time, date and frequency of weeding, inputs used and quantities, volumes produced, trainings received etc.
- Together with the marketing committee, coordinates bulking and physically examines all seeds delivered to the group store by members to ascertain purity and trueness to type.
- Makes seasonal and annual seed production plans for the groups' activities based on the potential market and storage inventory established by marketing committees.
- Liaises with external quality assurance service providers like NCSC/MAAIF and district agricultural production office for field inspection.
- Prepares monthly, quarterly and annual progress reports to the executive committee.

Marketing committee

The committee is usually made up of three members and they are supposed to do the following tasks to be able to contribute to LSB seed business growth;

- Advise the group on setting season's production targets.
- Look for markets on behalf of the group and negotiate with buyers for a good price.
- Communicate with the members to bring their products to the store as well as with the buyers to buy the seed.
- Coordinate the bulking of seed from all members of the LSB to the store or collection centre.
- Calculates the profit of enterprises and shares the results with the group.
- Market intelligence i.e. do market research on behalf of the group.
- They make marketing visit reports and presents to the rest of the group.
- Looks for quality inputs (e.g. seeds) and organises buying as a group.

- Lists contacts and locations of all customers and keeps such records.
- Together with the Internal Quality Control Committee, checks the produce quality (e.g. moisture content, cleanliness, packing, grading) after harvest and before delivery.
- Collects and handles money obtained from the buyers.
- Monitors the standards, markets, prices etc.

Setting up of committees

The executive committee is exclusively democratically elected where as other committees either can be elected or appointed. Relevant skills and experiences should be given key attention to when selecting or electing a member to be on such committees. Members on these committees work on a voluntary basis but the group should have an operational cost budget to facilitate such committees in implementing the activities of the LSB.

Communication and reporting structure

Communication and reporting are important aspects in enhancing LSB organisational management. It is necessary that each group has a clear and general agreed upon communication, reporting and feedback strategy.

Categories of business organizations

The LSBs are mainly organised in farmer groups, associations as well as cooperatives; and there are advantages and disadvantages associated with working with such kinds of organisations.

- **Farmers groups:** This is an organized group of farmers that has a relatively low number of members very often ranging from about 15 to about 40 people. In such an organisational setting the group is easily managed and there is cohesion among members. However there is loss of membership and low commitment. Farmers groups due to their small size face a challenge of resource mobilisation which affects the business objectives.
- **Associations:** This is an entity comprising of members in a given area and is usually legally registered either at the sub-county, district or at national level. It is bigger than a farmer group and usually is recognised in society and to some extent is able to mobilise resources.
- **Cooperatives:** Cooperatives are business organisations formed by members who come together to share their benefits. They are financed by members who hire management to run the activities of the cooperative. Usually the Cooperative has an advantage of resource mobilisation whereby the many members buy shares and continuously participate in the savings and credit process.

Training methods



The facilitator mentions that there have been a lot of stakeholders advocating for farmers to be organised in groups in order to access a number of services. ISSD Uganda is not any different as it also works with seed growers that are organised in groups.

- Q: What experiences do you have by being part of groups producing seed as a business?
- Q: How did you form your farmer group?
- Q: How are decisions made in your farmer group?
- Q: What are the roles of your main committees?
- Write the answers given for the different committees and compare with those listed above. Make additions and the necessary clarifications especially for the Internal Quality Control and marketing committees.
- Q: What challenges have you been facing as a group?
- Q: How do you think you can overcome the challenges highlighted above? Which measures can you put in place to have a well organised LSB?

Note down the most interesting suggestions (both positive and negative) on a flip chart.

Advice to the facilitator

- The facilitator should bear in mind that group organisational development is a process and should assess how far the group has come.

Materials

- Flip charts, markers, organogram samples, role plays

Resources

- Group dynamics training guide by Acellam John Baptist Trainer and Lead Consultant baptist.spring@gmail.com
- FAO-Seed; Afghanistan Manual-Chapter 9; Managing your business

Session 3.2.3: What is record keeping and why is it needed in LSBs?

Learning objectives

- Understand the meaning and importance of keeping records
- Know how to keep records and the types of records to be kept



Kyazanga Farmers' Cooperative Society, a local seed business that is located in Lwengo district, is one of the progressing LSBs involved in bean seed production as a business under the ISSD programme in South Western Uganda. It is made up of 40 active seed growers and on average it produces about 20 metric tonnes of seed per growing season. Documentation/record keeping has been consistently done on production and sales data. This has helped the group to assess their season's performance and be able to plan for the proceeding season. The individual members of the group are committed to seed production and keep records of their costs of production which make it easy for the LSB to gather information in one record ledger that is shared partners.

Content

Record keeping and management

Record keeping in agriculture is the practice of documenting and updating different information that is relevant/crucial for the success of the business or farming/business entity. Record keeping is of great importance to any business; whether it is seed, agriculture, retail shop etc.



Importance/advantages of record keeping and management

1. It assists you in preparing your financial statements quickly and accurately.
2. It provides information to enable the control of cash in the business.
3. It provides management information to base business decisions on.
4. It contributes promptly to assessing the financial situation of the business at any time.
5. Saves a lot of time and effort.
6. Keeps a good track of the costs of staff and their performance.
7. Measures the business performance against the projections that were originally set down in the business plan.
8. Highlights quickly areas where problems could arise and enable remedies to be put in place.
9. Fulfils the obligations as to taxation law.
10. Assists you in calculating how much tax you have to pay.
11. Assists in providing information required by your bankers.
12. Helps in detecting thefts within the business itself.
13. Provides valuable information and details for the future sale of your business where that is required.
14. Increases the chances of the business operating and achieving success.

Types of records to be kept in an LSB

- Basic information about the group.
- Trainings received from the different partners, success and challenges.

- Production records (Quantity of seed planted, labour costs, fertilizer costs, pesticides/herbicides used etc.), yields per variety.
- Member seed supply format.
- Sale/Customer information.
- Income of the cooperative.
- Expenditure of the co-operative.
- Member share.
- Farmer Personnel Information.
- Seed producer and Sale information.

Training method

Ask the participants to share their experiences regarding record keeping in the LSBs

Note the most interesting (positive and negative) on a flip chart and depending on the answers given above; ask all or some of the following questions.

- Q: What is record keeping?
- Q: What is the importance of record keeping? Here the discussion should be interactive where members suggest answers (Write answers given on a flip chart and go through them with the rest of participants seeking clarification where necessary)
- Group exercise: Divide participants in smaller groups using the random sampling. For instance let members count 1, 2, 3, 4,....., n depending on the number of participants present for the training
- Q: List and discuss the records you have been keeping at LSB level, what challenges have you encountered in the process of record keeping.
- Plenary presentation of the results. Allow questions, clarifications and feedback.
- Present the content (types of records), show the records ledger, and explain the contents as per type of records).

Materials:

- Flip charts, markers, record ledger, seed crop budget analysis, cards

Advice to the facilitator:

- Place emphasis on individual participants/farmers keeping records to be able to have good records at group level.
- Stick to seed records related and beneficial to the LSBs in their business.
- Emphasize consistent recording and updating.
- Keep in mind that records should be as simple as possible.


Resources:

- CIAT handbook (chapter 5.4)

Topic 3.3: Improving LSB Governance

Key messages

- Monitoring of LSB performance is the responsibility of all members, and should be undertaken periodically.
- Monitoring performance can be done at individual, group and community levels. At individual, LSBs want to know how their members are progressing in terms of their commitment to quality seed production. At group level, monitoring looks at the general performance of LSB in terms of the building blocks or success factors. At community level, monitoring looks at access to seed by farmers and customer satisfaction.



"We have many different animals in wild. Elephant, giraffe, tortoise, cat, hyenas, and lions among others. These animals play different roles, benefiting our environment. Similarly in our LSB group, we realized that, the characters of our members are like various animals in the wild. Some are aggressive, others giant, intelligent, slow, quick acting while others are protective. From the governance training by ISSD, we have learnt how to exploit these unique characters to benefit the development and sustainability of the group. Allocating characters to a suitable duties or roles has helped us succeed as a group". Says Mr. Angelus Ocen, the chairman Aye Medo Ngeca LSB in Amwoma Sub county Dokolo district.

Session No.	Session name	Duration
3.3.1	How to enhance governance in a Local Seed Business?	1Hr 30min.
3.3.2	How to use monitoring as an accountability tool?	1Hr 30min.

Session 3.3.1: How to enhance governance in a Local Seed Business?

Learning Objectives

At the end of the session participants shall be capable of:

- Applying the principles and enhancing practices of (good) governance to their LSB;
- Introducing practical ways of ensuring equal participation (men, women, youth and disabled) in their LSB



Members of Amadrimaa LSB would like to remove their chairperson as they think they are missing opportunities for developing their business and selling their product. *“Our chairperson is not guiding the group well, he is not communicating or calling for meetings so we don’t know what we’re up to”* says one member, *“the biggest problem is that he doesn’t connect with our partners so they also don’t know who we are, where we can be found and what we are doing”, it’s a pity because we are proud of producing seed of good quality”*.

Content

Who decides on which varieties to grow? Who decides which partners a LSB should approach? Who decides how to use or reinvest the profit a LSB? Who decides on new membership of the LSB? As a LSB grows and becomes more complex, the list of people who make decisions will become increasingly difficult to sort out if some kind of structure is not in place. For a LSB to grow successfully, the roles and responsibilities of everyone involved need to be outlined and understood.

There are two sides of governance: what and how to do something (or not to do) and how decisions are taken and who takes them. The best way to understand and assess governance in a LSB is to discuss and assess principles like participation, transparency, responsiveness, consensus-orientation, equity, inclusion, effectiveness, efficiency, trust and accountability.

Each LSB will have a different governance system. This system includes e.g. how decisions are made, how much distance there is between members and the leadership, and how profits are managed. In small LSBs, it is easy for all members to be involved in day-to-day decision-making. However, as membership increases, representatives are usually chosen to manage the LSB on behalf of members and general meeting should be held regularly for members to vote on the budget, the business plan, on committee members, and other general matters.

Constitution

Of course for a farmer group to be officially registered a constitution is compulsory. The constitution is in fact about governance principles of the LSB guiding how the LSB is organized, it’s the “law” of the farmer group. It defines the role of the executives, how often an assembly is called, how to become a member (subscription fee, annual fee), assets and property management and even how to dissolve the group.

Trust

One of the most important conditions for a well-functioning and successful LSB is members' trust of the leadership and a strong sense of ownership. Leaders need to be responsive to members' needs, and systems should be established to allow this to happen, for example, through participatory decision-making and strong accountability of leaders to members through regular election of officials and/or term limits.

For a LSB to grow, farmers and clients must trust it. When farmers lose trust in the provider of their seed, they make a logical decision and find another source for seed, possibly even saving it from last year's crop. LSBs must always keep the best interest of the farmer in mind. One simple way to test this goal is by asking yourself the following question about your products: "Is every single package of my company's seed good enough to plant on my own family farm?" If you cannot answer "yes" to this question, then it is not fair to ask your customers to plant your seed on their families' farms.



Checklist of governance questions

Below is a simple checklist of questions that will help you think about how trust impact a LSB's everyday operations.

A. Seed Quality:

- Does our LSB have strong quality standards?
- Do we fully and completely adhere to our quality standards?
- When we have seed that does not meet our quality standards, do we remove it from our saleable inventory?
- Do we ensure that all quality tests are accurate? Do we take steps to double-check our testing processes?
- Do we communicate the LSBs quality standards to all farmers and ensure that they adhere to them?

B. Farmer and agro dealer communication:

- Is all of our seed truthfully labelled?
- Do we communicate our quality standards to the farmer and to the agro dealer?
- Are we truthful and honest about where, when, and how our seed should be planted so that a farmer can achieve the maximum value from the seed he or she has purchased?
- When we have a problem with our seed, are we open and honest with our customers and agro dealers about it?
- Are we honest with agro dealers about seed availability so that they have the information they need to make their own business decisions?

C. Communication with members:

- Are we open and honest with our members about our business?
- Do we share both the successes and the failures with our members?
- Do we openly acknowledge and commend trustworthy behaviour?
- Do we talk frequently with our members about the importance of earning the trust of the farmers and agro dealers we serve and discuss how we can best do this?

Participation:

Participation is an active process by which community people influence the direction and implementation of a development project. Participation includes the involvement of

people, men and women in decision-making processes, gender sensitive planning, implementation, sharing of benefits and costs, and taking part in the project activities and evaluation. Factors that hinder seed business activity participation are:

- Members of the LSB are not fully involved in all the activities of the seed business.
- Cultural conflicts in the community; poor leadership; political interference; ignorance coupled with illiteracy; lack of commitment.

Inclusion

Inclusion is important for practicing good governance in your LSB:

- Promotes democracy and involvement.
- Contributes to good decision-making.
- Reinforces accountability and transparency.
- Involves and empowers beneficiaries.
- Creates unity and a sense of equity among community members.

Training methods

- Ask participants and explain what governance is and why it is important for LSBs. Do they know the content of their constitution; is the constitution also about governance?
- Divide participants into groups of 4 or 5 people. Give each group a big sheet of paper and markers. Ask participants to list governance principles in one column and how these principles are applied in the LSB in the second column, guide them in their discussion e.g.:
 - Q: Does every member know what's going on in our LSB?
 - Q: Do we organize assemblies often enough?
 - Q: Does everybody know how much profit we are making and what is done with it?
 - Q: How can we make sure that there is more trust inside the LSB and from our customers and agro dealers?
- In the last (third) column they list how the LSB can improve its governance.
- The results are shared and discussed in a plenary meeting. The result of the plenary meeting is a list of governance improvements for the LSB, to be discussed and monitored at the general assemblies.

Materials

- Flip Charts, Note Books, markers, Masking tapes

Advice to Facilitator

- Understand the LSB leadership and avoid pointing fingers at leaders.
- Encourage members to participate.
- It is better to use examples of animals as members or leaders in the group may be defensive when they realise that the situation you are expressing directly implicates them.

Resources

- Sean Callery, *Party Games*, p. 162, (2006), [ISBN 0-00-721397-2](https://www.isbn-international.org/view/title/115714).
- Use Chinese whisper game on http://en.wikipedia.org/wiki/Chinese_whispers
- <http://www.businessdictionary.com/definition/accountability.html#ixzz3Jh0VWbqe>

Session 3.3.2: How to use monitoring as an accountability tool?

Learning objective

- At the end of this session participants will understand the purpose of monitoring, what key elements of LSB performance they need to monitor, and responsibilities for monitoring at LSB level.



Okweyamba LSB located in Mbarara is engaged in producing seed of beans and potato. After doing a market analysis, the group selected these enterprises as the ones that were considered to have local demand, and therefore could be profitable for the group to engage in seed production. The group developed a production plan, procured 200kg of bean and 160kg of potato foundation seed from NARO. At least 20 members were mobilized to engage in seed production in season 2013A. Given the level of investment, the group went ahead to establish market contacts with potential buyers. The group signed a contract with seed company B to supply 2 tons of bean seed for season 2013B. Some agro-dealers in Mbarara town also booked 1 ton of seed potato for their clients for season 2013B. The group had received training in technical seed production, quality assurance, postharvest handling and marketing. Towards the end of the growing season, the group leadership moved around to check on the farmers to mobilize them in time for seed bulking. To the surprise of the leaders, of the members who had received foundation seed, only 5 actually planted the seed and even the planting standards were not adhered to. Some of the 'seed' gardens for beans had been inter-planted with maize. The group had no seed to sell that season, and had to pay penalties of false contracts.

Content

Monitoring is a periodically recurring task already beginning in the planning stage of a project or programme activities. Monitoring allows LSBs to assess results, processes and experiences to be documented and is used as a basis to steer decision-making and learning processes. Monitoring is checking progress against plans. The data acquired through monitoring is used for evaluation.

Accountability is an obligation of an individual, committee, leaders or organization to account for its activities, accept responsibility for them, and to disclose the results in a transparent manner. It also includes the responsibility for money or other entrusted property.

Leadership generally requires trust and honesty from the person given responsibility of a given post in the group. Members of the LSBs have different characters and all these should be able to benefit the group depending on how it is tapped.

Importance of monitoring

When monitoring and evaluation is undertaken on a continuous basis, monitoring empowers LSBs with "real-time" information to adjust as necessary. In particular, M&E:

- Motivates you to work hard in order to achieve your goals. For example if you have a production target of 1tonne of seed, periodic monitoring will help to gauge if you are on track or not.
- Helps you to make better decisions for example on what to focus on, given the experiences or challenges realized during the monitoring process.



- Alerts you if you lose track and need to change something in your group.
- Helps you do better planning of your activities and how to use your resources. For example in doing business planning, monitoring information helps you to make better projections of your business.
- Helps to share information within your group, so that all members are aware of the performance of the business, the profits they have earned.
- Helps improve the governance and accountability of the leadership. Leaders give an account of what they have been doing and what they have achieved, they also get feedback from the members on where they need to improve.
- It enhances learning within the LSB. For example field visits by the group support mutual learning.
- Supports joint ownership of planned and implemented activities without pointing fingers at leaders only.

What should monitoring look at?

LSB monitoring should focus on all components of LSB performance:

1. Achievement of set targets – LSB performance targets as set in the M&E matrix and business plans.
2. Progress against success factors – LSB success factors of market, unique product, marketing strategy, access to production inputs and services, quality seed production, LSB governance and land.

Training methods:

At the onset facilitate LSBs to;

1. Develop and agree on performance targets - Use M&E matrix tool (Module 1, topic 1.4)
2. Develop business models and business plans clearly showing their projected business performance (Module 4, Topic 4.2)
3. Review the success factors and score their current position against each. For weak scores, LSBs need to develop plans for improvement (module 1, topic 1.3)

Every six months, facilitate LSBs to conduct self-assessments and reflection against their set targets (Refer to topic 3, session 3 on the how to).

Materials

- flip charts, markers, masking tape, reference documents

Advice

- Use tools to train LSBs on how to monitor their activities and progress. Information obtained from LSBs on performance forms part of the organizational M&E reports, thus it's critical to engage LSBs in understanding M&E and its importance. This session is also important for technical teams who are engaged in monitoring LSB progress, thus the responsibilities need to be clarified in the monitoring tools.

Topic 3.4 Promoting gender sensitive LSBs

Key messages

- Gender integration in LSBs should focus on:
 - Increasing women and youth production and access to quality seeds of varieties that they prefer;
 - Improving business opportunities for women and youth in the seed business (strengthen women and youth seed entrepreneurship in local seed businesses).
 - Enhancing women and youth participation in decision making and leadership of LSBs.
 - Enhancing women and youth access and control of land and financial resources for seed production



Oribchorib cing women's group: involving men in their seed activities

Oribchorib cing women's group was composed entirely of female members and is working with an NGO. They were recommended by NAADS and other key stakeholders. They complied with the selection criteria and became an LSB. The purely women group realised during the interactions, that they needed to involve men in some activities. They hired men to provide the services, but it turned out they were not making profit. as The profits were being spent on paying the men for services. They were also fixated on free hand outs and were expecting these free hand-outs rather than self-investing. The lesson learned from this is that the best groups of LSBs are mixed gender groups.

Session overview table

Session No.	Session name	Duration
3.4.1	How to strengthen the roles and capacities of women and youth in LSBs?	3 hours

Session 3.4.1: How to strengthen the roles and capacities of women and youth in LSBs?

Learning objective

- At the end of this session participants from LSBs shall be capable of promoting the roles that women and youth can play in successful LSBs and developing strategies for more inclusive LSBs



Women seed entrepreneurship constrained by lack of access to credit

Maria Nahabwe, a member of Kalera Farmers Marketing Association LSB when asked why she was booking only two kilograms of bean foundation seed (the input required to produce quality seed) from research for season 2014B said:

"I have not yet sold my millet and thus cannot afford to book more quantity of foundation seed than this. Furthermore, I can't afford to hire land in case I needed to buy more foundation seed, because it's expensive. As a household we own only 3 acres of land which partly hosts the 0.5 acres of the banana plantation. This is not enough land to do all we would like to do in the farming business. Currently my husband is considering planting part of it with coffee seedlings provided under the NAADS programme".

She further explains: "This land belongs to my husband and he makes all the decisions on how to use it as well as its distribution to the different farming enterprises. I can't decide anything concerning land and on several occasions I have wished I had my own land that I would comfortably use for seed production. As a group we have a credit and saving scheme but the money we have there is still little and it is not sufficient for all of us. In addition, women are not considered for borrowing, as priority is usually given to men whom they are sure will pay back since they use the borrowed money to run several businesses, including produce trading".

Content

Women in rural Uganda generally have low income levels, are not decision makers on resource allocation and use, and very often do not share the benefits of some value chain activities even after investing so much labour. Men own, control and make all decisions regarding land, inputs such as seed, fertilizers and chemicals. Men also attend extension trainings more than women, have more access to credit, control marketing decisions and utilization of income. To a smaller extent, women market produce to local markets and may spend on household consumables, such as salt, soap and paraffin but must account to their husbands. Women are not allowed to make personal expenses unless they have permission from their husbands. Men, on the other hand, can spend without necessarily consulting their wives and, in cases where women are not aware of product prices and quantities marketed, men may not even account for expenses made.

Women do much of the agricultural production for both men and women preferred crop enterprises. A lot of the women's production is eaten at home although they sell a surplus for income, which they invest in domestic necessities. On the other hand, men are more income oriented and sell most of their crops.

Access to credit

There are many female farmers just like Maria from the case above in the LSBs who face similar challenges in their seed business ventures. Limited access to credit leaves a female seed entrepreneur vulnerable to selling the seed produced as grain shortly after harvest. Some female farmers wait to sell but give up too soon due to the desire to meet their pressing individual household needs such as school fees and health care. Other women are not able to buy foundation seed at the right time. Even when bookings are made some LSB members fail to pay. They are not able to mobilise enough money for what is needed for the booked seed. Access to credit would support female seed entrepreneurs in managing their seed businesses, but formal credit is considered to be expensive, and there are few financial institutions giving agricultural credit.

Saving mechanisms within the LSBs

Women have not been particularly active in saving within the LSBs. The mechanisms of resource mobilisation did not favour women since the saving frequency was high and thus required one to be earning regularly which is not the case with the smallholder women farmers in farming businesses.

Traditional ways of saving among farmer groups are always prioritised for other general investments and for meeting household needs such as school fees. It is difficult to channel such financial resources for new initiatives such as buying foundation seed. Short and long term investment strategies have been developed and LSBs are expected to have savings for different investment targets on a periodic basis. Some of these include; the "seed box" (saving to buy foundation seed); the "oxen box" (saving to buy oxen) among others. Such strategies are agreed upon based on the resource capacity of both men and women within the group. These investment boxes have been found to be convenient and affordable and will not put pressure on the entire household in meeting the other basic needs along-side savings. The period for mobilising such resources is long enough to allow households to contribute money to a specific box at their convenience.

Purely women, youth or mixed LSBs?

