ISSD Ethiopia

Newsletter - *October 2017*

Bringing informal seed systems into focus

With the majority of farmers sourcing seed from informal systems, ISSD has in 2017 launched a new and wide-ranging package of activities to reach and support farmers and processes which have until now been out of focus.

Despite the relatively little focus on informal seed sources awarded by government and its developmental partners, roughly 80% of farmers in Ethiopia continue to source their seeds through informal channels.

The lack of formal and commercial attention to informal systems has resulted in a low uptake and dispersal of quality farmer preferred crop varieties, contributing to household-level food insecurity and fragile farm income.

Strengthening capacity and facilitating linkages between actors in informal systems, as well as stimulating integration with formal systems, ISSD activities across 2017 seek to address these shortcomings and increase reliable and efficient access to farmer preferred varieties, improving livelihoods for some of the most vulnerable farming communities in Ethiopia.

continued on page 3

Increasing food security through cooperatives in PSNP woredas

Chronic food and nutrition insecurity continues to affect many rural households. Seed producer cooperatives, supported by ISSD, are improving resilience in some of Ethiopia's most food-insecure woredas.

The Productive Safety Nets Programme (PSNP) of the Ethiopian Government supports chronically food-insecure households in rural Ethiopia. PSNP focuses this support on increasing access to safety net and disaster risk management systems, complimentary livelihood services and nutrition-related support and advisory services.

PSNP is active in woredas with lower agricultural productivity. Limited water availability and soil degradation are common challenges in PSNP woredas, constraining their ability to achieve fuller potential as is contrastingly seen in woredas of the Agricultural Growth Program (AGP).

Many PSNP woredas though, offer encouragement and form the motivation to engage in sustainable development initiatives. In an effort to reach and support these food-insecure households, ISSD has been strengthening seed producer cooperatives (SPCs) in PSNP, AGP and other woredas.

continued on page 4

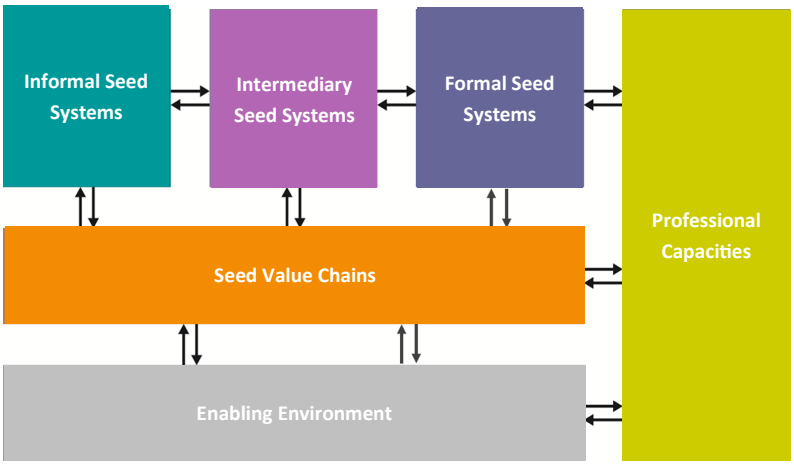
ISSD Ethiopia's informal seed systems component gives added investment and attention to female farmers. Photo: research highlights the central role of women in seed transportation

IN THIS ISSUE

BENEFIT-ISSD Ethiopia 2016/2017 in numbers

Across 2016 & 2017, the BENEFIT-ISSD Ethiopia (ISSD) programme has made great strides in our work to improve female and male smallholder farmer access to and use of quality seed of new, improved, and/or farmer preferred varieties to sustainably increase agricultural productivity.

Here, we take a look at some of the key achievements in our various components.



The ISSD Ethiopia Programme is structured around 6 integrated components

Increased availability and use of quality seed

In 2016, seed producer cooperatives (SPCs) and private seed producers (PSPs) supported by ISSD Ethiopia produced ***15,777*** tonnes of quality seed of cereals, legume, oilseeds, vegetables, spices and forage species, ***6,751*** tonnes of seed potato, ***9*** million sweet potato cuttings, in total producing quality seed of ***110*** varieties of ***28*** crops in 2016

Informal seed systems

Across ***30*** woredas, ***58*** focus group discussions, ***21*** market assessments, ***72*** trader interviews, ***6*** woreda social seed network analyses all helped to develop plans for informal seed systems interventions

