Sustainable seed systems

QDS – filling the gap between formal and informal seed systems: a case of common bean in Uganda

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Outline

- Access to seed and varieties
- Research question
- Quality Declared Seed class
- How to get there?
  - Local seed businesses
  - Pilot on delegated authority in seed inspection
- Results
- Challenges
- Conclusions
- ISSD Uganda project info
Access to seed and varieties used

Baselines study (2013) conducted in West Nile, Northern and South Western Uganda shows that

- 60% of the farmers grow common beans on slightly less than 1 acre, using 23 kg of seed
Household seed sources and varieties used in West Nile, Northern and S.Western Uganda

Sources of seed in 2013 A +B

- Home saved: 46%
- Neighbours: 2%
- Local market (grain): 43%
- LSB: 2%
- Agro-dealer: 7%
- Government: 0%
- NGO / projects: 0%

Bean varieties used in season 2013A

- Improved: 59%
- K131: 3%
- K132: 3%
- K20: 2%
- K32: 3%
- Local variety: 20%
- NABE 1: 0%
- NABE 14: 0%
- NABE 15: 0%
- NABE 17: 0%
- NABE 4: 7%
RESEARCH QUESTION

- How to make affordable quality seed of superior varieties available to farmers?
  - What role can QDS play?
QDS: High quality seed for and by farmers

Quality declared seed is produced by farmer groups & sold in their communities

QDS is:
- For locally demanded seed
- Quality assured seed
- Filling a gap not served by seed companies

Inspection & certification by MAAIF - NSCS + District Agricultural Office

Area Planted
2 Field Inspections
Seed Tested in Lab
QDS Labels printed
Seed Packaged

Breeder seed
Foundation seed

Seed companies Certified seed
Farmer groups QDS

Farmer groups are coached to become Local Seed Businesses
QDS SYSTEM IN UGANDA (PILOT)

- LSBs work closely with NARO breeders and buy the foundation seed they need
- Accreditation of District Agricultural Officers by National Seed Certification Service
- LSB submits planting return to DAO and request for inspection
- 2 field inspections by District Agricultural Officers on 10% of the fields. LSBs pay inspector
- 1 seed sample is taken for testing at the national lab
  - Pilot in one zone with a decentralised lab
- LSBs submit lab results to NSCS and request for government issued labels
LOCAL SEED BUSINESSES

- Business oriented farmer groups identified and transformed into LSBs
- They are trained, coached and linked to Research and MAAIF for sustainable seed businesses

1. Inward
   - Technically well equipped
   - Professionally organized

2. Outward
   - Market oriented
   - Strategically linked
FINDINGS

Seed volumes for beans in 2014:
- National estimated seed use is 53,920 MT (UBOS)
- Potential seed demand is 13,480 MT
- Certified seed sold is 4,000 MT (MAAIF)
- QDS sold 155 MT (ISSD Uganda)

30 farmer groups contributed to 4% of the quality seed produced
FINDINGS

- Bean Seed prices in 2014:
  - Certified seed price per kg $1.21
  - Cost price per kg $0.80
  - QDS price per kg $0.79
  - Cost price per kg $0.51
  - Grain price per kg $0.6

Large variations in QDS kg price (USD)

<table>
<thead>
<tr>
<th></th>
<th>2014A</th>
<th>2014B</th>
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<tr>
<td>Northern Uganda</td>
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<tr>
<td>South Western Uganda</td>
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<tr>
<td>West Nile</td>
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</tbody>
</table>
FINDINGS

- Seed purity, germination and moisture content standards for QDS are the same as certified seed
  - 13 seed samples tested in the National Lab show:
    - 99.8 – 100% physical purity
    - 90 – 99% germination (standard is 80%)
- Yield verification plots (QDS versus home-saved seed show an increase of 670 kg/ha (280 kg/acre)
- Extra income by using QDS is $19 per small scale farmer using 23 kg of seed. The return to investing $3 extra in seed is $23
findings

- Seed business has improved lives of LSB members thru better income.
- Quality seed of superior varieties, more available, accessible & affordable locally in the communities
- Easy & timely access to quality seed of high yielding, quick maturing varieties
Challenges – How to get to scale

- LSBs still few and not well spread in the country
  → out-scaling partners
- Slow progress on Decentralization of QDS inspections by MAAIF; accreditation of DAO’s to conduct field inspections
- QDS labels have to be obtained from Kampala, which is far for many groups
- Access to foundation seed is hampered by distance and availability
  → formation of LSB associations in each zone to coordinate quality inspection

TO BE ADDRESSED IN THE NEXT PHASE
Conclusion

Local Seed Businesses can contribute to a significant supply of Quality Seed of superior varieties to smallholder farmers. Supporting LSBs to operate efficiently is one way to promote climate resilience, increased household income and agricultural economic development.

Recommendations

1. More work with MAAIF needs to be done to sustainably upscale QDS in Uganda

2. More work with MAAIF and NARO on decentralisation of quality assurance

3. In a pluralistic seed sector, seed regulations should acknowledge different crop types (e.g., legumes, RTB, cereals, hybrids), their quality needs and have tailored quality assurance protocols
ISSD Background

- ISSD aims at developing a vibrant, pluralistic and market-oriented seed sector in Uganda.
- Project is funded by the Kingdom of Netherlands and implemented jointly by Wageningen University and NARO.
- Project started in 2012; active in West Nile, South Western and Northern Uganda.
- Outcome 1: commercially sustainable Local seed businesses.
- Outcome 2: To increase efficiency and effectiveness of public sector organisations in specific supportive tasks (EGS, quality assurance and regulatory framework).
Acknowledgement

www.issduganda.org
www.issdseed.org
Issd_uuganda (Twitter)