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**Project Title:** Integrated Management of Malting Barley in Pennsylvania

## PROJECT 1 ABSTRACT

(1 Page Limit)

Demand for locally sourced small grains of high quality in the Mid-Atlantic has continued to grow over the past decade. According to the Brewers Association, Pennsylvania now ranks first in the country in barrels of craft beer produced (nearly 4mil), and craft brewing has an economic impact of 6.3 billion dollars in the state. The number of operating craft breweries has quadrupled across the commonwealth over the last ten years. One of the primary challenges to achieving the high standards required for malting grain has been the near constant threat of Fusarium head blight (FHB) and subsequent development of vomitoxin in regional barley crops. Understanding the best combination of FHB management approaches will be key to supporting this growing industry in Pennsylvania and surrounding states.

In order to address these production concerns, Penn State hopes to continue its participation in the USWBSI Integrated Management Coordinated Project for barley through an Integrated Management (IM) and Uniform Fungicide Trial (UFT). Field plots will be established in Lancaster County and Centre County, representing two major small grain production zones of state. We will incorporate a known FHB susceptible and a known moderately resistant variety of malting barley as well as other high-performing varieties. Following analysis of agronomic qualities and toxin content, this information will be shared with the greater Coordinated Project in order to build a robust data set for statistical analysis and subsequent development of management recommendations.

Data from this and previous USWBSI-funded barley studies will be used to refine production recommendations and provide critical decision-making information to growers in Pennsylvania and the greater Mid-Atlantic region. They will be incorporated into e-newsletters, grower presentation, and production guides accessible through extension activities. While the results of these experiments will have impact for barley growers of all types, a special emphasis on factors important to maltsters will make this work valuable to the greatest scope of stakeholders.