18,000 packs of early generation seed (EGS) of over ***140*** different varieties of barley; finger millet; sorghum; teff; wheat; chick-pea; common bean; faba bean and field pea, were distributed to ***6,000*** farmers for on-farm participatory variety selection (PVS) trials and crowdsourcing

Intermediary seed systems

25 partners supported in Local Seed Business development

149 seed producer cooperatives received technical support in quality seed production, value addition and marketing, organizational and financial management and business plan development

Formal seed systems

10,000 small seed packs sold by ISSD-supported Private Seed Producers (PSPs) in Oromia

25 PSPs and ***4*** Public Seed Enterprises received technical support

13 innovation grants, totalling ***60,000*** Euro awarded to seed companies for investment in infrastructure and hardware

Seed value chains

14 SVC assessments across 10 crops

21 SVC interventions piloted

EGS of ***1*** crop, lentil, multiplied on contract on farmers' fields under supervision of Debre Zeit Agricultural Research Centre

6 Dutch companies collaboratively engaged on trade and investment in Ethiopia

Enabling environment

4 directives from the Federal Government on creating a better seed business climate advocated

1 study on rates and reasons for default in contract seed production

1 policy gap analysis, on mandate ownership of EGS production

1 Senior Seed Sector Expert employed and seconded to Ministry of Agriculture and Natural Resources to support policy development and implementation

1 National Seed Advisory Group being formed to give direction to ***5*** regional seed core groups in seed sector governance

1 national forum between Dutch/international seed companies and Ministry of Agriculture and Natural Resource to discuss regulatory reforms and directives.

Bringing informal seed systems into focus

continued from front ..

Building the evidence base for informal seed system interventions

Together with partners, ISSD has completed various participatory studies, focusing on key crops for food security, to better understand the prevailing situation in informal systems.

The studies included seed system security assessments (SSSA) with CRS to understand how seed is accessed in emergency areas; woreda analyses to understand preferred varieties and traits, constraints in accessing seed and what farmers and producers see as necessary interventions; local grain/seed market analyses to assess the role and centrality of the market in informal systems and traders roles in that market; and social seed network analyses to identify nodal farmers and their roles, as well as tracking and visualizing the movement of seed in and among villages.

The studies fed the design of ISSD's new component and interventions on informal seed systems. A total of 30 woredas are selected for intervention, across 22 zones and four regions. 21 of the woredas are PSNP woredas, while four are AGP woredas. In total, 96 kebelles are targeted, with 50% of direct beneficiaries being women farmers.

Differing roles and priorities among women and men farmers

With such a focus on gender sensitive interventions, understanding the different roles and preferences of women and men farmers is essential. The studies show that in general, men farmers focus on yield and disease/pest tolerance as desirable traits, while women farmers prioritise marketability, storability, colour, taste and ease of cooking as important traits to consider.

Further, depending on the region and sometimes woreda, differences in the activities of women and men farmers have also been identified. In eastern Oromia, for example, while there is equal contribution to many tasks such as weeding and crop, variety and seed selection, other tasks such as land selection and preparation, harvesting and threshing are mainly completed by men. Women however, are found to be more active in transportation and storage processes.

These results call for gender-based interventions in order to strengthen informal seed systems, and to this end Gender & Rural Development (GRD) Experts have been recruited to each of the five ISSD regional teams. These GRD experts are already engaged in key activities, an example of which is training in Oromia, in which 30 partners learned about gender sensitivity in crowdsourcing and participatory variety selection (PVS) and crowdsourcing. Together with ISSD Seed Experts and Farmer Organisation Experts, the GRD Experts will capitalise on the unique perspectives, needs and strengths of women farmers.

The importance of nodal farmers in the social seed network

The social seed network analyses highlighted the key role of nodal and connector farmers in establishing a robust informal seed network, and the opportunity such farmers give for reaching large numbers of farmers with our activities. Nodal farmers search for and maintain higher diversity, as well as having many more active connections

Photo: Sorghum Trials. PVS and crowdsourcing are approaches for rapid deployment of improved and farmer preferred varieties.

to other farmers in the community. Further, these farmers are far more active in sharing seeds within and outside of the community.

Nodal farmers are seen as being more knowledgeable by their peers in relation to seed production and are accepted as playing a key role in maintaining the network dynamics and contributing to resilience in times of difficulty. Connector, or bridging farmers, also serve this function, accessing sub-networks within communities.

