

Washington Grain Commission
Wheat and Barley Research Annual Progress Reports and Final Reports

Project #: 4721

Progress Report Year: 2 of 3

Title: Quality of Varieties & Pre-release Lines: Genotype & Environment-“G&E” Study

Cooperators: Ryan Higginbotham, Kim Garland-Campbell, Arron Carter, Mike Pumphrey

Executive summary: The 2016 harvest sample analysis is complete. As in previous years, all quality data will be analyzed using the *t*-Score statistic. The quality *t*-Scores for each spring hard red, hard white, soft white common and club varieties, and winter hard red, hard white, soft white common and club varieties are summarized using ‘Grain’, ‘Milling’, ‘End-Product’, and ‘Overall’ Scores. Varieties in each market class/sub-class are then ranked by the Overall Score. All varieties and advanced breeding lines with three or more years of data are included in the final listing.

Using these results and analyses, the WWQL works closely with the WGC to develop the, “*Preferred WHEAT VARIETIES for Washington based on end-use quality*”. Completion of the variety rankings in February represents the first significant accomplishment. We coordinate variety classification with Oregon and Idaho.

Impact: This ‘G&E’ project provides value to growers in two significant ways: First, it documents and highlights the quality of varieties so that growers are aware of the importance of quality and will hopefully include quality in their seed-buying decisions. Data are objective “head-to-head” results on Private and Public varieties. Secondly, the data generated by the G&E study supports in a major way the analysis of new breeding lines and the WSU Variety Release process. This program is also “highly visible” such that good end-use quality is reinforced as a priority in both private and public breeding programs throughout the region.

Outputs and Outcomes:

Use the [Excel template provided](#) to report on the following. Ideally, you simply update your spreadsheet from previous reports.

WGC project number: 4721
WGC project title: Quality of Varieties & Pre-release Lines: Genotype & Environment--"G&E" Study
Project PI(s): Craig F. Morris and Doug Engle
Project initiation date: 1-Jul-16
Project year: 2

Objective	Deliverable	Progress	Timeline	Communication
Complete milling & baking analyses	Data set complete	Winter and spring wheat datasets are complete	all tests are complete	internal
Analyzed data set for t-Scores	Grain, Milling, Baking and Overall t-Scores calculated	final data set is being processed	complete in January	internal
Rank varieties, assign quality classification, deliver final consensus to WGC	Final consensus classification of cereal chemists across the PNW	We will meet at the PNW Wheat Quality Council meeting to reach consensus on classification	We have scheduled meeting at the PNW Wheat Quality Council	Meeting with PNW cereal chemists from USDA, WSU, U of I and OSU at the PNW Wheat Quality Council; then communicate results to WGC