ISSD TIGRAY Brief

ISSD Ethiopia

January 2017

Effective Partnership for Efficient Seed System Growth: Lessons of DSM in Tigray

Vision Statement of ISSD Ethiopia

Through a vibrant and pluralistic seed sector, quality seed of superior varieties are available and affordable to a large number of farmers; thereby contributing to agriculture for food security and economic development in Ethiopia.

Objective of ISSD Ethiopia

To strengthen the development of a vibrant, commercial and pluralistic seed sector in Ethiopia.

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ISSUES TO PONDER:

- What makes efficient seed system . . .
- DSM at a cross road: prospects in Tigray
- Even smallholder farmers can do it: DSM is doable even at the farmers' gate
- DSM process impact: engaging partnership innovation platforms

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ISSD Brief: DSM Policy Brief

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Effective Partnership for Efficient Seed System Growth: Lessons of DSM in Tigray

Direct Seed Marketing entails seed producer cooperatives directly selling their produces to farmer users on cash or credit basis. Most SPCs often sell their seed through Unions or Ethiopian Seed Enterprise & little contact with the final users. The inefficiencies resulting from the conventional seed demand forecasting as well as the bulk of seed distribution challenges of the BoA have led to the necessity of the DSM innovation in Tigray. This article brief narrates DSM process impacts and lessons of DSM pilot implementation in Tigray.

The main actors in the DSM are SPCs certified by the regional seed regulatory. Hirity Mekan, Zeresenay, and Shewit SPCs were the lead implementers. The unique feature of DSM in Tigray is that the crops are open pollinated namely *wheat, barley,* and *teff.*

Storage, Hirity Mekan SPC

As a result, the pilot implementation showed that DSM is doable so long as the necessary integration & infrastructural amenities add up. The practice has crossed traditional regime attitudes that quality seed production and marketing are not doable by farmers. Two of the first SPC with CoC have achieved a puri-

BUREAU OF AGRICULTURE AND RURAL DEVELOPMENT
PLANT HEALTH AND QUALITY CONTROL
LABORATORY TEST RESULT

Ref no.	Evaluation date	crop/variety	Location	Lot/ Ref no.	Result		Standard for		Lot. size in qt	Remark
					GA	PS	GA	PS		
1	10/09/2016	Wheat/Danda	Mekan	Lot1	91	99.60	85	97	266.25	✓
2	10/09/2016	Wheat/Danda	Mekan	Lot2	92	99.79	85	97	200	✓
3	10/09/2016	Wheat/ Danda	Mekan	Lot3	93	99.40	85	97	229	✓
4	10/09/2016	Wheat/ Danda	Mekan	Lot4	91	99.84	85	97	213.75	✓
5	10/09/2016	Wheat/Picaflor	Mekan	Lot5	90	99.67	85	97	112.74	✓
6	10/09/2016	Wheat/Quiton	Mekan	Lot6	89	99.89	85	97	21.54	✓
7	10/09/2016	Wheat/Shewaye	Mekan	Lot7	95	99.61	85	97	52.54	✓

× Reject
✓ Accept

Checked by Tsegay Tekle
Date and Signature

Approved by Kibrom Gebrezgi
Date and Signature

Diversifying access to quality seed is building robust seed system efficiency

ty and germination performance of x and x. regional regulatory has rectified so

Lab Test Result

According to user farmers, the seed produced by the SPCs is found to be better in quality and timing of delivery, in 95% of the cases. DSM implementation is a flagship regime breakthrough which can effectively inject added efficiency levels to the regional seed system by minimizing seed carryovers and effectively shifting the burden to the SPCs.

Whereas the preparatory phases engaging seed value

chain players (e.g., awareness creation) were by large smooth, the real challenge has been during the marketing phase. The DSM implementation showed that the outcome impacts were not up to expectations, despite concerted preparations. For instance, Hirity Mekan has collected and processed 1192 quintals of quality wheat seed but managed to sell only 175 quintals through DSM. Moreover, Zeresenay SPC has also collected 300 quintals of quality seed *teff* but sold only 75 quintals through DSM. One of the reasons is found to be that the level of partnerships coordination lacked intensity during the marketing phase. Climatic variability, limited actors, uncontrolled seed distribution by different actors, nature of the target self-pollinated crops, limited capacity of SPCs and the novelty of the innovation itself to all actors were also practical challenges.

From a system perspective, DSM has laid a foundation for regulatory procedures, shifts responsibilities to seed producers, that seed marketing for self-pollinated crops is doable, and highlighted the capacity (and gaps) of SPCs to engage in seed business, to mention some.

DSM drives technolog adoption by SPCs

Smallholder agriculture and access to quality seed in Tigray

"To catch the reader's attention, place an interesting sentence or quote from the story here."