The position of these farmers in the social seed network offers promising intervention points, and across 2017, nodal farmers have engaged in training organised by ISSD. Training focuses on pre- and post-harvest quality seed management and basic financial literacy, while separate workshops seek to strengthen linkages between nodal farmers, cooperatives and seed vendors.

Reaching scale through PVS and crowdsourcing

Both PVS and crowdsourcing are key activities within ISSD's informal seed systems component. To support this work, training of trainers (ToTs) was organized for more than 125 experts of partner organizations and development agents, as well as enumerators hired to collect data on farmers' varietal preferences in Tigray region. In turn, these partners are training many more local farmers.

This approach offers opportunities to reach a large scale. Early generation seed (EGS) of over 140 different varieties of barley; finger millet; sorghum; teff; wheat; chick-pea; common bean; faba bean and field pea, was distributed to 6,000 farmers for on-farm PVS trials.

These 6,000 farmers will submit data on their evaluation of and preferences for varieties and specific traits to a database managed in collaboration with Bioversity International through a process called crowdsourcing. This data will become freely available to farmers, seed producers, and all other engaged actors active in efforts to improve men and women farmers' access to varieties of their preference.

Continuing wide-ranging interventions in the informal seed system

Just a snapshot of ISSD's activities in informal seed systems has been presented here. From 2017 onwards, ISSD and partners will continue to learn about the challenges and opportunities within informal systems and complete collaborative activities to strengthen the livelihoods of farming communities.

Food security in PSNP woredas

continued from front ..

SPC membership key to PSNP success

Since 2012, ISSD has organised over 100 SPCs in PSNP woredas across the regional states of Amhara, Oromia, SNNPR and Tigray. Together these SPCs have produced close to 20,000 tonnes of quality grain crop seeds. This achievement and the derived benefits for producers has motivated an increase in SPC membership.

Since 2012, an additional 2,500 farmers from PSNP woredas have joined supported SPCs. Another encouraging sign is the notable increase in women's participation in seed business, accounting for 21% of membership in PSNP woredas, an increase of close to 5% since 2012. In its efforts in PSNP woredas, ISSD continues to give special attention to increasing women's access to quality seed and the varieties they prefer.

SPC membership is voluntary, but requires clear commitments from aspiring members. Firstly, members are required to contribute a registration fee and commit to buying a certain number of shares, dependent on the specific SPC. Further, members are required to allocate specific sections of their plots and follow quality control procedures during production.

Members of SPCs benefit greatly from participation and through ISSD's support. They receive technical capacity building in pre- and post-harvest techniques of quality seed production, handling and storage; seed business management; organizational management; and marketing.

ISSD staff members also facilitate their linkage to institutional support for improved access to inputs (e.g. basic seed) and services like seed quality assurance, auditing and credit. ISSD also facilitates SPCs' involvement in wider value chain development.

To the benefit of other SPC members, active participation in SPC activities and assemblies, as well as participating in sub-committees is required of members. The sharing of experiences and collaborative decision-making is key to the success of PSNP SCPs and enables the SPC to respond better to prevailing situations.

Enhancing resilience through varieties

The Super El Niño of 2015/16 again highlighted the challenges faced in PSNP woredas. As drought set in, the amount of grain seed, for example, produced by SPC members fell by over half compared with 2014. Promoting resilience through diversity, ISSD-supported SPCs cultivate many different crops and varieties with preferable traits to minimize the risks associated with climate stress.

Efforts to address fragility of production in these woredas included participatory variety selection (PVS) trials, conducted on 6,000 smallholder farmers' fields, with a goal of identifying and deploying new, improved and adapted varieties, and crowdsourcing farmers' preferences of those varieties and their specific traits. PVS and crowdsourcing are approaches to rapidly deploy many new, improved and adapted varieties of different crops. Additional support in the informal seed systems component of ISSD includes training in seed selection, seed storage and maintenance.

A total of 25 crops and 138 varieties have been put in seed production at least for one season over the five years of activities. A relatively higher number of varieties of bread wheat (26), potato (19) open-pollinated maize (10) and tef (8) are used for seed production.

Resilience though, not only applies to climatic impacts on production. The availability of multiple crops and varieties is essential for a diverse and nutritious diet, with improving the wellbeing and livelihoods of PSNP woreda inhabitants being the ultimate objective.

