

WSU EXTENSION VARIETY TESTING PROGRAM

# Cereal Variety Performance Trials 2018

A. Esser, V. Jitkov, A. Horton<sup>1</sup>

DEPARTMENT OF CROP & SOIL SCIENCES • DECEMBER 2018



<http://smallgrains.wsu.edu/variety/>

WASHINGTON STATE UNIVERSITY  EXTENSION

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Bruce Nelson	Farmington	Whitman	Mac Mills	St. John	Whitman
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## INTRODUCTION

The goal of the WSU Extension Cereal Variety Testing Program is to provide growers and the agribusiness industry with independent and objective information on the adaptation and performance of winter and spring wheat, spring barley and triticale varieties across the different climatic regions and management practices in eastern Washington. A related goal is to provide WSU and USDA-ARS breeding programs a comprehensive testing and evaluation program for advanced breeding lines to assist in determinations for variety release recommendations to the Washington Agricultural Research Center. This report summarizes the 2018 WSU Extension Cereal Variety Testing trials.

When selecting varieties, it is important to review the yield and other variety performance data across as many trial sites with similar climatic and growing conditions as possible. In addition, evaluation of the yield results should rely most heavily on the long term yield averages, when available, since yield performance based on a single year for a given variety can be misleading. Variety testing results vary from year to year and site to site, just as commercial growing conditions vary across years and locations. Data tables included in this report provide current year, 2-year, 3-year and 5-year averages at each location (when available). Yield, test weight, and grain protein are also averaged across locations within each precipitation zone.

This report represents research in progress. Relative performance of varieties can change when tested under other environments and production practices. Evaluation of any variety included in these trials should not be construed as a recommendation or endorsement.

The WSU Cereal Variety Testing Program is conducted by independent objective processes to ensure results provide the best unbiased comparisons of variety performance.

## METHODS

### *Experimental Materials and Procedures*

The data presented in this report were generated in cereal variety testing trials conducted in 2018. The total number of varieties and locations was:

soft white winter wheat: 84 entries at 25 locations;  
hard red winter wheat: 35 entries at 16 locations;  
hard white winter: 4 entries at 3 locations;  
soft white spring wheat: 25 entries at 18 locations;  
hard red spring wheat: 37 entries at 18 locations;  
hard white spring wheat: 2 entries at 18 locations;  
durum spring wheat: 1 entries at 18 locations;  
spring barley: 24 entries at 12 locations;  
winter triticale: 5 entries at 2 location;

Tables 1-6 list all entries for the 2018 winter and spring cereal trials. An alpha lattice design with three replications was used for all cereal trials. For each crop, the seeding rate was a specific number of seeds planted per square foot. Planting rates were determined by weighing 1000 seeds (1000 kernel weight) of each cultivar (Tables 7-9). All cereal entries were treated with CruiserMaxx Vibrance 0.66 Cereal Custom Blend (3.55 oz/cwt). Entries were planted in small plots using one of six planter drill opener configurations based on the trial location (Tables 10 and 11). All trials were maintained under grower management conditions specific to each trial location. In 2018 most of the cereal experiments received application of fungicides to control development and spread of stripe rust. Fungicide management details, when applicable, are listed with the results of individual experiments.

Fertility levels for all crops were maintained under typical grower management practices at each location. Soil sampling was done at all locations. Soil test results were used to estimate the amount of nitrogen needed to attain a minimum grain protein of 11.5% for hard winter wheat and 14% for hard spring wheat. The calculation estimate used for hard winter wheat was 3.0 pounds of nitrogen X expected bushel yield. The calculation for hard spring wheat was 3.7 pounds of nitrogen X expected bushel yield. Unless otherwise noted, all additional fertilizer was spring applied as urea ammonium sulfate (40-0-0-6) using a broadcast surface application.

Weed management included spring applications of commercial herbicides and are noted in the results from each location. Clearfield<sup>®</sup> varieties were not treated with Beyond<sup>®</sup>. Variety plot tours were conducted at as many locations as possible to provide growers and agribusiness personnel opportunities to conduct in-field observations of all entries (Figure 1). Prior to each plot tour, experiments were trimmed to final harvest dimensions a by applying Roundup PowerMax herbicide with a hooded alley sprayer or by using rotary mowers to cut alleyways between ranges.

Seed samples of all winter wheat, spring wheat and spring barley were provided for stripe rust (*Puccinia striiformis*, West) screening conducted by Dr. X. Chen, Plant Pathologist, USDA/ARS. These evaluations were conducted at various locations under field conditions. Additional stripe rust screenings were conducted under greenhouse conditions. Stripe rust

evaluations for all wheat and barley entries can be found in Tables 49, 50, 75, 76, 108, 137, and 155.

INFECTION TYPE (IT): A 0-9 scale that is more damaging at higher levels on the scale.

- 0 = no visible signs or symptoms
- 1 = necrotic and/or chlorotic flecks; no sporulation
- 2 = Necrotic and/or chlorotic blotches or stripes; no sporulation
- 3 = Necrotic and/or chlorotic blotches or stripes; trace sporulation
- 4 = Necrotic and/or chlorotic blotches or stripes; light sporulation
- 5 = Necrotic and/or chlorotic blotches or stripes; intermediate sporulation
- 6 = Necrotic and /or chlorotic blotches or stripes; moderate sporulation
- 7 = Necrotic and/or chlorotic blotches or stripes; abundant sporulation
- 8 = Chlorosis behind sporulating areas; abundant sporulation
- 9 = No necrosis or chlorosis; abundant sporulation

SEVERITY (%): Severity is a percentage of the plants of a variety that are being infected with stripe rust.

Heading date for each entry was recorded when 50% of the heads were out of the boot and reported as Julian date (days from January 1). Plant height measurements were collected by selecting an average plant in each plot and measuring to the top of the spike (not including awns).

Lodging is reported as a percentage of the plant spikes that were lodged prior to harvest.

All cereal entries were evaluated for grain yield, test weight and percent grain protein. Plot size for all trials ranged from 60 to 96 square feet (Tables 10 and 11). Entire plot was harvested with small plot combines and grain yield (grams/plot) was converted to per acre yield. Wheat yield is reported in the standard 60 pounds per bushel. Barley trial yield is reported in pounds per acre. Test weight is reported in pounds per bushel. Grain protein percentage is reported for both wheat and barley entries, determined using a near infrared transmittance (NIRT) protein analyzer on a 12% moisture basis.

After harvest experiment data were analyzed, summarized, and sent out via e-mail list serve. Winter wheat trials were processed first in an effort to aide growers in making fall planting decisions. Spring data were also distributed via the e-mail list serve and all spring data were completed by the middle of October 2018. Data were also posted to the Variety Testing Program website (<http://smallgrains.wsu.edu/variety>). E-mail contacts can be added to the list serve by sending a request to [aarons@wsu.edu](mailto:aarons@wsu.edu) .

Some of the experiments were planted, grown and maintained but were lost at different stages prior to harvest due to various circumstances beyond our control. Trials at a few locations were harvested but data is not presented due to high variability and other factors. Following are experiments and locations for which data is not presented in the final report:

Lamont Soft White Winter Wheat trial – harvested, data not reported due to high variability and non-significant results;

Lamont Spring Barley trial - harvested, not reported due to high variability and non-significant results;

## *Statistical Analysis and Interpretation*

For each measured trait, entry means (averages) are shown within the body of the data tables and the overall trial averages are displayed at the bottom of the tables. The least significant difference (LSD) and the coefficient of variation (CV) are also listed. The LSD is presented at the 5 percent error level and is an aid in comparing the performance of any two varieties. If the reported value of a variety differs from another variety by more than the LSD, then there is at least a 95% chance that the values of those varieties are actually different and not due to random chance or variation. If the measured values differ by less than the LSD value, the differences may be due to random error rather than actual differences between the varieties. Yield values are reported from highest to lowest within a table, and varieties that are within the LSD range of the highest yielding variety are shown in bolded type. This only shows the LSD range of the top yielding varieties and LSD comparisons can be done on any varieties of interest within a column. The coefficient of variation (CV) is given as a general measurement of the precision of each experiment. CV values are listed as a percent and assist in estimating how much plot-to-plot variation was present in the trial due to differences in soil variability, soil moisture, diseases, weeds, experimental technique, etc. For yield a CV of 1% to 15% is considered acceptable, while a CV greater than 15% indicates that considerable unaccounted variation was present. While there could still be useful information in trials with CVs of >15%, interpretation is needed. The higher the CV, the more difficult it is to detect differences between varieties.



