



# American Malting Barley Association, Inc.

740 North Plankinton Avenue, Suite 830 / Milwaukee, WI 53203 / (414) 272-4640 / Fax: (414) 272-4631 / <http://www.AMBAinc.org>

## **Press Release: Climate Change Impacts Barley Production**

Contact: Scott E. Heisel, AMBA VP & Technical Director (414) 272-4640

Milwaukee, WI – May 17, 2018 – The major malting barley growing regions of the US extend from the Northern Great Plains, through the intermountain mountains and into the Pacific Northwest. A diverse geography that is being impacted by climate change in different ways requires a multidisciplinary approach to the development of adapted barley varieties. Temperatures across the region are predicted to increase in the coming years. North Dakota has seen the fastest increase in temperature in the contiguous 48 states, mainly through warming winters. The increases in the Pacific Northwest are expected to be largest during the summer growing season.

Rising temperatures pose a risk to cool season crops like barley. Optimum growing temperatures for barley are right around 70°F with maximums in the mid-80s. Temperatures in the upper 80s, particularly at night, can reduce yields and quality. Wheat can tolerate slightly higher temperatures and row crops like corn and soybeans do well at 85°F and these crops will continue to compete for barley acres. Warmer conditions will also lead to changes in weeds, insects, and probably most problematic for barley, diseases.

More precipitation is anticipated in the Northern Great Plains in the winter and spring seasons that could delay the planting season. Amounts in the summer are not likely to rise, but rainfall intensity is expected to be greater. There are significant areas of Montana and North Dakota that could actually see a reduction in the number of days between rainfall events. The Pacific Northwest could realize slightly lower summer rainfall, but not much change in winter snow. The greatest impact will be earlier melting and lower stream flows in the growing season for irrigation. With higher temperatures and near historical average precipitation, there are concerns of greater chance of drought.

Barley is a cool season crop with a short growing season allowing it to do relatively well in regions with low to moderate precipitation. If planted early, it can reach the critical flowering and grain filling periods before the hottest summer temperatures are reached. Researchers are working to further reduce the amount of time it takes for spring sown barley to reach maturity and developing fall sown, winter hardy varieties. “Nearly all of the breeding programs that the American Malting Barley Association (AMBA) provides support to, now spend some of their resources on developing winter malting varieties”, said Dr. Michael Davis, AMBA President. “Not only do they mature earlier in the growing season, they can yield substantially more, and when grown with irrigation, they require less water than spring barleys.” Continued research is critical to meet the challenges of changes in climate, pests, and end-use quality, as well as, maintaining barley’s competitiveness with other cropping options.