

## 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.



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## MALTING BARLEY RESEARCH PROGRAM

Malting barley research originated at the **Upper Peninsula Research and Extension Center (UPREC)** in 2013 in response to the growing desire for locally sourced ingredients in Michigan craft beer. The research program has brought in over \$200,000 in grants to support research and outreach activities throughout the state.

Coordination of research and outreach activities is led by MSU AgBioResearch and Extension Educator **Ashley McFarland**. UPREC research assistant, **Christian Kapp**, provides technical and logistical support of research activities. The research program includes an extended network of MSU Extension and AgBioResearch staff to conduct malting barley related activities throughout the state.

Michigan State University  
Malting Barley  
Research Program  
E3774 University Drive  
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Research and resources  
can be found at:  
[msue.anr.msu.edu/topic/  
info/malting\\_barley](https://msue.anr.msu.edu/topic/info/malting_barley)

## 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

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Keep tabs on research, bulletins, articles, and events at our website: [msue.anr.msu.edu/topic/info/malting\\_barley](http://msue.anr.msu.edu/topic/info/malting_barley)

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