Realising success in PSNP woredas

Within PSNP woredas, ISSD works closely with a large number of partners engaged in related activities. These include the Bureau of Agriculture & Natural Resources and Cooperative Promotion Agency at regional, zonal and woreda levels; ATA; research centres of the Ethiopian Institute of Agricultural Research (EIAR), agricultural research institutes of Amhara, Oromia, SNNPR and Tigray (ARARI, OARI, SARI and TARI respectively); multiple universities, cooperative unions, as well as with NGOs including CARE, CRS, HCS, REST, and ORDA. This network of partners informs and extends the impact of our work.

In 2018, ISSD hopes to expand its work in PSNP woredas with the proposed PSNP-REALISE project, enabling the development and execution of strategies for sustainable and resilient seed systems in many more PSNP woredas than ever before.

SPC members improve record-keeping as part of business and organisational management training
Photo: Shewit SPC in Tigray

Continued strategic interventions needed in seed value chain

Innovation-driven progress in seed value chains is constrained by capacity and cooperation shortages. Participatory assessments have created awareness for problems of a systemic nature, identified critical interventions needed to stimulate and build on innovation in seed value chains.

ISSD conducted 14 highly participatory rapid seed value chain (SVC) assessments on 10 economically important crops in 2016. The main objectives of the study were to identify actors in different operations of selected seed value chains, evaluate their access to and the performance of available support services and to assess the coherence of the regulatory environment with these practices. The assessments would enable the identification of opportunities and constraints for further interventions to continue to develop these seed value chains.

Many of the common constraints are already well known, but the assessments highlighted a number of chronic issues. Variety release from the research system is limited by a lack of capacity, while locally favoured varieties receive insufficient recognition and promotion. Shortages in early generation seed (EGS), certified seed, germplasm, and chemicals to treat diseases are compounded by a lack of technical capacity and cooperation among actors. In particular, women's participation in decision-making and benefit-sharing is still noticeably low.

Collaborative SVC action agenda

ISSD prioritises SVC development as one of its core programme components. The results of the SVC assessments have been shared and discussed in workshops with relevant SVC actors. The process informs an agenda calling for sector-wide engagement and action:

EGS shortages can be addressed through joint planning and responsibility sharing among research centres and seed producers. Strengthening the capacity of producers in terms of land, irrigation facilities, materials and man power will further support this process. A better system of forward planning and contracting based on actual market demands is needed.

Establishing independent seed regulatory bodies that operate at federal and regional levels will help to address seed quality problems in all regions, across all crops and seed classes. Revenue generation for cost recovery will be important for the effective functioning of these authorities. Their roles should not only be limited to inspecting quality, but also advising seed producers how to control internally for better seed quality.

Scaling up the input voucher system which is currently under pilot and fully implementing ATA's rural finance strategy is needed to combat the pervasive lack of credit across the sector. Hand-in hand with this objective is increased rates of farmers' financial literacy. Based on better financial recording and management, farmers can improve their creditworthiness. Existing materials for training on financial literacy are available from our partner BENEFIT-SBN (the support program to the Sesame Business Network).

Strengthening the role of the regional seed core groups in coordinating seed value chain developments and placing them under a supervision of a national seed advisory group is needed to improve collaborative governance of the seed sector.

Government's endorsement of direct seed marketing (DSM), coupled with adoption and implementation of guidelines will enable DSM to finally be incorporated into common practice. DSM will address many of the challenges in the current seed allocation and distribution system, providing farmers with greater choice among seed products at a competitive price and the chance to hold those to account for inferior seed quality or reward those producing superior quality. DSM has also been proven to reduce rates of wasteful carry-over seed.

The Ethiopian Institute of Biodiversity and research institutes need strengthening in terms of manpower and finance to ensure that outstanding new and improved varieties with farmer preferred traits are released regularly by the research system. Continuous and regular variety maintenance should also be done by respective research centers. Such strengthening will also address the current shortage of germplasm.

Solidifying producers' access to support from government and development partners is essential. Producer companies and cooperatives continue to need technical support from seed production through to marketing.

Creating awareness on contents of seed laws, regulations, directives and seed sector development strategies will stimulate enhanced cooperation and understanding among seed value chain actors. Here, the regulatory directorate of MoANR can play a strong leadership role. Further, encouraging and supporting MoANR to approve and implement recent amendments to the Plant Breeders' Right proclamation and in the preparation of directives and guidelines that clarify seed policy is crucial.

Training women; creating awareness for gender-related issues; introducing technologies preferred by women; and having policies that support women's participation across activities, in decision-making and in benefit-sharing are essential to increase the range, sustainability and impact of existing and new interventions and to capitalise on the unique strengths of women farmers.

