



Press Release: January 19, 2011

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University of Minnesota introduces new barley variety with improved Fusarium head blight resistance

Improved Fusarium head blight resistance is one of the features of Quest, a new malting barley variety released by the Minnesota Agricultural Experiment Station.

The spring, six-rowed barley is the first University of Minnesota malting barley variety with improved resistance to Fusarium head blight, commonly known as scab. Quest accumulates half the level of deoxynivalenol (DON), a damaging toxin produced by the fungus responsible for Fusarium head blight (scab). Quest is similar in yield to the varieties Tradition and Lacey which account for 70 percent of the Midwest barley acreage.

“Quest’s resistance derives from barley varieties that trace back to China and Switzerland,” said Kevin Smith, who leads the barley breeding program at the University of Minnesota. The time consuming work of developing scab resistant barley varieties is supported by the federally-funded U.S. Wheat and Barley Scab Initiative, the state-funded Minnesota Small Grains Initiative and the American Malting Barley Association (AMBA).

Tested as experimental line M122, the variety is aptly named Quest to underscore the arduous and long road the breeding program had to plow to capture a distinct improvement in resistance to a disease that has decimated the Midwest malting industry.

New barley varieties undergo a four-year, two-step quality evaluation by AMBA. This testing has been completed, the final results of evaluation were satisfactory, and the AMBA Board of Directors at their December 22, 2010 meeting approved the addition of Quest to the AMBA list of recommended varieties for 2011. “The addition of Quest to the AMBA list of recommended varieties is historic. It is the first variety developed from scab resistant germplasm in the US to be added to the list and will be of benefit to both growers and industry in reviving Midwest barley production,” said Mike Davis, AMBA President.

Barley acres in Minnesota declined after the arrival in 1993 of Fusarium head blight in the state. The new variety Quest has the potential to provide growers an option to increase barley acres. “The University of Minnesota is committed to helping small grain growers succeed by developing varieties that generate economic activity and provide new options for growers. Quest and our new wheat varieties including RB07 are the latest example of our drive to develop better small grain varieties,” said Beverly R. Durgan, Director of the Minnesota Agricultural Experiment Station and Dean of Extension.

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