MALTING BARLEY RESEARCH – 2017

EASTERN SPRING BARLEY NURSERY
This nursery, coordinated by the Craft Maltsters Guild and managed by North Dakota State University, was established to help identify existing barley varieties that may have adaptation in the eastern US. Twenty-five varieties are evaluated across 8 states, including three sites in Michigan; 1) MSU Upper Peninsula Research and Extension Center (UPREC), Alger Co.; 2) Pilarski Farm, Presque Isle Co.; and 3) MSU W.K. Kellogg Biological Station, Kalamazoo Co.

WINTER MALTING BARLEY VARIETY TRIALS
Trials featuring winter malting barley varieties were planted in fall 2016 at the MSU W.K. Kellogg Biological Station and the Saginaw Valley Research and Extension Center. This multi-state Winter Malting Barley Trial (WMBT) is led by the University of Minnesota. Additionally, on-farm evaluation of select varieties will occur in the southeast and Thumb regions of Michigan.

EXPLORING GENOTYPE BY ENVIRONMENT AND GENOMIC PREDICTION
Research led by Dr. Kevin Smith from the University of Minnesota, examines a large portfolio of genomic selection training populations in target environments to contribute to a national database. Specifically, 2 row spring types are evaluated at UPREC.

OREGON PROMISE FLAVOR NURSERY
Twenty varieties consisting of spring and facultative 2 row barley types will be evaluated, with a special focus on flavor. The trial is administered by Dr. Patrick Hayes at Oregon State University. Samples will be submitted to the project lead for micro-malting and flavor analysis to determine whether or not varieties impart different flavors.

SPRING BARLEY MANAGEMENT TRIALS
Examination of recommended management practices fuels ongoing research at UPREC. These trials have historically studied fertility and disease management. Currently, trials on seeding rate and management of pre-harvest sprout risk are being conducted.
GENOMIC SELECTION FOR LOCAL CEREAL PRODUCTION AND IMPROVED SOIL HEALTH
The John Innes Centre in Norwich, UK partners with eastern US research programs to analyze heritage varieties, and evaluate a wide genetic diversity pool to identify novel traits for crop improvement – specifically resistance to Fusarium head blight. UPREC researchers have an ongoing relationship with this research team, which supports the trials and international knowledge transfer.

GREAT LAKES HOP AND BARLEY CONFERENCE
Established in 2015, the conference spans over two days and has grown to over 300 attendees. It has evolved into the premier craft beer ingredient conference addressing the unique production challenges and opportunities for producers across the Great Lakes Region. With nationally and internationally recognized speakers, the conference provides attendees the opportunity to attend a wide range of educational sessions, trade show and various social events providing great networking opportunities.

SPARTAN BARLEY INCREASE
Spartan – a malting barley variety released in early 1900s – is being revisited by MSU researchers for potential in the re-emerging Michigan malting barley industry. Bred for Michigan’s unique climate, it may offer some positive genetic material in modern breeding programs, and offer a unique story to craft beer offerings in the state. The variety is undergoing a seed increase, quality testing, and pilot malting to confirm its viability.

MSU MALTING BARLEY QUALITY LAB
The malting barley quality analysis lab was established in 2016 through funding support from Michigan State University, Michigan Department of Agriculture and Rural Development, and the Brewers Association. The lab analyzes quality of malting barley grain, and is located at UPREC.

Photo credit Michigan Brewers Guild