Supporting innovative solutions

Through innovation grants, ISSD is piloting multiple interventions that, among others, address EGS production, contract seed production, the availability of small seed packs, the ginger SVC and private sector dialogue with government. Further, ISSD scales up proven innovations by providing training and both financial and technical support, for example in the construction and running of a disease screening house for potato mini-tuber production in Amhara region, and in organising a workshop and training for seed inspectors on seed quality and procedures for quality declared seed (QDS).

In fulfilment of its facilitation role, ISSD strategically links seed producers and input and service providers through value chain linkage forums. Together with partners, ISSD looks forward to achieving the potential offered by these connections and innovations.

DSM: Time to move forward?

In 2011, Direct Seed Marketing (DSM) was introduced to overcome inefficiencies in seed distribution. DSM was also hoped to stimulate accountability among actors in a seed supply system which has limited farmers' access to and use of quality seed.

DSM warrants changing, fully or partially, the existing distribution system, which has until now resulted in unpredictable and often delayed supply of seed, as well as enabling unused and wasted seed.

Moving from resistance to proven success

The initial introduction was challenging, as the existing institutions resisted such change, believing that the problems could better be solved within the prevailing distribution system. Regardless of the initial resistance, which is understandable, the support of different actors to demonstrate the potential of DSM over the years was commendable.

With this support however, the pilot has been scaled-up to cover over 100 districts, and in the case of hybrid maize, more than 8,000 tonnes (>1/3 of the total supply) is channelled through DSM since 2015. Thus, DSM is playing a significant role in the seed supply system of Ethiopia, particularly in high potential areas.

Different studies also confirm that farmers who bought seed through DSM are better off compared to the situation where they have been buying through the current distribution system. However, DSM is still held in a pilot phase, and actors in the seed sector now expect the government to fulfil their roles and make a decision. Yet the government has until now neither decided to stop nor to adopt the pilot, and the pilot continues into the seventh year.

A complex decision in a complex system

The question now is why DSM has not been officially endorsed, given that farmers are accepted as benefiting from the changed system under the pilot. Public decision-making is a complex process. Farmers are only one actor among a long list of actors who have vested interests in this decision. These actors with diverse and sometimes competing interests, directly or indirectly influence the decision-making about DSM.

DSM is appreciated as enabling consistent access to quality seed of preferred varieties. Here, farmers from Mecha woreda seek answers as to why their preferred variety is not available.

Packaging and displaying seeds for purchase in Gissa SPC, Dangila Woreda, Amhara

Other major actors include seed producers, government staff in different offices and at different levels involved in the allocation and distribution of seed, and the government itself as the key decision-making body. One of the major concerns we perceive government is having is whether or not through DSM all farmers, rich and poor, will have equitable access to seed. After all, the objectives and intended outcomes of adapting a given public policy will be perceived from different perspectives.

Limited evaluation focus

Current discussions about DSM are always positive. It has been shown to contribute to increased use of seed and decreased carryover of seed in store, what remains a serious and costly problem for government. Thus, the commonly held view is to further scale up the pilot or fully adopt it into common practice.

Thus far however, evaluation criteria have not taken into account the key initial objective of the pilot, namely, the addressing of inefficiencies in the current distribution system and consequences for farmers' access to quality seed. Rather the major focus of DSM evaluation remains on the achievement of annual targets such as numbers of woredas and the amount of seed distributed through DSM.

This already shows the low level of internalization of the initial objective of the pilot from the evaluators' side. The evaluation should incorporate how the approach has improved farmers' access to seed, their desire to have choice among products, and their ability to either hold those to account for inferior quality or reward others for superior quality. These indicators should be taken into account in deciding whether it is beneficial to adapt in the future.

Questions remain

The limited focus of evaluations of DSM means key information is missing in the decision to move from pilot to practice. What do we know about the objectives and benefits foregone by switching to DSM for different actors? What are the values critical to the role actors are willing to play in the distribution system that are more important than observable benefits to farmers?

Given the diversity of agriculture in Ethiopia and the current use of DSM to achieve delivery targets, how do different actors' visions of seed distribution and marketing in the future compare? These determine how these actors perceive DSM relative to the prevailing distribution system, and influence decision-making. Beyond the benefit to farmers, these values and perception need to be discussed openly to decide on the future of seed marketing systems in Ethiopia.