**Table 1. 2018 Soft White Winter Wheat Entries**

Name	Originator	Class	PI Number	Old Name	Sites
ARS06132-45C	USDA-ARS/WSU	WC <sup>1</sup>			b,d
ARS-Castella (ARS20060123-31C)	USDA-ARS/WSU	WC		ARS20060123-31C	a,b,d,e
ARS-Crescent	USDA-ARS/WSU	WC	PI 665048	ARS970163-4C	a,b,d,e
ARSDH08X028-9C	USDA-ARS/WSU	WC			d
ARSDH08X103-102C	USDA-ARS/WSU	WC			b,d
ARSDH08X117-83C	USDA-ARS/WSU	WC			a,d
ARSWA2J100065C	USDA-ARS/WSU	WC			a
Bobtail	OSU	SWW <sup>2</sup>	PI 673133	OR08047P94	b,c,d
Bruehl	WSU	WC	PI 606764	WA 7833	a,e
Curiosity CL+	WSU	SWWI <sup>3</sup>	PI 675007	WA 8143	a,e
Dyna-Gro Impact	CPS	SWW			a,b,c,d,e
Eltan	WSU	SWW	PI 536994	WA 7431	a,e
IDN 15-72458DH	Uofl	SWW			b,c,d
IDO1005	Uofl	SWW			a,d
IDO1708	Uofl	SWW			a,b,c,d
Jasper	WSU	SWW	PI 678442	WA 8169	a,b,c,d,e
KWS147	KWS Cereals	SWW			a
KXB-01	WSU/KG	SWW			a,b
LCS Artdeco	Limagrain	SWW	PI 667102	NSA06-2153A	b,c,d
LCS Drive	Limagrain	SWW	PI 680589	LWW12-7105	b,c,d
LCS Hulk	Limagrain	SWW	PI 689017	LWW14-73163	a,b,c,d,e
LCS Shark	Limagrain	SWW	PI 689018	LWW14-71195	b,c,d
LCS Sonic	Limagrain	SWW	PI 689019	LWW14-73161	a,d,e
LWW14-72916 (LCS Shine)	Limagrain	SWW			a,b,c,d
LWW14-74143 (LCS Ghost)	Limagrain	SWW			b,c,d
LWW15-71945	Limagrain	SWW			a,b,c,d
Madsen	USDA-ARS/WSU	SWW	PI 511673	WA 7163	b,d
Mary	OSU	SWW	PI 666373	OR2040726	d
Mela CL+	WSU	SWWI		WA 8155	a,e
M-Press	TMC	SWW			a,b,d,e
Norwest Duet	Limagrain/OSU	SWW	PI 681650	LOR-092	a,b,c,d,e
Norwest Tandem	Limagrain/OSU	SWW	PI 681649	LOR-334	a,b,c,d,e
OR2121086	OSU	SWW			a,b,c,d
OR2121285	OSU	SWW			d
OR2130081	OSU	SWW			d
ORCF-102	OSU	SWWI	PI 641787	OR201007	a,b,e
ORCF-103	OSU	SWWI	PI 658153	ORI2042037	a,e
ORI2150031 CL+	OSU	SWWI			a,b,c
ORI2150061 CL+	OSU	SWWI			b,c
Otto	WSU	SWW	PI 667557	WA 8092	a,e
PNW Hailey	PNW	SWW		09PN046#28	b,c,d
Pritchett	USDA-ARS/WSU	WC	PI 678944	4J0713366C	a,e
Puma	WSU	SWW	PI 670038	WA 8134	a,b,c,d,e
Purl (WA 8234)	WSU	SWW		WA 8234	b,c,d
Resilience CL+	WSU	SWWI	PI 686413	WA 8187	b,c,e
Rosalyn	OSU	SWW	PI 673132	OR2071071	b,c,d
Stephens	OSU	SWW	Citr 17596	OR 65-116	d
SY Assure	Syngenta	SWW	PI 678621	04PN096-2	b,c,d
SY Banks	Syngenta	SWW	PI 682076	SY 09PN005#25	a,b,d,e
SY Candor (09PN008#72)	Syngenta	SWW	PI 689045	09PN008#72	a,b,d

**Table 1 cont. 2018 Soft White Winter Wheat Entries**

Name	Originator	Class	PI Number	Old Name	Sites
<b>SY Command</b>	Syngenta	SWW	PI 682078	SY 04PN066-7	a,d,e
<b>SY Dayton</b>	Syngenta	SWW	PI 682079	SY 09PN062#18	b,c,d
<b>SY Ovation</b>	Syngenta	SWW	PI 662047	03PN108-21	b,c,d
<b>SY Raptor</b>	Syngenta	SWW	PI 682081	09PN046#16	c,d
<b>UI Castle CL+</b>	Uofl	SWWI	PI 675641	IDN 09-DH10	a,b,c,e
<b>UI Magic CL+</b>	Uofl	SWWI	PI 678629	IDN 09-DH11	a,b,c,e
<b>UI Palouse CL+</b>	Uofl	SWWI	PI 678630	IDN 3_5_10	b,c
<b>UI Sparrow</b>	Uofl	SWW	PI 680612	IDO1108DH, JC1108	a,b,d,e
<b>UIL 07-28017B</b>	Uofl	SWW		IDN 07-28017B	a,b,c,d
<b>UIL 09-15702A</b>	Uofl	SWW		IDN 09-15702A	a
<b>WA 8232</b>	WSU	SWW		SWW10127-1-DH-3-1	b,c,d
<b>WA 8270</b>	WSU	SWW			a
<b>WA 8271</b>	WSU	SWW			a
<b>WA 8274 CL+</b>	WSU	SWWI			b,c
<b>WA 8275 CL+</b>	WSU	SWWI			b,c
<b>WA 8290</b>	WSU	SWW			a
<b>WA 8291</b>	WSU	SWW			a
<b>WA 8292</b>	WSU	SWW			d
<b>WA 8293</b>	WSU	SWW			b,c,d
<b>WB1376CLP</b>	WestBred/Monsanto	SWWI	PI 674194	WB1376CLP	a,b,c,e
<b>WB1529</b>	WestBred/Monsanto	SWW	PI 671989	BZ6W07-436	a,b,c,d,e
<b>WB1532</b>	WestBred/Monsanto	SWW			a,b,c,d,e
<b>WB1604</b>	WestBred/Monsanto	SWW	PI 671990	BZ6W07-458	a,b,c,d,e
<b>WB1783</b>	WestBred/Monsanto	SWW			a,b,c,d,e
<b>WB-528</b>	WestBred/Monsanto	SWW	PI 643142	BZ 6W98-528	b,c,d
<b>XB1104</b>	WestBred/Monsanto	SWW			a,b,c,d
<b>Xerpha</b>	WSU	SWW	PI 645605	WA 7973	a,b,d,e
<b>YS-201</b>	Yield Star Cereals	SWW			d
<b>YS-205</b>	Yield Star Cereals	SWW			a,b,c,d

<sup>1</sup> - Winter Club

<sup>2</sup> - Soft White Winter

<sup>3</sup> - Soft White Winter, Clearfileld

**Sites:**

a - <16" precipitation zones

b - >16" precipitation zones

c - irrigated sites

d - Dayton, Eureka, Walla Walla

e - Bickleton

**Table 2. 2018 Hard Winter Wheat Entries**

Name	Originator	Class	PI Number	Old Name	Sites
<b>CO12D2011</b>	CSU	HRW <sup>1</sup>			d
<b>Farnum</b>	WSU	HRW	PI 638535	WA007975	a
<b>Keldin</b>	WestBred/Monsanto	HRW	PI 669490	ACS 55017	a,b,c,d,e
<b>Langin</b>	CSU	HRW	PI 678945	CO11D446	d
<b>LCS Aymeric</b>	Limagrain	HRW	PI 684646		c,d
<b>LCS Evina</b>	Limagrain	HRW	PI 679968	NIC04-3377-A	d
<b>LCS Jet</b>	Limagrain	HRW	PI 678936	NSA10-7208	a,b,c,d,e
<b>LCS Rocket</b>	Limagrain	HRW	PI 689020	NSA10-2196	a,b,c,d,e
<b>LWW14-73915 (LCS Zoom)</b>	Limagrain	HRW			a,b,c,d
<b>Mandala</b>	Tri-State Seed	HRW			a,b,c,d,e
<b>Metropolis</b>	Tri-State Seed	HRW			c,d
<b>Norwest 553</b>	OSU	HRW	PI 655030	ORN00B553	d
<b>NSA11-10108 (LCS Abraham)</b>	Limagrain	HRW		NSA11-10108	a,b,c,d,e
<b>NSA12-2472</b>	Limagrain	HRW			a,b,c,d
<b>OR2110679</b>	OSU	HWW <sup>2</sup>			d
<b>OR2120358H</b>	OSU	HWW			d
<b>OR2130021R</b>	OSU	HRW			b,c,d
<b>OR2130118H</b>	OSU	HWW			d
<b>OR2140074R</b>	OSU	HRW			d
<b>Rebelde</b>	Tri-State Seed	HRW			c,d
<b>Sequoia</b>	WSU	HRW	PI 678966	WA 8180	a
<b>Sprinter</b>	WSU	HRW	PI 671896	WA 8118	e
<b>SY Clearstone CL2</b>	Syngenta	HRW <sup>3</sup>	PI 668090	MTCL 1077	a,b,e
<b>SY Touchstone</b>	Syngenta	HRW	PI 678623	04PN028B-3	a,b,c,d,e
<b>WA 8268</b>	WSU	HRW			b,c,d
<b>WA 8273</b>	WSU	HRW			a
<b>WA 8286</b>	WSU	HRW			a
<b>WA 8287</b>	WSU	HRW			a
<b>WA 8288</b>	WSU	HRW			b,c,d
<b>WA 8289</b>	WSU	HRW			b,c,d
<b>WA 8294</b>	WSU	HWW			d
<b>WB4303</b>	WestBred/Monsanto	HRW	PI 678854		a,b,c,d,e
<b>WB4311 (XA4104)</b>	WestBred/Monsanto	HRW		XA4104	a,b,c,d,e
<b>WB4623CLP</b>	WestBred/Monsanto	HRWI	PI 674196	BZ9WM09-1663	a,b,e
<b>WB-Arrowhead</b>	WestBred/Monsanto	HRW	PI 664101	ML9W05-2501	d
<b>Whetstone</b>	Syngenta	HRW	PI 658009	W98-344	a,b,d,e
<b>XB4542</b>	WestBred/Monsanto	HRW			b,c,d
<b>YS-401</b>	Yield Star Cereals	HRW			d

<sup>1</sup> - Hard Red Winter

<sup>2</sup> - Hard White Winter

<sup>3</sup> - Hard Red Winter, Clearfield

**Sites:**

a - <16" precipitation zones

b - >16" precipitation zones

c - irrigated sites

d - Dayton, Eureka, Walla Walla

e - Bickleton

**Table 3. 2018 Winter Triticale Entries**

Name	Originator	Class
<b>ACS 12406</b>	ProGene	TRIT
<b>ACS 16409</b>	ProGene	TRIT
<b>K 3083</b>	ProGene	TRIT
<b>KTA 20425-2</b>	ProGene	TRIT
<b>TriMark 099</b>	ProGene	TRIT
<b>Xerpha</b>	ProGene	TRIT