Most LSBs are mixed in composition but not balanced. Some started as women groups, but during the course of the programme these women groups invited men to join them (see example of *Oribchorib cing* women's group above). Other LSB have installed clear conditions for participation of men and women. Like a LSB in Sengingilo: according to the bylaws/constitutions of this group both the husband and wife need to be group members. Even though they may have separate fields at household levels, they give each other practical support, they take decisions together and attend the trainings together.

Another example is *Kitgum* LSB. It started as youth group but later on the youth realised that they needed more guidance from elders. The membership opened up to an age group just above the youth age (youth are up to 25 years old). They now realise that they take better decisions and are growing faster. They also benefitted from the fact that the "new" youth that came in had higher ambitions and more acreages for seed production.

Gender issues in seed production

Through ISSD there seems to be more focus on market opportunities for seed than on male or female preferences for particular crops. But difference in preference exist. In Kazo LSB, men were mainly interested in pasture seed while the women were interested in

beans, or as the women said, *“you can’t eat pasture seed.”* Some of the key cash crops are easier to weed and process, these are liked more by men.

The access of women to land is limited. Its control is left to men. Unless the husband gives the woman the authority she cannot use the land. This also highlights the need for the household approach so that both man and woman are aware of the benefits of seed business. There where the husband is dead, the brother takes charge of the land, and the understanding of the brother may be limited of seed businesses.

Generally there’s limited participation of youth in seed production and in agriculture in general. The key reasons include land ownership, limited access to financial services and limited awareness among youth. Land tenure issues continue to impede many youths from engaging in agriculture and seed production in particular due to the fact that the majority of youth are using land without exclusive ownership rights. In addition, youth are less likely to access credit which should facilitate them to participate in seed production.

Youth are not interested in seed as seed, but in the money that comes from seed. For them the focus is on enterprises that give quick money. Youth are mostly interested in *simsim*. At the same time there are also benefits of engaging youth in seed production as they are more dynamic in finding markets and capable of linking with ICT.



Participation of women in leadership and governance

The participation of women in leadership positions is very low. Cultural norms, values and associated social expectations for women confine the majority of them to non-significant decision-making positions. Women’s participation in leadership positions also gets resistance from some men members within LSBs. Consultations held within LSBs revealed that women members of LSBs are predominantly occupying the positions of treasurers or members within specific committees which have nothing to do with decision-making. Consultations made further revealed that there is a silent resistance from men though they verbally sound supportive.

Another issue which requires more attention is the governance of the LSBs. Some of them are built around people with strong personalities. These can make decisions or sway the group without extensive consultation. The committees are largely symbolical without any information regarding the future of the group. When asked about their constitution, only one or two persons are familiar with its content. . Other LSBs are governed in accordance with the constitution, but still fewer people have a general understanding of the functioning and management of their LSBs. As an example of possible ineffective participation is Agetereine LSB, which is led by a woman (the chairperson), while the coordinator of the group, who seems to be an informed person within the group, is her husband. This could contribute to ineffective participation of other members because all decisions are at risk of being taken by only the chairperson and her husband. So far this situation does not exist in other LSBs.

Household approach

The Household Approach is a strategic way to encourage men and the entire community to facilitate and support women’s participation in seed production. It also facilitates mutual support within households among spouses by sharing some domestic responsibilities which culturally are reserved to women, and joint decision making. Households prepare “business” plans jointly. This feeds into the bigger business plan for the whole LSB.

Developing inclusive LSBs

This involves increasing the participation of women in leadership and enabling them to actively participate in LSBs and in decision-making at household level.

- Conduct leadership training for LSB members. All women need to participate in the training to ensure a pool of potential future women leaders.
- Increase the number of women on leadership committees, both in the executive and sub-committees. Integrate role plays when hosting field days and allow both men and women to participate equally.
- Seek for collaboration with Community Based Organisations, for example to use the GAL approach.
- Intensify trainings to impart skills and target women to attend trainings. Due to women's low literacy levels, there is a need to diversify the training methods to include study tours or practical methods.
- Support women's access to labour reduction/saving technologies such as ox-plough, ox-carts to enable women to invest time in seed production.
- Work with LSB groups to promote participation in seed markets. Based on market needs, women should be given the opportunity to select priority seed enterprises that they wish to develop as LSBs.

Source: Edidah Lubega Ampaire, 2013. Gender study for seed sector development in Uganda. ISSD Uganda.

Adapting training methods to the specific needs of women

It is important to adjust the time and location of the training such that women can participate fully in them. Given their other reproductive roles, locations need to be chosen near the LSBs member households to ensure convenient access for women willing to participate in the training. The time of trainings is also to be adjusted; trainings should start at around 11 or 12am when the women have completed their household activities.

"The only women that came to our training were widows or young unmarried women".

More efforts should be taken to make sure that women also attend training with groups from other areas. To enable this, the leaders of the LSB should visit the husband to explain and also state that the women are under the supervision of the LSB (or ISSD). This has indeed improved the participation of women in central trainings and twinning visits.

Training methods

Please refer to the Household Approach and GALS manual for specific guidelines on how to address gender issues in training. Below only a general way of addressing gender in LSBs is presented, specific (GALS) tools should/can be used where needed.

During the first plenary, present the objectives of the meeting and the final result (a strategy for more inclusive LSBs). Then, present some of the case studies in the text above and ask participants to comment while reflecting on their own situation.

To make sure that people can express themselves freely, participants are divided into groups (women, men, youth, if possible and depending on past experiences with the LSB also mixed groups can be used). Discuss the following questions:



- Q: To what extent are youths and women represented in the work of your LSB? How? What are their current activities? Are these profitable?
- Q: How do women and youths participate in LSB decision-making and planning?
- Q: How can we better involve women and youth in the activities of the LSB?
- Q: What are the specific needs of youth and women? What do they want to do, what do they want to learn, which crops are they interested in?
- Q: How to improve access of women and youth to financial resources?



The results are discussed in a plenary and the result is a list of actions on how to make the LB more inclusive and (SMART) indicators:

Activity	Who will take the lead?	Who will participate?	How do we measure progress?

Materials:

- Black or white board or flipchart, markers

Advice to the facilitator:

- Appreciate cultural differences and know that it is important to them. At the same time you need to make the LSB realise that each person has his/her own contribution. The different roles appreciated provides the foundation for bringing in new ideas that they had not thought of. That way they would absorb these new ideas. Example a "having a female chair person does not mean that the women is the chair person at home."
- If the facilitator is from outside, it takes time to learn and understand the cultural dynamics. Slowly address the issues, take a step at the time.
- Twinning is a good way of addressing gender issues. Especially where the gender barrier is very big. Providing exposure.


Resources

- Gender Action Learning Systems (GALS) manual & toolkit

Topic 3.5: Developing a business model and a business plan for a Local Seed Business

Key messages

- 1) Help farmers to plan their seed businesses with realistic projections aligned with the total resources they have.
- 2) LSBs being able to project the resources that they need in the seed business and where to get them from and the costs involved.
- 3) LSBs will be in position to set realist goals for their businesses and study the environment in which they operate. This will give their businesses a clear direction.
- 4) LSBs understand the clear steps they need to take to meet their set targets and objectives.



A farmer group in Masha sub-county has been in the farming business for over 10 years without a business plan. The group has been doing fairly well but with no clear results or success. Most of their members were comfortable with the situation at hand until one day when about five members of the group attended a training organised by a new development organisation in the area. One of the topics covered was business planning. After receiving the training the five members shared what they had learnt in the training in their next monthly meeting. The group was happy with the news they received and lobbied for an in depth training in the same for all the group members. This was granted to them and after about four months, they developed a business plan which they claim has created a great change in the way they have been doing things and hope for the best in their farming business. The farmer group has managed to improve its planning and production activities and now it is a success story with the slogan that "if you do not plan, you plan to fail."

Session overview

Session No	Session name	Duration
3.5.1	How to develop a business model for a Local Seed Business?	5 hours
3.5.2	What is a business plan and why do we need a business plan in a seed business?	5 hours
3.5.3	What do you think will be the expenditure and income from your seed business?	5 hours

Session 3.5.1: How to develop a business model for a Local Seed Business?

Learning objectives:

At the end of the session, participants should be able to

- Develop business models for their local seed business.
- Understand the relevance of a business model to a local seed business.
- Understand the 9 components of the business model and be able to complete it.
- Understand how to develop a seed business model using a Business Model Canvas (BMC)
- Know how often the Business Model Canvas can be updated.



Figure: A business model canvas developed by Kyamulama Mixed Farmers' Group in Lyantonde district during a business planning training in July 2013.



"This is such an interesting tool in the seed business" exclaimed one of the members in the business plan training as they filled in and completed the business model canvas.

A business model canvas is one tool that has been introduced to LSBs to help them have a snapshot of their business before going down to develop a detailed business plan. Farmers have appreciated it as an innovative tool that makes them envision their seed business in short time and as quickly as possible. The 9 building blocks make it possible for LSBs to have a quick picture of their business in its entirety.

Content

A business model is a business plan showing how it competes, uses its structures, relationships, interfaces with customers, and creates value to sustain itself on the basis of the profits it earns. It is a handy way to fine tune your business strategy and therefore the LSBs are able to envision their seed business with a firm and reliable analysis made.

Importance of a business model



- It helps in producing the right product that will meet customer needs and preferences.
- It helps in envisioning the key activities and resources needed in carrying out these activities.
- It is good for strategic planning and defining your business niche.
- The business model canvas forms a basis for business plan development.

The Business Model Canvas diagram (business development process)



In each building block a number of questions are asked and when answered, the business model will be generated.

Steps for completing the business model canvas.

1: Value proposition: Value proposition answers the following questions

- What value do we deliver to the customer?
- Which one of our customer's problems are we helping to solve?
- What bundles of products and services are we offering to each Customer Segment?
- Which customer needs are we satisfying?

2. Customer segmentation

- What type of relationship does each of our Customer segments expect us to establish and maintain with them?
- Which ones have we established?
- How are they integrated with the rest of our business model?
- How costly are they?

3. Customer relations

- For whom are we creating value?
- Who are our most important customers?

Examples are: Mass Market, Niche Market, Segmented, Diversified, Multi-sided Platform

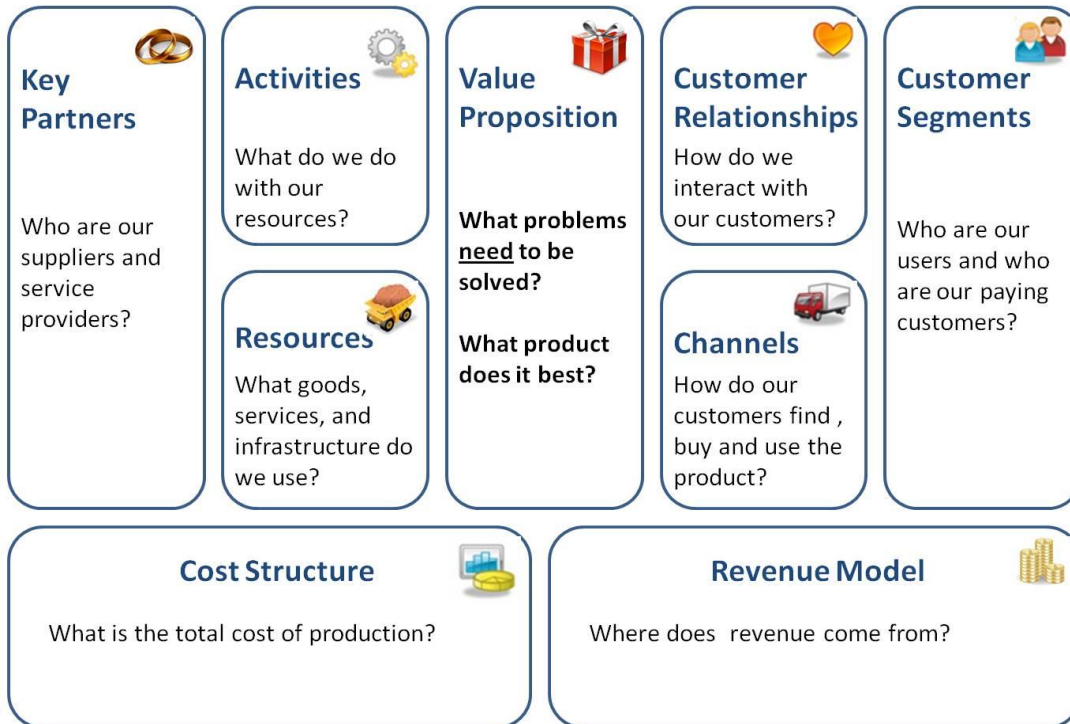
4. Channels

- Through which Channels do our Customer Segments want to be reached?
- How are we reaching them now?
- How are our Channels integrated?
- Which ones work best?
- Which ones are most cost-efficient?
- How are we integrating them with customer?

5. Key activities

- What Key Activities do our Value Propositions require?

- Our Distribution Channels?
- Customer Relationships?
- Revenue streams?



6. Key resources

- What Key Resources do our Value Propositions require?
- Our Distribution Channels? Customer Relationships?
- Revenue Streams?
- Types of resources; Physical, Intellectual (brand patents, copyrights, data), Human, Financial

7. Key partners

- Who are our Key Partners?
- Who are our key suppliers?
- Which Key Resources are we acquiring from partners?
- Which Key Activities do partners perform?

8. Cost structure

- What are the most important costs inherent in our business model?
- Which Key Resources are most expensive?
- Which Key Activities are most expensive?

9. Revenue streams

- For what value are our customers really willing to pay?
- For what do they currently pay?
- How are they currently paying?
- How would they prefer to pay?

How much does each Revenue Stream contribute to overall revenues?

Training methods



- Q: In your seed businesses, what problems of the customer are you trying to solve? Write the answers on a flip chart. Let members discuss the answers given further for clarity if the members understand the value proposition of their business

Depending on the answers given above, ask the following questions;

- Q: What is a business model?
- Q: Why should businesses have business models?
- Present to the participants the content on business models
- Present the Business model Canvas to the participants; explaining in detail the components.



Divide participants in groups. Groups should not exceed 10 participants. If all members of the LSB are present have them split up into several groups according to the crops being grown for seed. If it is one crop, let the participants split and can merge the results in the plenary as to come up with one harmonized and agreed upon business model.



Plenary: Let the groups present the model developed in the plenary. At this level critical analysis should be done by all members of the LSB and supplements be added as well as deductions done. (This should take about 30 minutes per group)

Materials:

- Flip charts, markers, BMC chart, idea cards, Manila paper, masking tape, camera

Advice to the facilitator

- Ensure time management; the BMC requires that ample time be given during practice.
- Constantly move around the groups and offer advice where necessary.
- If the groups are many (as in a workshop), have another person helping you during the group work.
- Control over dominance from some members and encourage all members to participate.
- Relate all the explanation to seed business.

Resources

- ISSD course notes (27th May to 14th June, 2012) in the Netherlands
<http://www.investopedia.com/terms/b/businessmodel.asp>

Session 3.5.2: What is a business plan and why is it needed in LSBs?

Learning objectives

At the end of this session participants shall:

- Know what a business plan is.
- Know why it is important to have a business plan while producing seed as a business
- Understand the components of a business plan.
- Be able to prepare a complete business plan for their seed business.
- Have a clear direction of their business in a given period of time.

Need of a Business plan and a business model

While working with LSBs for two years, we have seen them graduate from one level to another. For instance at the start of the programme, a number of complaints came from most LSBs and some of these included;

"We have problems with booking foundation seed because we do not know how much we need and always have problems with collecting money for the purchases. As a result, we end up receiving the foundation seed late and plant late, thus the reason for the poor yields" – one of the common LSB complaints.

Other similar complaints include;

"We do not know the foundation seed requirements thus cannot make early bookings leading to delayed/inadequate purchases!"

"We do not know the costs involved in the seed business to effectively mobilize resources thus leading to lack of finances!"

"We cannot accurately schedule the activities nor properly assign labour thus leading poor agronomic practices and poor yields!"

"We do not determine the right mix of categories of crops and varieties to grow leading to failure to market seed and under supply of our reliable markets!"

A good LSB business plan will endeavour to help the LSB members in forecasting the business costs and benefits while identifying and managing all risks associated with the business venture to ensure success. For LSBs to be able to do seed production for business gain in a sustainable manner some key aspects such as business planning are inevitable.

Content

Key messages

- LSB members know and are able to draw their business plan.
- LSB members are able to know how much seed production will cost them in a season/year
- LSB members will have a clear direction for their seed businesses

Most small farming businesses in Uganda are run without business plans and they have faced a number of challenges regarding their business growth. Businesses that do not do business planning face a number of challenges such as collapse among others. A number of development programmes/projects have engaged farmer groups in seed multiplication but collapsed immediately because the business aspect of seed production was over looked. Things such as group self-investment, business planning were over looked. For a seed business to be successful, the members have to be equipped with skills in business development.

What is a business plan?

A business plan is a written document that sets out the basic idea (a dream) underlying a business and related start-up considerations (Longenecker, et al. 2003) or an entrepreneur's game plan.

A business plan should lay out your basic idea for the venture, describe where you are now, indicate where you want to go, and outline how you propose to get there with clear evaluation of the viability of the venture as well as success factors.



Why a business plan is needed in a local seed Business

1. To show the cash flow you expect or how much money you expect to spend on the business in comparison with how much you bring into the business during a given period of time.
2. To facilitate projections for the seed business.
3. To show funding or credit agencies how much your enterprise is worth and how well it will do in the future.
4. To assess the chances of the enterprise and make necessary correlation before starting the business so as to increase your possibility of success.
5. To promote and market your enterprise.
6. To minimize risks by preparing a plan that will guide the operation of your enterprise and serve as a continuous reference.
7. To show how you will achieve your business goals and objectives.
8. To promote and market your enterprise (Reference: FAO-Seed; Afghanistan Manual).

What are the components of a business plan?

Introduction: describes what kind of business the group is dealing with; the crop and variety of seed that your business will produce, why the choice for this seed is a good one and who will be your clients.

Group information: mention LSB name, the name of your business, location/address.

Product description: gives more details on the crop and varieties that you plan to multiply, the measures for quality control that will be set up, the packaging... Explain why your seed are special. Basically it describes the value proposition of the LSB.

Business target: This comes from your vision and mission. It should be SMART (smart, measurable, realistic and time bound). The business target should be agreed upon depending on the capacity of individual farmers (resources such as land, skills, experience etc.)

Example: By the end of next year our group will have sold 20 tons of quality rice to a buyer with a contract at a price of ugx 2000 per kg

Production and postharvest plan: This explains the product to be delivered to customers, the technology that will be used to produce it; the inputs to be used in producing the desired quality product (varieties, fertilizers, and how much of each). Maintenance of capital assets, Explanation of how you will deal with postharvest handling must be part too.



Budget for purchase of inputs during production

Item	Quantity	Cost/unit	Total cost
Seed			
Chemical fertilizers			
Organic fertilizers			
Fungicides			
Pesticides			
Inspection costs			
Bags			
Total material cost			

Marketing and sales plan: Who are LSB current customers? Who are the new customers that you intend to sell the product to? Where are they located? What is the market size? Is demand tending to grow or decrease? Who are your competitors and what will be their reactions when you start the production? How are you going to sell your products? How are you going to promote your products and why your promotional methods will succeed? Which distributional channels are cost effective in your seed business?

Financial plan/needs: What are your financial needs to launch the business and sustain it for a full year? In case you would need a credit, how much and for what purpose? What guarantees can you provide in order to obtain a loan?

Table showing the financial requirements of Kyazanga Farmers' Cooperative Society Limited:

Fixed assets:	Amount UGX
Store construction	110,271,600
seed mixer/ cleaner	5,000,000
Tarpaulins(50)	3,500,000
Land	15,000,000
Working capital:	Amount (USD)
Processing/packaging	5,000,000
Transport/marketing	7,000,000
Communication	1,000,000
Utility bills	800,000
Salary/ remuneration	9,800,000
Equipment/ maintenance	900,000
Office cost	600,000
Total investment needed (UGX):	158,871,600

Management plan: This section is exclusively about the internal resources and processes needed to produce the product or service and managing the social enterprise. It shows

good opportunity to plan and outline the details of running the enterprise and it is a critical step in ensuring successful implementation of business

Business plan template for group (refer to CIAT Handbook Chapter 5). This should be as simple as possible and depending on the level of growth of the LSB; it can be adopted and adjusted accordingly.

Training methods

- Q: What is important concerning planning for the seed business
- Q: Ask participants to share their experiences concerning business planning both in groups and at household level?
- Depending on the answers given above; ask the following questions;
- Q: What is a business plan?
- Q: Who has used or developed a business plan before? What was the experience in using it?
- Present the content on business plan and its importance.
- Allow questions from participants.
- Introduce and describe in detail business plan components to the participants. Present the content
- Provide the LSBs with a template of a business plan. Go through the different sections with the group members. (Design one, integrate it and simplify it)
- Group work: Divide the participants in small groups and let them begin filling in the template of a business plan preparing at group level (Allow them four hours).
- Select some participants to fill in the business plan template at group level

Plenary: The individual small groups present the parts of the business plan they have worked on. These are later harmonized to make a complete business plan for the LSB. Comments should be given and key LSB members should be nominated to complete the business plan on behalf of the others.

Materials:

- Flip chart, markers, templates of business plan (both at individual and group level)

Advice to facilitator

- Remind them that a business plan can be made at both a household level and group level.
- The Business plan should take care of the interests of both men and women in the LSB.
- Prepare a template of a business plan for the group exercise.
- During implementation, business plans should be checked and updated (aspects on gender responsiveness, realism of the business plan should be assessed)

Resources

- CIAT handbook 5.2; (pages 1-8), Afghan Seed Manual (pages 40-61), Source: Rwanda Seed Entrepreneurship Manual (session 4)


Session 3.5.3: What do you think will be the expenditure and income from your seed business?

Learning objective

At the end of this sessions participants shall:

- Have a clear understanding of the expenditures they will need in a season's or yearly seed production venture.
- Understand what a cash flow plan is.
- Understand what projected income statement entails.
- Understand the importance of having these projected statements in a seed business.

Projected income statement for Kyazanga Farmers' Cooperative Society Limited:



Profit and loss account	Improved Bean Seed Post-Harvest Handling and marketing				
	Real 2009	Real 2012	2014	2015	2016
Revenues (see budgeting sheet)	From cash flow		104,800,000	146,050,000	201,219,375
Total revenue	0	0	104,800,000	146,050,000	201,219,375
Cost of sales or direct costs	0	0	65,280,000	77,421,040	98,071,365
Cost of sales	0	0	65,280,000	77,421,040	98,071,365
Gross margin (Net revenues)	0	0	39,520,000	68,628,960	103,148,010
Storage, transport, marketing	From cash flow		14,000,000	15,400,000	17,248,000
	From cash flow		21,600,000	23,400,000	26,160,000
	From cash flow		0	0	0
	From cash flow		1,500,000	6,600,000	7,260,000
	From cash flow		0	1,000,000	1,200,000
	From cash flow		1,360,000	1,560,000	1,680,000
Other costs	From cash flow		150	1,200,000	1,400,000
Operating costs	0	0	38,460,450	49,160,000	54,948,000
Income from operations (EBITDA)	0	0	1,059,550	19,468,960	48,200,010
VAT	0	-900,000	190,719	3,504,413	8,673,302
Interest charges	0	0	0	0	0
Depreciation	0	1,306,122	1,306,122	1,306,122	1,302,122
Non-operating costs	0	406,122	1,496,841	4,810,535	9,980,924
Gross profit	0	-406,122	-437,291	14,658,425	38,219,086
Corporate tax	0	0	0	1,465,842	3,821,909
Net profit	0	-406,122	-437,291	13,192,582	34,397,177
Dividend payments	0	0	0	0	0
Retained earnings	0	-406,122	-437,291	13,192,582	34,397,177
Number of staff (add 2007 & 2008)	0	2	4	6	8

Source: Extracted from LSB business plan for Kyazanga Farmers' Cooperative Society Limited

The above income statement shows that projected income and expenditure of Kyazanga Farmers’ Cooperative Society Limited. It is observed that in the year 2012 the group made a net loss of UGX 406,122 and is still projecting a net loss of UGX 437,291. It begins to make profit in 2014.

