

ETHIOPIA



Revival of indigenous seeds at Borussilassie

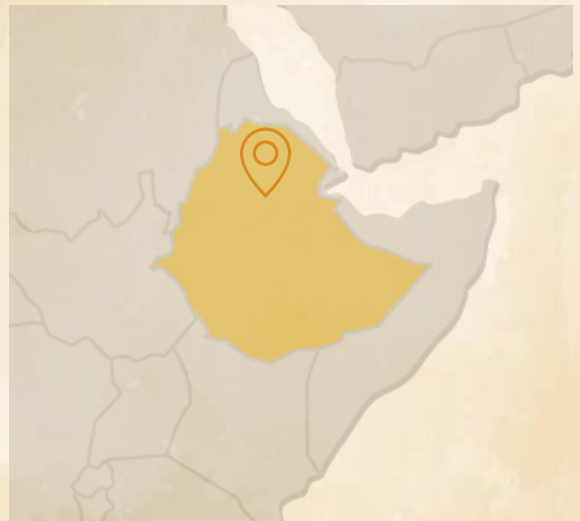
The mission of the initiative is to restore the diversity of the heritage of indigenous seeds of Borussilassie. The traditional varieties are preferred by the members of the community for their taste, suitability for making different dishes, nutritional value and traits that enable them to tolerate stress.

Map

The revival of indigenous seeds varieties is an **agro-ecological initiative** that has been undertaken since 2018 by farmers in the Mesal 07 Kebele community in the Borussilassie area of the Tehuledere district, of the North Wollo zone in the Amhara regional state.

Borussilassie is located at 11°30'N 39°35'E

Most of the population of the kebele lives on privately owned family farms where they have the right to lifetime land use and also it is inheritable. The agro-ecosystem of the area experiences moisture stress frequently and serious water shortages causes people to travel long distances to reach water points.



Context of the initiative

Use of improved seeds, associated with the use of inorganic fertilizers and chemicals, is part of the “green revolution” technology package introduced in the 1970’s. It was strongly promoted by the government as it was perceived as a key driving force to increase agricultural production and productivity. The introduction of these seeds posed threats to local crop biodiversity. In response, the communities of Mesal 07 kebele decided to revive indigenous crops because of their high ecological and social value. These crops are particularly valued for their resistance to moisture stress, common diseases and insect pests. The farmer varieties are also environment-friendly and fit with the traditional food culture of the community. In order to revive the indigenous crops, the farmers of the Masal community started to collect, conserve, restore and reuse local seeds. Currently with the support of ISD and ABN (African Biodiversity Network), the farmers are organized as an association of 50 members. The leadership includes 7 Executive Committee members elected from among the members.





Description of the initiative

The initiative started with financial and technical support provided by Bread for the World (BftW), the Africa Biodiversity Network (ABN) and the Institute of Sustainable Development (ISD) in 2018 as part of the SEWOH initiative (Special initiative for one world without hunger). A baseline survey was conducted to assess seed security and the level of seed diversity by engaging 50 men, women and youth farmers from the Mesal kebele community. These farmers formed an association to engage in community seed banking. Training has contributed to developing the capacities of the participants including concepts like ecological production practices, eco-mapping and seed cataloguing based on community knowledge and rooted in the local cropping systems. The association also received support for the construction of a seed store and office.

The farmers of Masal are smallholders who have persistently faced inadequate supply of agricultural inputs such as seeds, which have frequently been of a low-quality. Seed insecurity in the region is widespread despite the intervention of the Ministry of Agriculture, regional and national seed companies which distribute improved seeds that do not produce well without chemical fertilizers. These seed suppliers didn't meet their seed requirements. The major types of indigenous seeds conserved by the farmers include maize, wheat, barley, oats and tef. Even amongst farmers in the district who are also using improved seeds, the desire and commitment to conserve and use indigenous seed is very high.

The diversity of seeds helps to increase drought tolerance and most of the local and indigenous varieties favoured by the farmers are well adapted to moisture stress conditions and have been proven to increase farmers' resilience to climate change. The impacts of prolonged periodic droughts caused dramatic declines in agricultural production, low crop yields, high mortality of livestock and the drying up of most water sources. Climate change is increasing the intensity of droughts and the corresponding impacts.

Tehuledere wereda is characterised by very low soil fertility. Growing crops from improved seeds requires the use of more chemical fertilizers that are not affordable to the farmers. Hence, the initiative to revive the conservation and use of indigenous seed is valued by the farmers as they do not require the additional fertilizer to produce crops on their relatively infertile farm land. The indigenous seeds include legumes which are grown in rotation with cereals and improve soil fertility.