In Tigray, agriculture is characterized by smallholder subsistence farming and low productivity. Low productivity is partly attributed to limited use of technologies such as quality seed. The bulk of seed planted by smallholders is from the informal system whereas the formal seed system is active to a very limited extent dealing with very limited crops and varieties covering less than 4% of the regional seed supply. The seed demand estimation and allocation in the conventional seed system is characterized by mismatches. For one thing there is seed carry-over and yet majority of farmers are not able to access quality seed. The presence of carry over under limited coverage shows a seed system paradox. Studies indicated (Spielman, Dawit and Dawit, 2011) that the main factors for the paradox can be attributed to poor seed marketing systems of reaching farmers and/or the inabilities of the system to meet farmers' need such as varietal choice, product quality, timeliness and desired amount and shift in demand due to change in climatic conditions (IFPRI, 2010).

ISSD: heralding partnership innovations

ISSD Program Ethiopia is one of the key implementing partners working to strengthen the seed sector by harnessing innovation and technology within the different seed systems. ISSD believes improving market efficiency is the a major issue for seed sector development. Accordingly,

'. . . entrepreneurial innovation should thrive upon institutional capacity building'

Cleaning and packaging, HM

ISSD ventured heralding a pilot DSM innovation which is believed to enhance the efficiency of seed marketing & distribution by reducing long distribution channels and therefore improve availability of quality seed at the right time, right quantity, at the right place and at an affordable price. In Tigray, DSM was formally piloted in 2014 in three district of the region. However, DSM has long been practiced by SPCs informally since 2009. The main actors of the pilot DSM are SPCs engaged in seed production, processing and marketing of self-pollinated crops namely wheat, teff and barley.

Storage practices, before.

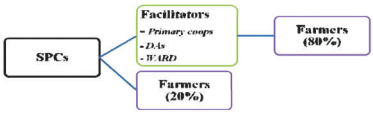
SPCs have taken the responsibility of producing quality seed, processing and storing . . .

Seed distribution under DSM: performance + challenges

DSM implementation ensued multi-stakeholder process innovations. During the process, BoARD & district admin have played significant role.

Compared to the conventional seed delivery, the pilot DSM has introduced new regime of business to the regional seed system. For one thing, it shifted responsibilities and accountability from the government to the seed producers.

SPCs have taken the responsibility of producing quality seed, processing and storing per the regulatory requirements and marketed independently or with the support of the WoARD. SPCs have employed multiple channels, as shown below:



Primary/multipurpose coops were not paid commission for the service they render to their kebelle farmers. Respective kebelle, district and WoARD administration supported implementation of the DSM due to capacity constraints of the SPCs to open sales shops in every kebelle. Such arrangements were set through the sales promotion workshop organized by ISSD & consecutive stakeholders' discussions.

Primary cooperatives identified seed demand of their members, collect cash from members, bought seed from SPCs and distributed to members with no additional cost.

SPCs have hired professional sales persons to sell their seeds on contractual basis for the sales period. Sales shops were open on regular hours for customers.

Collaboration from other actors is critical in promoting new ways of doing things

Implementation of Pilot DSM: achievements

Cognizant of the role DSM could play, the regional government supported the production of quality seed through SPCs.

3 SPC taken up DSM . . .

Practically, three SPCs (Hiriti Mekan, Zeresenay and Shewit) taken up piloting DSM and happen to be very promising seed producing enterprises for self-pollinated crops in the region.

3 SPCs awarded COC

However, only two (Hiriti Mekan and Zeresenay) were able to process, package and market their seed by obtaining the CoC from the regional regulatory, Shewit SPC has now obtained the CoC. The three SPCs had collected certified seed of Wheat, *Teff*, Field pea and Barley.

Increased seed collection performance of SPCs . . .

Hiriti Mekan SPC collected 1,197.5 quintal of wheat and 24.17 quintal of field pea, i.e. a total of 1,221.88 quintals. Similarly Zerisenay SPC collected 165.45 quintal of wheat and 142.74 quintal of Teff, i.e. a total of 308.19 quintals. Shewit SPC has also collected 616 quintal of barley produced under rainfall and irrigation scenarios.

97% sales performance. . . 87.8% cash sales

97% of sales performance, 87.8 cash sales

- Hirity mekan sold 1193.69 quintals
- Zeresenay sold 298.29 quintals
- Shewit sold 592.92 quintals

Even though Shewit was not licensed and thus unable to clean and pack its seed 592.92 quintals were sold directly to individual farmers informally.

Farmers . . .the buyers

Generally, the main customers of the SPCs were individual farmers.

