

OSU Malt Lab: Bridging Barley and Barley Products on a Research Scale

S. Fisk, T. Filichkin, P. Hayes, L. Helgerson, D. Herb, and D. Wheeler
Oregon State University, Department of Crop and Soil Science, Oregon State University, Corvallis, OR 97331



Background

There has been a gap in the malting industry between industrial production and micro-malting, particularly on a research scale. The OSU Malt Lab will assist in closing this gap. Our pilot malting unit was built as a collaborative effort of the OSU Barley Project, the OSU Fermentation Science Program, and the OSU School of Mechanical, Industrial, and Manufacturing Engineering. The unit is designed as an all-in-one system (uni-malter) as each step of the malting process takes place within a single vessel with the capacity to malt 150-300 pounds of grain.

Mission

Brewing and Distilling

Our goal is to produce a sufficient amount of malt for making research scale beers and spirits using typical pilot brewing and distilling facilities. This may be performed at the OSU Fermentation Science Pilot Plant or by brewing/distilling cooperators. Beer and spirits made in these pilot plants will be more representative of actual production. This will allow end-users to assess the performance and flavor characteristics earlier in the variety development process than was previously possible.

Barley & Beer Flavor

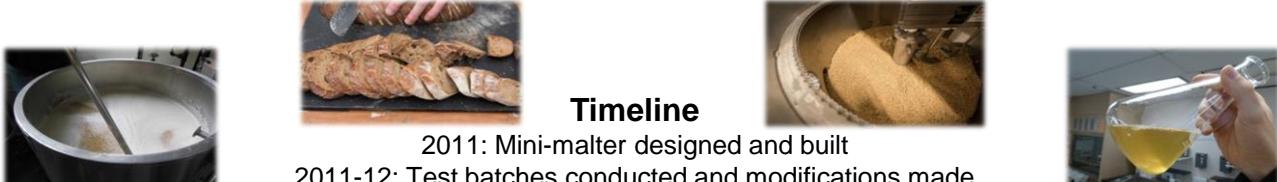
There is increasing appreciation for the contributions that different barley varieties, and growing environments, can make to beer flavor. The OSU Malt Lab will play a key role in investigating these effects.

Baking

Culinary uses for malt are often overlooked. Malts created can be used in The OSU Baking Laboratory for product development and assessment.

Malt Analysis

Malts produced will be analyzed in-house in the newly established malt quality analysis lab to ensure quality malt is being produced and provide brewers & distillers with the information needed to create their desired products.



Timeline

- 2011: Mini-malter designed and built
- 2011-12: Test batches conducted and modifications made
- 2013-15: Mini-malter on loan to Grain Millers, Inc.
- 2014-2015: Fundraising and renovation of dedicated malt lab space
- 2015-16 (Winter): Mini-malter installed, test batches conducted and modifications made
- 2016 (Summer): Establishment of malt quality analysis lab
- 2016 (Fall): Producing and analyzing consistent and quality base malt

Sponsors

Brewers Association, OSU Food Science & Technology, Mr. Carl Casale, OSU College of Agriculture, OSU Crop and Soil Science, Mr. Bob Grover, Idaho Barley Commission, Firestone Walker Brewing, Russian River Brewing, Sierra Nevada Brewing
Rahr Malting – Equipment Donation