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**Research Category: BAR-CP**

**Duration of Award: 1 Year**

**Project Title: Interstate Spring 2-row Malting Barley Breeding.**

### **PROJECT 1 ABSTRACT**

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In 2012, the New York legislature passed the New York Farm Brewery Bill providing new opportunities to develop a craft brewing industry in New York. This legislation provided tax breaks and marketing incentives to small breweries if they use locally grown ingredients. However, malting barley has not been grown commercially in New York for many decades, so there is no information available on varieties, management practices, or production and marketing. We have been evaluating spring and winter malting barley varieties from various regions around the world for the past 2 years but for this crop to reach its' potential in this region, a malting barley breeding program is required because of the unique climate and soils.

**Goal:** The overall goal of this project is to develop spring 2-row malting barley varieties with FHB resistance and adaptation to the northeastern U.S.

**Specific objectives:**

- 1) Evaluate FHB resistance in spring malting barley varieties in a Uniform Eastern Spring Malting Barley nursery coordinated by Richard Horsley at North Dakota State University.
- 2) Evaluate FHB resistance in spring malting barley varieties in the New York State Regional Spring Malting Barley testing program.
- 3) Evaluate FHB resistance in a spring 2-row Master Training nursery developed by Kevin Smith at the University of Minnesota.
- 4) Use genomic selection to develop spring 2-row malting barley varieties with FHB resistance and adaptation to the northeastern U.S.

Genomic estimated breeding values will be used to select new lines with FHB resistance for advanced testing in regional state trials and for crossing in the winter greenhouse.