

Barley Breeding Timeline

Year 1: 200 to 250 initial crosses are made and progeny are evaluated for agronomic characteristics such as maturity, kernel plumpness, straw strength, spike fertility and plant height.

Year 2: Selected lines are grown and tested for straw strength, maturity, plant height and disease resistance. The first quality tests including plumpness, test weight, protein and barley diastatic power are conducted.

Year 3-5: Lines are tested and advanced through Preliminary, Intermediate and Advanced Yield Trials (PYT, IYT & AYT), and are sent to USDA/ARS Cereal Crops Research Unit at Madison, WI for malt quality analysis and the NDSU Plant Pathology lab for disease resistance testing. Lines that do well are sent to the American Malting Barley Association (AMBA) for their first of Pilot Scale evaluation in year 5.

Year 6-7: Lines submitted for Pilot Scale evaluations are entered into Varietal and Cooperative Yield Trials (VYT & CYT) in up to 10 locations. Lines passing the second year Pilot Scale evaluations are submitted for AMBA Plant Scale testing of malting and brewing quality in year 7.

Year 8-10: AMBA Plant Scale testing continues, yield trials are conducted and lines are evaluated further for agronomic, disease, and malt quality traits. Based on acceptance by the AMBA's members, the line is given a varietal name and released as a malting barley variety. Seed is increased during the summers.