

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

Project #: 4721

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

Cooperators: Kim Garland-Campbell, Arron Carter, Mike Pumphrey, Clark Neely

Executive summary: The 2020 harvest sample analysis is roughly half done; the project is on-going with the most recent project covering the third of three years. As in previous years, all quality data were/will be analyzed using the *t*-Score statistic. The quality *t*-Scores for each soft white winter, club, soft white spring and club, hard red winter, hard red spring, and hard white winter and spring 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*” each year with annual updates. Completion of the variety rankings in February represents the first significant accomplishment each year. We coordinate variety classification with Oregon and Idaho cereal chemists.

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: Following are recent advanced lines and released varieties that were supported with complete end-use quality analyses:

ALUM	HRS
ARROWHEAD	HRW
ARS09X492-6CBW	CLUB
ARS14DH1122-26	CLUB

ARS14DH1122-44	CLUB
ARSX09500-14CBW	CLUB
ARSX09500-17CBW	CLUB
ARSX12015-68CBW	CLUB
ARSX12097-8D	CLUB
ARSX12099-158	CLUB
ASSURE	SWW
BOBTAIL	SWW
BRUEHL	CLUB
BRUNDAGE96	SWW
BRUNEAU	SWW
CASTELLA	CLUB
CHET	HRS
CLEARSTONE	HRW
COMMAND	SWW
CRESCENT	CLUB
CURIOSITY	SWW
DAYN	HWS
DEVOTE	SWW
DUET	SWW
EARL	HWW
FARNUM	HRW
FUSION	HRS
GLEE	HRS
GUNSIGHT	HRS
HULK	SWW
INCLINE	HRW
JASPER	SWW
JD	CLUB
JET	HRW
KELDIN	HRW
KELSE	HRS
LOUISE	SWS
MADSEN	SWW
MAGIC	SWW
MELA	SWW
MELBA	CLUB
MONARCH	HWW
NORWEST553	HRW
ORCF102	SWW
OTTO	SWW
PIRANHA	SWW
PRITCHETT	CLUB

PUMA	SWW
PURL	SWW
RESILIENCE	SWW
ROSALYN	SWW
RYAN	SWS
SCORPIO	HRW
SEAHAWK	SWS
SELBU2	SWW
SEQUOIA	HRW
SOCKEYE	SWW
SPRINTER	HRW
STEPHENS	SWW
STINGRAY	SWW
TANDEM	SWW
WA8290	SWW
WA8293	SWW
WA8307	SWW
WA8309	HRW
WA8310	HRW
WA8312	CLUB
WA8317	SWW
WA8318	HRW
WA8319	SWW
WA8321	SWS
WA8323	SWS
WA8325	CLUB
WA8330	
WA8335	SWW
WA8336	SWW
WA8337	SWW
WA8342	HRS
WA8343	HRS
WA8344	HRS
WB528	SWW
WB9668	HRS
WHETSTONE	HRW
XERPHA	SWW

Preferred Wheat Varieties 2020 following page

SOFT WHITE WINTER

VI Frost	LCS/UI	MD
Bobtail	OSU	MD
UI Castle CL+	UI	MD
Brundage96	UI	MD
Kaseberg	OSU	MD
LCS Shine	LCS	MD
Jasper	OSU	MD
Bruneau	UI	MD
LCS Ghost	LCS	MD
UI Palouse CL+	UI	MD
Nixon	OSU	MD
Puma	WSU	MD
UI WSU Huffman	UI	MD
ARS-Selbu	ARS	D
VI Bulldog	LCS/UI	D
SY Command	AP/SY	D
LCS Biancor	LCS	D
UI Magic CL+	UI	D
Devote	WSU	D
Mary	OSU	D
LCS Shark	LCS	D
SY Ovation	AP/SY	D
LCS Drive	LCS	D
Skiles	OSU	D
WB 523	WB	D
UI Sparrow	UI	D
Eltan	WSU	D
SY Dayton	AP/SY	D
SY Raptor	AP/SY	D
Norwest Duet	OSU/LCS	D
Otto	WSU	D
WB-528	WB	D
Resilience CL+	WSU	D
Stephens	OSU	D
ORCF101	OSU	D
LCS Hulk	LCS	A
SY Assure	AP/SY	A
Purl	WSU	A
ORCF103	OSU	A
LCS Artdeco	LCS	A
Madsen	ARS	A
WB1604	WB	A
Mela CL+	WSU	A
Curiosity CL+	WSU	A
WB-1070CL	WB	A

WB1529	WB	A
WB-1066CL	WB	A
WB 456	WB	A
WB1376CLP	WB	LD
Xerpha	WSU	LD
SY Banks	AP/SY	LD
WB1783	WB	LD

HARD RED WINTER

WB4623CLP	WB	MD
Whetstone	AP/SY	MD
UI SRG	UI	MD
Norwest 553	OSU	D
LCS Rocket	LCS	D
SY Clearstone	AP/SY	D
AP503 CL2	AP/SY	D
Farnum	WSU	D
LCS Evina	LCS	D
Sequoia	WSU	D
LCS Jet	LCS	A
Keldin	WB	A
LCS Zoom	LCS	A
Esperia	Societa Produttori Sementi Spa	A
SY Touchstone	AP/SY	LD
Residence	Cebeco	UCS
Estica	Cebeco	UCS
Symphony	Tanio Tech	UCS

HARD RED SPRING

Hollis	WSU	MD
SY605 CL	AP/SY	MD
Alum	WSU	MD
SY Coho	AP/SY	MD
SY Selway	AP/SY	MD
Glee	WSU	MD
Chet	WSU	MD
LCS Luna	LCS	MD
Net CL+	WSU	D
LCS Iron	LCS	D
WB9411	WB	D
WB9668	WB	D
WB9229	WB	D
Kelse	WSU	D
Jefferson	UI	D
AP Renegade	AP/SY	D
SY Gunsight	AP/SY	D

SOFT WHITE SPRING

Tekoa	WSU	
UI Stone	UI	
Diva	WSU	
WB6341	WB	
Louise	WSU	
SY Saitese	AP/SY	
Alturas	UI	
Ryan	WSU	
Whit	WSU	
Seahawk	WSU	
Babe	WSU	
WB6121	WB	
WB-1035CL+	WB	

CLUB

ARS Castella	ARS	
ARS Crescent	ARS	
Cara	ARS	
ARS Pritchett	ARS	
Bruehl	WSU	

SPRING CLUB

Melba	WSU	
JD	WSU	

HARD WHITE WINTER*

UI Silver	UI	
Earl	WSU	

HARD WHITE SPRING*

UI Platinum	UI	
WB Hartline	WB	
Dayn	WSU	

ABBREVIATIONS

AP/SY	AgriPro/
ARS	Agricultural Researc
LCS	Limagrain Cen
OSU	Oregon State U
UI	University
WB	WestBred/In