SEED PRODUCERS IN THE DRY ZONE OF MYANMAR
Current status on business performance and development opportunities

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About ISSD Myanmar Programme

The Integrated Seed Sector Development (ISSD) programme envisions a vibrant and pluralistic seed sector that caters to the quality seed needs of smallholder farmers in Myanmar’s dry zone. Started in 2017, ISSD is a four years programme with a budget of Euro 1.5 million. It is implemented by the Ministry of Agriculture, Livestock and Irrigation (MOALI) of Myanmar and Welthungerhilfe (WHH), with technical support from the Wageningen Centre for Development Innovation (WCDI), Wageningen University and Research, and Resilience BV. The programme is funded by the Directorate-General for International Co-operation, Ministry of Foreign Affairs of the Kingdom of the Netherlands.

The ISSD Myanmar programme operates in four regions in the dry zone of Myanmar: Sagaing, Mandalay, Nay Pyi Taw and East Bago regions. Rice, green gram, black gram, pigeon peas, chick peas, sesame, groundnuts and sunflowers are the eight targeted crops of the ISSD Myanmar programme.

Interventions focus on: 1) improving seed sector coordination, 2) increasing the business performance of early generation seed producing seed farms, and 3) increasing the local availability of quality seed at an affordable price for smallholder farmers. The program is targeted to reach 75,500 smallholder farmers with locally available quality seed of well adapted varieties of rice, food legume and oilseed crops.

About the study

The purpose of the study is twofold. It serves as a baseline study assessing the current status of seed producers in the dry zone of Myanmar in terms of their technical skills, internal capacities, business models, operational styles, partnerships and sustainability. It also serves as a key entry point to identify their challenges and support needs. Based on the information and analysis provided by the study, the ISSD programme selects seed producers for further support, designing specific interventions to develop scalable and sustainable local seed business models in the dry zone of Myanmar.

Seed producers in this study include existing ‘contact farmers’ or ‘individual farmers’ in the dry zone who are involved in quality seed production of improved or officially released varieties. They are often linked with the Department of Agriculture (MOALI), and produce quality seed for local market. We have excluded domestic private seed companies in this report; these have been studied separately.

Assessment framework

Four strategic aspects of seed business constitute the framework of this study. We looked at the extent to which seed producers were technically well-equipped, professionally well-organized, market oriented and strategically linked. These are the four key performance areas (KPAs) that we adapted in the context of Myanmar (Figure 1). Each KPA was further analyzed, based on one or more Critical Success Factors (CSF) and scored with a four-points scale; one (lowest) indicating poor performance, and four (highest) indicating excellent performance.

The Critical Success Factors for each key performance areas were as follows:

Technically well-equipped – a crop and varieties portfolio that fulfils local demand; easy access to the required volume of Early Generation Seed (EGS); a substantial volume of quality seed production; pre-harvest and post-harvest seed production skills; the ability to produce quality seed guided by the seed quality assurance system.

Professionally well-organized – easy access to seed production land; easy access to supplementary irrigation and physical assets; an effective seed business plan, along with proper finance and human resources management.

Market oriented – good market segmentation; effective product promotion; successful handling of customer feedback.

Strategically linked – good record of acquiring services; effective use of new technologies, information and capacities; membership of seed growers’ associations.

Study sites

The study was organised in three townships from Sagaing region (Chaung U, Monywa and Myinmu) and three townships from Mandalay region (Kyaukse, Madaya and Pathengyi) (Figure 2).

Sampling

A cluster sampling method was used to select seed producers. Data were collected from 18 clusters, nine in the Sagaing region and nine in the Mandalay region. The survey consisted of a total of 130 seed producers, chosen from producers from six townships that were growing the eight crops targeted by the programme.

Survey design

A semi-structured questionnaire was used to interview the seed producers. Data collection took place from November 2017 to December 2017. The data collection software KoBoToolbox was used to administer the survey. Developed in English, the questionnaire was pre-tested and finally administered in the Myanmar language.
RESULTS: BUSINESS PERFORMANCE ASSESSMENT OF SEED PRODUCERS

1/ TECHNICALLY WELL-EQUIPPED
83% of seed producers show a satisfactory performance in being technically well equipped, while no producers were found to be poor (scoring below 25%) or excellent (scoring above 75%).

With regards with critical success factors, the study shows that seed producers both in Mandalay and Sagaing region score lowest in quantity of seed produced, having a poor performance (score below 25%). This is the area of performance where most support is needed. On the other hand, the area of performance in which seed producers are best technically equipped is production skills, with four out of six townships scoring good.

Analyzing the data at village level, the study shows that two villages score particularly high on the CSF of seed quality management. Kyar Kar, in Mandalay Region, and Thaunt Pan Hla, in Sagaing Region, respectively meet 88% and 80% of the requirements for this CSF, indicating that their performance is excellent.

2/ PROFESSIONALLY WELL-ORGANIZED
All seed producers scored as satisfactory in being professionally well-organized in both Sagaing and Mandalay regions.