**Table 4. 2018 Soft White Spring Wheat Entries**

Name	Originator	Class	PI Number	Old Name
<b>08PN2001-07</b>	Syngenta	SWS <sup>1</sup>		
<b>11PN2532-507</b>	Syngenta	SWSI <sup>2</sup>		
<b>14-FAC-2043</b>	Limagrain	SWS		
<b>14-SW-1059</b>	Limagrain	SWS		
<b>Babe</b>	WSU	SWS	PI 656791	WA008039
<b>Diva</b>	WSU	SWS	PI 660663	WA008090
<b>IDO1403S</b>	Uofl	SWS		
<b>JD</b>	WSU	SC <sup>3</sup>	PI 656790	WA008047
<b>Louise</b>	WSU	SWS	PI 634865	WA 7921
<b>Melba</b>	WSU	SC	PI 682073	WA 8193
<b>Ryan</b>	WSU	SWS	PI 682074	WA 8214
<b>Seahawk</b>	WSU	SWS	PI 633036	WA 8162
<b>SY Saltese</b>	Syngenta	SWS	PI 678969	SY 04PN3024-2
<b>Tekoa</b>	WSU	SWS	PI 681653	WA 8189
<b>WA 8266 CL+</b>	KG/WSU	SWSI		GSSC-2
<b>WA 8277</b>	WSU	SWS		
<b>WA 8295 CL+</b>	WSU	SCI <sup>4</sup>		
<b>WA 8296 CL+</b>	WSU	SWSI		
<b>WA 8297 CL+</b>	WSU	SWSI		
<b>WA 8298 CL+</b>	WSU	SWSI		
<b>WB-1035CL+</b>	WestBred/Monsanto	SWSI	PI 665495	
<b>WB6121</b>	WestBred/Monsanto	SWS	PI 671991	BZ608-121
<b>WB6341</b>	WestBred/Monsanto	SWS	PI 671992	BZ608-014
<b>Whit</b>	WSU	SWS	PI 653841	WA008008
<b>Irrigated only</b>				
<b>YS-603</b>	Yield Star Cereals	SWS		

<sup>1</sup> - Soft White Spring

<sup>2</sup> - Soft White Spring, Clearfileld

<sup>3</sup> - Spring Club

<sup>4</sup> - Spring Club, Clearfileld

**Table 5. 2018 Hard Spring Wheat Entries**

Name	Originator	Class	PI Number	Old Name
<b>10PN3039-02</b>	Syngenta	HRSI <sup>1</sup>		
<b>12SB0197</b>	Limagrain	HRS <sup>2</sup>		
<b>12SB0224</b>	Limagrain	HRS		
<b>16-HRS-5172</b>	Limagrain	HRS		
<b>Alum</b>	WSU	HRS	PI 676289	WA 8166
<b>Chet</b>	WSU	HRS	PI 676288	WA 8165
<b>Dayn</b>	WSU	HWS <sup>3</sup>	PI 666941	WA008123
<b>Glee</b>	WSU	HRS	PI 666940	H0500135, WA 8074)
<b>Hollis</b>	WSU	HRS	PI 632857	WA007859
<b>IDO1603S</b>	Uofl	HRS		
<b>IDO1701S</b>	Uofl	HRS		
<b>Kelse</b>	WSU	HRS	PI 653842	WA007954
<b>LCS Buck Pronto</b>	Limagrain	HRS	PI 619397	T 1052
<b>LCS Iron</b>	Limagrain	HRS	PI 683538	11SB0096
<b>LCS Luna</b>	Limagrain	HRS	PI 683539	10SB0087-B
<b>Soft Svevo</b>	WWQL	Durum <sup>4</sup>		
<b>SY Coho</b>	Syngenta	HRS	PI 676286	04W40292R
<b>SY Gunsight</b>	Syngenta	HRS	PI 686410	SY 06PN3015-08
<b>SY Renegade (06PN3017)</b>	Syngenta	HRS		06PN3017-09
<b>SY Selway</b>	Syngenta	HRS	PI 676285	04PN3001-2
<b>SY605 CL</b>	Syngenta	HRSI	PI 659810	03S0409-16
<b>WA 8280 CL+</b>	WSU	HRSI		
<b>WA 8282</b>	WSU	HRS		
<b>WA 8299 CL+</b>	WSU	HRSI		
<b>WA 8300 CL+</b>	WSU	HRSI		
<b>WA 8301</b>	WSU	HRS		
<b>WA 8302 CL+</b>	WSU	HRSI		
<b>WB7202CLP</b>	WestBred/Monsanto	HWS		
<b>WB9350</b>	WestBred/Monsanto	HRS	PI 689016	
<b>WB9518</b>	WestBred/Monsanto	HRS	PI 670037	BZ9080-485
<b>WB9662</b>	WestBred/Monsanto	HRS	PI 686423	
<b>WB9668</b>	WestBred/Monsanto	HRS	PI 671994	BZ908-552
<b>WB9717</b>	WestBred/Monsanto	HRS		
<b>WB9879CLP</b>	WestBred/Monsanto	HRSI	PI 666046	IMICHT79
<b>XB9290</b>	WestBred/Monsanto	HRS		
<b>XB9591</b>	WestBred/Monsanto	HRS		
<b>Irrigated only</b>				
<b>09W821030-15</b>	Syngenta	HRS		
<b>09W821030-32</b>	Syngenta	HRS		
<b>SY Basalt</b>	Syngenta	HRS	PI 672584	04W40240R
<b>WA 8283</b>	WSU	HRS		

<sup>1</sup> - Hard Red Spring, Clearfield

<sup>2</sup> - Hard Red Spring

<sup>3</sup> - Hard White Spring

<sup>4</sup> - Durum

**Table 6. 2018 Spring Barley Entries**

Name	Originator	Class	PI Number	Old Name
<b>11WA-107.36</b>	WSU	S2M <sup>1</sup>		
<b>11WA-107.43</b>	WSU	S2M		
<b>11WA-107.58</b>	WSU	S2M		
<b>12WA-120.14</b>	WSU	S2M		
<b>12WA-120.23</b>	WSU	S2M		
<b>13WA-101.2</b>	WSU	S2M		
<b>13WA-149.2</b>	WSU	S2M		
<b>Altorado</b>	Highland Specialty Grains	S2 <sup>2</sup>	PI 685778	BZ509-601
<b>BZ 512-319</b>	Highland Specialty Grains	S2		
<b>CDC Copeland</b>	Great Western Malting	S2M		SKTR0150
<b>Champion</b>	WestBred	S2	PI 654517	YU-501-385D
<b>Claymore</b>	Highland Specialty Grains	S2	PI 676998	BZ509-216
<b>Havener</b>	WSU	S2NWxF <sup>3,4,5</sup>		09WA-265.5
<b>LCS Genie</b>	Limagrain	S2M	PI 675338	NSL07-8424-A
<b>LCS Odyssey</b>	Limagrain	S2M		
<b>LCS Opera</b>	Limagrain	S2M		
<b>LCS Sienna</b>	Limagrain	S2M		
<b>LCS Vespa</b>	Limagrain	S2	PI 673930	LCS LN09-0920
<b>Lenetah</b>	Uofl	S2	PI 652440	01Ab11107
<b>Lyon</b>	WSU	S2	PI 673045	05WA-316.K
<b>Meg's Song (X05013-T1)</b>	WSU	S2NBgF <sup>6</sup>		X05013-T1
<b>Muir</b>	WSU	S2	PI 674172	07WA-601.6
<b>Oreana</b>	Highland Specialty Grains	S2	PI 676999	BZ509-448
<b>Survivor</b>	WSU	S2I <sup>7</sup>		07MWA-203

- <sup>1</sup> - "M" - Malting
- <sup>2</sup> - 2-row Feed
- <sup>3</sup> - "N" - Hulless
- <sup>4</sup> - "Wx" - Waxy
- <sup>5</sup> - "F" - Food
- <sup>6</sup> - "Bg" - High B-glucan
- <sup>7</sup> - I - IMI tolerant

**Table 7. 2018 WSU Winter Wheat Variety Trial Seed Weight**

Name	1000 KW (grams)	Seeds per Pound	Name	1000 KW (grams)	Seeds per Pound
<b>Soft White Common</b>			<b>Soft White Common</b>		
Bobtail	43.8	10,356	SY Command	41.4	10,956
Curiosity CL+	52.0	8,723	SY Dayton	40.3	11,255
Dyna-Gro Impact	43.4	10,451	SY Ovation	46.1	9,839
Eltan	47.1	9,630	SY Raptor	45.3	10,013
IDN 15-72458DH	44.3	10,239	UI Castle CL+	32.5	13,957
IDO1005	40.5	11,200	UI Magic CL+	37.9	11,968
IDO1708	38.0	11,937	UI Palouse CL+	36.8	12,326
Jasper	47.1	9,630	UI Sparrow	35.5	12,777
KWS147	41.0	11,063	UIL 07-28017B	42.5	10,673
KXB-01	36.6	12,393	UIL 09-15702A	44.4	10,216
LCS Artdeco	42.8	10,598	WA 8232	42.6	10,648
LCS Drive	42.5	10,673	WA 8270	38.9	11,660
LCS Hulk	43.3	10,476	WA 8271	43.1	10,524
LCS Shark	49.9	9,090	WA 8274 CL+	39.0	11,631
LCS Sonic	36.3	12,496	WA 8275 CL+	40.5	11,200
LWW14-72916	38.2	11,874	WA 8290	40.7	11,145
LWW14-74143	40.1	11,312	WA 8291	42.0	10,800
LWW15-71945	44.3	10,239	WA 8292	45.0	10,080
Madsen	41.4	10,956	WA 8293	37.1	12,226
Mary	41.0	11,063	WB1376CLP	41.3	10,983
Mela CL+	38.4	11,812	WB1529	46.6	9,734
M-Press	49.6	9,145	WB1532	40.9	11,090
Norwest Duet	37.7	12,032	WB1604	44.0	10,309
Norwest Tandem	43.4	10,451	WB1783	44.7	10,147
OR2121086	36.6	12,393	WB-528	46.5	9,755
OR2121285	42.0	10,800	XB1104	40.6	11,172
OR2130081	33.0	13,745	Xerpha	42.8	10,598
ORCF-102	45.1	10,057	YS-201	37.0	12,259
ORCF-103	46.1	9,839	YS-205	29.3	15,481
ORI2150031 CL+	30.3	14,970			
ORI2150061 CL+	30.8	14,727	<b>Soft White Club</b>		
Otto	41.7	10,878	ARS06132-45C	34.8	13,034
PNW Hailey	41.3	10,983	ARS-Castella	32.3	14,043
Puma	40.9	11,090	ARS-Crescent	43.2	10,500
Purl (WA 8234)	40.1	11,312	ARSDH08X028-9C	32.1	14,131
Resilience CL+	43.0	10,549	ARSDH08X103-102C	35.6	12,741
Rosalyn	46.3	9,797	ARSDH08X117-83C	35.2	12,886
Stephens	43.9	10,332	ARSWA2J100065C	31.0	14,632
SY Assure	44.3	10,239	Bruehl	41.1	11,036
SY Banks	38.1	11,905	Pritchett	42.1	10,774
SY Candor (09PN008#72)	35.4	12,813			