Market: Currently there is no new market linkage, and the farmers simply collect, plant, harvest and then store the seeds. They use the excess of grain for home consumption. However, a plan has been developed to create market linkages and to expand the initiative to other areas.





Results & Benefits



Members of the community in Borusellassie who participated in training learned how to catalogue their seed and subsequently catalogued 9 different varieties of food crops. They have restored 4 varieties of local crops that had been lost; **black barley** (locally named "**Temege**"), 2 varieties of wheat locally named '**Achiru gunde**' and '**Rejimu gunde**' (**short** and **long gunde** wheat varieties respectively), and 1 maize variety called **Abesha maize**. They started multiplying these on 6 farmers' plots. The Farmers' Association applied to the wereda administration for permanent use of plots of arable land of at least a hectare on which they will be able to multiply these seeds in bulk for further multiplication for domestic use and for commercial purposes.

The community of Borusellassie has continued to look at nearby local markets and beyond for more lost varieties of crops for restoration. Farmers' determination to use organic fertilizers increased after a compost preparation training. They confirm that using compost increases soil fertility for more than one season. The farmers observe that food produced from improved seeds is less nutritious, has less feed value for animals, and is less tolerant to drought conditions when compared to indigenous seeds.



Membership of the association increased from 50 to 56 as a result of farmers' perception of the promise of improvements in the life of the people and in their environment. Farmer's commitment has increased to work hard on the other social and environmental problems the community members faced with a minimum external input or support.

The current production system using local indigenous seeds in the village is more resilient than in the past because it is less dependent of external inputs such as inorganic fertilizers, is better organized, depends on farmers knowledge systems and benefits from better community administration.



A major challenge encountered by the members of the initiative was that the seed stock in the community seed bank warehouse and stored at the homes of members was damaged and looted during the recent war that spread into the district. As a result, the farmers do not have reserve seeds to plant during the coming cropping season. Hence, they are asking for restoration of lost seed stocks by approaching farmers in nearby districts.



Resilience

Traditional seeds have been critical for the communities in Borussellasié mainly because of their role in adaptation and increased resilience to climate change. The main reason that they are able to cope with climate variation is their diversity and the genetic characteristics that have been shaped by human selection as well as gene x environment interactions.



Human & social values :

The initiative had started its training with 50 implementers (of different age groups) of which 20 were female farmers. Development agents, elders and agricultural experts were also participants. Social interactions had given great attention during and after the training. The farmer varieties and associated local knowledge are highly valued by the communities.



Diversity:

The initiative supports cultivation of different seeds and helps to provide different food sources while favouring the conservation of biodiversity. Diversity of traditional seeds provides opportunity and sufficient flexibility to produce food sustainably in a variety of agroclimatic zones.



Culture & food traditions:

The initiative produces and processes local seeds utilising indigenous knowledge. The indigenous seeds have preferred taste and are used for making various kinds of traditional foods (*injera, difo dabo, kinche, kollo, nifro*, etc) and drinks. Hence, the initiative favours production of healthy and diversified dietary sources.



Co-creation & sharing of knowledge:

The initiative built on indigenous knowledge and has been working in collaboration with agricultural experts in a participatory manner. Local elders are sources of local knowledge and they share it to others through different ways (for instance, farmers' field days).



Efficiency:

The initiative is efficient in terms of cost as farmers are not buying expensive inputs (improved seeds and chemical fertilizers and herbicides and pesticides). The indigenous local legumes increase soil fertility without creating dependency on external sources.



Synergies :

The initiative enables the integration of crop-livestock production systems as each complements the other. Animals provide traction power and are sources of food for humans. Crop residue is used as feed for the animals and the resulting manure is applied to crop fields to increase production levels.



Responsible governance:

The association is a legal person and is led by an Executive Committee of 7 members including a Chairperson, Vice Chairperson –and a secretary. They have their own bylaws and internal regulations. The district Cooperative Development office provides technical support in terms of training on managing property/finance and documentation as well as doing annual audits.



Recycling :

Composting is used to increase soil fertility and food production. This depends on recycling available materials like crop residues, broad leaved weeds, kitchen waste and manure.



Circular and solidarity economy :

Members collect and store local endangered seeds in their seed bank, and most food produced by the members of the initiative is consumed by their households. Surpluses are sold on the local market. Currently there is no external market linkage. Because the system depends on local inputs there is no external dependency.



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The AVACLIM project aims to create the necessary conditions for the deployment of agroecology in arid areas.

For more information : www.avaclim.org

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