Content

The income statement



The income statement also called the profit and loss account shows the potential profitability of your enterprise. The profit and loss statement will show what profit or loss you expect to make at the end of the cropping season. This statement will summarize expenses (or costs) of your enterprise and the revenue obtained during the year to give two totals A and B as follows:

- Total A = (opening value of seed stock + expenses during the year)
- Total B = (closing value of seed stock + revenue received during the year)
- Expected profit of your enterprise = (Total B) – (Total A).

A successful seed enterprise should aim at selling all its seed during the year (no carryover stock) such that both opening and closing value of seed stock equal zero. The profit during the year will therefore be determined only by the difference between the revenue received and the expenses made.

Projected cash flow plan



	Item /month	1	2	3	4	5	6	7	8	9	10	11	12
1	Cash at the start of the month (B/F)												
	Total money at the start of the month												
In flows													
	cash in/seed sales												
	cash in/others												
	Total cash in												
Out flows													
	cash out for fixed costs												
	Cashed out for operational costs												
	Cashed out for investments in equipment												
	Cashed out / others												
	Total cash out												
	cash available at the end of the month												

Steps for making a cash flow plan



1. Record the amount that you aim to have in cash and on your bank account (if you have one) at the beginning of month. Write this amount in the row “Cash in the start of the month”.
2. Examine your plan of sales and expenditures. Identify the projection you made for month 1. Write this amount in the row “cashed in through sales”.

3. Beside your sales revenues, it is possible that you receive money from other sources, such as banks, interests or donations. Write this amount in the row "cashed in / others".
4. Add all the amounts of steps 1, 2 and 3 to obtain the total amount of cash influx. Write this amount in the row "total cashed in".
5. You might have purchased material for your business in Month 1. Check your sales and expenditures plan for this month. Write this amount in the row "cashed out for fixed costs".
6. Check your sales and expenditures plan for March to know how much you projected to spend for labour. Write this amount in the row "cashed out for operational costs".
7. Will you buy equipment in March? Get information on the prices of these pieces of equipment and write this amount in the row "cashed out for investments in equipment".
8. Are there other payments that you project to do, such as the reimbursement of a loan? Write this amount in the row "cashed out / others". Leave the box empty if nothing is planned.
9. Add all "cashed out" of steps 5, 6, 7 and 8. This will represent the projections of "total cashed out" for the month of March.
10. Subtract the total of "cashed out" from the total of "cashed in" to know the amount of cash available (cash and bank) at the end of March. Remember that the available amount of cash at the end of a month represents the amount of cash available at the beginning of the next one.

Training method



1. Give a scenario on the performance and projection in a seed growing group of your own experience. e.g.

Kampiringisa Community Seed Growers Association located in Mahyoro sub-county, Kamwenge district has been in the seed business for the last two years and has on several occasions received trainings concerning business development. Recently one of the development organisations spearheading some activities in this seed group, with a hired a business consultant, visited the group to discuss cost benefit analysis as well as business performance. Some of the answers that were given by members of the group include;

- a) *"Expenditure is always high"*
- b) *"Sometimes we get profit and sometimes we don't"*
- c) *"The market is a challenge"*

2. Ask the group for the message they have picked from the above scenario. Write the answers on a flip chart.

3. Depending on the answers given above, ask some of the participants to share their experiences on their business expenditures and income for the last complete two season/production and marketing cycles. Let them answer by show of hands; capture their answers on a flip chart.

4. Explain the importance of these statements in a seed business

5. Show the prepared templates and present them to the participants.
6. Group discussions: Divide the group randomly to try out some of the expenditures and the projected income of their businesses. Ask the individual groups the challenges encountered while doing the exercise as well as the facilitating factors (such as keeping good records)
7. Plenary: Let the groups present their results in a plenary, allow clarifications and feed back

Materials

- Flip charts, markers, financial templates, and examples

Advice

- Important that these statements are as simple as possible and can easily be understood by LSBs
- Use simple language of the components of a business plans

Resources

- CIAT Handbook 5.2 (pages)
- Seed Entrepreneurship Rwanda Manual (session 5.2)


Module 4: LSB's are market oriented

Topic 4.1: Doing Market Research

Key Messages

- Market Research informs the LSB of the characteristics of the market in regard to the 4As:
 - Availability of the seed in the market.
 - Affordability of the seed by the farmers.
 - Acceptability of the seed.
 - Accessibility of the market.
- The foundation of your product line (portfolio) must be based on the products that you are able to produce in a profitable way.
- Criteria from the market are the priority. If production is difficult, one should still produce if the market is disposed to pay a prime. It is useless to produce, even if it is easy, a crop for which the market is not ready to pay.
- The profitability of a product is based on the value of the product for the client. This value can be determined by a large array of characteristics. It is imperative to know your market (compare topic 3.1 on market analysis).
- Focus on a single product represents a vulnerable position. Focus on the production of too many different products on the other hand, can lead to a lack of concentration and one runs the risk of not doing the job as good as it should.
- Be careful with local varieties, rarely cultivated. There is always a reason for that being so.

Doing market research



Kigaaga Farmers' Cooperative Society Limited in Mwizi Sub-county, Mbarara district applied the skills attained in market research training and was able to get a good market for seed. The market identified was Rural Health Initiatives that works with the communities in both Mbarara and Isingiro districts to improve nutrition. They kept in touch with this newly identified market and were informed of the volumes it needed which were much higher than what the group had produced. Quickly the Chairperson of Kigaaga Farmers' Cooperative Society Limited contacted the nearby LSB Omutiima Gwa Ruhira and Turibamwe Mixed RPO that had grown the same bean seed variety in question. The three groups managed to sell over 4,000 tonnes to Rural Health Initiatives at a good price of UGX 2,600. This motivated the members in these LSBs to pool resources and invest more in the seed business.

Session overview

Session No	Session Name	Duration
4.1.1	What is market research and why is it important?	½ hour
4.1.2	How to conduct market research?	Several days
4.1.3	How to profile potential customers? / how to do market segmentation?	2 hours
4.1.4	How to use information of the market to select crops and varieties?	1 hour

Session 4.1.1: what is market research and why is it important?

Learning objective:

At the end of the session participants shall be able to:

- Outline the different components of market research.
- Identify the information needs that they have as a local business and why this information is important.



One LSB in Northern Uganda was interested in growing sweet potato vines as planting material because they felt it was a crop that almost everyone eats and was considered a food security crop. They started asking other farmers whether they would buy sweet potato vines. After talking to the farmers the group realised that vines were actually not sold in their area and that who-ever needed sweet potato could cut it from another person's garden. In the communities, clear rules exist on when and how much a farmers can cut. The cutting actually helps the owner of the sweet potato to keep the garden pruned. As a result of their market research the group changed their mind and started producing simsim seed instead.

Content

For the LSB to be successful and grow we need to know what customers want, understand customer behaviour to treat them well, deal with other seed suppliers, create demand, promote the seed, package the seed and transport the seed to the point of sale. The process of getting information on these issues is called market research. The main purpose of a market research is to assess and understand the 4 As in rural marketing.

- Availability: Is there scarcity or excess?
- Affordability: How is the price compared to farmers' purchasing power?
- Acceptability: Is there any positive or negative perceptions about the seed?
- Awareness: Do the farmers know enough about your crop or variety?

In addition to these, other important purposes of market research are:

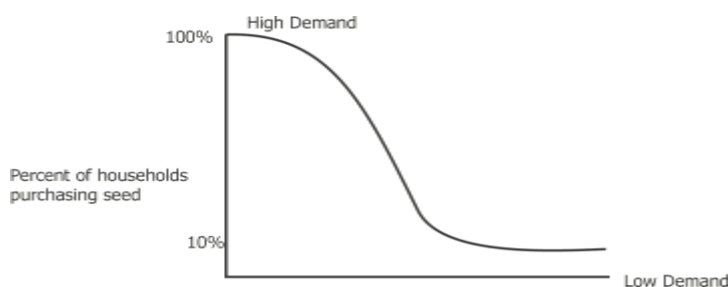
Knowing your customers: what crops and varieties are farmers in the area growing and where do they get the seed from. Who is buying your seed: are they farmers, agro dealers, seed companies, NAADS? Farmers generally look at yield capacity, cooking quality and taste and whether there is a market for the produce they grow with seed. Customer preferences change over time because the output market changes, new varieties are released or the climate changes. How far are your customers willing to travel and what are their transport costs? Additionally there may be a difference in male farmer and female farmer seed preferences.

Understanding customer behaviour: This is important so that you can be able to treat your customers appropriately based of the understanding of their behaviour. This will make customers come back for more seed. Always be Friendly. To be able to treat your customers well you need to able to answer questions they may ask on characteristics of seed and planting information (including benefits of using other inputs) and you need to explain what makes your seed better than other seed seller in terms of quality and price.

Understanding your competition (Seed sold by other seed suppliers): to be able to position yourself well as a local seed business, you need to know who else is selling seed in your area of operation, the quality and certification levels that seed is and the price your competitors ask. Also take into consideration that many farmers buy grain in the local market and plant it as seed, especially for OPVs and SPV such as beans and groundnut. In short there are three types of competitors: 1) seed sellers that sell the same quality of seed, e.g. other local seed businesses: similar pricing; 2) grain sellers that sell grain as seed, thus lower quality seed: much lower price; 3) specialised seed producers that produce certified seed, such as seed companies: higher pricing.

Knowing your input suppliers: to be able to produce seed you need input; need foundation seed or other input seed and fertilizers and crop protection products. You need to know where you can buy them at what price. What is the quality and cost.

Estimating demand and understanding demand trends: you need to know how often farmers buy your seed (seed replacement rate) and when they use seed from their own farm. Once a new variety is introduced, the demand may start high and goes down over time. The figure shows how demand for a new seed variety may develop over time. Other ways of increasing demand include looking for new crops to introduce, expanding the area of sales, and looking for new customer (e.g not only farmers but also schools), lower seed sale prices and actively promote the seed so farmers are aware of your seed.



Source: CIAT handbook 2 chapter 5

Understanding preferred Packaging: proper packaging and labelling is important for certain types of crops such as beans because it sells something about the quality of seed and makes it look different from seed available from other sources. To do packaging well you need to know which quantities of seed your customers like to buy (e.g. 1kg packs, 100 kg packs) and you need to know what kind of packaging material is accepted by your customers and where to get it from. The label should also be clear with information about the producer, crop and variety characteristics, quantity and quality characteristics and class of seed. There may be a difference in packaging requirements between male and female farmers in terms of size and material and labelling.

Identifying most effective promotion methods: there are different ways to promote your seed, such as demonstration plots, field days, radio announcements, posters, markets, shops. You need to know where your customers get their information about seed from and target these events to promote your seed. Use different ways. It is also important to distinguish between needs of female farmers and male farmers in terms of promotion location that are frequently visited.

Assessing available modes of transport: transport can add a major cost to the seed price but it can also help to provide access to a higher market segment in another area of Uganda. Therefore you need to know the different options of transport available and the costs involved of hiring that transport.

Identifying the marketing risks: To be able to adequately manage the inherent market risks, there is need to adequately identify all potential threats and risks that exist in the marketing process and the marketing environment. The risks could include: loss of market due to delays in supply, influx of free/subsidised seed, failure to access markets due to poor transport etc. Always keep in mind that a risk once identified is no longer a threat but a management issue.

Training methods



- Start with reading the case and discuss with the participants what they learned from the story brainstorm.
- Q: What do you think market research is? (answers on flipchart)
- Q: What kind of groups and people are important for the seed business? Farmers will be able to come up with the buyers and other seed sellers etc. Divide the flipchart in two columns. Write actors in the first column (each row 1)
- Q: What kind of information would you like to know from these actors? (Column 2).
- Add the components which are missing from the first column and ask participants what kind of questions they have.
- Q: What are the most effective ways to promote your seed?
- Q: What are other important considerations you need to know about your market?
- Q: Name some know market risks in your area and mention how you would be able to manage them?

Materials:

- Mango tree charts on market research, Flipcharts and markers,

Advise:

- Briefly explain what market research is and why it is important. Give simple and relevant examples. Demystify the concept of research by getting participants to recognize that they already do research.
- It is important to show the need for market research at different stages in the life of a business: at the beginning and more regularly (every 2 years).

Resources

- CIAT handbook 2 chapter 2
- CIAT handbook 3 chapter 2
- Enabling rural innovation module 3.

Session 4.1.2: How to do market research?

Learning objective:

- At the end of the session the participants will know different methods of collecting doing market research and have gained practical experience.



In October and November 2013, the agribusiness expert in Mbarara ZARDI conducted a value chain analysis of three crops: potato, beans and pasture seed. She found that varieties with high demand in beans include NABE 15, NABE 4, K132 and mixed varieties that were actually sold in very large quantities by the grain traders. Kachpot, Rwashaki, Kiningyi, Rwangume, Victoria were highly demanded mainly in Mbarara district while potato market demand is still very low in Kiruhura district. Pasture seed had low demand in Kiruhura district where actually the LSB is located, whereas high demand for it existed in Mbarara district.

It was thus important that in the short run the pasture seed LSB would be linked to dairy farmers from neighbouring districts and also linked to NAADS (that is working on pasture seed production and pasture improvement in the region under the ATAAS programme.)

The volume of turnover varied across the value chain actors: Among farmers, especially in grain, the LSB sold higher volumes than the non LSBs. Prices of beans were found to be relatively lower in Kiruhura district than Mbarara district due to the transports costs, as the buyers came from Kampala, Mbarara among other areas. For potatoes because of the low production and potato trade, there was not enough information on prices in Kiruhura district. In Mbarara however, the potato business was lucrative with a bag being sold at over 80,000/= after obtaining it at about 35,000/= in high production periods and at about UGX 50,000-60,000 in low production periods. Pasture seed prices were found to be in the same range by both the LSB and the agro-dealer.

She got all this information by talking to farmers, both women and men, agro-dealers and breeders and NAADS. As a local seed business you can and will collect the same information to plan for your production.

Content

There are three ways of conducting market research: formal enquiry using questionnaires, informal enquiry, and observation.

- a) Formal enquiry: anonymous standardized information, large volumes, costly and needs someone who can analyse the information. This is used to get general demand trends and market behaviour.
- b) Informal enquiry: subjective, smaller area of operation, to collect sensitive information such as prices from competitors, but also in relation to packaging, transport, promotion, input suppliers.
- c) Observations: to see the behaviour of your competitors in terms of how they treat customers, the type of customers and quantities of seed a customer normally buys.

For all the methods it is important to think of how many people to interview and what kind of people so that you get information from different types of people (e.g. small farmers, large farmers, widows etc).



Tools to use to gather market intelligence:



Crop selection identification card

Questions	Column 1	Column 2	Column 3
Do farmers buy seed?	Farmers rarely buy seed.	Farmers sometimes buy seed.	Farmers often buy seed.
Why do farmers buy seed?	Mainly to get new varieties.	Mainly to replace seed lost during a bad season.	Unable to save seed or use own seed, have insufficient seed.
What do farmers think about the quality of their own seed?	Farmers are very satisfied.	Farmers are a bit satisfied.	Farmers are not satisfied.
What do farmers think about the quality of the seed they buy from shops and markets or get from other farmers?	Farmers are very satisfied.	Farmers are a bit satisfied.	Farmers are not satisfied.
Do the crops suffer from diseases found inside the seed?	Crop rarely or never suffers from 'seed' disease.	Crop sometimes suffers from 'seed' disease.	Crop often suffers from 'seed' disease.
Is the crop grown for cash?	Only or mostly for consumption.	For both consumption and sales.	Only or mostly for sales.
Total number of ticked boxes	More than 3 Don't	More than 3 Consider.	More than 3 Do.

Market prices register


Seed source	Crop and variety	Variety	02/02/2014	09/02/2014						
Grain market	Beans	K132	700	1,200						
		Nabe 15	800	1,000						
		local	700	700						
Seed company	Bean	K132	3,200	3,200						
		Nabe 15	4,000	4,000						

Seed value chain

The value chain study was undertaken by ISSD Uganda Mbarara ZARDI on three value chains including beans, potatoes and pastures to mainly understand the market dynamics in the region for these crops and be able to guide LSBs involved in the seed production of these crops on the appropriate marketing strategies and how they can sustainably develop their seed businesses. Furthermore the study looked at issues of Foundation seed production at ZARDIs as access has been a big challenge and hampered seed production greatly by the seed producing organisations under the ISSD Uganda programme. Five main aspects were analysed and these include; Varieties mainly preferred and the sources of seed, volume of turnover, prices applied both upstream and downstream and how they have changed over a period of five years, Innovations initiated and adopted in the value chains, competition and relationship and linkages among the actors.

The methodology approach undertaken was mainly qualitative approach; whereby respondents were selected from the actors and service providers in these value chains and

interviewed for primary data using FGDs for both seed producer and grain producers. Face to face interviews were used to collect data from key informants and service providers e.g the financial institutions in the area of study. A check list was used for the FGDs and an unstructured questionnaire used for the key informants and FIs.



Research and breeding NARO	Foundation seed ZARDI	Seed producer Seed	Agro dealer/ Seed company	Farmer (male and female)	Market Grain trader
Market (demand, needs, attitudes...) Prices Trends (in time and space...) Comparative advantages (Competitors, alternatives) Relations between chain actors Which services needed?					
Plant Breeders	ZARDI interview (ZARDI RO/Scientist, Farm Manager	Local Seed Business (LSBs) Interview	Agro dealers/Seed Company interview	Farmers Interview	Grain traders interview
Services	Certification services BDS services Extension Financial service				

Visual representation of information collected during the value chain analysis.

Training methods

This session is covered in several coaching sessions with the LSB and trainings with the LSB market research is a complex issue that cannot be dealt with on one training only.

The Training methods cover:

- 1) How to do crop selection.
- 2) 2-day training on participatory market research.
- 3) Coaching session on how to collect and record market prices.
- 4) Explanation on how the value chain tool can be used by the LSB.

The first part is a plenary that can be combined with session 1 in which the tools are explained and the LSB prepares to do the market survey for crop selection.

- Ask the LSB to brainstorm on which crops they would want to grow as seed.
- Prioritise the crops into the 3 most important crops.
- Practise with the tool. Each crop needs a separate crop identification chart. Farmers can practice with each other. One is asking questions the other answers. Let them also think of how to approach farmers, in which locations and how many farmers should be asked.
- Agree with the group on the number of people to be interviewed and who will photocopy the tool.



- **Advise:** the facilitator should carry about 60 copies of the tool. So 15 farmers can be asked on each of the 3 most important crops and interviewed farmers can add 1 more crop they find important. The interview process can be homework so that the next time the facilitator and LSB convene they bring the questionnaires and they do the crop selection (see session on crop selection).



Participatory market research (refer to the TOR for participatory market research and the training report for LSB Farmer's marketing committees in Lira and Gulu District conducted from 30th of September 2013 – 4th of October. This is a 2 day training.

Objectives of the training: Farmers understand how to identify and select enterprises; Farmers learn how to carryout cost benefit analysis so as to know profits and unit cost of production; Enable farmers to understand the meaning, importance and types of basic records; Equip farmers with skills in collecting market information to enable them make informed decisions about the viable enterprises and how to write feedback reports for the group; Farmers empowered to be able to go to the different existing markets in order to have a broader perspective in identifying the most appropriate marketable options for production; Empower the farmers to get acquainted with market dynamics involved in marketing, contracts and trading principles.

Proposed time table



Day	Time	Activity
Day 1	9:00	Welcome remarks
	9:05	Introductions
	9:25	Expectations & Fears for this training, contract setting
	10:00	Introduction to Participatory Market Research-PMR
	10:30	Tea Break
	11:00	Learning marketing Basics- market chain, demand, supply and 4Ps
	1:00	Lunch
	2:00	Current and desired marketing situation Introduction on collective marketing & intelligence marketing
	3:00	Roles and responsibilities of marketing committee; Draft guidelines for the marketing committees
	4:00	Basic Marketing/trading principles and contract mgt; A case story on contract farming for Seed companies
	5:00	Evaluation of the day
Day 2	8:00	Recap
	8:10	Identification of profitable seed enterprises
	8:40	Gender and market visits
	9:00	Preparation for seed market research-visits
	9:30	Setting off to carry out market visits
	1:00	Lunch
	2:00	Analysis and preparation for feedback from market visits
	3:00	Selecting a seed enterprise -selection criteria and Profits Cost benefit analysis.
	4:00	Record keeping; Marketing & Production records
	5.00	Training Evaluation and Closure



- 1) The second activity should be planned once the crop is planted and during the period when labour requirements are not very high. This activity looks at the market price register and the value chain analysis tool
 - a. Refresh through Q&A the different aspects of market research and why it is important (session one)
 - b. Explain the market price register tool to the group and explain that it is important for them to keep a register of prices to see the market development of particular varieties and see how the prices change for crops and varieties they selected. Add more local varieties from the grain market. Local seed business seed is generally priced between grain price and certified seed price.
 - c. Have the group discuss which grain market is the best to get weekly prices (this could be a small shop in the village or in the weekly open market and discuss which person within the LSB will be responsible for collecting prices.
 - d. Have a group discussion on which seed companies sell the seed they produce and agree on who will call the seed company on a bi-weekly or monthly basis to confirm seed prices (rotational is better otherwise the seed company may get suspicious).
 - e. The facilitator should together with the group look at the prices. Initially every time they meet and once the system is working the prices can be evaluated at the end of each season. To prepare for the next season.



- 2) Value chain analysis session:
 - a. Read the case study at the start of the session and discuss with the farmers if they feel they can do the same.
 - b. Use the tool and picture for the value chain analysis and start breaking down the components. Discuss for each cell what information they would want to have and why, and for each cell, LSB members should discuss in small groups which questions they want to ask to get the information they need.
 - c. Divide tasks amongst the members who should talk to which categories of people and give a time frame.
 - d. After the LSB members have collected the information, organise a new session and paste 4 flipcharts together to make the map with the information they gathered. Use cards to put the information on the flipcharts and start drawing lines once all the information is on the flipcharts.
 - e. Discuss with them what conclusions they can draw and what information is missing.