**Table 7 cont. 2018 WSU Winter Wheat Variety Trial Seed Weight**

<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>	<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>
<b>Hard Red Winter</b>			<b>Hard Red Winter</b>		
<b>CO12D2011</b>	41.0	11,063	<b>SY Touchstone</b>	42.1	10,774
<b>Farnum</b>	22.1	20,525	<b>WA 8268</b>	42.8	10,598
<b>Keldin</b>	48.2	9,411	<b>WA 8273</b>	38.6	11,751
<b>Langin</b>	35.0	12,960	<b>WA 8286</b>	30.9	14,679
<b>LCS Aymeric</b>	44.5	10,193	<b>WA 8287</b>	43.4	10,451
<b>LCS Evina</b>	41.0	11,063	<b>WA 8288</b>	41.2	11,010
<b>LCS Jet</b>	43.0	10,549	<b>WA 8289</b>	37.5	12,096
<b>LCS Rocket</b>	45.5	9,969	<b>WB4303</b>	44.4	10,216
<b>LWW14-73915</b>	38.8	11,691	<b>WB4311</b>	44.8	10,125
<b>Mandala</b>	39.6	11,454	<b>WB4623CLP</b>	35.1	12,923
<b>Metropolis</b>	45.0	10,080	<b>WB-Arrowhead</b>	44.0	10,309
<b>Norwest 553</b>	42.5	10,673	<b>Whetstone</b>	25.0	18,144
<b>NSA11-10108 (LCS Abraham)</b>	52.4	8,656	<b>XB4542</b>	42.5	10,673
<b>NSA12-2472</b>	42.5	10,673	<b>YS-401</b>	43.0	10,549
<b>OR2130021R</b>	28.2	16,085	<b>Hard White Winter</b>		
<b>OR2140074R</b>	30.0	15,120	<b>OR2110679</b>	37.7	12,032
<b>Rebelde</b>	47.0	9,651	<b>OR2120358H</b>	34.9	12,997
<b>Sequoia</b>	54.1	8,384	<b>OR2130118H</b>	35.2	12,886
<b>Sprinter</b>	49.9	9,090	<b>WA 8294</b>	39.2	11,571
<b>SY Clearstone CL2</b>	42.5	10,673			

**Table 8. 2018 WSU Spring Wheat Variety Trial Seed Weight**

Name	1000 KW (grams)	Seeds per Pound	Name	1000 KW (grams)	Seeds per Pound
<b>Soft White Common</b>			<b>Hard Red Spring</b>		
08PN2001-07	46.6	9,734	09W821030-15	41.2	11,010
11PN2532-507	40.4	11,228	09W821030-32	41.0	11,063
14-FAC-2043	30.8	14,727	10PN3039-02	35.2	12,886
14-SW-1059	24.1	18,821	12SB0197	37.1	12,226
Babe	33.5	13,540	12SB0224	31.9	14,219
Diva	51.2	8,859	16-HRS-5172	26.8	16,925
IDO1403S	33.4	13,581	Alum	40.7	11,145
Louise	52.1	8,706	Chet	40.5	11,200
Ryan	43.8	10,356	Glee	47.6	9,529
Seahawk	45.5	9,969	Hollis	53.4	8,494
SY Saltese	39.7	11,426	IDO1603S	33.0	13,745
Tekoa	39.8	11,397	IDO1701S	33.9	13,380
WA 8266 CL+	34.3	13,224	Kelse	48.3	9,391
WA 8277	43.2	10,500	LCS Buck Pronto	36.9	12,292
WA 8296 CL+	45.6	9,947	LCS Iron	35.4	12,813
WA 8297 CL+	40.8	11,117	LCS Luna	36.4	12,461
WA 8298 CL+	50.7	8,947	SY Basalt	35.9	12,635
WB-1035CL+	39.0	11,631	SY Coho	43.7	10,380
WB6121	39.8	11,397	SY Gunsight	33.9	13,380
WB6341	33.1	13,704	SY Renegade (06PN3017-09)	36.9	12,292
Whit	48.7	9,314	SY Selway	42.4	10,698
YS-603	32.4	14,000	SY605 CL	34.6	13,110
<b>Soft White Club</b>			WA 8280 CL+	41.8	10,851
JD	45.9	9,882	WA 8282	43.1	10,524
Melba	38.4	11,812	WA 8283	41.6	10,904
WA 8295 CL+	45.6	9,947	WA 8299 CL+	41.9	10,826
<b>Hard White Spring</b>			WA 8300 CL+	47.3	9,590
Dayn	41.2	11,010	WA 8301	47.5	9,549
WB7202CLP	36.9	12,292	WA 8302 CL+	42.0	10,800
<b>Durum</b>			WB9350	38.5	11,782
Soft Svevo	42.5	10,673	WB9518	34.9	12,997
			WB9662	39.0	11,631
			WB9668	34.4	13,186
			WB9717	33.1	13,704
			WB9879CLP	38.8	11,691
			XB9290	38.7	11,721
			XB9591	40.1	11,312

**Table 9. 2018 WSU Spring Barley Variety Trial Seed Weight**

<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>	<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>
<b>2-row Feed</b>			<b>2-row Malting</b>		
<b>Altorado</b>	44.4	10,216	<b>11WA-107.36</b>	37.8	12,000
<b>BZ 512-319</b>	53.9	8,415	<b>11WA-107.43</b>	36.4	12,461
<b>Champion</b>	53.9	8,415	<b>11WA-107.58</b>	41.5	10,930
<b>Claymore</b>	44.5	10,193	<b>12WA-120.14</b>	48.0	9,450
<b>LCS Vespa</b>	45.3	10,013	<b>12WA-120.23</b>	45.5	9,969
<b>Lenetah</b>	40.7	11,145	<b>13WA-101.2</b>	43.4	10,451
<b>Lyon</b>	50.6	8,964	<b>13WA-149.2</b>	38.4	11,812
<b>Muir</b>	40.2	11,283	<b>CDC Copeland</b>	38.4	11,812
<b>Oreana</b>	50.6	8,964	<b>LCS Genie</b>	42.8	10,598
<b>Survivor</b>	42.8	10,598	<b>LCS Odyssey</b>	42.4	10,698
<b>2-row Hulless</b>			<b>LCS Opera</b>	50.6	8,964
<b>Havener</b>	44.8	10,125	<b>LCS Sienna</b>	47.9	9,470
<b>Meg's Song (X05013-T1)</b>	38.5	11,782			

