



# American Malting Barley Association, Inc.

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## Press Release: Regional Malting Barley

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May 21, 2014 – Every North American brewer has their favorite variety or in most cases, group of varieties, that are suited to making their product line and perform well in their breweries. Historically, the choices were made based on the barley that was best adapted to the region in which a brewery was located. Six-rowed varieties originating from northeast China dominated in the eastern and midwestern US, two-rowed varieties from Europe in the intermountain west, and six-rowed varieties out of North Africa in California. Each type had its own quality strengths, but their field performance was a primary force in determining what brewers were using in different regions of the continent.

Two-rowed and six-rowed barley differ from each other simply by how the kernels form on the head or spike of the barley plant. The extra four rows of barley in six-rowed varieties are nestled in between central rows and their kernels get twisted and tend to be slightly smaller making six-rowed grain slightly less uniform in size or plumpness. Most of the quality differences between these two types of barley are related to this. A brewer could extract more starch from the plumper two-rowed kernels adding efficiencies to the brewing process. Plumper kernels also have a lower surface to volume ratio resulting in slightly less husk material. Over time, breeders of malting barley have increased the grain size in six-rowed types and greatly reduced the gap in kernel plumpness between these types of barley.

The American Malting Barley Association, Inc. and its predecessor organizations have been providing funding for these improvements and evaluating new varieties since the repeal of prohibition. The variety Larker, which stands for large-kernel was released by North Dakota State University in 1961 and in 1978, the University of Minnesota release Morex (more extract). These varieties were significant improvements in grain size and extract, and today's six-rowed varieties further blur the distinction between the two types, but two-rowed varieties are still slightly more plump in the regions to which they are adapted. Why all this effort to increase the kernel plumpness in six-rowed rather than just growing two-rowed varieties? Two-rows did not have the agronomics to compete with six-rowed varieties in the higher rainfall, more humid regions of the upper Midwest in the US where many of the malting plants are located.

The strength of the straw in two-rowed varieties was one factor, but diseases were the major factor. Resistance to diseases like Spot blotch, Net blotch and Rust was lacking and according to Dr. Brian Steffenson, University of Minnesota Plant Pathologist, "for some unknown reason, it has been harder get genes for resistance to some of these diseases fully expressed in two-rowed lines". Advances are being made and the North Dakota State University is beginning to release malting two-rowed lines better suited to more humid growing conditions.

As brewers and maltsters begin to source locally grown malting barley in these more humid environments, it would be wise to rely on any regional barley trial data available to select the best adapted variety for their region. The chances of getting good quality malting barley in the end will be improved.