Materials

- Flipcharts, markets, cards, printed tools, hand-outs

Advice:

- Learning by doing is important here and the mapping does not have to be perfect the first time. It should be a living map whereby every time a LSB member has new information, it is updated.
- The facilitator should carry about 60 copies of the crop selection tool so that LSB members have the tool at hand.

Reference:

- Enabling Rural Innovation ERI - Module 3

Session 4.1.3: How to profile potential customers/How to do market segmentation.

Learning objectives:

- At the end of the session the participants shall be able to define different types of customers and know how to assess the needs for each market segment.



The main buyer of bean seed from a womens LSB in West Nile is NAADS. They have been producing seed since 2009. At the end of the season NAADS went to the group and bought everything available for UGX 2,000 per kilo. However, when the women went to the market to buy food, they found that some farmers were selling the seed they had received from NAADS at UGX 2,500 per kilo. The women are asking themselves whether they can also sell directly to farmers. How should they find out?

Content

Businesses exist to serve their customers. So the local seed business exists to serve the end users of the seed. These are the farmers. Farmers buy seed from LSBs and from agro dealers. Sometimes farmers also get seed for free from NAADS or from an NGO. The customers of an LSB are female and male farmers, agro-dealers, seed companies, NAADS and other programmes. If the main customers are female farmers, it is not useful to package bean seed in 100kg bags because she cannot afford 100 kg or her garden may be small (1/4 acre for beans, which needs only 8 kg of seed). At the same time, if NAADS wants to buy 500 kg of bean seed, they don't want to receive it in 1 kg packages because that is a lot of counting.

So a good LSB understands their customers, their problems and their preferences. A good seed business looks through the eyes of the customer and knows that a happy customer will come back for more seed. Openly discuss what you know about your customers and what this information means for your marketing strategy. As an LSB you need to know the following:



- 1) Trust is the most critical element of the farmer's relationship with you.
- 2) Convenience of making the purchase is a big factor for customers and also for farmers. This means that they will look at the distance they have to travel, packaging size, availability of other inputs required (one stop shop). But also the opening hours of the sales point is an important criteria for farmers.
- 3) Customers want a fair deal and if they are satisfied with your seed, they will tell another 10 farmers.
- 4) Customers are characterised by purchasing patterns, they tend to go back to the same source of the seed, if they are satisfied. Male and female farmers have a preference for different varieties/ crop seed and the quantities they buy. Farmers can buy all the seed they need at once at the start of the season or spread the purchase over different trips.
- 5) Farmers are extremely visual, so make sure your packaging is attractive to farmers and that you display the seed. Demonstration at places that attract farmers will also be a good way of promoting your seed. They will have seen the crop in the field. Think about the language the farmers speak and are able to read. If the majority of your customers can't read, think about using pictures and drawings.

- 6) Farmers don't like to take risks, so also sell your new varieties in smaller quantities so they can try them out. As a business your sales of seed maybe small in the first one or two years until farmers are convinced you produce good quality seed.

Customer segmentation:

- 1) Farmers that have already bought your seed.
- 2) Farmers that are considering buying your seed.
- 3) Agro dealers that are considering selling your seed.
- 4) Seed companies that want to buy your seed and sell it as their own seed.
- 5) NAADS and NGO programmes that buy seed and give it to farmers.



Type of customer	Characteristics	Advantages for selling	Disadvantages for selling
Farmer already bought seed.	<ul style="list-style-type: none"> Farmer knows the product. 	<ul style="list-style-type: none"> Farmer was satisfied with the first sale and came back. 	<ul style="list-style-type: none"> Small quantities.
Potential female and male farmer.	<ul style="list-style-type: none"> Farmers look for good quality seed for their own farm. Since they pay themselves they will want to make sure quality is good. Varieties preferred by men and women are different. 	<ul style="list-style-type: none"> Once satisfied become loyal customers. 	<ul style="list-style-type: none"> Small quantities.
Agro dealer	<ul style="list-style-type: none"> Retailer packaging required. 	<ul style="list-style-type: none"> Larger distribution network for LSB. No sales and marketing costs. 	<ul style="list-style-type: none"> May store the seed badly, affecting germination.
Seed companies	<ul style="list-style-type: none"> Bulking. Pre-determined quality standards. 	<ul style="list-style-type: none"> Once the contract is signed a secure market. Large quantities. LSB does not need to spend money on retail packaging. 	<ul style="list-style-type: none"> Generally late payment and potentially lower seed price than when sold directly to farmers.
NAADS	<ul style="list-style-type: none"> Bulking Packaging size may differ depending on how NAADS is distributing 	<ul style="list-style-type: none"> Large quantities NAADS can promote LSB amongst farmers in the sub-county and beyond. Larger sales network 	<ul style="list-style-type: none"> Potentially late order and late payment.

Additional profiling can be conducted to reflect the size, profitability, accessibility and opportunities/threats using the additional tool below:

Type of Customer	Size	profitability	Accessibility	Opportunities/threats
Farmer already bought seed.				
Potential female and male farmer				
Agro dealer				
Seed companies				
NAADS				

Training method

Plenary discussions on who are potential customers?

- Q: Where are the major customers located? How far do they generally want to travel?
- Q: Will most of my customers be men or women (women and men like different seed and may want to buy different quantities)?
- Q: Will the majority be new customers or repeat customers?
- Q: What is their purchasing power/income bracket? Will they buy in bulk or small quantities?
- Q: What is convenient/inconvenient for them when purchasing (distance, opening hours, package size)?
- Q: What seed attribute will be most important to my target customers (yield potential or stability, storage, drought resistant, taste etc.)?
- Q: Do they want additional services like fertilizer advices, or agronomic advice?
- Q: Are they part of a group or association?
- Q: Will they want to have seen the crop in the field before buying?
- Q: What are the opportunities and threats in each customer category?

Materials

- Flipcharts, markets, cards, printed tools

Advice to the facilitator

- The facilitator should carry sufficient copies of the crop selection tool so that LSB members have the tool at hand.
- Ensure time management and constantly move around the groups and offer advice where necessary.
- If the groups are many (as in a workshop), have another person helping you during the group work.
- Control over dominance from some members and encourage all members to participate.

Resources:

- African seed company tool box tools 17, 18, 19, 27.



Session 4.1.4: How to use information of the market to select crops and varieties?

Learning objective

At the end of this session, participants should know how to use market information to select crops and varieties:

- The criteria used (market and technical criteria) in the selection of crops and varieties;
- Advantages and disadvantages of producing one or several crops/varieties.



Omutima gwa Ruhira farmers' group located in Isingiro district is comprised of 52 members (26 women) started professional seed production in March 2013. Before seed production, the group undertook a market analysis focusing on the crops they were interested in – Beans, Potato and Sorghum. The group used a crop identification chart where they interviewed 4 members of the LSB and 4 other community members (non-LSB members) to understand seed demand for these crops in the community. The table below shows the groups analysis of the results. The groups used the rating of Poor, Fair and Good to represent their assessment of the current seed demand in their community of the various crops.

Category of respondents	Beans			Potato			Sorghum		
	Poor	Fair	Good	Poor	Fair	Good	Poor	Fair	Good
Non LSB members	1	4	1	1	3	2	2	2	2
LSB members	1	4	1	1	3	2	2	2	2
Average	1	4	1	1	3	2	2	2	2

The analysis showed that both beans and potato had moderate market demand, and therefore agreed to engage in seed production of the crops, with a vision of exploring more market options from outside the community. On the other hand, the demand for sorghum was not clear given the results of the market study, so they opted not to engage in sorghum. While the community had interest in growing sorghum due to their existing contract growing with Nile Breweries, the obvious lack of demand for seed made the LSB re-think its priorities for seed production. It should be noted that sorghum is generally required in low volumes and the replacement period can be over 4 years, thus it might not make much business sense to engage in a crop that is demanded in low volumes, with low turnover. It was interesting however, to note that both LSB and non LSB members had similar perceptions about the two seed crops.

Content

Use the information of the market research

In topic 4.1, we saw the use of several market analysis tools. The analysis of data obtained from some of the tools is aimed at informing decisions of LSBs on which crops to select. The key tools to use are: i) Crop identification chart and ii) Agro-dealers / seed companies form. These are explained below.

Crop Identification Chart

In filling the chart, the farmer or respondent should tick only one answer per question. For example, the first question on whether farmers buy seed, the respondent should either tick "farmers rarely buy seed" = column 1, or "farmers sometimes buy seed" = column 2 or "farmers often buy seed" = column 3. Once the chart is filled by the farmers, the data is summed up using the table below. Add the ticks per column and record them in the last row.

Table: Individual farmer analysis



Question	Column 1	Column 2	Column 3
Do farmers buy seed?			
Why do farmers buy seed?			
What do farmers think about quality of their own seed?			
What do farmers think about quality of seed they buy from shops and markets or get from other farmers?			
Does the crop suffer from diseases found inside the seed?			
Is the crop grown for cash?			
Total number of ticks			

After each farmer has filled the chart and counted their ticks in each column, the facilitator should add the ticks (from all farmers) in each column. Get the average of the ticks by dividing the number of ticks to the number of respondents. The average should be between 1 and 6; else it means there was a problem with the ratings by individual members or the addition. The facilitator needs to use a simple ranking sheet as proposed in the methods under this session.

Table: Aggregating scores by different farmers or respondents

Question	Column 1	Column 2	Column 3
Total number of ticks (all respondents)			
Number of respondents			
Average number of ticks (total ticks / number of respondents)			
Decision	If 3 or more, Don't	If 3 or more, Consider	If 3 or more, Do

Decision: If the number of ticks in column 1 is 3 or more, don't consider the crop; if the number of ticks in column 2 or 3 is 3 or more, consider the crop.

Note 1: In some cases, there might be a tie between columns. If the number of ticks in column 1 and 2 are the same and equal three, don't consider the crop. If the number of ticks in column 2 and 3 are the same and equal three, consider the crop.

Note 2: Analyse each crop separately

Agro-dealers/seed companies

Using the same criteria as crop identification chart, rate the demand for seed based on data collected from agro-dealers or seed companies. First analyse for each agro-dealer / Seed Company, and then aggregate for all to obtain a single score per column. **Note:** for

this tool, the total number of ticks is 9 (equal to the number of questions). The analysis is done by crop and variety if possible.

Table: agro-dealer / seed company questionnaires

Scale of demand	Column 1	Column 2	Column 3
Expected local demand			
Expected demand regionally			
Seasonal fluctuations in demand			
Expected demand from institutional buyers that may pre-order or buy in bulk			
Expected demand from different types of farmers			
Competition			
Profitability			
Constraints to business entry (financial, seed regulation)			
Access to clean seed			
Total number of ticks			
Decision	If 5 or more, Don't	If 5 or more, Consider	If 5 or more, Do

Training methods

To aggregating information from the crop identification chart and agro-dealer / seed company questionnaire, the facilitator prepares the scoring chart in advance. Once the farmers have completed doing their individual scoring, they are asked to come forward and indicate the number of scores per column. The example below is a hypothetical example of an LSB in western Uganda, where 6 members of the LSB filled the crop identification chart.

Crop Identification chart

Crop: Beans

LSB name: Action and Faith LSB

Location: Western Uganda

Farmer	Number of ticks per farmer			
	Column 1	Column 2	Column 3	Total
1. Nakamya J.	2	1	3	6
2. Aturinda Annet	1	1	4	6
3. Kabasita Agnes	3	3	0	6
4. Kebirungi	0	0	6	6
5. Nankabirwa	2	2	2	6
6. Kekirunga	3	2	1	6
Total number of ticks	11	9	16	36
Average (rounded off to the nearest)	2	1	3	6

Proposed decision – select the crop for seed production

In a different session, the facilitator can also analyse the information from agro-dealer / seed companies. Or if already analysed, the facilitator can present it to the group. The analysis from agro-dealer or seed company should also have the proposed decision regarding that crop.

Crop selection - One or more varieties?

- Q: What are the advantages of producing more than one crop?
 - When seed demand decreases for a crop, it is possible to produce seed of other crops.
 - Crop rotation can be beneficial for seed quality.
 - Producing more than one crop improves chances to increase the benefit and reduces weather-related risks.
- Q: What is the biggest difficulty of seed production when producing more than one crop?
 - More equipment and expertise is needed and more work is required (material and human means).
- Explain that to ensure a business' success, it is preferable to limit the number of crops to one or two at the same time.
- To produce two or more than two crops at the same time, it is required to choose two crops which can be rotated in order to use less land. For example, wheat or maize work well together with potato.
- The selection of crops to multiply will significantly determine your business' success.
- Finally, it is the market research and the results emerging from it which guide the selection of crops and varieties. If demand for several varieties is large and if the business/cooperative has the capacity to produce several crops/varieties at the same time, it is logical to select more than just one variety or crop.

Choosing the combination of crops/varieties to produce

- The next step consists of selecting crops and varieties to produce, based on the results of the market research.
- If it is planned to produce varieties that are not yet available, it is possible that the task could not be carried out.
- Each participant or group will have to present his/her results and conclusions.

Facilitate a general discussion about the exercise.

Materials

- flip charts, markers, masking tape

Advice to the facilitator

- Ensure time management and constantly move around the groups and offer advice where necessary
- If the groups are many (as in a workshop), have another person helping you during the group work
- Control over dominance from some members and encourage all members to participate.
- Relate all the explanation to seed businesses.

Resources

- IFDC manual Module 3



Topic 4.2: Marketing of LSB seed

Key messages

- This topic is about marketing. Marketing is the strategies and tactics used to create and maintain satisfying relationships with customers that result in value for both the customer and the marketer (www.knowthis.com).
- Marketing is the process used to get customers to buy your product/service. The goal of marketing is to increase sales.



Agieramach Ogiebu Women's Group for Development in Zombo district West Nile in season 2013B in an effort to market their seed approached their sub-county; Wara so that they could sell to them their high quality seed. Unfortunately due to some reason they did not win the contract to supply this sub-county with seed. So they approached a nearby Atyak sub-county whom they managed to convince and later sold to them their seed. The seed was highly appreciated because of its high quality attributes such as high germination rate. Later on during the local MSP meeting, the officials from Wara sub-county shared their bad experience with the seed they had acquired from the different supplier whose germination rate was only at 50%. Wara Sub-county officials pledged never to buy seed from elsewhere other than that produced and supplied by this women's LSB Agierimach Ogiebu. The DAO in his remarks urged stakeholders on the need to have more LSBs in the district that could be the source of seed.

Session overview

Session No.	Session Name	Duration
4.2.1	What is marketing?	2 hours
4.2.2	What are marketing strategies- 4 P's?	3 hours
4.2.3	What is a farmer field day?	1 day and 2 hours
4.2.4	What is market intelligence and market information?	2 hours
4.2.5	What is sales monitoring and a stock record?	2 hours

Session 4.2.1: What is marketing?

Learning objectives

At the end of this session participants know:

- What marketing is
- How to market their seed



Mr. Ocen got a loan from a SACCO to finance his seed production business. He produced a lot of maize seed and then started looking for the market after harvest. He wandered through the market but no one was willing to buy his product at the price he was offering of 500/= per kg. He later decided that since there was no market for his product, he had to sell it to one buyer at 300/= per kg who said he wanted more tons than Mr. Ocen could offer. Mr. Ocen had no bargaining power for his price and ended up selling at a lower price since he could not meet the tons required by the buyer. Mr. Ocen could not even fully pay back the loan he got from the SACCO. What could Mr. Ocen have done during the growing season?

Content

Marketing is:

- Working to supply what customers want and doing it profitably for both the customer and the firm supplying the product (The African Seed Company Toolbox, 2009).
- Finding out what customers want and supply to them at a profit.
- A series of services/activities involved in moving a product from point of production to point of consumption.

Marketing is linked to

- Planning what to grow –doing crop budget analysis and analysing profitability
- Storing to maintain quality of seed
- Maintaining quality of seed during production -Module 2 (quality seed production and quality control)
- Types of seed produced
- Packaging, sales and transport to sales point



Importance of marketing

- Marketing helps in finding out what customers want.
- Enables you to produce and sell the things that people want.
- Provides information in letting people know about your products/services.
- Marketing provides information which will enable you to sell your products in the right places and also setting the right price so that people will buy your products. Examples of packaging varies from one buyer to another i.e. NAADS could be in 100kg bag while seed companies will buy and need to repack so no packaging and farmers say 1, 2, or 5kg bag. Packaging materials costs money and smaller packs will in the end cost more than the bigger packages.
- Marketing helps provide information on how to make your products / services unique and more attractive than other similar businesses. (Small Business Management Skills Facilitators Guide, 2010 and modified by author).

Collective marketing

Is bulking your products as a group and selling them together. There are different ways of marketing and if you are producing say 0.5 acres of bean seed you cannot reach larger buyers since you will not have enough to offer and therefore it is better to bulk your seed with other seed farmers and later sell collectively.

Importance of collective marketing

- You can negotiate better since you have more to sell (a trader listens to you easier since you have a lot).
- You save on transport and handling costs since you can bring your products to the market together.
- You can control quality better. All farmers deliver the same quality. Traders like this.
- You will produce more because markets will become better.
- You can get loans easier.
- You can get trainings from organizations.
- You can buy quality inputs at a cheaper price (e.g. seed, tractor hire etc.) and have lower production costs.

Increased bargaining power

Better quality

Dealing with large trader



Higher prices

Higher price + lower production costs



Higher profit

Training methods



- Q: What is marketing
- Q: Why is marketing is important
- Q: What is collective marketing and the importance of collective marketing?
- Give the illustration charts to the farmers before asking the questions
- Q: Who produces the products? Show the card with a farmer
- Q: Who do you sell your products to? Show the cards the participants say (broker, retailer, wholesaler, consumer etc.)
- Q: What is your relationship with your buyers?

Role play



- Let 4 members volunteer.
- Have two seed samples in cups (one at higher price and the other at lower price)
- Have two seed samples in plastic bags (one at higher price and the other at lower price).
- Let the 4 members sell their seed to other members (the seller needs to explain to customers about their products, price and packaging)
- Ask the members what they see during the sales.
- Lesson learnt: Higher prices are difficult to sell
- Note: Allow sessions for questions, feedback and clarification

Note: It is important for the farmer groups to select marketing committees to help them with marketing their products as a group and also looking for markets. The facilitator will also list some of the roles and duties of the marketing committees.

Materials

- Flip charts, markers, pens, seed samples in plastic bags and cups writing cards and illustration charts

Advise

- Should be able to give time for questions and answers from the participants
- Should prepare the role play materials beforehand.

Resources

- Training manual by Mango tree on marketing basics.

Session 4.2.2: What are marketing strategies- 4 P's?

Learning objectives

At the end of this session participants will know how to:

- Differentiate between the 4 P's as a marketing strategy in seed marketing.
- Apply the 4P's in real seed market situations.
- Develop effective and realistic strategies to improve the marketing of seed in the LSBs.



Akello went to the market and saw a trader with a beans seller and the seller had made money from his sales of beans which was of very good quality and nicely packaged. Akello went back very excited and told her group members that there is market for beans. The group decided to plant K20 (without knowing exactly which variety is preferred in the market by buyers) and after harvest they went to the market to sell their beans (K20). To their surpriseno buyer was interested in it. Instead of going back to the market to look for more interested buyers a trader came to buy from Akello and the group and he agreed to buy from them at 700/= per kg instead of the 1500/= they had proposed. Looking at the seed produced, the buyer was also disappointed that the product was of low quality and not meeting his standards. He decided to buy at 600/= per kg instead of the agreed 700/= . This left both parties dissatisfied. What key messages do you pick from the story?

Content

Marketing

Marketing is the most critical factor that determines the success of your seed business. Effective marketing starts with a considered, well-informed marketing strategy. Developing a marketing strategy development in Local Seed businesses needs to be based on trainings such as customer analysis and the participatory market research that should be conducted before the marketing strategy development training. The marketing strategy comprises of the four Ps (Product, Place, Promotion and Price (also referred to as the marketing mix).

Your marketing strategy affects the way you run your entire business, so it should be planned and developed in consultation with all the members in the group team. It is a wide-reaching and comprehensive strategic planning tool that:

- Describes your business and its products and services.
- Explains the position and role of your products and services in the market.
- Profiles your customers and your competition.
- Identifies the marketing tactics you will use.
- Allows you to build a marketing plan and measure its effectiveness.
- Allows the group to assess the risks involved and the how they can be mitigated.

A marketing strategy sets the overall direction and goals for your marketing, and is therefore different from a marketing plan, which outlines the specific actions you will take to implement your marketing strategy. Your marketing strategy could be developed for the next few years, while your marketing plan usually describes tactics to be achieved in the current year. It is developed so as to be able to sell the best and mainly desired product by the customer at the preferred location and price.

The 4 P's

The four Ps (Marketing mix)

Any marketing strategy comprises four basic elements referred to as the 4Ps' namely **product, place, price, and promotion.**

The Marketing Mix [or] The 4 Ps			
PRODUCT	PLACE	PRICE	PROMOTION
Quality	Distribution	List price	Advertising
Features		Discounts	Public relations
Brand			Direct marketing
Format			Social media
			Events

Product:

A product is what a business presents to the customer or the value proposition that is meant to solve the customer's problem at hand. Thus this dictates how the customer will require the product. It is important to ensure that the product fully meets the needs of the customer. From an angle of industry analysis, it is necessary that the product is unique and in this way, your business as a firm or an individual will enjoy competitive advantage. These can be quality attributes, branding, packaging etc.

To sell your seed, you must assess effective demand for it and what farmers would like or may not like about it. You should compare your seed with that of other suppliers and justify why farmers would prefer your seed over those of your competitors.

- What will be unique about your seed? (e.g., type of varieties should be the preferred one by buyers, quality status should be standard)
- Have your product well packaged (ISSD label, type and preferred packaged size by buyers basing on their customer segments, good grades and standards-quality declared seed, certified seed etc.)
- Do some value additions i.e. seed colouring, seed treatment, coating the seed to differentiate it from grains as done by LSBs in Ethiopia.

Step 1: List the different attributes that the target customers specifically look for in your product.

Step 2: Assess the current level of customer satisfaction in line with the product you are providing to them.

Step 3: What can be done to improve the product so as to meet the customers' priority needs?

Step 4: Identify the risks that are involved in trying to improve the product and their management measures. These are the strategies or actions to be taken depending on the outcomes of steps 1 and 2.

Place:

Place is important in meeting two main market aspects namely; availability of the product to and accessibility of the product by the customer. Thus it is important that the product is found in an easily accessible place or location and should also be readily available to the customer at the time of need. The seed marketing cycle is unique in a way that seed is sold in the growing season after harvest. It is important this time factor be planned for in the seed business. Businesses such LSBs need to know exactly where their profiled customers want to find their seed and at what time in the cropping cycle. Effectiveness and efficiency of the distributional channels used must be considered as well.

The relative locations of the production fields, seed storage facilities, and the sales points are important in terms of transportation costs and access to customers.

Places where LSBs sell their seed depends on the kind of customers and costs to be incurred.