**Table 10. Cultural Data for 2018 WSU Winter Wheat Variety Trial Locations.**

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Fertilizer		Planting			Harvest		Crop Year Ppntn. (in.)	Soil Type	Soil pH (Sample Depth)		Location Data			
			Base	Hard Trial Additional	Date	Rate (lb/A)	Planter Type <sup>1</sup>	Row Space (in)	Harvest Area (ft. <sup>2</sup> )			Harvest Date	1 ft	6 in	Elevation	Latitude	Longitude
< 12	Bickleton	chem fallow	50N 9P 9S	---	26-Oct	50	NT-X	10	80	13-Aug	Bickleton Silt Loam	6.1	5.9	3077	N46 01.594	W120 16.478	
	Connell	fallow	100N	---	6-Sep	50	DF	15	96	24-Jul	Ritzville Silt Loam	6.2	5.9	1265	N46 37.175	W118 43.668	
	Harrington	fallow	55N 10P	---	11-Sep	50	DF	15	72	1-Aug	Willis Silt Loam	5.9	5.4	2222	N47 27.357	W118 21.386	
	Horse Heaven	chem fallow	35N 6P 6S	20N	26-Oct	50	NT-X	10	80	20-Jul	Ritzville Silt Loam	7.2	6.8	1316	N46 11.238	W119 34.514	
	Lind	fallow	50N 10S	---	4-Sep	50	DF	15	72	20-Jul	Ritzville Silt Loam	6.9	6.0	1663	N47 00.243	W118 34.293	
	Ritzville	fallow	50N 5S	---	6-Sep	50	DF	15	96	25-Jul	Ritzville Silt Loam	6.7	6.1	1908	N17 08.208	W118 28.348	
	St. Andrews	fallow	55N	---	7-Sep	50	DF	15	96	14-Aug	Broadax Silt Loam	6.3	5.7	2480	N47 37.680	W119 24.283	
	12-16	Almira	fallow	70N	---	14-Sep	85	NT-H	10	80	15-Aug	Bagdad Silt Loam	5.9	5.3	2660	N47 53.288	W118 53.704
		Anatone	chem fallow	60N 10P 10S	20N	26-Sep	85	NT-H	10	60	30-Jul	Pataha-Neissenberg Silt Loam	7.7	6.5	2903	N46 12.686	W117 04.910
		Creston	fallow	90N 10S	---	14-Sep	85	NT-H	10	60	9-Aug	Bagdad Silt Loam	5.3	5.3	2547	N47 49.889	W118 31.731
		Dusty	chem fallow	85N 19P 15S	---	25-Sep	85	NT-H	10	60	17-Jul	Onyx Silt Loam	6.1	5.2	1600	N46 17.911	W117 48.085
Eureka		chem fallow	100N 20P 20S	---	5-Oct	85	OSU	12	80	18-Jul	Ritzville Silt Loam	6.3	5.4	1048	N46 16.840	W118 37.583	
Lanmont		chem fallow	65N	20N	25-Sep	85	NT-H	10	60	16-Aug	Athens Silt Loam	5.6	5.3	1883	N47 08.254	W117 49.869	
Reardan		chem fallow	80N 14P 14S	20N	15-Sep	85	NT-H	10	60	10-Aug	Hanning Silt Loam	5.5	4.9	2533	N47 39.762	W118 01.990	
Dayton		chickpeas	125N 15P 15S	---	11-Oct	85	DD	7.5	60	1-Aug	Athens Silt Loam	5.5	5.5	2076	N46 23.545	W118 03.326	
Mayview		fallow	85N 12S	---	2-Oct	85	DD	7.5	60	8-Aug	Athens Silt Loam	5.5	5.0	2356	N46 35.663	W117 24.110	
St. John		fallow	85N 10S	---	3-Oct	85	NT-X	7.5	60	16-Aug	Athens Silt Loam	5.4	5.4	2188	N47 04.961	W117 31.075	
Walla Walla		peas	kk	---	4-Oct	85	OSU	12	80	7-Aug	Walla Walla Silt Loam	5.1	5.1	1642	N46 05.763	W118 10.190	
>20	Colton	lentils	120N 21P 21S	---	29-Sep	95	NT-X	10	60	22-Aug	Palouse Silt Loam	6.2	5.8	2587	N46 33.506	W117 07.245	
	Fairfield	lentils	100N 17P 17S	---	29-Sep	95	NT-X	10	60	20-Aug	Natf-Garfield Complex	5.2	5.6	2613	N47 13.474	W117 03.156	
	Farmington	chickpeas	113N 20S 5P	---	4-Oct	95	DD	12	60	20-Aug	Palouse Silt Loam	5.2	5.2	2640	N47 04.485	W117 03.621	
Irrigated	Pullman	chickpeas	110N 25S 30S	80N	5-Oct	95	DD	7.5	60	3-Aug	Palouse Silt Loam	5.9	5.5	2430	N46 41.717	W117 07.670	
	Moses Lake Irrig	potatoes	215N 20P 50S	---	18-Oct	95	DD	7.5	60	2-Aug	Shano Silt Loam	6.7	6.2	1607	N47 13.843	W118 59.367	
	Pasco Irrig.	onions	300N	---	16-Oct	96	DD	7.5	60	11-Jul	Sagehill Sandy Loam	7.9	7.5	784	N46 17.354	W118 55.180	

<sup>1</sup> - DF = Deep Furrow; DD = Double Disc; H = Hoe openers; NT-H = No-till Hoe; NT-X=No-till Cross Slot, OSU - OSU No-till drill

50# = 12.5 Seeds/ft<sup>2</sup>

85# = 21.5 Seeds/ft<sup>2</sup>

95# = 23.75 Seeds/ft<sup>2</sup>

**Table 11. Cultural Data for the 2018 WSU Spring Wheat and Barley Variety Trial Locations.**

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Fertilizer		Planting				Precipitation		Harvest Date	Soil pH (Sample Depth)		Location Data			
			Base	Additional	Date	Rate (lb/A)	Planter Type <sup>1</sup>	Row Space (in)	Harvest Area (ft. <sup>2</sup> )	Soil Moisture (in)		Rainfall (in)	1 ft	6 in	Elevation	Latitude	Longitude
<12	Bickleton	Winter Wheat	40N 8P 8S	---	2-May	60	---	NT-H	10	80	11.50	0.31	6.6	5.9	3061	N46 01.628	W120 16.489
	Horse Heaven	Chem fallow	35N	---	23-Mar	50	---	NT-H	10	80	7.09	2.09	7.1	7.3	1311	N46 11.238	W119 34.477
	Lind	Fallow	70N 10S	---	13-Mar	50	---	DD	6	80	7.15	2.83	6.6	6.1	1699	N47 00.415	W118 34.177
12-16	Almira	Winter Wheat	70N	---	27-Apr	80	---	DD	7.5	80	13.00	3.19	6.0	5.1	2628	N47 49.483	W118 53.693
	Endicott	Winter Wheat	75N	---	3-Apr	80	---	DD	7.5	80	11.10	2.90	5.8	5.6	1670	N46 54.465	W117 44.590
	Lamont	Winter Wheat	50N 9P 9S	---	1-May	80	---	NT-X	10	80	13.31	---	5.6	5.3	1795	N47 08.088	W117 49.531
16-20	Reardan	Spring Wheat	100N	---	26-Apr	80	---	NT-X	10	80	9.90	3.16	5.8	5.1	2510	N47 39.525	W118 02.061
	Dayton	Winter Wheat	130N	---	23-Apr	80	---	DD	7.5	80	9.89	4.76	5.8	5.5	2021	N46 23.249	W118 03.314
	Mayview	Winter Wheat	75N 15S	---	24-Apr	80	---	DD	7.5	80	12.69	6.10	5.8	5.1	2434	N46 36.442	W117 24.523
>20	Plaza	Winter Wheat	120N 10P 10S	---	27-Apr	80	---	DD	6	80	9.86	5.42	5.8	5.2	2460	N47 16.034	W117 14.440
	St. John	Winter Wheat	80N 10S	40N	23-Apr	80	80	DD	7.5	80	13.84	2.47	5.7	5.3	2215	N47 04.809	W117 31.213
	Walla Walla	Winter Wheat	120N 15P 20S	50N	30-Mar	80	80	DD	7.5	80	11.06	3.94	5.1	5.2	1283	N46 07.057	W118 14.162
Irrigated	Fairfield	Winter Wheat	100N 17P 17S	18N	4-May	90	90	NT-X	10	80	14.71	5.03	5.6	5.3	2405	N47 26.286	W117 14.364
	Farmington	Winter Wheat	100N 20S	40N	30-Apr	90	90	DD	7.5	80	13.22	6.18	5.6	5.4	2579	N47 02.285	W117 02.771
	Palouse	Winter Wheat	150N	40N	25-Apr	90	90	NT-H	10	80	14.04	---	5.2	5.2	2418	N46 53.150	W117 18.164
Irrigated	Pullman, SW	Winter Wheat	180N 20P 20S	---	24-Apr	90	---	DD	6	80	8.99	4.81	6.1	5.7	2604	N46 41.952	W117 07.952
	Pullman, BLY	Winter Wheat	160N	---	27-Apr	---	90	DD	6	80	12.33	4.81	5.3	5.5	2527	N46 41.828	W117 08.400
	Moses Lake	Potatoes	300N	---	15-Mar	100	---	DD	6	80	5.46	---	5.8	6.1	1312	N47 05.644	W119 05.517
Irrigated	Pasco	Corn	150N 60P 60S 25K	40N	26-Mar	100	---	DD	7.5	80	7.22	---	6.7	6.6	751	N46 28.317	W119 02.627

<sup>1</sup> - DD = double disc drill; NT-H = No-till Hoe; NT-X = No-till Cross Slot

60# = 15 Seeds/FT<sup>2</sup> (wheat)/18 Seeds/FT<sup>2</sup> (barley)

80# = 20 Seeds/FT<sup>2</sup> (wheat)/24 Seeds/FT<sup>2</sup> (barley)

90# = 22.5 Seeds/FT<sup>2</sup> (wheat)/27 Seeds/FT<sup>2</sup> (barley)

100# = 25 Seeds/FT<sup>2</sup> (wheat)/30 Seeds/FT<sup>2</sup> (barley)

Figure 1.

# 2018 WSU Variety Testing Program PNW Crop Tour Schedule

The 2018 crop tour season will soon be starting and provides opportunities to view field trials and interact with Washington State University personnel and others about cereal varieties and crop management practices. Cereal breeders, extension agronomists, plant pathologists, and other scientists will be presenting information at various events. The small grain variety and research tours, listed below, provide a guide for wheat, barley, and legume tours in Washington and nearby locations.

Please check with the contact listed prior to the tour to verify the time, location, agenda, and ensure a place at the table if food is served. Location maps for the WSU Cereal Variety Trials are available online at <http://smallgrains.wsu.edu/variety>. Washington Grain Commission funds support the trials and the tours, and we look forward to seeing you in the fields.