The worst drought in 50 years means widespread seed shortages in some areas. Here, stocks of maize seed have been certified for quality and are now ready to be distributed to farmers in drought-affected districts.
Photo: Tadele Asfaw/CIMMYT

Super El Niño tests the resilience of Ethiopian seed systems

Swift collaborative action and capacity strengthening in the informal seed system key to increase security in the face of drought

More than 18 million Ethiopian people, including eight million already receiving cash and food assistance through the Productive Safety Net Programme, required humanitarian assistance in 2016 at a cost of $1.4 billion due to the worst droughts to hit in 50 years, according to Oxfam International. The charity estimates that 11 million in the horn of Africa are still in desperate need of assistance in 2017. Facing what they believe is looming humanitarian catastrophe; the United Nations has issued an appeal for £1.5 billion to assist the region.

"Climate change is not a distant, future threat," Oxfam said in a briefing. The organization points to mounting evidence that temperatures have been consistently higher in East Africa in recent years, which is part of a trend seen in Africa and around the world today.

Compounding the effects of a lack of rain to fall, warmer temperatures result in higher rates of evapotranspiration, which just make conditions for crops, livestock and those that tend to them even drier and more difficult to survive in.

Assessing Seed System Security

Responding to the urgency of the situation, the Government of Ethiopia and humanitarian partners have swiftly reacted to the crisis, initially distributing 32 000 tons of assorted crop seed during the 2016 Belg and Meher seasons and with additional distributions across 2017.

Catholic Relief Services (CRS) and partners including ISSD Ethiopia, carried out a Seed System Security Assessment (SSSA) in Ethiopia in 2016. In total, 1,756 farming households, the largest national sample of any SSSA done to date, were interviewed.

The SSSA reviewed the functioning of the seed systems farmers use, both formal and informal, and assessed whether farmers could access seed of adequate quantity and quality in the short and medium term.

Specifically, the work reviewed the actual quantities of seed used as reported by farmers themselves for their key crops in the 2016 Belg and Meher seasons. But what makes seed systems more resilient to stress?

According to Shawn McGuire and Louise Sperling, altering crop profiles, making use of multiple delivery channels, and innovating (for example, with new barter mechanisms) all become key, as does mobilizing cross-scale seed supply linkages.

Together, Shawn McGuire, seed security officer at the Food and Agriculture Organization (FAO) of the United Nations and Louise Sperling, seed system security expert, have shed a lot of light on what we continue to learn about seed security and how best to respond in times of crises to the seed demands of farmers. The website 'seedsystem.org', which the two help curate, shares an interesting video on the subject, along with many more useful resources for practitioners and government.

Practitioners in the ISSD community also have evidence to share. Evidence from ISSD Uganda shows that 75% of the varieties with climate resilient features are home saved or locally bought, including those of sorghum and finger millet.

At the best of times, farmers save a portion of their harvests for sowing the seed of future crops. But, during times of stress, data from ISSD Uganda clearly shows a shift towards farmers' sourcing from their neighbours and from local markets. It doesn't, however, show an increase in the quantity of seed sourced from formal agrodealer outlets, displaying the limited importance of this source at present in times of seed insecurity.

Continued importance of informal systems

We conclude that despite their limitations, informal seed systems remain an important source of seed for farmers especially in times of stress.

Farmers continue to source the lion's share of their seed from their own fields, those of their relatives and neighbours, or from local markets where grain is typically sold. And, as pointed out in Uganda, it is very often these informal seed systems that conserve and maintain the diversity needed in order to respond to changing climatic conditions.

As outlined in another article of this newsletter issue, ISSD Ethiopia is expanding its activities to improve men and women farmers' access to quality seed of the varieties they prefer and which are important to food and nutrition security through strengthening capacities in informal seed systems.

ISSD Ethiopia

The Integrated Seed Sector Development programme in Ethiopia (ISSD Ethiopia) is implemented under the umbrella of the Bilateral Ethiopian Netherlands Effort for Food, Income and Trade Partnership (BENEFIT Partnership).

Our goal is to improve female and male smallholder farmer access to and use of quality seed of new, improved, and/or farmer preferred varieties to sustainably increase agricultural productivity.

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Bilateral Ethiopian Netherlands Effort for Food Income & Trade

Contributing to improved food, markets and trade for rural households in Ethiopia

Programmes united in the BENEFIT Partnership work hard to help achieve increased quantity and quality of sustainable agricultural production, improved markets and trade and strengthened enabling institutional environment for the agricultural sector for rural people in Ethiopia.

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