- Local market-sell in kilograms with less quantity, small packed sizes and less transport costs.
- Agro-dealer- requires some level of packaging.
- Own shop- within the village with less transport cost, maintain quality and control storage (combined sales for the LSB group)
- Farm gate /store- for wholesale detailers like seed companies buy in bulk.

Step 1: List the different customers and where they would want to find the seed products.

Step 2: List the actions to be taken by the group to improve distribution of seed to the different customers.

Step 3: Assess the risks involved by taking these actions and how they can be managed.

Price:

Price is one of the important market aspects in the seed businesses. A good price is seen in the profit a business earns after selling its products. When selling seed, a competitive price needs to be set and this varies from customer to customer. A number of factors are considered when setting price but mainly two of these are most important: the cost of production; and market price (both for seed and grain). It is important not set the price so high that the business will fail to sell its products and it should not be set too low that the business may not break even.

The price of your seed will be based on your production costs, the willingness of your customers to pay as determined by prices charged by other suppliers, and your perceived profit margin. This may depend on the nature of seed and the demand for it.

There are various ways of calculating prices:

- Using costs of production- refer to cost benefit analysis under module 3 of financial management (minimum cost of production)
- Comparative price (maximum competitors)-market price sheet.
- Optimum price (between minimum and maximum price)

There are several methods of setting prices which include:

- Market price.
- Competitive price.(for market penetration)

- Introduction price.
- Cost plus price- looking at cost of production.
- Size pricing- depending on the size of the product packet.

The following steps are important to evaluate the pricing strategy that the LSBs can use in their business.

Step 1: List the different customers and the price at which seed will be sold to them.

Step 2: Calculate the profit margin earned per customer.

Step 3: Identify the customers from whom a big profit margin is earned and where flexibility in price setting is possible.

Step 4: List the actions to be taken by the group in setting a good price for seed depending on the customers and the two main market factors (1. Cost of production, 2. Market price (for grain and seed)).

Step 5: Risk analysis and management: Identify and evaluate the risks that are likely to affect the implementation of the above strategies and how they can be managed.

Promotion:

It is important to know that before the customer buys the product, he/she must hear about the product or see the product or have experience of the product. These will stimulate him/her to think about your product and probably he/she will eventually make the decision to buy product. This depends on how the product is presented to him in terms of features such quality, packaging and labelling, yield potential, and maturity period (say if seen during a field day exercise).

You should use a variety of methods or strategies to inform different categories of customers about the seed you offer and convince them to buy. These can be through the following ways

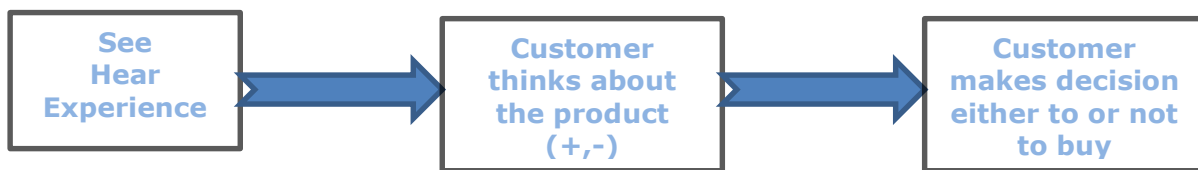
- Personal sales of your product to your intended buyers.
- Conducting sales promotion- say the first ten people to buy our seed from 5kgs get 0.5 kg for free.
- Promotions can be done through trade shows and exhibitions on field days.
- Through word of mouth promotions.
- Advertisement through radio shows.

However the farmer group can use marketing mix strategy to distinguish themselves from other competitors through;

- Modifying products.
- Changing pricing and strategy.
- Offer seed that others do not sell.
- Use different promotions and promote distinctiveness.

Note: Proper packaging and labelling is important for certain types of crops such as beans because it says something about the quality of the seed and makes it look different from seed available from other sources. Packaging also allows you to transport your products easily. Hence packaging should be taken up seriously by the farmers.

Step 1: Go through the diagram below on how the customer is influenced to think about your product and eventually make the decision to buy.



Step 2: List the promotional strategies in the cropping calendar year as shown below

Customer/Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Customer 1												
Customer 2												
Customer 3												
Customer 4												
Customer 5												
Customer 6												

In the above table, list the different promotional strategies that you are likely to use for the different customers at specific times of the cropping year.

Step 3: Risk analysis and management: Identify and evaluate the risks that are likely to affect the implementation of the above strategies and how they can be managed.

By fully going through the 4Ps, it helps the LSBs to readily know how effectively and efficiently they can sell their seed at a profit while satisfying their customers’ needs.

Training methods



Participants will be divided into 4 groups and given charts with illustrations of the 4 P’s and they should be able to interpret them with the help of the facilitator.

- Q: what is happening in the chart? Why is it important? Explain that all this knowledge is called market information.

Questions on the 4P’s in the charts

Product:

- Q: What product is needed in the market vis a vis the product you intend to take to the market?
- Q: What quality is for sale?
- Q: What quantity requirements does the market require?
- Q: What will make your produce unique so as to attract potential customers.

Place:

- Q: Where are you going to sell it? At farm gate? At the market?
- Q: How will your products reach the market?

Price:

- Q: What price will you obtain?
- Q: How are you going to relate the quality of your produce with the price?
- Q: How will the customers pay for the product (Terms of payment)?

Promotion:

- Q: How are you going to promote the product?
- Q: How are you going to convince traders to buy from you?

The training method should be basically divided into four parts (according to each of the four Ps) as illustrated in the tool in annex



Photo of one of the marketing committees explaining one (place) of the 4 Ps as participants look on during PMR training.

Materials

- Flip charts, markers, pens, writing cards and illustration charts

Advise

- The facilitator should be able to understand the 4P's and interpret them for participants.
- The participants should be involved in the discussions as much as possible.
- Please note that the strategies identified to be undertaken are to be as realistic as possible. For instance they should match the business level of the group and the group's resource base. They should be SMART.

Resources, bibliography

- Small scale seed business enterprise-startup and management, guideline and business skills for seed producers in Afghanistan, page 54-56.
- <http://www.business.qld.gov.au/business/running/marketing/develop-marketing-strategy>
- Afghanistan Manual: Farmer Seed Enterprise

Session 4.2.3: What is a farmer field day?

Learning objectives

- To learn from the successes and good practices of other farmers.
- To get new ideas and new solutions for production, marketing and consumption challenges.
- To discuss these ideas with other farmers and stakeholders.



Farmer field day at Aye Medo Ngeca in Dokolo District

Quote by NAADs Official from the Sub-county:

"It is very good to see that our own farmers are already into quality seed production. This has come in very handy since we need quality seed to boost our yield and ensure food security at household level".

Content



Field days are important venues for showcasing your farmer group and products. If necessary, suggest the following items: welcome, introduction, update about latest activities, achievements and challenges, field visit (for example to an experimentation site), lunch, exhibition/display, interactive discussions and consultations, way forward.

Example of a timetable for the field day

Item/ Activities	Responsible person	Time
Arrival and registration	LSB	9:00am
Introduction	Key participants	10:00am
Opening remarks	Guest of honour	10:15am
Speech by NAADS /ISSD	NAADS/ ISSD	10:30aaaam
Update on LSB activities	LSB chairperson	10:45am
Achievements and challenges	LSB chairperson	11:15am
Field visit	LSB	11:45am
Lunch	Catering service	1:00pm
Exhibition/display	LSB	2:00pm
Discussions	Participants	2:45pm
Way forward	Participants	3:30pm
Closing remark	Sub county chief	4:005pm
Closure	LSB	4:30pm

During farmer field days, LSBs will be able to showcase their products, sell themselves to other farmers and stakeholders invited and this happens to be very good for visibility for the seed producing groups. Farmers will also be able to create marketing linkages with other participants present for future market opportunities.

The farmer field day should be organized at a time when farmers have a lot of information to share (for example right after harvest and also when fields are showing good results).



A visit to the field during the farmer field day in Latyeng LSB in Gulu District.

The location of the farmer field day should be at the sub county village level since the venue has to be near the fields where the scheduled visits will take place in the farmer's

gardens and at demonstration plots. Farmers and other stakeholders should have easy access, spacious shelter in case of rain, farms in the vicinity for demonstration, etc.

Guide the farmers who are in charge of organizing the farmer field day so that the targeted farmers and stakeholders are invited well in advance.

Training method



- Q: Have you heard of a farmer field day?
- Q: What are the main topics you want to discuss during the farmer field day?

For example, market research, seed enterprise development, demonstration plots, stakeholder interactions, seed production and marketing challenges, etc.

- Q: What do you want to share with other farmers and stakeholders?
- Q: What kind of information would you like to get from others?

Explain: During the farmer field day, information will be shared mutually. It is not just you providing information—you will also be able to find out new things from others.

- Q: What do you want to achieve through the farmer field day?

Explain: You farmers are the hosts and organizers of this event, not an external organization. How much you will benefit from the farmer field day depends on how well you organize it.

- Q: What makes the farmer field day interesting for others to join?
- Q: Who will you invite for the farmer field day?
- Q: Who do you want to share knowledge and information with?
- Q: What is the maximum number of persons you should invite?
- Q: How will the people be invited? Who is responsible for that?
- Q: What is the program for the farmer field day?
- Ask farmers to plan the exact time required for each activity under the programme.
- Q: Are there any commodities or other things that you want to put on display?
- Q: Who will be responsible for different activities during the preparation of the farmer field day?
- Make sure someone is responsible for sending invitations, preparing the venue, organizing food and drinks (if applicable), organizing displays, etc.
- Q: Who will be responsible for certain activities during the farmer field day itself?
- Make sure people are responsible for the following roles: master of ceremonies, usher, logistics, welfare, documentation, time keeper, etc.
- Q: Who is responsible for which part of the programme?
- Ask farmers to write down the responsibilities on a flip chart.
- Q: Are there benefits / advantages of a field day to an LSB?

Materials

- Flip charts, markers, tapes, banners, some items for showcasing, chairs, tables and public address system

Advise

- The field day is to be organized by the farmer groups, they are to invite the guests but the support comes from the supporting organization together with other partners too.
- During the farmer field day, let farmers take the lead (according to how they have planned it and allocated responsibilities). Only intervene if you feel farmers are losing track.
- In order to stimulate an interesting discussion, ask critical questions and give critical comments.
- Try to involve other stakeholders as much as possible (for example, by asking questions directly to them).
- Give ample time to the group to prepare for the field day to avoid being disappointed on that day.

Resources

- Training manual by Mango on farmer field day.

Session 4.2.4: What is market information?

Learning objectives

At the end of this session participants shall:

- Understand the meaning of market information.
- Appreciate the need to have updated market information.
- Understand the kind of market information they need and how they can use it.
- Understand where and how to access updated market information.



Lawino is a widow with five children of school going age. She has friends who are business women in town. Her friends told her that there is a market for simsim. The price for simsim has gone up and the demand is also still very high. She went to the market to verify this and also made contacts with some other buyers who promised to buy from her at 5000/= per kg on condition that she produces simsim of good quality. Lawino went back home and told her children about her interest in producing simsim and they supported her during the production process during which she kept in contact with her potential buyers. She harvested 80 bags of simsim and later sold it to her buyers for good money. From her sales of simsim she was able to pay her children's school fees.

Content

Market information includes all kinds of information business people (including farmers) need in order to market their products and produce for the markets. It is two way

Types of market information



Market information	Examples	Where to get information
Agricultural inputs	Seed, fertilizers, pesticides, herbicides	Agro-input dealers, NAADS
Weather information	When to expect rains, droughts, duration	Metrological department, sub-county, newspapers
Extension services	Trainings, advisory services	Sub county NAADS, ISSD, DAO, other NGO's
Agricultural technologies	New varieties, land management	ZARDI, Research institutes, newspapers
Product marketing	Prices, products needed, buyers, transport and transport costs	Through SMS-phones, face to face interactions, sub county, radio, farmer associations
Agricultural credits	Loans (conditions)	SACCO, Banks and MFI

The 4C's of market information

- **Customers** – LSB's target client. Who are they? What do they do? How many of them are there? Where are they located? What will they pay?
- **Cost** – LSB's Costs. Operational costs, Administrative costs, Manufacturing costs, Selling Costs, transportation costs.

- **Commodity** – LSB seed for the market. What are you offering? What is the gap in the market? What are the benefits of your commodity? Is there demand for it?
- **Competition** - other business targeting same market. Who are they? Where are they? What are their prices? How do they promote their product?

Benefits of market information

- It allows better decision making at the time of production. It helps you decide on:-
- What to plant, quantities, methods, what to finance.
- It allows better decision making at the time of selling. It helps you decide on:-
- Where to sell, when to sell, to whom to sell, price.
- It attracts traders by informing them about the quantity and quality of produce you have available.

Note: Most farmers produce before collecting marketing information on what the market/customers really wants from them. However from this session one lesson learnt is that it is very important to know what the market wants and prices offered before engaging in any kind of seed production to avoid being disappointed after harvesting your products.

Marketing information is a very useful element in business and it is not free. It has costs attached to it to enable the group source for market information.

Training methods

- Q: What is market information?
- Q: What market information do you use?
- Q: Where do you get the information from?
- Q: How do you gather it?
- Q: How do you make sure all members of your group get this information?
- Q: What do you do with this information? How do you use it?
- Q: What challenges do you have with getting market information?
- Q: Can you think of any other sources of market information that you could get?
- Q: Do you use this information? How?
- Q: If you don't use, could this information be useful to you? How?



Group work

Put farmers in 2 groups and let them come up with information that they think is useful for their seed businesses- let one person per group present this to all members

Give each group thirty minutes to answer the following questions:

- What information does your group need to improve your business
- Where will you get the information from?
- Who will collect this information?
- How will you use this information?
- How will you make sure this information is reached by all group members?
- What support do you need? (e.g. notice board at the sub-county HQ)

Allow 15 minutes for each group to present and discuss.

Allow time for questions, feedback and clarifications

Materials

- Flip chart, markers, tape, session chart and market intelligence story

Advise

- Market intelligence and market information are used together because it is through having market intelligence that's when we can get market information.
- The facilitator should be in position to stimulate debate easily after asking an important question.

Resources

- Training manual by mango tree on market information and market intelligence

Session 4.2.5: What is sales monitoring and a stock record?

Learning objectives

At the end of this session participants shall understand:

- The importance of monitoring sales by use of a sales records.
- The importance of controlling stock through use of stock records.
- How to enter data on sales and stock records.



AFOSEN a local seed business group in Northern Uganda has so far proven to be very serious in seed production and they produce cassava cuttings, rice, simsim, sorghum and groundnuts. They went into contract growing of sorghum seed with Naseco seed-company in the second season of 2013. They kept proper records of their production costs and after harvest they calculated their unit cost of production. They then compared it with the price that was being offered by the seed company and saw that they would make profits if they sold at the agreed price and hence sold it.

Content

Stock and sales monitoring can be done through recording all information on stock and sales records respectively.

Stock record

Stock records keep track of the quantity of seed that is available for sale. This record tells you accurately at all times how much seed you have for sale. This information is important for making you aware of how much money you can make or lose depending on whether the seed is sold or not. It helps the group to know what comes in and what goes out.



Crop: Beans

Date	Name producer	of	Quantity IN (Kg)	Quantity OUT (Kg)	Balance/kg	Estimated price

Sales record

A sales record is a record used for recording all sales and income made by indicating the date of sales, name of the buyer, the quantity purchased by variety, the unit price by variety and the total price paid. This kind of record helps you to know what kind of people buy your seed, in what quantity, and where your customers are located.

Date	Name of buyer	Gender	Quantity bought (Kg)	Unit price	Total Amount	Quantity left in store/kg

A simple format for the production and sales record used by the LSB's to capture sales record which also includes production is as below:

Production and sales record 2014a

LSB Name	Crop	Variety	Acres	Production cost	Yield/kg or Bags	Kg sold	Balance	Price /kg	Sales revenue	Total revenue
AFOSEN	G /nuts	Serenut 5, 6	7	3,720,000	79	0	79	250,000	0	19,750,000
	Simsim	Sesame 2	4.5	1,540,000	1,496	1,496	0	6,000	8,976,000	8,976,000
Obanga Ber	Simsim	Sesame 2	20	Data to be verified	16,000	0	16,000	6,300	0	100,800,000
Aye Medo Ngeca	G/nuts	Serenut 5	6	6,600,000	63	2	61	250,000	500,000	15,750,000
		Serenut 6	1	1,100,000	12	0	12	250,000	0	3,000,000
	Beans	Nabe 17	24	4,800,000	12,000	11,880	120	1,800	21,384,000	21,600,000
	Simsim	Sesame 2	39	16,380,000	19,500	19,305	195	4,000	77,220,000	78,000,000

NB: Figures in the table is for learning purpose and may not be real.

Record keeping is important for planning purposes. Without careful record keeping your business is likely to fail.

Training methods

Sales monitoring

- Q: Do you know how to monitor group sales?
- Q: What ways do you use to help monitor your sales?
- Q: how will your group start or improve on your sales record and monitoring?
- Q: Who is responsible?
- Q: Which resources do you need?
- Q: When do you need the resources?
- Q: How are you going to link your business records with the data collected by the sales monitoring committee?

Ask a volunteer to write on a flip chart the following outline;

No.	What?	Who?	By When?	Resources needed?
1				
2				
3				
4				

Suggest that the monitoring committee will be responsible for group record keeping and monitoring while individual members will keep their own updated business records.

Inventory record

- Q: Does the group know how to monitor their inventory?
- Q: Who is responsible for inventory monitoring?
- Q: When does the group do inventory monitoring?

- Q: Are there any importance of inventory monitoring?



NB: Put participants in groups and let them come up with an example of a sales ledger and inventory ledger for their various groups- They will present after completion of the group work.

Materials

- Flip charts, markers, tapes, sales and stock formats

Advise

- The facilitator should be able to come up with examples to fill in the ledgers.

Resources

- CIAT handbook 2, page 52-53.

Topic 4.3 Enhancing Customer Feedback

Key messages:

There are 5 effective customer feedback mechanisms:

- Welcoming feedback,
- Rank and prioritize,
- Solving the highlighted problems,
- Follow up with customers,
- Notify others about improvements.

Session overview

Session No.	Session name	Duration
4.3.1	What is customer feedback?	3 hours

Session 4.3.1: What is customer feedback?



Learning objectives

At the end of this session participants shall understand:

- What customer feedback is.
- How important consumer feedback is to the seed business.
- The various mechanisms used to ensure proper customer feedback.



Quote from one of the farmer respondents during a market survey conducted

"We buy seed from agro-input dealers with packages having logos of seed companies thinking they are quality seed, but this seed has a very low germination percentage and they are also full of impurities, so how will this survey you are conducting help us to solve our problems of access to quality seed?"

Content

Customer feed-back is a message got from your customers regarding the quality of your services and products. Small businesses need to have an effective customer feedback mechanism in place. This is not only to maintain or improve customer satisfaction but it also feeds you with information such as what do your customers want from you.

There are 5 effective customer feedback mechanisms:



Step 1: Welcoming feedback

You must be willing to listen to your customers if you want them to submit their feedback to you. Some traditional ways of welcoming feedback include placing a suggestion box on the help desk, conducting customer satisfaction surveys, having a complaint section on your site and so on.

First time customers' feedback: It is extremely important to know whether a new customer enjoyed their experience with you in seed marketing. Thus, tracking feedback from first time customers is a must.

Step 2: Rank and prioritize

If you have a large customer base in seed production, you are probably going to get a lot of feedback. Rank them according to the degree of improvements required, the amount of benefits that an improvement will reap as well as the interest of that particular customer submitting the feedback.

For example, you definitely do not want to delay the processing of feedback submitted by long time loyal customers. Also, pay particular attention to problems that are brought up by multiple customers.

Step 3: Solving the highlighted problems

Customer feedback may be positive or negative. Of course, it is always good to receive a positive one, which means that a customer is satisfied with the seed sold by your business.

However, for a negative feedback, you need to quickly rectify the issues specified by your customers as soon as possible. If there are no suggestions included in the feedback and you, as a small business owner, have no idea how to deal with the problems, you can always contact the customers to get some input.

Step 4: Follow up with customers

Once a problem has been rectified, notify the customer who submitted the feedback about the improvements made and invite him/her to do business with you again to see whether if the previous problem still persists.

If they had a bad experience with you previously, incentivize them to try out your seed again. Often, because you are being perceived by a business that cares, customers will provide more suggestions for improvements in the future. They might even tell people around them that you actually took notice of their feedback and there you go, free word of mouth marketing love!

Step 5: Notify others about improvements

It is always good to let your target market, prospects and customers know that improvements are constantly being carried out based on customer feedback.

Not only will this help to create a buzz around your market, it will also showcase your business as one that is constantly improving and listening to the needs of your customers. With that, more people are going to be doing business with you in the long run.

Share your stories on customer feedback

Do you have a customer feedback mechanism for your own small business for seed production? If yes, can you share with us some tactics that you think might be a good add-on to the steps above?

What are some of the amazing things that have happened to your business just because you listen to your customers?

Businesses exist to serve their customers, for example farmers are the customers of local seed business groups (LSBs). Good LSBs understand farmers –their problems and their preferences and always try to look at their activities through the eyes of the customers

and walk in their customers shoes. Businesses cannot survive without satisfied customers. Farmers who receive high quality seed from you consistently and conveniently will become your loyal customers and will tell other farmers how satisfied they are. This will cause your business to grow.

Note: If a good customer feedback mechanism is developed then the local seed producers will be in position to know what is actually on ground and find ways to solve the problem and avoid tarnishing their images.

The different ways of getting customer feedback include:-

- Through surveys conducted;
- Face to face interactions;
- Telephone calls ;
- Farmer field day;
- Ask buyers;
- Ask sub county NAADS.

Customers can give feedback to their producers through use of mobile phones.

“I once bought certified seed for planting from an agro-dealer but I was disappointed when the rice seed had less than 50% germination. I did not go back to complain since I feared that I would not be listened to. Maybe if they had asked me to give them feedback on my experience after planting I could have”.

This was a quote made by a farmer (respondents) interviewed during the market survey conducted by Agribusiness Expert of ISSD Ngetta ZARDI in November 2013 from Gulu District.

Training method

- Q: What is customer feedback?
- Q: What are the different ways of getting customer feedback?
- Q: Why it is important to always get feedback from your customers?
- Q: How can you respond adequately to customer feedback?

Materials

- Flip charts, marker, tapes and illustration charts

Advise to the facilitator

- Probe to know how the groups usually get feedback from their customers.
- The facilitator should inform the group that a customer feedback mechanism is a two way process.

Resources

- The African seed company toolbox, Section Two, page 71-73




Module 5: LSB are strategically linked


Topic 5.1 Understanding the importance of partnerships and how to manage partnerships.

Key messages

- Communication among partners is important in managing and sustaining partnerships.



"Thank you ISSD for inviting me to be part of West Nile Seed Sector Platform "I had never interfaced with Abi ZARDI and did not know what they do, also I had no information on the significance of challenges in Seed sector before. I am glad and look forward to actively champion seed issues in the Council," says Candini Luiji Arua District Secretary for Production & Marketing.