– Aaron Esser, WSU Cereal Variety Testing

<u>Date</u>	<u>Tour</u>	<u>Time</u>	<u>Contact</u>
6-Jun	Horse Heaven	8:00 AM	Aaron Esser, 509-659-3210
6-Jun	Ritzville	3:00 PM	Aaron Esser, 509-659-3210
7-Jun	Western Whitman Co. - LaCrosse	9:30 AM	Steve Van Vleet, 509-397-6290
7-Jun	Connell	5:00 PM	Aaron Esser, 509-659-3210
12-Jun	Pendleton Field Day	7:30 AM	Stewart Wuest, 541-278-4381
13-Jun	Moro Field Day	7:30 AM	Stewart Wuest, 541-278-4381
13-Jun	WSU Weed Science - Pullman	12:30 PM	Drew Lyon, 509-335-2961
14-Jun	Lind Field Day	8:30 AM	Bill Schillinger, 509-235-1933
14-Jun	Harrington	4:00 PM	Diana Roberts, 509-477-2167
15-Jun	St. Andrews	5:00 PM	Dale Whaley, 509-745-8531
18-Jun	*Eureka	3:00 PM	Aaron Esser, 509-659-3210
19-Jun	Univ. of Idaho/Limagrain - Lewiston	TBD	Doug Finkelnburg, 208-799-3096
20-Jun	*Walla Walla (cereals)	1:00 PM	Aaron Esser, 509-659-3210
22-Jun	*Dayton (cereals & legumes)	8:00 AM	Paul Carter, 509-382-4741
25-Jun	Moses Lake - irrigated	8:00 AM	Andy McGuire, 509-754-2011
25-Jun	Almira	8:00 AM	Diana Roberts, 509-477-2167
25-Jun	Creston	3:00 PM	Diana Roberts, 509-477-2167
26-Jun	Wilke Farm Field Day	8:00 AM	Aaron Esser, 509-659-3210
26-Jun	Reardan	2:00 PM	Diana Roberts, 509-477-2167
27-Jun	Mayview	9:00 AM	Mark Heitstuman, 509-243-2009
27-Jun	Anatone	3:30 PM	Mark Heitstuman, 509-243-2009
28-Jun	Fairfield	7:00 AM	Diana Roberts, 509-477-2167
28-Jun	St. John	10:00 AM	Steve Van Vleet, 509-397-6290
28-Jun	Lamont	2:30 PM	Steve Van Vleet, 509-397-6290
29-Jun	Bickleton	11:00 AM	Hannah Brause, 509-773-5817
6-Jul	Farmington	8:00 AM	Steve Van Vleet, 509-397-6290
6-Jul	Palouse	3:30 PM	Steve Van Vleet, 509-397-6290

\*Cooperative trials/tours with Oregon State University and Northwest Grain Growers

<http://smallgrains.wsu.edu/variety>



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Table 12. 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone >20"

Variety Name <i>Club Italicized</i>	Colton	Fairfield	Farmington	Pullman	Average	Colton	Fairfield	Farmington	Pullman	Average	Colton	Fairfield	Farmington	Pullman	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>Released Varieties</b>															
Rosalyn	151	77	150	181	140	60.6	59.0	61.0	59.3	60.0	9.0	8.4	8.3	9.8	8.9
Bobtail	144	76	141	179	135	59.7	57.8	59.7	58.2	58.9	9.3	8.9	8.3	10.1	9.2
SY Ovation	144	75	141	177	134	60.8	59.9	61.3	61.3	60.8	9.6	9.3	9.0	10.4	9.6
Jasper	144	74	144	173	134	61.7	59.2	61.9	56.9	59.9	9.4	9.8	8.5	10.1	9.4
Norwest Duet	144	74	136	169	131	62.4	60.3	62.0	55.7	60.1	9.6	9.5	8.5	10.6	9.5
LCS Hulk	130	70	136	178	129	63.5	61.5	63.1	61.8	62.4	9.6	9.8	10.0	10.6	10.0
UI Sparrow	147	73	135	155	128	61.1	59.9	60.6	53.3	58.7	9.8	9.9	8.9	10.3	9.7
PNW Hailey	134	75	130	171	127	63.2	62.4	63.5	62.3	62.9	9.8	10.1	8.5	10.4	9.7
LCS Artdeco	143	71	144	150	127	61.0	59.6	61.7	58.1	60.1	9.4	9.3	8.9	11.0	9.6
SY Candor (09PN008#72)	143	72	129	165	127	62.6	60.9	63.0	60.4	61.7	10.1	9.9	9.7	11.0	10.2
UI Castle CL+	130	67	141	170	127	62.6	61.0	62.6	58.5	61.2	10.4	10.8	8.9	11.1	10.3
ARS-Crescent	146	74	128	155	126	62.0	60.2	60.9	54.5	59.4	9.5	9.3	8.4	10.2	9.4
SY Raptor	139	61	136	166	125	61.9	60.3	61.9	61.1	61.3	9.5	9.7	9.0	10.4	9.6
SY Dayton	143	63	137	156	125	61.7	60.2	62.1	60.9	61.2	9.6	9.8	8.8	10.2	9.6
Xerpha	144	72	135	147	125	61.5	60.6	61.2	55.6	59.7	9.6	9.6	8.3	10.5	9.5
ARS-Castella (ARS20060123-31C)	131	69	136	160	124	61.6	59.2	61.6	59.4	60.5	9.6	9.0	8.5	11.2	9.6
Norwest Tandem	128	76	133	156	123	61.7	60.9	62.4	58.8	60.9	9.9	10.0	9.1	10.6	9.9
Dyna-Gro Impact	134	66	130	161	123	62.6	61.2	61.7	58.4	61.0	10.0	10.2	9.7	10.7	10.1
M-Press	135	69	132	155	123	62.1	60.4	61.4	59.7	60.9	9.5	9.4	8.4	10.4	9.4
Puma	133	72	129	156	123	61.8	60.8	61.8	58.9	60.8	10.0	9.7	8.6	10.5	9.7
WB1604	132	67	135	154	122	62.3	61.3	62.7	61.9	62.1	10.0	10.0	9.3	10.7	10.0
Purl (WA 8234)	133	65	131	159	122	62.4	60.9	62.6	59.2	61.3	9.6	9.7	8.4	10.8	9.6
LCS Drive	128	60	137	160	121	60.3	59.0	60.3	59.6	59.8	9.8	10.5	9.8	10.6	10.2
UI Magic CL+	130	67	132	153	121	62.4	61.1	62.2	62.2	62.0	9.9	10.2	8.7	10.6	9.9
SY Assure	118	70	135	153	119	62.6	61.2	62.9	62.4	62.3	10.1	10.2	9.6	11.0	10.2
SY Banks	135	54	129	156	119	60.9	58.2	61.8	58.0	59.7	9.1	9.5	8.6	10.3	9.4
WB1783	131	61	124	155	118	63.9	60.9	64.0	59.5	62.1	9.8	10.8	9.2	10.2	10.0
ORCF-102	121	76	123	150	117	61.8	60.6	62.6	59.0	61.0	10.3	10.0	9.1	10.5	10.0
WB1532	131	62	118	159	117	62.8	60.5	62.5	56.8	60.7	10.3	10.8	8.9	11.5	10.4
LCS Shark	134	68	130	137	117	60.1	59.5	60.9	56.4	59.2	10.1	10.4	9.0	11.5	10.3
UI Palouse CL+	123	71	122	151	117	61.5	58.9	61.4	59.8	60.4	9.9	9.9	9.1	10.7	9.9
WB1529	135	59	120	151	116	63.5	60.7	63.8	63.3	62.8	9.9	10.5	9.6	10.7	10.2
Resilience CL+	121	67	119	150	114	62.5	60.8	61.9	58.1	60.8	10.2	10.6	9.4	10.8	10.3
WB-528	135	48	125	149	114	62.7	58.7	62.8	61.2	61.4	10.0	10.7	9.5	11.0	10.3
Madsen	119	61	117	153	112	61.5	59.9	61.8	58.3	60.4	10.2	9.7	9.7	11.3	10.2
WB1376CLP	115	60	114	146	109	64.2	62.0	64.9	63.1	63.5	11.3	11.2	9.7	11.6	11.0
<b>Experimental Lines</b>															
LWW14-74143	149	80	152	185	142	58.4	57.7	59.2	58.3	58.4	8.6	8.6	7.8	9.6	8.7
LWW15-71945	164	76	148	179	141	59.4	57.9	59.5	57.9	58.7	9.5	9.1	8.7	10.4	9.4
IDN 15-72458DH	146	77	150	180	138	61.5	60.1	61.6	58.9	60.5	9.3	9.5	8.6	9.8	9.3
KXB-01	143	73	139	176	133	61.6	60.6	60.9	56.1	59.8	9.5	10.4	9.2	10.8	10.0
UIL 07-28017B	138	79	135	172	131	62.2	61.8	62.8	60.6	61.9	10.1	10.0	8.9	10.5	9.9
WA 8232	149	68	138	156	128	63.5	61.0	63.2	59.8	61.9	9.5	9.2	8.0	10.3	9.3
LWW14-72916	136	72	136	160	126	61.6	59.8	62.8	61.5	61.4	9.4	9.0	9.0	10.3	9.4
ARS06132-45C	137	65	137	164	126	60.5	58.6	60.5	60.6	60.0	9.5	9.6	8.8	10.2	9.5
WA 8275 CL+	134	67	129	161	123	62.5	60.2	62.2	58.9	60.9	9.9	9.9	9.6	10.6	10.0

## 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone >20"

Variety Name <i>Club Italicized</i>	Colton	Fairfield	Farmington	Pullman	Average	Colton	Fairfield	Farmington	Pullman	Average	Colton	Fairfield	Farmington	Pullman	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>WA 8293</b>	128	68	130	162	122	62.0	60.7	61.6	54.7	59.7	9.8	10.4	9.2	10.9	10.1
<b>WA 8274 CL+</b>	137	75	123	146	120	62.1	60.2	61.2	55.4	59.7	10.2	10.6	10.0	11.1	10.5
<b>OR2121086</b>	133	62	129	157	120	62.0	59.2	62.5	59.2	60.7	9.9	9.8	8.8	10.6	9.8
<b>YS-205</b>	125	60	128	165	119	63.4	60.6	64.0	59.1	61.8	9.7	10.2	9.0	10.2	9.8
<b>IDO1708</b>	134	58	123	158	118	60.7	58.3	61.0	60.4	60.1	9.3	9.9	9.1	9.9	9.6
<i>ARSDH08X103-102C</i>	125	65	123	155	117	60.9	59.2	61.8	58.8	60.2	9.8	9.7	9.1	10.6	9.8
<b>XB1104</b>	119	58	130	147	114	63.1	61.1	64.1	63.1	62.8	10.3	10.3	10.0	10.9	10.4
<b>ORI2150031 CL+</b>	115	61	120	132	107	62.3	60.0	62.3	60.3	61.2	10.9	10.5	9.9	11.5	10.7
<b>ORI2150061 CL+</b>	95	52	103	112	91	63.0	60.4	63.8	62.5	62.4	12.0	11.5	11.4	12.4	11.8
<b>C.V. %</b>	5	10	4	5	6	0.4	1.2	0.8	1.9	1.2	2.2	4.9	6.4	2.1	4.2
<b>LSD (0.05)</b>	10	9	7	11	5	0.4	1.0	0.7	1.5	0.5	0.3	0.7	0.8	0.3	0.3
<b>Average</b>	134	68	132	159	123	61.9	60.1	62.0	59.2	60.8	9.8	9.9	9.1	10.6	9.9
<b>Highest</b>	164	80	152	185	142	64.2	62.4	64.9	63.3	63.5	12.0	11.5	11.4	12.4	11.8
<b>Lowest</b>	95	48	103	112	91	58.4	57.7	59.2	53.3	58.4	8.6	8.4	7.8	9.6	8.7