Joint price determination

WoARD and the executive committees of SPCs jointly decided on the pricing of seed collected - 1,160.00 Birr for wheat and 2,210.00 Birr for Teff. In fact, price concerns were not even seen as issues as the actors were only SPCs and not intended to compete with the government. Yet, raw seed price was different for the two SPCs. For instance, Hiriti Mekan bought wheat at 874.00 Birr while Zerisenay bought wheat at 903.00 Birrteff per quintal; *i.e.,* a 29.00 birr difference in purchasing wheat in two weredas although same selling price of 1,160.00 birr. This only put Zerisenay at disadvantage for that amount compared with Hiriti Mekan.

DSM drives profitability of SPCs

SPC's profitability averaging above 36.45%

On average, however, both SPCs sell 271.5 birr above the purchasing price, regardless of other

Revolutionizing seed system regimes, embedding efficiency in seed business

costs .

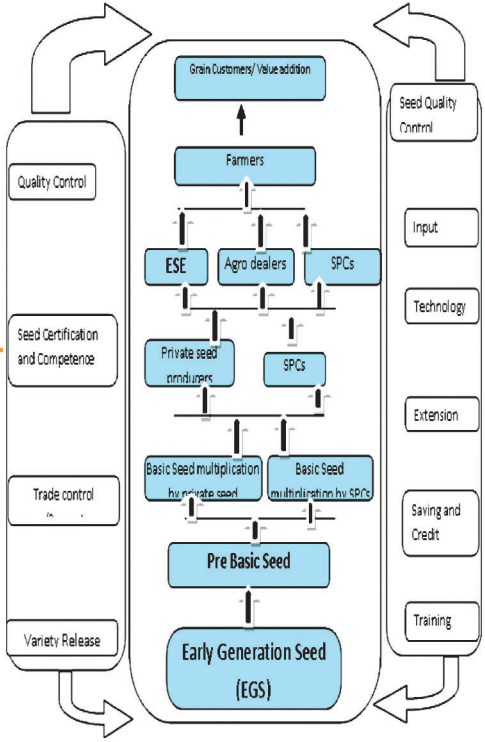
DSM is doable . . . even farmers can do it

Injecting efficiency in seed distribution through farmer based seed production is doable and yet needed the concerted support of seed value chain partners.

ISSD investments have enabled SPCs to become autonomous thorough partnership engagements and in recognition the DSM SPCs are now graduated in recognition of their operational and organizational capacities.

Regional DSM road map

SPCs become autonomous . . .



Opportunities for furthering DSM

- Collaborative partnerships platform in the region
- Clear regional direction on seed system development strategy
- Experience in DSM, regulatory practices, and seed business in general
- Flexible regulatory standards of certification
- Willingness, capacity, and experience of SPCs venturing DSM
- High demand for quality and locally adapted seed
- Better infrastructural fulfillments of SPCs
- Clear DSM implementation roadmap

Challenges . . . *innovation is a bumpy road*

- Climatic factors- delay in rainfall in the implementing weredas reduced the demand to acquire supplied certified quality seed by the SPCs
- Competition - DSM target areas are major seed multiplication clusters where farmers had multiplied basic seed & retained 10% leading to low seed demand from DSM SPCs.
- Unregulated and unsystematic seed distribution (in the name of popularization, scaling up, demonstration etc.) by some actors
- Limited support & integration (during marketing phase) among parters, low woreda support, loose local seed task force leadership and lacks coordination during distribution:
- Low focus to seed at wereda level.

Challenges on becoming learning platforms . . .

- Nature of target crops - DSM on self-pollinated crops is challenging compared to the hybrid maize.
- Awareness gaps (farmers, partners'' rank & file experts, implementing local officials etc) - resistance towards regime change in seed distribution . . .

Conclusion

From a system perspective, DSM has laid a foundation for regulatory procedures, shifts responsibilities and accountability to the seed producer, that seed marketing for self-pollinated crops is doable, and highlighted the capacity (and gaps) of SPCs to engage in seed business to mention some. Despite the bulk of challenges, the main lesson drawn from the pilot DSM implementation is that it is doable and with better integration and capacity building efforts, it is an alternative seed distribution system that can redress the inefficiencies of the conventional approach.

Recommendation

Empowering famers and SPCs in Direct Seed Marketing is empowering an efficient system regime - doing so, the DSM implementation has unraveled the bumps only to reveal the weakest links in the seed system functioning. Based on the DSM pilot implementation and follow up customer satisfaction survey findings, it is recommended that ISSD invests in the following strategic direction:

- DSM should be institutionalized as an alternative seed distribution regime within the formal system
- SPCs should be market oriented in their seed production efforts. The crop portfolio should be determined by the market demand. The idea is that SPCs should not be relying on external support, e.g., BoA to sell their seed.
- The provision of basic seed should be directed at SPCs not just individual farmers. This helps open up a market for SPCs.
- Seed value chain players should redirect investment on building SPC infrastructural amenities. This will facilitate quality seed supply at the farm gates.

Editorial

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