Amadrimaa Farmers Association was legally registered in 2007 as a community based organization (CBO) in Metu Sub-county, Moyo district Uganda. The group has been involved in small holder market oriented crop farming with support from Volunteer Efforts Development Concerns (VEDCO), a Local NGO. It was selected as a Local seed Business and initiated seed production in 2013B. As a strategy to create linkages, the group was always participating in different Local Multi-stakeholder meetings organised by ISSD Abi ZARDI. Currently, the group has established good linkages with several local partners like Metu Sub county Local Government, and local extension service personnel visit the group frequently to give them advisory services and available opportunities.

"Before, we did not know much about the sub county people but now they visit and advise us, they recently invited us to Local Government Development Services Management Programme review and planning meeting, where we presented a report on Seed Business," says Beatrice Akuku, the Group Secretary.

Session overview

Session No.	Session name	Duration
5.1.1	Why do we need partnerships and how can we engage with partners?	3 hours
5.1.2	How to undertake twinning visits?	3 hours

Session 5.1.1: Why do we need partnerships and how can we engage with partners?

Learning objective

- At the end of the session, participants should be able to appreciate the need for partnerships and they should be empowered to deal better with partners.



LSBs are in a tripartite partnership with ISSD and ZARDIs. ISSD engagement with other partners has made the partners interested in LSBs and facilitated LSB linkages to potential markets. For example, AFOSEN group in Apac district in northern Uganda has engaged in contract growing for sorghum seed of Seso 1 variety with NASECO and Alinto Joint farmers in Kole district in northern Uganda has also entered into a contract farming arrangement with Equator seed Uganda Ltd to produce soy bean of Maksoy 3M variety.

Content

Definition of partner

A partner is any person or organization who you obtain from or provide with inputs and/or services. LSB partners can be suppliers of inputs such as seed and agro-chemicals; customers for the LSB seed; service providers offering extension, credit, marketing or research services to LSBs; or an agent selling seed on behalf of LSBs.

Definition of partnership

A partnership is an arrangement where two or more parties agree to cooperate in order to achieve common objectives. A partnership is created by individual parties believing they can achieve their goals better by working together.

Importance of partnerships;

- Enhanced capacity.
- Access to alternative funding agencies.
- Increase chances of business success.
- Opportunities for education, training and career development.

Factors to consider in selecting a potential partner

- **Trust and Integrity:** Can you trust this person absolutely? Do you have complete faith in his or her integrity? If the answer to either of these questions is “no,” you should avoid the partnership. For more details on how trust and ethics can affect a seed business, refer to tool 40 (Trust and ethics checklist) of the African Seed Company Tool Box.
- **Common Values:** Do you share the same values? Do you have the same views about Product quality? Spending money? Integrity (e.g in production, marketing)? Customer focus?
- **Strategic Vision:** Do you share the same long-term vision for the company? Do you both understand the milestones that must be achieved to realize this vision? Do you both agree on how you will handle likely strategic setbacks?
- **Indispensable Talents:** Do all partners bring something to the table that the others cannot bring?

Partnerships are built on eight guiding principles which fall under four thematic areas (starting/initiation, implementation, sustainability, M&E). These are discussed below:

1) *Starting/Initiating the partnership*

This is about developing the partnership's core values and has two core principles: Partnerships must be built on shared values and philosophies.

- Begin with an open and frank discussion about values, goals and philosophies.
- Determine the exact business role of each partner. The roles should not overlap and should play to the strength of each partner. Clarifications of any issues must be during this stage.
- You must put your partnership in writing and all the partners should sign as a means of agreement with the provisions in the partnership arrangement. The partnership agreement allows partners to decide on how decisions are made, and will establish the agreement's scope.
- Address the issue of partnership communication. This may include regular meetings to discuss emerging issues and review progress, financial reporting.
- Partnerships should be defined by mutually beneficial goals and objectives.
- Clearly define the short and long term goals.
- Define the roles, responsibilities of each partner within their mandates.
- Discuss and agree on collaboration indicators or progress markers to determine activities that meet the goals of all involved.
- Partnership goals and objectives should be aligned with the goals and objectives of all the partners involved.

2) *Implementation of partnerships*

This is about translating values into action. Partnership activities should be integrated into the values of the organisations involved:

- Partners should communicate frequently.
- Partnerships should provide the parties with opportunities to interact, look at their business sites to enhance learning.
- Partnerships should be driven by a clear management process and structure.
- Each organisation should have a designated person to manage the partnerships eg changes created by partnership to ensure quality and alignment with his/her organisation's goals.
- Partnerships should include written descriptions of roles.
- Agree on responsibilities and accountability measures.
- Partnerships should include training for all key personnel.
- Partnerships should define specific, measurable outcomes.
- Partnerships should be guided by collaborative agreement, clarity on outcomes, benchmarks and measures of progress.

3) *Sustaining the partnership*

Partnerships should have support at the highest level within the business/organisation and concurrence at all levels.

- All staff of the organisation should articulate and demonstrate support for the partnership internally and externally.

- Communities should have the opportunity to review and contribute to partnerships.

Partnerships should include detailed internal and external communication plans, which clearly illustrate expectations of all the parties.

- Partners should communicate regularly about intended and actual outcomes of all activities.
- Communication about partnerships should allow opportunities for private and public recognition of both parties.

4) *Monitoring and evaluating partnerships*

This is about determining strengths, weaknesses and future directions.

Partnerships should be developed with clear definitions of success for all partners.

- Measures for success should be established at the outset of the partnership.
- Partnerships should be evaluated on a regular agreed-upon basis.
- Evaluation should include collection and analysis of information to determine accomplishments, strengths and weaknesses of the partnership. The performance/evaluation questions should focus on partnership objectives?
- Develop and implement a realistic monitoring mechanism against the agreed results.
- Come up with a shared strategy and action plan for critical analysis, communication and reporting, analysis critical reflection and decision making.

5) *Termination/ending partnerships*

Partnerships usually have defined objectives to achieve in a specified timeframe. Clear terms/circumstances under which a partnership is terminated are usually set at the start of the partnership. A partner may choose to withdraw from the partnership even before the end of the period set in the partnership for one reason or the other. If this occurs, make sure the withdrawal of a partner does not affect the execution and conclusion of specific activities in progress. It should also not affect the agreed collaboration and activities by other partners signatory to the partnership agreement. However, if a partnership will end at the expiration of the agreed-upon period, then follow the agreed terms of termination stated in the partnership agreement.



Contents of a good partnership agreement

- Areas of collaboration.
- Definition of the partners and what they do.
- Clarity on the roles of each partner.
- Principles for the partnership.
- Clause on dispute settlement.
- Clarity on how to handle cases where partners do not perform what they promised in the partnership arrangement.
- Starting date of the partnership and duration of the partnership.
- Clarity on communication among the partners.
- Provision on possibility of amendments to the partnership arrangement.
- Clarity on circumstances under which the partnership can be terminated.
- Clarity on key issues not covered in the partnership arrangement.
- Signatures of partners and witnesses. All the LSB members should decide on who should be the key signatory for the LSB based on trust, literacy and integrity of the

person. Witnesses can be LSB partners such as agricultural officers, community development officers and sub county chiefs.

Training methods

Through questions-answers:



- Q: Who is a partner for your LSB? Write down responses on paper cards and pin them on the walls. Facilitator defines partners in the context of LSBs and compares this definition with earlier responses by the LSBs
- Q: Who are your partners? Who are your potential partners?
- Q: How did you start your partnership? Who initiated it? Allow participants to share their previous experiences with partnerships and collaborations.
- Q: Basing on your previous partnerships, how would you approach your potential partners today? Build on the responses provided above and agree together with the LSBs, the best ways of dealing with potential partners.
- Q: Did the partnership achieve its intended objectives? What were the facilitating factors? Challenges? How did you benefit from your previous partnerships? Allow participants to share their experiences first. Write responses on a flipchart. The facilitator builds on the LSB perception of the importance of partnerships through additional advantages of partnerships on the flipchart.
- Q: How did you relate or engage with partners in the past? (emphasis on strategies used to engage with the partners and evidence of the partnership arrangement).The facilitator then emphasizes the need for a written partnership arrangement and displays an example of a partnership agreement with particular attention to the contents of a partnership agreement.
- Q: How did the partnership end?

Materials

- Pens, note books, attendance list, flip chart, masking tape, markers, coloured paper cards.

Advice:

- LSBs should be proactive in seeking partnerships.
- Important to manage expectations of the different stakeholders involved.
- Important to manage challenges and conflicts among stakeholders as they arise.

Resources:

- The African Seed Company Tool Box: 52 Tools Every Seed Company Manager Should Know How to Use. Pp. 3.26-3.28.

Session 5.1.2: How to undertake twinning visits?

Learning objective

At the end of the session, participants should be able to:

- Identify their learning needs that would be solved by a twinning visit.
- Plan, organise and conduct a twinning visit.



Some lessons learned from LSB twinning visits in Uganda:

"I just realized that we have a limited number of varieties and old ones"

Statement from an LSB member during a twinning visit to a research institute and fellow seed producing groups.

New ways of business visioning e.g. use of the Gender Action Learning System to envision business and empower women.

- New pre-harvest handling methods such as cutting seed potato plants a few inches from the ground at physiological maturity to enable the tubers to dry at the right moisture content, harden the skin and mature evenly.
- Construction of storage facilities using locally available materials.
- Awareness of potential opportunities to become out growers for seed companies.
- Existence of alternative sources of foundation seed e.g. seed companies for soy bean and farmer groups that work closely with research for crops such as potato.
- Learning from the experience of LSBs engaging in future crops of interest by other LSBs.

Content

Twinning/exchange visits

Exchange visits, which are also called study tours, seek to improve the knowledge and practices of the visitors and their organizations, and to integrate the experience gained from the visit into their daily lives. Exchange visits are very useful in mentoring LSBs through sharing experiences and peer learning from other farmers or organisations/institutions dealing in seed related activities.

Exchange visits involve organizing a meeting between, on the one hand, a group of visitors made up of between four and 30 people, both men and women, and, on the other hand, a host group. The aim is to exchange experiences and discover new viewpoints and approaches for a specific theme.

The geographical location of these visits varies according to the expectations of the participants. A visit may take place within the same community, area or country, or between different communities, areas or countries of a region or continent.

In terms of capacity development, exchange visits offer considerable scope for both women and men farmers. Producers will not immediately adopt a new practice simply because they have been made aware of its benefits. The process is more complex and requires going through certain stages. Once a producer has been made aware of a new practice, he or she will need to have an interest in the practice. When the farmer has understood how to use this practice, the next step will be making changes in the way he or she thinks and behaves. Only when what needs to be done in order to use the new

practice in local conditions has been established will the farmer be able to translate the idea into action, leading to adoption and ownership. This process is not immediate, but progresses with the help of Communication for Development. It is a process that takes time and requires openness to dialogue.

Learning experiences facilitated through exchange visits can take place at the following levels:

- Theoretical: the exchange visits lead to mutual knowledge increase, due to practical demonstrations, which make it easier to understand an idea or a concept and which stimulate willingness to take action. This method also enables participants to become more aware of their own skills and capacities.
- Practical: beyond facilitating a simple exchange of ideas, an exchange visit makes it possible for farmers to see concrete examples and to understand the advantage of subsequently adapting these practices and applying them to their own circumstances.
- Behavioural: the exchange visit leads to changes in attitude and encourages open mindedness and free choice.

Stakeholders and partners

The main actors involved in exchange visits are:

1. Male and female members of producers' organizations (POs), which may be made up of just men, just women or mixed;
2. Men and women farmers;
3. Managers of national and microfinance institutions, as well as managerial staff of ministries and projects.

Methodological approach

To achieve its objectives, an exchange visit should be organized in three phases: before, during and after the visit. Execution of these three stages should respect a certain number of criteria presented below. These criteria combine a systematic gender approach with a participatory approach. Both are crucial in order to take into account the needs and specific circumstances of all actors – both men and women – in the rural agriculture sector.

A. Before the Visit

Practical arrangements to be made when organizing a successful exchange visit include the following:

Identification of the theme and selection of participants

- Identify the theme of the visit.
- Work with the LSB to identify challenges that can be addressed through a twinning visit
- Identify an organisation where the visit can take place in order to meet the objectives of the twinning visit; advise the most suitable host for twinning event.
- Guide the LSB to identify the participants for the twinning visit by questioning them about their motivation, expectations and future commitments;
- Guarantee respect for gender parity in the selection of participants. It is crucial to increase the presence of women in twinning visits and take steps to ensure that they are able to participate fully.

- Use a system of alternating when selecting participants so as to avoid always choosing the same people and to enable both men and women who have never benefited from a visit to take part.
- Within the group chosen for the exchange visit, identify people whose qualities, roles and functions match the following criteria:
 - demonstration of a degree of interest in the objective of the visit, showing a willingness to play an active role in discussions and observations during the trip;
 - On return from the exchange visit, demonstration of a formal commitment to disseminate, to both men and women, the information and knowledge acquired.
- Take care to address the expectations of people not taking part in the trip but who could nevertheless benefit from the knowledge acquired by LSB members that participated in twinning trip. This will facilitate careful targeting of the practices to be explored during the trip, ensuring that the group returns with concrete solutions.

Sharing roles and responsibilities between participants

It is a good idea to identify, within the group travelling, certain resource people and define their responsibilities. Ideally, it is advisable to choose:

- **A person in charge of logistical organization**, to coordinate preparation for the trip and accompany the group throughout the visit;
- **Two facilitators – one male and one female – to be in charge of technical details**, such as preparation and moderation of the visit. Together with the participants, these facilitators will also have to prepare a summary of the events of each day, and organize opportunities to report back (i.e to provide feedback) from the visit once the group has returned home.

It is important that the people chosen be communicative, that they know the rest of the group well and that they are able to explain things clearly and make themselves understood. All the participants should take part in taking notes and photographs or recording interviews with audio or video. It is therefore essential to check that they have the technical skills to carry out these tasks.

Location and host organization(s)

The following are various aspects which should not be overlooked:

- Choosing the location for the visit and the host structure(s). The organization selected should fully match the expectations of the visitors and the resources available for the visit;
- Ensuring that the facilitators and person in charge of logistics – male or female – contacts the host organization(s) in advance (individuals and/or organizations) to obtain information about their activities, so the group can prepare for the visit;
- Checking with the host organization(s) as to which costs will be covered by the group of visitors (meals, accommodation, services);
- Supplying the host organization(s) with information about the objective and theme of the visit;
- Considering what contribution the visitors could make to the host group, so as to build a reciprocal relationship;
- Nominating, in the village, region or country visited, a person to take responsibility for organizing the on-the-spot logistics of the visit;

- Identifying an interpreter to translate discussions if the language spoken by the host group differs from that of the visitors;
- Ensuring that the host setting is suited to the specific concerns of women, as well as to those of men;
- Identifying the men and women within the host organization who will take part in the meetings, and defining their roles and responsibilities.

Timing and duration of visit

It is important to:

- Identify the best time of year to visit the location chosen for the visit.
- Think about the duration of the visit, which would create problems of having to limit the time spent at the location chosen for the exchange.

Preparation of the journey, administrative formalities and material

- Define the route, study road conditions and identify the type of vehicle to be used;
- Decide the day and time of the journey;
- Check all formalities required, such as visas and vaccinations;
- Prepare any foreign currency as needed;
- Identify and prepare material needed for the visit, for the host organization as well as for the visitors.

Financial organization of visit – Costs and allowance for participants

It is advisable to:

- Budget for all aspects of the exchange visit (transport, accommodation, meals, services supplied by the host organization, visas, vaccinations, etc.);
- Address any difficulties that might arise from different allowances between visitors, which may vary according to their membership in separate bodies.

Preliminary meeting and identification of theme

It is crucial to organize a meeting prior to the start of the exchange visit. Ideally, the group should meet several weeks before the start of the visit, especially if the participants do not know each other. This will help to define issues to be addressed by the exchange visit and to encompass them within a wider common project.

This meeting will ensure that the visit does not become a tourist excursion, and will strengthen the interest, involvement and sense of responsibility of the participants. Before leaving, the group should be made aware of the fact that members' input is fundamental to the successful outcome of the experience: the visit is not an end in itself, so the 'before' (the preparation phase) and the 'after' (the phase for giving feedback and applying lessons learned) make an equal contribution to achieving the objectives of the process.

Programming of field visits and interventions

The choice of resource people should be linked to the challenges to be addressed by the visit. It should be remembered that it is important to take into account the common and specific expectations of the women and men in the group. It may be useful to send a list of questions in advance, so that the resource people can be better prepared. It is up to the facilitator to ensure that the issues for each visit are defined in advance.

The program for the visits should:

- Take care to ensure a balance between theoretical and practical information. While the theoretical information will lay the foundation for a practice to be adopted, the field visits will enable participants to see it working in practice;
- Set aside free time between visits so that all participants can absorb the information and exchange views about their impressions. If the timetable is too full, the visits may prove counter-productive;
- Create opportunities for social interaction during meals.

Preparation of Terms of Reference

The objectives of the exchange visit should be clearly defined in the Terms of Reference. In this document, the group of visitors, and the organizations that they represent, should describe:

- their position and the situation at the outset;
- the areas of interest for both men and women participants, their motivation and the questions they have, as well as the practices they hope to learn about;
- the purpose and objective of the exchange visit, including any changes expected after the group's return home.

Ideally, these terms of reference should be prepared in consultation with the host organization, since it is advisable to agree the methodology with the partner.

Preparation of supplementary documents

Aside from the terms of reference, the visitors' group is advised to prepare a briefing note before departure. This should contain all the information gathered during the logistical and technical preparation phase, a programme, including the places to be visited, and a brief presentation of the people and organizations to be encountered. The organizations represented by the visitors' group should also supply promotional material to be distributed to the people met during the exchange (brochures, posters, various documents).

Preparation of participants and their entourage

- A poorly prepared exchange visit can become a stressful experience for men and women not used to making such journeys. For this reason, it is advisable to:
- organize the visit as a group, as this will put everyone at ease;
- give all details about places to be visited, people who will be encountered;
- prepare the participants for discussions and give them communication skills. They should know how to listen, ask the right questions and request clarification;
- make sure the group is escorted by a woman and a man able to overcome cultural differences and act as a link between group members;
- ensure that practical arrangements are made at the host site so that everyone feels at ease. For example, organize a degree of privacy by separating accommodation for women and men, take account of specific needs of women who are breastfeeding, etc.

In addition, it will be important to arrange advance preparation for families and the entourage (husbands, heads of household, etc.) of women taking part in the exchange visit, so that they can:

- plan for their absence from the family and the community.
- make arrangements so that their household and child care duties and responsibilities do not become an obstacle for preventing them to participate in the visit.

B. DURING THE VISIT

Organization of daily visits

Each day, the group will make several visits. During these, the facilitator must ensure that all group members – women as well as men – are able to express themselves and receive answers to their questions. It is crucial to:

- respect the established calendar and programme (punctuality and objectives);
- ensure discipline and respect for differences (values and customs) throughout the visit;
- stimulate a willingness to listen and communicate among participants, between visitors and the host group and encourage all participants to take an active role in debates;
- organize reporting groups on a daily basis;
- document during the entire process in order to enable opportunities for feedback after the event, and in particular:
 - take notes (of contacts and content)
 - take photos, record interviews
 - take samples if necessary.

Daily wrap-up meeting (reflections)

It is essential to hold a daily wrap-up meeting, during which participants can:

- take turns to give their impressions;
- explain what has impressed them, favourably or otherwise;
- ask the facilitators questions on certain points.

The people tasked with taking notes will give a brief summary, add information from the discussions and complete their material with documents collected. The meeting should end with a review of the visits planned for the following day, including a quick list of the main questions to be asked and information to be gathered.

C. AFTER THE VISIT:

Preparation of exchange visit report and wrap-up meeting

The report from the exchange visit, based on results from the daily wrap-up meetings, should:

- Summarize the content of visits and presentations;
- Present the thoughts of participants.

The report should be clear and instructive, so as to make it easy for everyone to communicate the information gathered and the knowledge acquired. It is therefore recommended that participants set aside a day to wrap-up the experience at the end of the visit, so that they can all make an active contribution to the content preparation and organization of the final report.

Feedback meetings

Meetings to present and share the experience (and report back) should be based on the final report and illustrated with photos and, if possible, with video footage. These meetings should be facilitated by one or more members of the group that took part in the exchange visit. Such meetings often bring together staff from organizations that sent participants

on the visit and may also include other partner organizations involved in the theme chosen for that particular exchange visit.

The feedback meeting offers an opportunity for the visitors' group to plan how the newly acquired knowledge can be put into practice in concrete terms. The group should also make provisions for sending its feedback to the host organization.

Members of the host group, which organized the meetings, will use this to analyze the experience and improve future visits.

If there is a rural radio station in the area, it may be interesting for one male and one female participant to take part in a broadcast and talk about what they saw and the lessons learned during the exchange visit. The broadcast can later be rebroadcast by other rural radio stations.

Lessons from the experience should be drawn during and after the exchange visit, with the following questions in mind:

- What worked well, and why?
- What did not work well, and why?
- What should be done differently next time?
- What recommendations can be made for the following day and for future visits?

If the various stages of the exchange visit are well documented, both the host organization and the visitors' group will be able to capitalize on the experiences and improve their working methods in future.

Assessment of Impact

Experiences from exchange visits lead to changes which can enable a new practice to be discovered, understood, assimilated, validated and subsequently applied. This corresponds with the outline of the adoption ladder described above, so long as participants move on to the next step of putting the knowledge acquired into practice, once they are back from the exchange visit.

An exchange visit does not just enable farmers to learn about a new practice that they did not previously use. It also encourages them to be more open-minded and may motivate some of them to try a new activity.

A more precise evaluation of the long-term impact that visits have on uptake of practices by participants can be obtained through questionnaires conducted with people who took part in exchanges. Alternatively, assessments can be specifically worked into the organization's monitoring and evaluation mechanism.

Training methods:

- Q: Have you ever visited any organization or person engaged in seed production? Who initiated the visit? Why did you visit? What did you learn from the visit?
- Q: What kind of preparations did you undertake before, during and after the visit?
- Q: Why did you choose that organisation for the visit?
- Q: How did you select participants for the exchange visit?
- Q: What did you learn from the visit?



- Q: Does a twinning visit need a facilitator? Why?
- Q: Divide participants into groups and list the most pressing challenges that you are currently facing? Do you know anyone who has managed to deal with that challenge?



- The facilitator takes lead in organizing for and facilitating discussions during the twinning visit (refer to content on how to Organise twinning visit, above)

Materials:

- pens, note books, camera, flip chart, markers.

Advice:

- Timing is critical for learning during twinning visits (give example of LSB that learned nothing from a twinning visit)
- It is advisable to avoid organizing an exchange visit for producers/farmers during the crop season, as this is a period of intense work for both hosts and visitors. This is especially true for women, who would be unable to delegate their domestic and agricultural duties.