Table 13. 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone = 16-20"

Variety Name <i>Club Italicized</i>	Dayton	Mayview	St. John	Walla Walla	Average	Dayton	Mayview	St. John	Walla Walla	Average	Dayton	Mayview	St. John	Walla Walla	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>Released Varieties</b>															
Rosalyn	111	129	131	136	127	60.1	60.2	60.9	61.8	60.7	8.6	9.0	8.4	9.8	8.9
Bobtail	105	128	125	149	127	58.8	59.8	59.8	61.0	59.9	8.9	9.2	8.7	9.8	9.2
Jasper	104	125	118	136	121	60.1	61.7	61.5	62.4	61.4	9.8	9.9	9.0	10.7	9.9
LCS Artdeco	106	125	111	135	119	60.7	61.1	60.7	62.1	61.1	9.0	9.5	8.7	10.2	9.3
Norwest Tandem	107	123	107	139	119	62.1	62.1	62.0	62.8	62.3	9.1	10.1	9.1	10.8	9.8
SY Ovation	99	133	113	132	119	61.9	61.0	60.6	62.3	61.5	9.3	9.6	8.7	11.0	9.6
Puma	98	125	111	138	118	61.7	62.0	61.5	62.6	62.0	9.4	10.3	9.2	10.8	9.9
M-Press	111	122	114	125	118	61.4	61.6	61.0	61.9	61.5	8.7	9.2	8.5	9.9	9.1
SY Raptor	110	118	106	137	118	61.4	61.4	61.6	61.9	61.6	9.2	9.5	9.0	9.8	9.4
PNW Hailey	102	127	112	128	117	63.1	63.2	63.2	64.1	63.4	9.3	10.5	9.4	10.8	10.0
Dyna-Gro Impact	104	127	111	125	117	62.6	62.2	62.1	63.3	62.5	9.2	10.0	8.8	11.0	9.7
Norwest Duet	102	127	114	124	116	62.0	62.1	62.0	63.2	62.3	9.1	9.5	8.5	11.0	9.5
LCS Sonic <sup>1</sup>	100			133	116	61.1			63.0	62.0	9.0			11.1	10.1
LCS Hulk	103	128	108	126	116	62.5	63.0	63.2	64.0	63.2	9.0	10.4	9.3	10.2	9.7
Xerpha	104	119	108	132	116	61.6	61.9	61.7	62.6	61.9	9.0	10.1	8.9	10.5	9.6
SY Command <sup>1</sup>	99			132	116	60.3			61.0	60.7	8.4			10.1	9.3
ARS-Crescent	92	122	118	131	116	60.5	61.7	61.1	61.8	61.3	8.8	8.9	7.8	10.0	8.9
SY Dayton	101	118	115	126	115	61.8	61.7	62.0	62.8	62.1	9.3	9.4	9.0	10.6	9.6
UI Sparrow	94	116	109	140	115	60.3	60.5	60.1	61.5	60.6	8.7	9.7	8.5	10.9	9.4
LCS Shark	102	122	108	126	114	61.4	60.5	60.9	62.0	61.2	9.1	9.7	9.2	11.4	9.9
Purl (WA 8234)	98	114	111	131	114	62.6	62.5	62.3	63.3	62.7	9.2	9.8	9.2	10.9	9.8
SY Assure	94	132	108	121	114	62.9	63.1	62.1	63.4	62.9	9.1	10.4	9.4	11.0	10.0
WB1604	95	122	112	124	113	60.1	62.0	62.1	63.3	61.9	9.6	10.3	9.2	10.8	10.0
LCS Drive	102	124	104	122	113	60.6	60.0	60.0	61.2	60.5	8.7	10.0	8.8	10.9	9.6
Mary <sup>1</sup>	101			121	111	62.2			63.0	62.6	9.4			11.1	10.3
ARS-Castella (ARS20060123-31C)	94	100	112	138	111	61.0	60.8	60.8	62.5	61.3	9.0	9.2	9.1	10.7	9.5
WB-528	95	119	105	116	109	62.3	62.9	62.3	63.2	62.7	9.9	10.2	9.2	11.5	10.2
WB1529	93	114	109	114	107	63.1	63.4	63.2	63.9	63.4	9.8	10.1	9.4	11.3	10.2
WB1783	93	114	101	115	106	64.0	63.7	63.5	64.3	63.9	9.7	11.1	10.0	11.7	10.6
SY Candor (09PN008#72)	96	120	104	103	106	62.6	62.6	62.3	63.2	62.7	9.3	10.0	9.8	11.6	10.2
Stephens <sup>1</sup>	90			118	104	60.9			62.4	61.6	10.0			10.7	10.3
WB1532	89	107	103	117	104	61.1	62.4	62.2	63.4	62.3	10.4	10.7	9.4	12.2	10.7
Madsen	87	106	100	114	101	61.7	61.4	61.4	62.8	61.8	10.3	10.6	10.0	11.2	10.5
SY Banks	90	104	94	110	99	60.0	60.8	60.7	62.0	60.9	9.1	10.0	9.5	11.2	10.0
<b>Experimental Lines</b>															
LWW15-71945	112	136	131	148	132	59.5	59.6	59.4	60.5	59.8	9.2	9.8	8.6	10.2	9.4
LWW14-74143	110	136	127	135	127	59.2	59.2	58.9	60.5	59.4	7.9	9.0	7.9	9.8	8.7
IDN 15-72458DH	103	139	120	127	123	60.7	61.4	61.0	62.2	61.3	8.7	9.7	8.1	10.1	9.2
LWW14-72916	98	137	124	127	121	61.8	62.0	61.7	62.3	61.9	9.1	9.4	8.2	9.5	9.1
UIL 07-28017B	107	122	110	129	117	63.0	62.4	62.2	63.6	62.8	9.4	10.4	9.6	10.8	10.1
WA 8293	101	117	100	139	114	61.1	62.1	61.6	62.9	61.9	9.1	10.0	8.9	10.8	9.7
WA 8292 <sup>1</sup>	99			127	113	62.0			63.0	62.5	10.1			11.3	10.7
WA 8232	94	123	111	122	112	62.6	63.2	63.1	63.9	63.2	9.6	9.7	8.9	11.1	9.8
ARS06132-45C	95	114	114	126	112	60.1	60.9	59.8	61.1	60.5	8.9	10.0	8.3	10.3	9.4
OR2121086	99	116	112	118	111	62.1	62.1	62.1	63.0	62.3	9.4	10.2	9.3	11.4	10.1
XB1104	98	118	106	120	110	63.5	63.7	63.8	64.0	63.7	9.6	10.2	9.4	10.9	10.0

## 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone = 16-20"

Variety Name <i>Club Italicized</i>	Dayton	Mayview	St. John	Walla Walla	Average	Dayton	Mayview	St. John	Walla Walla	Average	Dayton	Mayview	St. John	Walla Walla	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>OR2121285<sup>1</sup></b>	95			125	110	62.2			63.1	62.7	9.9			11.3	10.6
<b>YS-205</b>	94	117	110	119	110	62.9	63.4	63.5	63.9	63.4	9.1	10.5	8.6	11.6	10.0
<i>ARSDH08X103-102C</i>	90	120	107	122	110	60.2	62.7	62.0	62.7	61.9	9.7	10.4	9.0	10.1	9.8
<i>ARSDH08X117-83C<sup>1</sup></i>	92			127	109	62.5			62.9	62.7	9.3			9.9	9.6
<i>ARSDH08X028-9C<sup>1</sup></i>	91			124	108	60.5			61.7	61.1	9.8			10.5	10.2
<b>OR2130081<sup>1</sup></b>	89			125	107	61.0			62.3	61.7	9.4			11.1	10.3
<b>IDO1708</b>	85	120	108	113	106	59.4	60.4	59.5	61.5	60.2	9.1	9.6	8.8	11.0	9.6
<b>IDO1005<sup>1</sup></b>	91			110	101	61.4			62.1	61.7	10.1			11.7	10.9
<b>YS-201<sup>1</sup></b>	84			105	95	61.8			62.0	61.9	9.2			11.5	10.3
<b>C.V. %</b>	5	5	5	8	6	0.8	0.6	0.6	0.5	0.6	4.5	5.9	4.6	4.3	4.9
<b>LSD (0.05)</b>	6	8	8	13	5	0.6	0.5	0.5	0.4	0.3	0.6	0.8	0.6	0.6	0.3
<b>Average</b>	98	122	111	126	113	61.4	61.8	61.6	62.6	61.9	9.3	9.9	9.0	10.8	9.8
<b>Highest</b>	112	139	131	149	132	64.0	63.7	63.8	64.3	63.9	10.4	11.1	10.0	12.2	10.9
<b>Lowest</b>	84	100	94	103	95	58.8	59.2	58.9	60.5	59.4	7.9	8.9	7.8	9.5	8.7