It is worth noting that Ahlar Kapa village in Sagaing region is where seed producers perform best. Further analysis could reveal what makes these producers perform particularly well, and the way the producers are organized could be taken as an example to scale up in other villages and regions.

3/ MARKET ORIENTED
The study suggests that the overall market orientation of seed producers is satisfactory in 78% of cases, while 23% of respondents show a good performance.

With regard to specific CSFs, seed producers show a satisfactory performance both in product promotion and in customer feedback management. However, it is in the way seed producers diversify their customer portfolio (market segmentation) that the performance score is the highest, reaching the level of good. Moreover, the data indicates that Nat Sein village, in Mandalay Region, performs best (score: excellent) in market segmentation, as their seed producers manage to comply with 78% of requirements.

Seed producers in Inn Tine village and Kyawt Min village, both in Sagaing Region, require the greatest attention by the programme as their score is just on the threshold between poor and satisfactory in the CFS of customer feedback management.

4/ STRATEGICALLY LINKED
The study indicates that 78% of seed producers show satisfactory performance. At the same time, 22% of respondents are classified as poorly linked, indicating that most of the support provided by the programme should be in this CFS of seed business.

As this KPA is composed by only one CSF, the data at township and village level reflect results at the general level. Seed producers show satisfactory performance, with only a few cases of poor performance (Tha Pyaw Whun and Ye Baw Gyi in Kyaukse township, Magyi Pin in Patheingyi township and Kyawt Min in Myinmu township).
RESULT: CURRENT STATUS OF SEED PRODUCERS IN SEED BUSINESS MANAGEMENT

1/ TECHNICALLY WELL-EQUIPPED

Crop and variety portfolio
- Seed producers produce a maximum of three crops and three varieties, of which at least one is a new improved variety.
- Only one seed producer produces hybrid sunflower
- 38% of seed producers get information on new varieties from brokers, 31% from DOA extensions, 14% from DAR and 1% from NGOs.

Access to EGS
- Seed producers are able to get only 50% of the volume of the required registered seed of the majority of the crops studied.
- 38% of seed producers do not use fresh registered seed, but use certified seed as EGS to produce quality seed (i.e. they produce C2 seed).
- 45% seed producers source their registered seed through middlemen. Only 15–31% of seed producers access registered seed directly from the DOA or DAR farms.

Scale of seed production
- 46% seed producers have 1–5 acres, 39% have 6–20 acres, and only 5% seed producers have over 30 acres of land given over to seed production.
- 43% seed producers produce 1–20 baskets of seed, 20% seed producers produce 21–50 baskets, 16% produce 51–100 and only 5% produce over 500 baskets of seed.

Seed production skills
- 85% of seed producers have skills in pre-harvest production, such as site selection, land preparation, and fertilizer application. However, they need labour to perform weed control, sowing, rouging and agro-chemical applications.
- 58% of seed producers have some post-harvest skills. For instance, they can do packaging and storage on their own. The hiring of skilled labour is needed for threshing, drying, cleaning, and seed treatment.

Seed quality management
- 30% of seed producers do not have knowledge of rouging and have not done it before.
- 73% of the seed producers have not submitted seed samples to the laboratory over at least the two last production seasons, because they do not know where or how to send samples.
- Only 5% of seed producer receive support from DOA extension staff for sending seed samples to the lab.

2/ PROFESSIONALLY WELL-ORGANIZED

Seed business plan
- 82% of seed producers have no long-term vision or planning. They manage their business on an ad hoc basis.
- 45% of seed producers do not keep records.
- Seed producers have made some estimates for resource planning but have no clear schedule for production activities.

Financial management
- 53% of seed producers have no financial bookkeeping system and do not audit. 46% of seed producers have a poor bookkeeping system.
- None of the seed producers have a bank account dedicated to seed business.
- 65% of seed producers do not have access to credit and 35% of seed producers have credit from the agricultural bank. On average, the available credit only covers 50% of the required investment.

3/ MARKET ORIENTED

Market segmentation
- 88% of seed producers have only one buyer (farmers within the same township) but 12% have three types of buyers (farmers within the same township, farmers outside the township, and the township office).
- 87% of seed producers do not set their own seed price. The price is determined by the market price demanded by brokers and/or DOA extension staffs. However, seed producers sometimes set their own price when supply is low and demand is high.
- 85% of seed growers sold between 50% and 70% of the seed that they produce.

Customer feedback
- 20% of seed producers have specific mechanisms to get customer feedback (farmers to farmers in person, contact by phone or field visits).
- 80% of seed producers have no specific mechanisms to get customer feedback.

4/ STRATEGICALLY LINKED

Product promotion
- 51% seed producers use word of mouth to promote their product. They occasionally organize promotional activities such as giving out seed samples and organizing demonstrations.
- 98% of seed producers have no seed packaging materials, own bags, or brand name.

Seed producers have functional collaboration with farmers and DOA extension staff for seed production and marketing. They do not have strong relationships or interactions enabling them to acquire services, technologies, information and capacities mutually.
- 95% of seed producers are not officially registered. This means that they can only operate as informal seed producers.
- Only 35% of seed producers are a member of a seed grower association participating in at least one meeting per year.