Resources:

- Seed Entrepreneurship Manual for Rwanda. Pp 18, 19.
- Frédérique Matras, Fatouma Sidi, Sophie Treinen. (2013). Exchange visits: Advice for improving the impact. Good practices fact sheet. April 2013. www.fao.org/knowledge/km-gender.

Topic 5.2: Partnerships with value chain actors

Key messages

- Seed production requires a lot of production inputs as well as processing materials.
- Most of these inputs are supplied by other partners in the seed sector or seed supply chain.
- It is important for the Local Seed Business groups to identify and map out these stakeholders to increase efficiency in accessing required inputs.
- Seed produced by the LSBs needs to reach its final destination to a food security farmer. This may be done directly by the LSB or by the other actors in the seed supply chain.
- Proper linkages and coordination in supply chain will increase the efficiency of input acquisition as well as dissemination of outputs from the seed business.



LSB Aye Medo Ngeca benefiting from establishing a good linkage in the seed supply chain

Aye Medo Ngeca Local Seed Business in Dokolo district, northern Uganda initiated seed production in 2008. Linking for input was not a critical issue at the beginning because the group had little knowledge on the impact of these linkages in the progress and sustainability of their seed business. However, with the introduction of LSBs concept in 2013, Aye Medo Ngeca have developed a good knowledge of the benefits of accessing essential inputs such as foundation seed, fertilizers and other agro chemicals (pesticides, herbicides and fungicides). As a strategy to create efficient linkages, the group has formed a production committee which is tasked with identifying the inputs required by the group and the potential suppliers. Currently, the good linkage the group has established with the National Semi Arid Resources Research Institute, NaSARRI in Serere, for access to foundation seed, have earn them additional benefit on gender mainstreaming coaching by the same research institution. Starting from their primary target in the linkage for Foundation seed, the group now accesses gender coaching as a secondary benefit from the NaSARRI.

Session overview

Session no.	Session name	Duration
5.2.1	Who supplies inputs in quality seed production?	1,5 hours
5.2.2	What are the Services LSBs can get from Research, Extension, Credit Institutions, and Quality Assurance Offices?	1hour
5.2.3	Legislation Governing seed Business	0,5 hour
5.2.4	Seed Inspection and Seed Certification	2 hours

Session 5.2.1 Who supplies inputs in quality seed production?

Learning Objective

By the end of this session, participants should be able to;

- Know the benefit of utilizing essential agricultural inputs and link with the various sources.
- Develop interest and demand for essential inputs and services that may enhance the performance of their seed businesses.



"If I hardly get money to acquire foundation seed for my seed business, where will I get more money to buy fertilizers, pesticides and fungicides?"

Mr. Okello Patrick, a Local Seed Business member from Tic ryemo can, Local Seed Business in Nwoya district wonders about accessing inputs for quality seed production. Most farmers do not value the use of other agricultural inputs which may enhance the yield and quality of their seed crop. It is very important to encourage farmers on benefits of accessing and keeping good linkages with the suppliers of these inputs and services.

Farmers consider most inputs other than seed as a luxury in agricultural production. This perception lowers the interest of the farmers to effectively demand these inputs and services.

Content

Inputs required by LSBs for quality seed production

These are materials, equipment or services that are required to enhance agricultural productivity. These includes fertilizers, labour, seed, implements such hoes, ox ploughs, machetes; pesticides, herbicides and fungicides among others.

Category of inputs

Physical inputs services; seed, fertilizers, packaging materials, drying tarpaulin.

Services; labour, advisory services, transportation, storage etc.

Ways of acquiring inputs; direct purchase, obtain on credit, free from friends, relatives and in laws, through contractual arrangement and loan.



Important production and processing Inputs required by LSBs:

Inputs	Who can supply?	What type of relationships
Foundation seed	Research station, Public Universities in research, Seed companies and organized farmer groups with rights to produce Foundation seed.	Contract, direct purchase of Foundation seed, technical advice, inspection.
Fertilizers	Agro dealers, large companies like Bolton Uganda.	Direct purchase, contractual
Pesticides, fungicides and seed treatment chemicals	Agro dealers	Direct purchase and contractual
Ox-ploughs, hand tools	Open market and agro dealers	Direct purchase, contractual
Equipment; Sprayers, (hand, Knapsack etc.) moisture machines	Agro dealers & Agro input companies	Direct purchase
Rhizobia for most legumes	Makerere University, Faculty of agriculture, agro dealers	Partnership, contractual and direct purchase
Drying materials/Tarpauline	Agro dealers and open market	Direct purchase
Packaging bags	Open market, packaging factories for specific orders	Direct purchase
Herbicides and storage chemicals	Agro dealers	Direct purchase or contractual
Advisory services and technical support	NAADS, Agricultural Research, Institutions like agricultural universities, private companies	Direct consultancy hire or through partnership support and contractual arrangement
Transportation services	Transport companies	Contractual or direct hire.
Labour	Surrounding community	As wanted, may also engage labour on contract basis

Importance of using inputs, particularly fertilizers to enhance the seed quality from LSBs

Essential Nutrients

The fertility of the soil largely depends on the amount and rate of nutrients provided to it. To enhance healthy and continuous growth of plants, it is important to provide the soil with adequate nutrients. Thus, fertilizers contain the essential nutrients that are supplied to the soil, thereby improving plant growth and producing high yields.

Increased Resistance

Fertilizers increase the capacity of the plants to hold more water and thus, becoming more resistant to even severe drought conditions. Fertilizers that contain potassium are best meant for strengthening the stalks and straws of plants. Further, they assist in enhancing seed and fruit quality, thereby delivering better produce and stocks.

Early Blooms

Fertilizers shorten the blooming time of flowering plants. Researches indicate that the phosphorus content in fertilizers helps in the early maturity of the plants. This means that the plants form seed and develop roots faster than in the absence of fertilizers.

Growth Booster

To encourage faster growth of plants, farmers use fertilizers containing nitrogen. Nitrogen functions as a growth booster and greening agent as well. To improve the green colour of plants, nitrogen aids in forming chlorophyll and manufacturing plant protein. Deficiency of nitrogen can be diagnosed by plants that display stunted growth and light-green leaves. Therefore, fertilizers with rich nitrogen content are important for greening plants and lawns.

Soil Fertility and higher yield

Fertilizers form an integral part of soil fertility and texture. As such, natural fertilizers, such as compost and manure, serve as the best soil enhancers, thereby eradicating various soil problems and enhancing crop yield.

Outputs from the LSB

LSBs target is to product and market quality seed. The marketing the quality seed may be done centrally by the LSBs themselves or they can have distribution points through the existing agro dealers.



Outputs	Who can buy?	Who can support in the distribution
Quality seed	Community food security farmers. NAADS program at sub county levels.	Direct sales or through agro dealers. Direct purchase from the LSBS, promoting LSBs through contractual arrangement, partnership with the NAADS program
Advisory services	Food security farmers	This is can be added



Training methods

- Q: What type of inputs do they know?
- Q: Who are the suppliers of those inputs?
- Q: What type of relationships can they have with those suppliers?

Materials to use

- Flip charts, markers, masking tape, exercise books

Advice:

- Know the contact information of nearby agro dealers because a link needs to be created.
- Involve agro dealers in the training where possible.

Resources:

- Seed Entrepreneurship Manual for Rwanda.

Session 5.2.2: What are the services LSBs can get from research, extension, credit institutions, and quality assurance offices?

Learning objective

At the end of this session LSBs should be capable of:

- Identifying the different kinds of services they need.
- Knowing who the service providers are.
- Knowing at what cost they can acquire particular services.



Farmers think inputs are acquired free of charge, there is a need to instil in them the mindset to acquire input at their own cost. This is a very common experience in areas where there was an emergency program like in Northern Uganda.

"We have been authorized to sell seed by Abi ZARDI because we are very well trained by them to produce seed in the District of Adjumani" says Mr. Adam the chairman of Andevuku LSB in Adjumani. He said they only do what NARO taught them and they get all their foundation seed from Abi ZARDI. He said many groups were trained by Abi ZARDI but could not follow the training and failed to get foundation seed from Abi ZARDI



Odonga was asked what he knows about NARO and he simply answered: *"I don't know but I think they are the people who sell maize"*. Odonga is a member of Farson LSB in Nebbi district who never met any official from NARO until the ISSD/Abi ZARDI team started working with his group. Many LSBs know vaguely what services they require especially in the beginning of their seed business, yet there are a number of services and service providers that they should actually know. We have seen LSBs appreciating the efforts to bring Credit providers to talk to them on field days, trainings, MSPs and other occasions. The LSBs may know they need credit; but what kind and on what terms. LSBs will really miss opportunities if they do not know what services can support them and who provides them.

Content

Research

Crop and Animal Research is handled by National Agricultural Research Organization (NARO) but there are also other organizations in Uganda doing research such as CIAT, IITA, CIMMYT, and CIP. In Uganda different crops are bred from different research institutes (Table below)

Research Institutes and their main Crops

Institute	Mandate crop & Information
National Crop Resources Research Institute(NaCRRI)-Namulonge	Rice, Maize, Cassava, Sweet Potatoes, Bean
National Semi Arid Resources Research Institute(NaSARRI)-Serere	Millet, Sorghum, Pearl Millet, Groundnut, Simsim, Cowpea
Zonal Agricultural Research and Development Institutes(ZARDIs) e.g. Abi ZARDI, Ngetta, Mbarara, Buginyinya, Mukono, Bulindi, Kachekwano	Just for multiplications of developed varieties and adaptive research



Extension for seed:

This is meant to offer advisory services to farmers and government very much supports extension and extension workers are at sub-county level in Uganda. There are also other NGOs giving extension support to government and the LSBs need to take the chance whenever they get it.

Credit Institutions:

Several credit institutions exist near all LSBs. Examples include Microfinance Institutions, Banks and SACCOS. These offer a number of services.

Quality Assurance:

Monitoring seed quality is a very important service that a local seed business must access continuously and in Uganda it is the responsibility of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF); particularly the National seed certification services in the department of Crop Protection.

List of Service Providers and Services

Service Institutes	Services Offered
Research	<ul style="list-style-type: none"> • Foundation Seed advice • Source of New Varieties and information • technical advice • Participatory Variety Selection(PVS) opportunities • Participatory Plant Breeding Research(PPBR) Opportunities • Trial Materials • Demonstrations • Quality Assurance
Extension	<ul style="list-style-type: none"> • Linkage to Market • Sometimes can buy seed(Market) • Training of new skills • Promotion • Technical advice
Credit Institutions	<ul style="list-style-type: none"> • Loan/credit • Loan/Credit management advice • Market and market information
Quality Assurance	<ul style="list-style-type: none"> • Inspection and certification • Training on QA • Labels

Training methods

Divide LSBs in small groups of about 5 members and ask them to respond to questions below:

- Q: What kinds of services are required for our Local Seed Business Development?
- Q: Who are the providers?
- Q: Which one person in that organisation is known by one of our members and provide the contacts of that person.
- Q: Are the services free or at a cost?



Each group should have a secretary to write and present. All groups should then present and a summary table is made.

During the presentation members can agree or disagree about a particular service/provider so that a common ground is achieved. Whatever is forgotten, the facilitator can add.



Map the service providers

Services and Service Providers near LSBs

No	Service Required	Provider	Contact of Provider

Materials

- Flip charts, markers, notebooks, pens

Advice/notes for the Facilitators

- Let the LSBs talk more here so that they explore.

Resources, Bibliography


- <http://naro.omni-techsolution.com/>
- <http://www.unada.org/>

Session 5.2.3 What legislation governs local seed businesses?

Seed legislation is meant to promote, regulate and control plant breeding, variety release, multiplication, condition, marketing, importing and quality assurance of seeds and other planting materials to ensure quality and distinctiveness.

Learning Objectives

- At the end of this session participants should be aware of the different regulations that govern seed research, seed production, and seed marketing including seed standards required by law.



"We used to think production certified seed is only work of educated persons and multi-nationals and national companies", says Chairman Obanga Ber, one of the LSBs in Northern Uganda. "It is interesting to know that, we produce seed and also apply for inspection to MAAIF", he added.

Anyone can apply for seed inspection as long as they are registered and trained as seed growers. Certification is a service by government which can be offered to any registered seed grower whether individual, group of farmers or companies and institutions.

Content

Different Regulations/Laws LSBs need to be aware of include;

1. Constitution of the Republic of Uganda
2. Seed and Plant Act of 2006: Act No. 3 of 2007
3. National Seed Policy (Draft 2014)
4. International Seed Testing Association (ISTA) Rules

Training methods

- Ask what kinds of laws bylaws, resolutions and policies are there that govern seed business in their area.
- Present all the relevant laws and policies to the gathering and the implication of not abiding by them.

Materials

- Flip charts, markers, notebooks, pens

Advice to the facilitator

- This involves creating awareness about the existing laws governing the seed industry and if possible photocopying the relevant parts.

Resources

- National Seed Certification standard for Uganda, Pg. 8-10
- Plant and Seed Act. 2006
- The Constitution of the Republic of Uganda, relevant section of seed law

Session 5.2.4 How is seed inspection and certification done?

Learning Objectives

At the end of the session the participants should understand:

- The importance of seed inspection.
- The minimum standards during inspection and the penalty for non-compliance.
- Who does seed inspection and the roles of both internal and external inspection.
- How to conduct seed field inspection.



"We were prepared by the ISSD seed expert to be visited by seed inspectors from MAAIF. We were very optimistic to receive the external inspectors from MAAIF. We expected the seed expert to be with us during the inspection so that in case we forget anything, he would help us answer or negotiate with the inspectors. To our surprise, the seed expert only introduced the inspection team to us and left. The inspectors noticed both good and bad practices which left us very worried whether we were still allowed to remain seed growers". Says the Chairperson of AFOSEN, a LSB in Apac district.

External inspectors do not compromise with the seed growers on issues of quality. Therefore it is very important that LSB farmers get the quality issues first in the right way to avoid panic during inspection.



Ngetta ZARDI Seed expert (3rd left) guide LSBs during internal inspection

Content

Seed certification is a legally sanctioned system for quality control of seed during seed multiplication, production and marketing. It consists of field and bin inspection, pre and post control tests and seed quality tests. Seed certification is a scientific and systematically designed process to secure, maintain, multiply and make available seeds of notified and released varieties to the farmers.

Inspection is the process of ascertaining the extent to which quality procedures, set standards have been maintained by seed growers during multiplication and marketing of seed. Inspection is the role of the government implemented by trained persons under NSCS in MAAIF.



Seed Certification Procedure

Good quality seeds refer to seeds having

- Optimum genetic and physical purity ,
- High germination procedure percentage and seed with optimum moisture content.
- It also includes seeds free from noxious weed seed and other crop seeds and free from seed borne diseases.

Objective of Seed Certification:

- To ensure the genetic identity of a variety.
- To ensure a high degree of physical purity.
- To ensure a high degree of germinability.
- To ensure freedom from all designation seed borne disease, weeds and other crop seeds.

According to statutory rules and regulation of seed act (2006), MAAIF National Seed Certification Services (NSCS) is the one responsible for seed certification in Uganda. The Act has well established procedures for registration, field inspection, seed processing, release sampling, seed testing, issuing of seed certification tags and seals and the release of seed lots among others.

Mechanics of Seed Certification

- National Seed Certification Services
- Seed Multiplication Scheme
- Farmer cooperation/groups
- Seed Inspectors
- Crops eligible for certification
- Field Inspections
- Field and Seed Standards
- Seed Sampling
- Quality Tests Conducted
- Issuance of results of analysis and tags

Steps to follow in seed certification:

- 1) Receipt and scrutiny of the application with notarized agreement for the registration of the seed plot for certification.
- 2) Verification of seed source, class used for raising the crop by checking certification tags, labels, seed containers , cash memo or bills.
- 3) Field inspections of the seed plot to verify conformity to prescribed field standards.
- 4) Post-harvest supervision of seed crop including sealing raw seed, issue T.C. supervision during seed processing at registered seed processing plant.
- 5) Seed sampling and TESTING: sending samples to MAAIF Laboratory for analysis to verify conformity to prescribed seed standards as well as genetic purity.
- 6) Grant of certification, tagging and sealing of the containers – Release of seed lot for seed multiplication or marketing for commercial purposes.

Seed Classes

Established by the Board, for the purposes of seed production and marketing five seed classes as follows:

Seed class	Tag colours
Pre-Basic (Breeder seed);	White with violet diagonal strip
Basic seed (Foundation Seed);	White
Certified seed first generation;	Blue
Certified seed second generation; and	Red
Standard seed.	Yellow
Quality Declared Seed/Partially certified.	Grey



Training methods

- Q What is the importance of seed inspection?
- Q. What are the minimum standards during inspection and what is the penalty for non-compliance.
- Q. Who does seed inspection; internal and external inspectors.
- Q. How to prepare for and conduct seed field Inspection.

Materials

- Flip Chart, Pen, Book, Markers, Printed seed certification standards, Prepare field for practical session, tape measure, Pencil, Variety Descriptors

Advice to the facilitator

- The Facilitator must understand the certification standards and laws.
- The Facilitator must probe well if members have understood the criteria of certification.

Resources

- National Seed Certification standard for Uganda, Pg. 8-10
- Plant and Seed Act. 2006
- The Constitution of the Republic of Uganda, relevant section of seed law.

Annexes

Annex 1 (module 1, session 1.3.2, session 1.4.3)

In the yellow boxes how LSB KYAZANGA SHUPO is scoring for each of the success factors

In yellow the scores per sub factor for this LSB

Success factors	Subfactor	Questions	1= Poor	2=Fair	3 = Satisfactory	4= Good	5= Excellent
Marketing strategy	4 Ps	PRODUCT: Does the LSB know the product attributes needed by the customers?	the LSBs do not know any product attribute needed by customers;	The LSB knows only one product attribute needed by their customers	The LSB knows at least two product attribute needed by their customers	The LSB knows at least three product attribute needed by their customers	The LSB knows all the product attribute needed by their customers
		PRICE: Does the LSB have a pricing strategy?	the LSBs does not have any knowledge on a pricing strategy	The LSBs has some knowledge on the pricing but does not have a strategy in place	The LSB has a pricing strategy but is not using it.	The LSBs has a clear plan , task and responsibility on pricing strategy but not fully implemented;	The LSBs has a clear plan for price strategy and fully implemented
		PROMOTION: Does the LSB have a promotional strategy?	The LSBs does not have any knowledge on a promotional strategy.	The LSB has the knowledge but no resources to promote its seed;	The LSB occasionally promotes its seed but does not a specific budget.	The LSB has organized and planned promotion activities and the budget but limited by resources.	The LSB has organized and planned promotion activities and the budget with sufficient resources.
		PLACE: Does LSB have a sales point and how effective are the distributional channels?	the LSBs does not have a sales point and has not identified the distribution channels	The LSBs has a sales point and have not identified the distributional channels.	The LSBs has a sales point and have identified the distributional channels but are not using the channels	The LSB has a sales point with distributional channels but not fully effective.	The LSB has a sales point with distributional channels which are fully effective.
	Customer analysis	Does the LSB know its customers and their needs fully?	LSB members do not know their customers and neither their needs.	LSB have identified few customers but is not aware of their needs.	LSB knows most of their customers and are not fully aware of their needs.	LSB knows most of their customers and are fully aware of their needs	LSB knows most of their customers as well as their needs with plans to meet their needs

	Market segmentation	Has the LSB segmented its seed market?	LSB has no knowledge into do market segmented.	LSB has knowledge on how do market segmentation but have not implemented.	LSB has developed the criteria for market segmentation but unutilised.	LSB has developed the criteria for market segmentation and have started using it.	LSB has identified the market segments.
	Unique product	Does the LSB produce and market unique seed?	LSB does not have any knowledge on product differentiation?	LSB members have been trained in product differentiation but have not put in place plans on how to do it.	LSB members have skills in product differentiation a and have put plans in place on how to differentiate their seed products	The LSBs have planned on how to differentiate their products, have allocated resources for this but only for one enterprise	All LSB seed products are unique in terms of all key attributes and have a brand name.
	Diversification	How diverse are the LSB seeds and market segments?	Limited Number of Crop and varieties bartered and sold at the farmgate	Limited Number of Crop and varieties that are Seed sold farmers in community	Limited Number of Seed and varieties Seed sold locally to farmers in and outside LSB community	A number of different seed crops and varieties that are sold to farmers and institutional buyers in the community	A number of different Seeds crops and varieties that are sold to different types of farmers and institutional buyers all over the district/region and beyond
Consumer feedback mechanism	Diversity, and frequency of getting product feedback from customers	How, and how often does the LSB get feedback from customers on seeds sold (crops, varieties, qualities)?	LSB has no mechanism of getting feedback from customers	LSB is getting some feedback from less than 10% of its customers coming to them	LSB actively gets information informally during meetings with less than 25% of customers	LSB actively plans at least one annual meetings with up to 50% of its customers and gets feedback on seeds sold	LSB actively plans at least two annual meetings covering more than 50% of its customers and gets feedback on seeds sold.
	Remedial responses	Does the LSB adapt/respond to customers complaints?	LSB ignores the complaint.	LSB tries to solve the complaint	LSB solves the complaint from the complainer	LSB also investigates the cause of the complaints (what did the LSB do wrong?)	LSB has a structure that allows using complaints as an opportunity to improve its product.
Access input and services	Breeder and Foundation	Does the LSBs have sufficient access to Breeder and Foundation seed?	The LSB does not have access to breeder and foundation seed	Limited access to Breeder and Foundation seed	There is access to Breeder and Foundation seed, but the supply is not reliable in terms of quality	The LSB has access to Breeder and Foundation seed but sometimes the quantities are not sufficient	Reliable and timely access to sufficient quantities of quality Breeder and Foundation seed

LSB Governance	Leadership	How do(es) the leader(s) perform in terms of guiding the LSB and its members into a commercially sustainable enterprise?	No leadership structure, outsiders govern the LSB in the development of a commercially sustainable enterprise	LSB leadership s strongly leaning on external support in its operations for the development of a commercially sustainable enterprise	The LSB is operationally led by one or more entrepreneurial farmers taking the lead in the development of a commercially sustainable LSB	Leadership has been democratically elected by the LSB members, and has the capacity to guide its members operationally in the development of a commercially sustainable LSB.	Leadership has been democratically elected by the LSB members, and has the capacity to guide its members strategically and operationally in the development of a commercially sustainable LSB.
	Committees	Do the LSB have the functional committees with Clear Terms of Reference, work plans and reporting structure?	The LSB has no committees in place.	The LSB has committees in place but no terms of reference.	The LSB has committees in place with terms of references but no work plans.	The LSB has committees in place with terms of references with work plans and no repotting structure	The LSB has committees in place with terms of references with work plans and repotting structure.
	Land	Access, ownership and gender: Do the LSB members (both Men and women) have access to Land for Seed Production?	Land is traditionally owned. Male and female farmers use the land for a short period of time and not concerned with sustainable use of the land for seed production.	Land is traditionally owned and controlled and user rights for male and female farmers are under customary law for a longer term	Land is leased on a long-term contract (>10 years) and farmers (male and female) to a limited extent invest in the quality of their land/soil for seed production	Land is individually owned through customary law (based on long-term user rights and de factor ownership) and managed sustainably for seed production	Land is privately owned (title deed in the name of the user) and managed sustainably (in terms of soil fertility, prevention of erosion, etc.) for seed production.
		Clustering: And what is the extent of clustering land for seed production? How is the clustering of seed production fields organized in the LSB in order to contribute to efficient quality seed production (efficient use of inputs, machinery, etc.)	Small farm plots are scattered. Individual farmers are responsible for seed production on their own plot(s).	Farm plots are scattered. Farmers have a relatively larger size of plots available for seed production.	Farmers have started to cluster their land for seed production and jointly organize isolation issues	Farmers have clustered their fields for quality seed production in 4 - 10 clusters. Addition clustering of field would allow for even more efficient seed production of the selected crop.	Farmers have clustered their fields for quality seed production into 1-3 cluster(s). The cluster(s) are big enough for efficient seed production of the selected crop.

