



Malting Barley Breeding Guidelines Ideal Commercial Malt Criteria

January 2023

	Adjunct Brewing Two-Row	All-Malt Brewing & Distilling Two-Row	Grain Distillers Two-Row
AMBA Member Interest¹	62%	32%	6%
Barley Factors			
Plump Kernels (on 6/64)	>90%	>90%	>70%
Thin Kernels (thru 5/64)	<3%	<3%	<5%
Germination (4 ml, 72-hour GE)	>98%	>98%	>98%
Protein	≤13.0%	≤12.0%	11.5 - 14.0%
Skinned & Broken Kernels	<5%	<5%	<5%
Malt Factors			
Total Protein	≤12.8%	≤11.8%	11.0 - 13.5%
on 7/64 screen	>70%	>75%	>50%
Glycosidic Nitrile (g/MT) ²		<0.5	<0.5
PSY (LPA/MT)		≥400	
Measures of Malt Modification			
Beta-Glucan (ppm)	<100	<100	
Soluble/Total Protein	40 - 47%	38 - 45%	>48%
Turbidity (NTU)	<10	<10	
Viscosity (absolute cp)	<1.50	<1.50	
Congress Wort			
Soluble Protein	4.8 - 5.6%	<5.3%	>6.0%
Extract (FG db)	>81.0%	>81.0%	>79.0%
Color (°ASBC)	1.6 - 2.5	1.6 - 2.8	<4.0
FAN	>210	140 - 190	>250
Malt Enzymes			
Diastatic Power (°ASBC)	>140	110 - 150	>200
Alpha Amylase (DU)	>50	40 - 70	>75

¹Based on 2021 dues weighted survey of regular members

²All Malt Distillers' Two-Row should have less than 0.5 g/MT Glycosidic Nitrile (GN) and a Predicted Spirit Yield (PSY) of 400 LPA/MT or more. GN and PSY are distilling, not brewing parameters.

General Comments

- Barley should mature rapidly, break dormancy quickly without pre-germination, and germinate uniformly. The hull should be thin, bright, and adhere tightly during harvesting, cleaning, and malting.
- Malted barley should exhibit a well-balanced modification in a conventional malting schedule with four day germination.
- Malted barley must provide desired beer and spirit flavor.
- Distillers' Malt guidelines are designed to reflect how varieties perform when malted in the normal brewers' cycles used for AMBA and CCRU variety trials.