THE TOP FIVE CHALLENGES IN SEED PRODUCTION

1. Increase of drought (78%)
2. Shortage of labour (53%)
3. Increase of pests and diseases (42%)
4. Insufficiency of capital (35%)
5. Insufficiency of EGS (28%)

THE TOP FIVE CHALLENGES IN SEED MARKETING

1. Insufficient number of seed marketing outlets (76%)
2. Low seed market prices (54%)
3. Volatility of the grain market (32%)
4. Limitations of marketing skills (25%)
5. Lack of any platform for seed producers, seed traders and seed users to meet together (21%)

Q.C.
THE WAY FORWARD:
Priority strategies

The study provides detailed insight on the current status of seed producers’ business performances and the key challenges that they face.

A number of intervention strategies would help to develop viable, scalable and sustainable local seed businesses in the dry zone of Myanmar. These are detailed below.

Development of an organisation model that shapes the local seed business
Currently seed business operations are done on an individual basis. Business sizes are very small (about half metric ton of seed per season, per seed producer). Seed producers are not officially registered yet. In regulatory terms, they are informal seed producers. In addition to this, mobilising public seed service provision is challenging; for instance, providing a seed quality assurance system that is capable of satisfying the need of hundreds of small-scale seed producers, often at the same time. The public seed quality assurance service is already resource constrained in fulfilling their obligation. Getting access to credit from financial institutions is difficult because current seed businesses are so informal and small. Access to credit would solve many issues such as purchasing seed equipment and developing infrastructures that could lower labour shortage issues. In this context, moving from small-scale individual seed production to a more collective business model would be the most effective pathway for development.

In many emerging economies, seed producers have gained economy of scale through establishing their own cooperatives or seed producers’ associations. It is legally possible to establish seed producer cooperatives in Myanmar. We suggest organising current individual seed production into seed producer cooperatives (SPC) at the cluster village or township level. In this regard, partnership with the Department of Cooperatives of MOALI should be emphasized to develop specific guidelines for SPCs. These SPCs would need to develop functional linkages, on the one hand, with the output market such as traders and millers for demand information, on the other hand with public seed farms for EGS and other seed service providers. This would allow them to bulk their seed business efforts and resources, and eventually allow them to grow as viable seed businesses.

Promoting climate resilience varieties
Most seed producers in the dry zone have experienced increased spells of drought, disease and pest pressure. Farmers and seed producers both need climate resilient varieties more urgently than ever before. Currently DAR is the main public body for new variety development or for testing of CGIAR’s best bets. Effective coordination is needed with ICRISAT, the World Vegetable Centre, IRRI and the international private seed sector to source best bet products, to conduct variety adaptability trials, and to make available resilient crops and varieties. The role of the Myanmar national gene bank and assessment of local varieties maintained by farmers are very important as they hold thousands of germplasms. Crowd sourcing, using a citizen science approach and a fast-tracking variety delivery of climate resilient varieties, should be the key strategy.

Producing own Early Generation Seed
The quality and quantity of EGS production and supply specific to pulses and oil seed crops in the dry zone is not sufficient. Only 50% of registered seed demand is fulfilled. This has resulted in the recycling of certified seed over several seasons. Efficiency would be gained if some of the steps of the seed value chain were to be taken up by seed producers themselves. In this regard, producing own-registered seed would have the biggest impact, as it would solve the RS seed demand and further assure seed quality.

Strengthening the internal and external seed quality assurance system
Only 5% of seed producers of the dry zone send seed samples to the seed testing laboratory. This means that most of the seed sold to farmers in the study sites is uncertified, and that its quality is unknown. Over 70% of seed producers do not know that they need to send their seed samples to the seed quality testing laboratory. Two issues thus need urgent attention. First, seed certification should be a compulsory requirement for those who intend to sell seed to the farmers. This should go together with a training and awareness programme. Second, the capacity of seed producers should be developed so that they can carry out their own internal quality controls.

The key areas of focus should be sourcing good quality EGS, using fresh registered seed every season to produce certified/commercial seed, developing capacity in roguing and testing seed germination, and improving seed storage.

Seed business planning
Long-term visions and business plans are completely lacking among with seed producers in the dry zone. Proper financial record keeping is also largely lacking. Intervention should focus on developing tailor-made training for seed producers to develop their capacity in seed business planning and record keeping.

Seed marketing and creating more demand
Currently seed sales are about 50–70% of total production per season. Seed producers do not yet deploy specific seed marketing strategies or get customer feedback. Organising quality seed demonstrations, new variety trails, and township level seed fairs, all of which could be done by the producers themselves, could boost quality seed uptake, develop mechanisms for customer feedback and create more demand. These activities would help to develop seed marketing platforms at the local level. Effective linkage with grain traders and millers should be highly emphasised to broaden the seed market and improve demand estimation. Most seed producers sell their seed directly to the farmers, but as yet there are no linkages with agro-dealer shops; these linkages should be established. In addition to this, 98% of seed producers do not have packaging materials or brand names; this is another area that needs support.