	Gender	Does the LSB have balanced representation of youths, women and men in leadership?	The LSB executive committee is not gender (women, men and youths) sensitive.	The LSB is 90% dominated by one gender category.	The LSB is 70% dominated by one gender category.	The LSB is 50% dominated by one gender category.	The LSB equal gender representation in leadership.
Business orientation	Business plan	Are LSBs having a business plan (BP) which guides their seed production and marketing activities?	The LSB has no business plan.	The LSB has an informal business strategy	The LSB has a business plan but is not using it.	The LSB has developed its business plan but is using it only for part of their activities	The LSB has developed its business plan and is using it fully and is updating it regularly.
	Business records	Does the LSB keep and use business records?	The LSB is not recording any data on revenues (amounts of seed sold, price obtained) or costs (inputs, labour, transport, storage, credit. Etc.)	The LSB has only rough data (often not recorded) on revenue and expenditure	The LSB is only recording the cash flow (revenue and expenditure) of the seed production and marketing activities without analysis.	The LSB is recording all costs and revenues but has just started analysing benefits and profits, without looking at return to labour	The LSB records all data (including land, capital and labour costs) that allows a cost-benefit analysis of the seed enterprise and used of these data inactivity and investment planning
	Work plan	Does the LSB have seasonal activity work plans?	LSB does not plan and does not have work plans.	LSB plans but have their work plans orally agreed upon and not documented	LSB have developed work plans but do not use it	LSB has developed and has the work plan but only use them in parts. (inconsistent use)	LSB develops work plan on a seasonal basis, fully uses it and where necessary adjusts according to the situation
Mobilization and use of resource	Internal savings	Does the LSBs use internal savings for seed business?	The entire production and marketing is not financed through internal savings - 0%	Production and marketing is partly financed through internal savings- 25%	Production and marketing is partly financed through internal savings- 50%	Production and marketing is partly financed through internal savings- 75%	The production and marketing process is fully financed by internal savings- 100%
	Labour use and mechanisation	To what extent does the LSB use labour efficient technologies? (improved technologies, mechanisations etc)	The LSB uses only the traditional farming practices.	The LSB uses technology in one of the key activities in seed production (tillage, planting, field management, harvesting and PHH)	The LSB uses technology in any two of the key activities in seed production (tillage, planting, field management, harvesting and PHH)	The LSB uses technology in any three of the key activities in seed production (tillage, planting, field management, harvesting and PHH)	The LSB uses technology in all the key activities in seed production (tillage, planting, field management, harvesting and PHH)

Quality seed production	Value proposition	To what extent are the values (e.g. quality, price, packaging sizes) offered to customers understood by LSB?	The LSB members do not understand the values to be offered to their customers	LSB members understand but do not offer any of the values to their customers	LSB members offer at least one of the values to their customers	LSB members offer at least two of the values to their customers	LSB members offer all the values to their customers
	Production and Productivity	Agronomic practices: Does the LSB have the skills to produce seeds (measured by exposure to external training)?	Nobody in the LSB has received training in seed production	At least one person in the LSB has received at least one week of training in seed production	At least one person in the LSB has received at least one week of training in seed production, including on-farm training	More than one person in the LSB has received at least one week of training in seed production, including on-farm training	People in the LSB are constantly trained in seed production
		To what extent are appropriate seed production guidelines being used?	LSB members have no access and do not use written seed production guidelines	LSB members are interested in seed production information but have no access to guidelines	LSB members have access to seed production guidelines but do not use these properly	LSB members have access to seed production guidelines and use these regularly	LSB members follow official seed production guidelines and provide feedback on its use
		Utilisation of inputs: To what extent do the LSBs understand, access and use yield enhancing inputs in quality seed production (fertiliser, pesticides)?	LSB members are not aware of these inputs and are therefore not using them.	LSB members are aware but have no access to these inputs	LSB members have access to these inputs but cannot afford them	LSB members have access, can afford to these inputs and do not use them correctly	LSB members fully invest in inputs and use them correctly in quality seed production.
		Sustainable land use: How are farmers maintaining soil fertility for sustainable seed production?	LSB members use the land for a short period of time and not concerned with sustainable use of the land for seed production.	LSB members to a limited extent invest in the quality of their land/soil for seed production	LSB members invest in the quality of their land/soil for seed production, but not reaching a sustainable level	LSB members invest in some soil fertility management activities.	LSB members actively invest in a full set of soil and water management interventions to maintain soil fertility for quality seed production.

	Internal quality control mechanisms	Does the LSB have an internal procedure for quality control?	No procedure or division of responsibilities in place	There is an informal procedure, but no clear demarcation of responsibilities; no monitoring	There is an informal procedure, some division of responsibilities, but limited authority and adherence to procedures.	There is a clear procedure, and responsible committee, but members do not always adhere to the procedure.	There is a clear procedure, and responsible committee with authority; members adhere to the procedures, and procedure is monitored on effectiveness.
	Seed Quality	Does the LSB seed meet the minimum quality standards of germination, purity, moisture content and seed health?	The LSB is not aware of the minimum standards in seed quality.	The LSB is aware of the minimum seed quality standards	At least 50% of the LSB produced seed meets the minimum quality standards	At least 75% of the LSB produced seed meets the minimum quality standards	100% of the LSB produced seed meets the minimum quality standards
Processing and value addition	Seed treatment	To what extent are appropriate seed treatment technologies being used?	LSB members have no knowledge and access to any seed treatment technologies and do not treat their seed	LSB members have knowledge but no access to any seed treatment technologies and do not treat their seed	LSB members have some knowledge and access to some seed treatment technologies but do not treat their seed.	LSB members have good knowledge and access to seed treatment technologies and do not treat their seed always.	LSB members have good knowledge and access to seed treatment technologies and do treat all their seed regularly
	Packaging	Does the LSB have the capacity (knowledge, skills & resources) to package their seed?	Nobody in the LSB has knowledge and skills in seed packaging and are not packaging	At least one LSB member has received at least one week of training in seed packaging but the LSB does not have the resources for seed packaging.	At least one LSB member has received at least one week of training including hands-on practical experience in seed packaging but have limited resources for seed packaging.	More than one person in the LSB has received at least one week of training in seed packaging, including hands-on packaging procedures and are packaging a limited volume of seed sold	LSB members have the skills and are packaging all their seed.
	Storage	Does the LSB have appropriate and sufficient space for seed processing and storage?	LSBs do not have appropriate and sufficient space for seed processing and storage.	The LSB has limited access (rented or owned) to space which is not appropriate for seed processing and storage	The LSB has access (rented or owned) to sufficient space for seed processing but not appropriate for seed storage	The LSB has access (rented or owned) to sufficient space for seed processing and storage but storage management procedures are not well followed.	Seed from all LSB members is bulked, appropriately stored and all storage management procedures implemented.

Annex 2 (module 2, session

Data collection tool from the demonstration garden

1. Background Information

Region _____, District _____, County _____, Sub-county _____, Parish _____, Village _____ Farmers name/Owner of field _____

2. History of Field/Site of demonstration

- i. Types of crop(s) grown in last 3 years(Year1_____,Year 2_____Year 3_____)
- ii. Amount _____ of _____ fertilizer _____ applied (1st_____,2nd_____,3rd_____)
- iii. Type _____ of _____ fertilizer _____ applied (1st_____,2nd_____,3rd_____)

3. Agronomic Data

- i. Types of crop(s) _____
 - ii. Variety (ies) _____
 - iii. Date of germination _____
 - iv. Number _____ of _____ ploughs: 1st_____, 2nd_____,3rd_____)
 - v. Date _____ of _____ ploughs: 1st_____, 2nd_____,3rd_____)
 - vi. Weeding _____ Date _____ (1st_____, 2nd_____,3rd_____)
 - vii. Date _____ of _____ fertilizer _____ application (1st_____,2nd_____,3rd_____)
 - viii. Amount _____ of _____ fertilizer _____ applied (1st_____,2nd_____,3rd_____)
 - ix. Type _____ of _____ fertilizer _____ applied (1st_____,2nd_____,3rd_____)
 - x. Disease and/or pest observed _____
 - xi. Plant height (at different levels) _____
 - xii. Number of effective tillers _____
 - xiii. Date of harvesting _____
- Yield (grain and straw) _____

Annex 3 (module 2, session 2.2.2)

Minimum isolation distance in meters

SPECIES	Pre-basic/breeder	Basic/foundation	Certified/QDS/Farmer Produced seed
Cereals			
Sorghum	200	100	50
Rice	10	5	2
Finger millet	10	5	2
Legumes & oil crops			
Beans	20	10	10
Soybeans	20	10	5
Groundnuts	20	10	5
Cow peas	50	50	25
Peas	50	50	25
Simsim	20	10	5
Pasture grasses			
Rhodes grass	200	200	100
Setaria grass	200	200	100
Congo signal	50	50	25
Guinea grass	50	50	25
Sudan grass	400	400	200
Columbus grass	400	400	200
Pasture legumes			
Stylo	200	200	100
Desmodium	200	200	100
Siratro	200	200	100
Clover	800	800	400
Lucerne	800	800	400
Vegetatively propagated crops			
Irish potato			3-5
Sweet potato			3-10
Cassava			3-15

Source: Seed Certification Procedures—NSCS/MAAIF

Disease tolerance levels in seed production

Crop	Disease	Tolerance
Sorghum	Covered smut (<i>Sphacelotheca sorghi</i>).	1 plant per 1000 plants
	Bunt (<i>Sphacelotheca cruenta</i> (Kuhn) <i>S. sorghi</i>).	1 plant per 1000 plants
	Mildew (<i>Perenosclerospora sorghi</i>)	1 plant per 1000 plants
	Ergot (<i>Claviceps spp</i>)	1 plant per 1000 plants
	Head smut (<i>Sporisorium reilianum</i>)	1 plant per 1000 plants
Beans	Halo blight (<i>Pseudomonas phaseolicola</i>)	None during final inspection
	Anthraxnose (<i>Colletotricum lindemuthianum</i>)	None during final inspection
	Bean common mosaic virus (BCMV)	None during final inspection
	Common blight (<i>Xanthomonas phaseoli</i>)	None during final inspection
	Aschochyta leaf spot	None during final inspection.
Peas and Cowpeas	Leaf blight (<i>Pseudomonas phaseolocola</i>)	None during final inspection
	Pod spots (<i>Mycosphaerella pinodes</i>)	None during final inspection
	Bacterial blight (<i>Xanthomonas vignicola</i>)	None during final inspection
Soybean	Bacterial blight (<i>Pseudomonas spp.</i>)	None during final inspection
	Bacterial pustule (<i>Xanthomonas phaseoli</i>).	None during final inspection
	Photomics	None during final inspection
Groundnuts	Rosette (<i>Alphis craccivova</i>)	5 plants per 1000 plants
	Bacterial wilt (<i>Pseudomonas salanacearum</i>)	5 plants per 1000 plants
Finger millet	Blast (<i>Piricularia grisea</i>)	1 plant per 100 plants
	Ergot (<i>Claviceps spp</i>)	1 plant per 100 plants
Rice	Blast (<i>Piricularia oryzae</i>)	1 plant per 1000 plants
	False smut (<i>Ustilaginoidea virens</i>)	1 plant per 1000 plants
	Kernel Smut (<i>Tilletia barclayara</i>)	1 plant per 1000 plants
	Ergot (<i>Claviceps spp</i>)	1 plant per 1000 plants
Irish potato	Bacterial wilt	None during final inspection
	Late blight tuber rot	1 plant per 100 plants
	Nematode	None during final inspection
	Soft rot or wet breakdown	1 plant per 200 plants

Source: Seed Certification Procedures—NSCS/MAAIF

Annex 4 (module 5)

PARTNERSHIP AGREEMENT BETWEEN

WAGENINGEN UR UGANDA, ISSD PROGRAMME

Plot 5, Bandali Rise, Bugolobi, Kampala
P.O. Box 20106, Kampala-Uganda

AND

MBARARA ZONAL AGRICULTURAL RESEARCH AND DEVELOPMENT INSTITUTE (MBAZARDI)

P.O. Box 389,
Mbarara- Uganda

AND

KYAZANGA FARMERS' COOPERATIVE SOCIETY LTD

Mpumudde village, Lyakibirizi Parish, Kyazanga Rural Sub County, Lwengo District
P.O. Box 76, Masaka-Uganda

Hereinafter referred to as Local Seed Business

INTRODUCTION

This partnership agreement is made and entered on this.....day of2013
Between;

Wageningen UR Uganda, P.O. Box 20106, Kampala; **Mbarara Zonal Agricultural Research and Development Institute (MBAZARDI)**, P.O. Box 389, Mbarara, and **Kyazanga Farmers' Cooperative Society Ltd**, P.O. Box 76, Masaka.

In this partnership agreement, **Wageningen UR Uganda**, **Mbarara ZARDI** and **Kyazanga Farmers' Cooperative Society Ltd** are jointly referred to as 'the partners'.

THE PARTNERS

A) Wageningen UR Uganda/ISSD Programme

Objectives of the ISSD Programme

The ISSD Uganda programme aims to contribute to the development of a vibrant, pluralistic and market-oriented seed sector in Uganda.

Specific Objectives of ISSD Programme

Functional local seed businesses (LSBs) established knowing that they can fill a gap in quality seed production and marketing for food security and cash crops which have local demand and in which the commercial seed companies may not be interested.

LSBs may start from informal sector farmer groups, farmer cooperatives, associations or entrepreneurial farmers seeing business opportunities in the production and marketing of quality seed of superior varieties. At the end of the programme these Local Seed Businesses are producing and selling quality seed of locally preferred crops and varieties to local markets, and operate as local seed businesses. They are technically better equipped, commercially sustainable and more autonomous in their seed entrepreneurship.

B) Mbarara Zonal Agricultural Research and Development Institute (MBAZARDI)

MBAZARDI is a semi-autonomous Public Agricultural Research Institute (PARI) which was established as part of implementing the Uganda's National Agricultural Research Policy and Strategy, which seeks to decentralize Agricultural Research and Development for modernisation of Agriculture in the country.

The Mandate of MBAZARDI

The institute is mandated to conduct client oriented, demand-driven and market responsive research specific to the South-western Rangeland agro-ecological zone, through adaptive research and technology dissemination in livestock, crop, fisheries, forestry and linking production to market. In the districts of: Bushenyi, Ibanda, Isingiro, Kiruhura, Mbarara, Ntungamo, Rakai, Rubirizi, Mitooma, Buhweju, Sheema, Lyantonde and Sembabule. Mbarara ZARDI is one of the nine ZARDIs under the policy guidance of the National Agricultural Research Organisation (NARO).

MBAZARDI Mission statement

To undertake agricultural research and disseminate appropriate technologies for improving productivity and profitability in a sustainable way in the SWAEZ

MBAZARDI Vision statement

To be the centre of excellence in demand-driven, client-oriented and market-responsive agricultural research in South Western Agro-ecological Zone of Uganda

C) Kyazanga Farmers' Cooperative Society Ltd

The core value of Kyazanga Farmers' Cooperative Society Ltd is to support members in undertaking development programmes through improved agricultural technologies and environmental protection, and to foster development among group members through rendering micro-finance services.

PRINCIPLES FOR COLLABORATION

The Partners affirm this set of principles which should guide their joint activities:

- To take into cognizance the missions and strategic goals of each partner;
- To be transparent and open regarding expectations of each other and during collaboration;
- To articulate clearly the benefits to each partner and forge mutual and respectful relationships;
- To observe mutual respect for the philosophy, approach and capacities of each partner;
- To seek flexibility and space for innovation and new approaches;

ARTICLE I: AREAS OF COLLABORATION/RESPONSIBILITIES

The partners by this partnership agreement agree and have reached consensus of each other's responsibilities as follows:

Roles of Wageningen UR Uganda/ISSD Programme

1. Follow up seed production activities of the LSB through regular inspections.
2. Train, coach and provide technical backstopping to the LSB on its market orientation, business planning and record keeping.

3. Support the LSB in the strengthening of its organizational capacity; training and coaching on group dynamics and business organization principles; and creating cohesion, trust and social capital among the members.
4. Organise twinning/LSB exchange visits to other LSBs that have excelled in seed production (experience sharing) and/or exposure visits to centres of excellence (e.g. during field days).
5. Organise local and zonal multi-stakeholder innovation platforms (MSIPs).
6. Support the LSB in the development of competitive grant proposals for seed production infrastructure
7. Link the LSB to sources of quality foundation seed by providing contacts and/or making enquiries on behalf of the group.
8. Develop appropriate quality assurance mechanisms for farmer-based seed production.
9. Mainstream gender into the development of the Local Seed Business.
10. Develop capacity of LSB to link to research, extension, market, quality assurance and credit.
11. Train, coach and provide technical backstopping to the LSBs on practices of quality seed production.
12. Closely collaborate with Mbarara ZARDI staff and other partners in supporting the LSB towards producing quality seed.
13. Provide inputs (seed, fertiliser, pesticides) to the LSBs for demonstration purposes only.

Roles of NARO-Mbarara ZARDI

1. Closely collaborate with ISSD staff in supporting the LSB towards producing quality seed.
2. Support the LSB in evaluation of crop varieties.
3. Act as a source of foundation seed to the LSB.

Roles of Kyazanga Farmers' Cooperative Society Ltd

1. Produce quality seed based on a business model (or based on entrepreneurial principles).
2. Provide/avail land and labour for establishment of demonstration gardens.
3. Assess LSB foundation seed requirements of each member and make enquiries in advance before the start of the production season and order for foundation seed in time.
4. The LSB shall bear all production costs (inputs, weeding, harvesting, bags, sorting, crib storage, packaging, certification, etc.) incurred for the production of quality seed.
5. Prepare and keep record of planting returns every production season. This includes the seed grower's name, location (district, sub county, parish), crop, variety, quantity of parent/input seed received, status of input seed for multiplication (breeder, foundation, certified or standard), acreage planted, seed rate used, planting date and expected yield.
6. Ensure that quality of seed produced is upto required standards by observing the best cropping practice. The group/LSB is expected to abide by all the conditions within the Seed Act which have relevance to the multiplication of its specific crop enterprise(s).
7. Participate in all coaching/trainings/workshops organized by ISSD Programme and other partners.

8. Keep record of the different activities e.g. date of planting, date and frequency of weeding, inputs used and quantities, volumes produced, trainings received, etc.
9. Organise seed marketing and promotional events such as field days.
10. Physically examine all seed delivered to the group store to ascertain purity and trueness to type.
11. Contact any technical person from ISSD, Mbarara ZARDI and district or Sub County agricultural office in case of any observation that requires technical support. E.g. new disease/pest outbreak, storage conditions, etc.
12. The LSB should plan seed production based on available market and actively seek market for the members' produced seed and be responsible for marketing produced seed.
13. Organize regular group meetings to discuss activity progress and make joint decisions on important issues such as budget for producing seed, among others.

Roles of Local Government administration at Sub-County level

1. Assign Extension officers to support the LSB with seed crop production techniques and other technical backstopping.
2. Assign a Community Development Officer (CDO) to support the LSB with leadership coaching and other development issues.
3. Monitor progress of the local seed business (LSB).
4. Provide an enabling environment for the ISSD Programme.
5. Create awareness about the group and their activities hence in a way promote the group.

ARTICLE II: SETTLEMENT OF DISPUTES

Any disputes regarding the interpretation or application of this partnership agreement will be resolved by consultations between the Partners and will not be referred to any national or international tribunal or third party for settlement.

ARTICLE III: EFFECTIVE DATE, AMMENDMENTS AND TERMINATION

a) Effective Date

This partnership agreement will enter into effect on the date of the last signature.

b) Validity

This partnership agreement is valid up to December 31st, 2014 renewable on an annual basis until the end of the ISSD programme in June 2016.

c) Amendments

The terms of this partnership agreement can be amended, with the approval of all Parties, by means of exchange of letters through the authorized officials at each institution.

d) Termination

This partnership agreement may be terminated by a partner by giving written notice of intent to terminate the partnership agreement. Such termination shall not affect the execution and conclusion of specific activities in effect under the terms of this partnership agreement nor publication and dissemination of results of activities in progress. It will also not affect the agreed collaboration and activities by other partners signatory to the partnership agreement. Such notice will be given thirty (30) calendar days in advance of the desired termination date. The partnership agreement shall automatically come to an end at the expiration of the term as agreed and stated in section (b) of article III above.

e) Liability-disclaimer

Wageningen UR Uganda shall not cover any claim for damages incurred by partners' staff and/or their agents as a result of actions carried out in the legitimate pursuit of activities

stated or otherwise implied in this partnership agreement. The same liability disclaimer applies to other partners towards Wageningen UR Uganda, its staff and agents. Wageningen UR Uganda shall not be held liable for the consequences of any act or omission, whether intentional or the result of gross negligence, on the part of partners and the staff and or agents acting for and on their behalf. The same liability disclaimer applies to other partners towards Wageningen UR Uganda, its staff and agents.

ARTICLE IV: SIGNATURES

IN WITNESS THEREOF, in the interest of implementing a program of technical cooperation of mutual benefit to the contracting Partners, four (4) original copies of this Memorandum of Understanding are signed by the respective officers on the day, month and year indicated below.

For and on behalf of Kyazanga Farmers' Cooperative Society Ltd

Name: _____

Capacity: _____

Signature: _____

Date: _____

Official stamp

In presence of (witness)

Name: _____

Title: _____

Signature: _____

Date: _____

In presence of (witness)

Name: _____

Title: _____

Signature: _____

Date: _____

Official stamp

In presence of (witness)

Name: _____

Title: **Sub County Chief**

Signature: _____

Date: _____

**For and on behalf of Wageningen UR
Uganda**

Name: _____

Capacity: **Chief of Party**

Signature: _____

Date: _____

Official stamp

In presence of (witness)

Name: _____

Title: **Seed Expert**

Signature: _____

For and on behalf of Mbarara ZARDI

Name: _____

Capacity: **Director of Research**

Signature: _____

Date: _____

Official stamp

In presence of (witness)

Name: _____

Title: **Research Officer/Crop
Agronomist**

Signature: _____

Date: _____

And (witness)

Name:

Title: **Agribusiness Expert**

Signature: _____

Date: _____