

Building Resilient & Diversified Livelihoods for Ethiopia's Smallholders



Linking barley farmers to malting industry

Gosaye Degefa, a smallholder farmer living in Asella in the Oromia region of Ethiopia, mainly grows food and malt barley. The local varieties that Gosaye was using were highly vulnerable to diseases and gave poor yield, barely enough to feed his family.

In 2014, Gosyae became one of the progressive farmers in Asella by participating in a project with a team of scientists from the Ethiopian Institute of Agricultural Research (EIAR) and the International Center for Agricultural Research in the Dry Areas (ICARDA). Gosyae received improved malt barley varieties along with training in related crop management practices. The varieties were developed from germplasm provided by ICARDA as part of the team's barley improvement research program targeting the new booming demand for malt barley in Ethiopia to feed its rapidly growing market for malted beverages.

In Ethiopia, the gap between malt barley production and demand is high. In 2015, domestic malt barley production met only 35% of the demand, with the remaining 65% (63,526 tonnes) imported at a steep cost of US\$38 million. In late 2015, brewing factories, such as the Assela Malt factory had to scale down their production due to the chronic shortages of malt barley in the market.

New malt barley varieties released have the potential to triple average yield in Ethiopia, from 2 t/ha to 6 t/ha.

“ I have benefited a lot from malt barley production. We didn't have money to spend before. Today we are saving money in the bank. We are also able to send our children to school. ”

- Gosaye Degefa, a smallholder barley farmer in Asella, Oromia

The ICARDA-EIAR barley research partnership, with funding support from USAID, is aiming to translate import expenses into an income opportunity for the country's subsistence farmers by leveraging Ethiopia's suitable agro-ecologies to produce malt barley. Like Gosyae, about 4.5 million smallholder farmers grow barley in Ethiopia every year with an average yield of 2.0 tonnes/hectare (t/ha), one of the lowest yields in the world.

The scientists are developing barley varieties with traits such as high grain yield and superior malting quality, and tolerance to drought, disease and insect pests. Until 2015, two improved varieties, Miscal 21 and IBON174/03 were successfully piloted by the farmers and breweries for malt production. Gosyae and other participating smallholders saw their yields more than double from 2 t/ha to 5 t/ha. Gosyae had surplus to sell for malt production purposes and was even able to save money in the bank. Gosyae has not looked back ever since.

In May 2016, two new malt barley varieties with the potential to triple average yield in Ethiopia have been released by the Holetta Agricultural Research Center of EIAR as a result of research collaboration with ICARDA. The two varieties, HB1963 and HB1964 are game changing for both the smallholders and the



Malt produced from malt barley being shipped to breweries, Assela factory, Arsi

malting and brewing industry, yielding up to 6 t/ha. The varieties also offer excellent malting quality, making them attractive buys for the businesses, thus allowing smallholders to use the new malt barley as a cash crop and generate additional income from it.

The business opportunity: a win-win for smallholders and breweries

The stakeholder partnership of malt barley farmers, scientists and beer producers could herald a big change for millions of subsistence barley farmers in Ethiopia. “Barley is known for its resilience and stable yields even under water scarcity, drought, low and high temperatures, and soil salinity, making it a crop for climate change.” according to Ramesh Verma, ICARDA’s lead barley breeder.

The improved malt barley with high productivity can build resilience of farmers in the highlands of Ethiopia. “Shifting to these varieties will help farmers avoid risks with old barley and wheat cultivars which are being affected by rusts and other foliar diseases”, adds Verma. The straw yield will also increase from 3 t/ha to 7.5 t/ha which is key for livestock feed.

Deployment of malt barley technologies

The scaling out activities, supported by USAID, are focusing on accelerating the production and multiplication of seed of new malt barley varieties to meet the malt barley demand. A community seed production program has been put in place with farmer groups in Kersa Malima, Jeldu and Wolmera districts of South and West Shoa. Through training courses and field days, ICARDA and Holetta Agricultural Research Center are building the capacity of development agents, specialists, district officials and farmers on quality seed production, marketing, and management of local seed businesses.

TAPPING THE MALT BARLEY MARKET

In Ethiopia, barley is grown by over **4 million** smallholder farmers on close to **1 million** ha, producing **1,953,385 tonnes** annually (2015). In 2015, domestic malt barley production in Ethiopia met only 35% of the demand. The shortfall of **63,526 tonnes** was imported at a cost of **\$38 million**. The new malt barley varieties have thrown open the doors for the barley farmers to tap into the malt beverages market.

Contact

Zewdie Bishaw, Acting Regional Coordinator for Sub-Saharan Africa, ICARDA, at Z.BISHAW@CGIAR.ORG