<sup>1</sup> - Entries grown only in cooperative trials at Dayton & Walla Walla. Average of two locations

Table 14. 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone = 12-16"

Variety Name <i>Club Italicized</i>	Almira	Anatone	Creston	Reardan	Average	Almira	Anatone	Creston	Reardan	Average	Almira	Anatone	Creston	Reardan	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>Released Varieties</b>															
LCS Sonic	119	106	106	120	113	60.2	59.1	61.2	61.6	60.5	7.9	6.5	10.4	10.8	8.9
Norwest Duet	121	101	109	115	112	61.2	59.9	61.7	62.1	61.2	8.2	6.7	10.5	10.8	9.1
Jasper	116	99	105	125	111	60.0	59.8	60.3	61.4	60.4	8.0	6.8	9.9	11.0	8.9
Xerpha	122	95	104	124	111	60.5	58.7	61.3	62.0	60.6	8.2	6.2	9.8	11.2	8.8
M-Press	122	98	101	120	110	60.0	59.9	61.4	61.8	60.8	8.5	6.4	9.8	10.6	8.8
ARS-Crescent	118	97	106	117	110	59.8	60.1	61.0	61.0	60.5	7.8	6.3	10.2	10.4	8.7
SY Command	119	97	101	119	109	59.1	58.6	59.9	60.4	59.5	8.1	6.6	9.8	10.5	8.8
Pritchett	120	97	97	120	109	59.0	58.1	59.9	60.3	59.3	7.7	6.3	10.1	11.2	8.8
LCS Hulk	115	104	102	112	108	61.9	61.4	63.0	62.7	62.2	8.3	7.3	10.4	10.8	9.2
Dyna-Gro Impact	121	91	101	112	106	61.5	60.1	62.5	62.3	61.6	8.8	6.4	10.3	11.4	9.2
ARS-Castella (ARS20060123-31C)	112	99	99	112	106	59.4	59.7	60.5	61.6	60.3	8.0	6.7	9.4	10.5	8.6
Norwest Tandem	120	93	98	111	105	60.7	60.4	61.4	61.8	61.1	8.8	6.7	10.0	10.8	9.1
UI Sparrow	113	104	99	104	105	59.5	58.0	60.1	60.2	59.5	8.4	6.3	10.2	10.7	8.9
Puma	111	100	101	109	105	60.9	60.0	61.9	62.0	61.2	8.7	6.8	10.6	11.4	9.4
ORCF-102	109	94	100	113	104	61.1	60.6	62.2	61.5	61.4	8.6	7.0	10.4	11.3	9.3
WB1783	118	95	89	110	103	62.6	61.7	63.4	63.5	62.8	8.7	7.0	11.4	11.4	9.6
WB1529	114	100	92	106	103	62.0	61.8	63.4	63.7	62.7	8.5	7.3	11.0	11.5	9.6
UI Castle CL+	111	86	96	112	102	61.3	60.0	62.7	62.8	61.7	9.3	7.0	11.6	11.6	9.9
SY Candor (09PN008#72)	112	107	88	97	101	62.0	61.2	61.8	62.1	61.7	9.1	7.3	10.3	11.3	9.5
UI Magic CL+	115	87	91	107	100	61.0	60.3	62.8	62.4	61.6	8.6	7.0	11.3	11.3	9.6
SY Banks	110	99	91	100	100	60.3	59.9	60.2	60.2	60.2	8.6	6.8	10.6	11.0	9.3
WB1604	106	102	91	99	99	60.9	60.6	62.9	62.4	61.7	8.8	7.0	11.3	11.5	9.7
Bruehl	113	83	101	99	99	58.5	57.6	60.1	59.3	58.9	8.6	6.6	10.7	11.3	9.3
Curiosity CL+	114	81	93	102	97	61.1	58.9	62.0	62.2	61.0	8.5	6.4	10.3	11.2	9.1
Eltan	109	84	93	101	97	60.2	59.0	62.0	62.4	60.9	8.1	6.7	10.5	10.7	9.0
Mela CL+	110	85	90	98	96	61.5	59.7	61.6	62.4	61.3	8.4	6.6	9.9	11.4	9.1
WB1532	110	89	83	102	96	61.1	60.0	62.0	62.2	61.3	8.9	6.9	11.4	11.7	9.8
Otto	111	75	92	103	95	61.1	59.6	61.3	61.6	60.9	8.3	6.9	11.0	11.3	9.4
ORCF-103	97	94	82	94	92	60.0	59.0	61.1	61.4	60.4	8.6	7.5	10.5	11.3	9.5
WB1376CLP	99	88	78	88	88	63.5	62.8	63.1	63.2	<b>63.1</b>	10.1	7.9	11.8	12.7	10.6
<b>Experimental Lines</b>															
LWW15-71945	129	105	113	129	<b>119</b>	57.9	57.3	58.8	60.0	58.5	8.2	6.3	9.4	10.9	8.7
LWW14-72916	120	109	107	127	<b>116</b>	59.8	60.3	61.4	62.0	60.9	7.7	6.6	9.5	10.1	8.5
UIL 09-15702A	127	96	109	112	111	61.0	60.8	61.7	61.6	61.3	9.4	6.9	10.6	11.5	9.6
KXB-01	125	94	103	116	110	60.9	58.9	61.4	61.7	60.7	8.5	6.3	9.9	11.0	9.0
UIL 07-28017B	124	99	97	116	109	61.6	61.0	61.8	62.3	61.7	8.7	6.7	10.3	10.5	9.1
ARSDH08X117-83C	117	97	103	113	108	61.1	60.3	62.8	63.0	61.8	8.0	6.1	10.4	10.9	8.8
ARSWA2J100065C	116	95	100	117	107	58.6	58.6	60.0	60.2	59.4	7.8	6.0	10.1	10.1	8.5
WA 8291	113	101	107	106	107	60.9	60.2	62.0	62.0	61.2	8.3	7.1	10.2	11.0	9.1
WA 8290	119	93	105	108	107	60.1	58.5	60.9	61.6	60.3	7.9	6.7	10.5	11.1	9.0
WA 8270	110	97	101	108	104	60.0	59.8	59.8	60.5	60.0	8.8	6.8	9.7	11.1	9.1
OR2121086	113	92	94	106	101	60.5	60.8	61.2	61.2	60.9	8.4	6.9	10.3	11.2	9.2
ORI2150031 CL+	112	88	91	106	99	61.5	60.3	61.1	61.7	61.1	9.3	7.6	11.5	11.8	10.0
YS-205	112	86	87	105	98	62.8	62.6	62.4	62.7	62.6	8.4	6.4	10.6	11.5	9.2
IDO1708	106	95	88	101	97	58.8	58.1	60.2	60.6	59.4	8.7	6.4	11.2	11.0	9.3
KWS147	100	82	97	109	97	61.7	61.7	61.8	62.1	61.8	9.9	7.3	11.0	11.1	9.8

## 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone = 12-16"

Variety Name <i>Club Italicized</i>	Almira	Anatone	Creston	Reardan	Average	Almira	Anatone	Creston	Reardan	Average	Almira	Anatone	Creston	Reardan	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>IDO1005</b>	108	91	87	97	96	60.7	59.4	60.7	60.8	60.4	9.3	7.4	11.5	12.5	10.2
<b>WA 8271</b>	107	78	88	103	94	61.8	60.1	62.3	62.7	61.7	8.7	7.0	10.3	10.8	9.2
<b>XB1104</b>		100			- <sup>1</sup>		61.7			- <sup>1</sup>		7.4			- <sup>1</sup>
<b>C.V. %</b>	6	7	7	7	7	0.6	0.5	0.6	0.5	0.6	5.7	4.1	6.4	3.8	5.2
<b>LSD (0.05)</b>	9	10	9	10	5	0.5	0.4	0.5	0.5	0.2	0.7	0.4	0.9	0.6	0.3
<b>Average</b>	114	94	97	109	104	60.7	59.9	61.5	61.7	60.9	8.5	6.8	10.5	11.1	9.2
<b>Highest</b>	129	109	113	129	119	63.5	62.8	63.4	63.7	63.1	10.1	7.9	11.8	12.7	10.6
<b>Lowest</b>	97	75	78	88	88	57.9	57.3	58.8	59.3	58.5	7.7	6.0	9.4	10.1	8.5

<sup>1</sup> - No average. Entry grown at one location only.

Note - Data for 2018 Dusty and Eureka locations is excluded from the summary due to a different set of entries grown at

Table 15.

2018 WSU Variety Testing Soft White Winter Wheat Trial Summary  
Precipitation Zone <12"

Variety Name (Club <i>italicized</i> )	Yield (Bu/A)										Test Wt (Lbs/Bu)										Protein (%)									
	Bickleton <sup>1</sup>	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Bickleton <sup>1</sup>	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Bickleton <sup>1</sup>	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average						
<b>Released Varieties</b>																														
<i>Xerpha</i>	37	71	72	65	87	91	75	77	58.2	59.7	58.9	60.1	60.6	59.2	60.3	59.8	9.9	9.3	8.6	10.2	9.5	6.8	9.3	9.0						
<i>Pritchett</i>	37	76	73	63	77	91	71	75	56.2	58.8	57.6	58.8	60.3	58.6	58.4	58.8	9.8	9.8	8.5	10.5	9.6	7.2	8.6	9.0						
<i>Dyna-Gro Impact</i>	35	77	70	62	83	85	64	74	58.8	61.1	59.9	60.8	62.3	60.9	61.3	61.1	9.9	10.1	8.7	10.3	10.1	7.8	10.5	9.6						
<i>M-Press</i>	37	75	68	57	87	77	72	73	57.8	60.4	59.1	59.9	61.4	59.3	60.4	60.1	10.1	9.7	9.7	10.5	9.0	7.3	8.9	9.2						
<i>LCS Sonic</i>	36	72	76	55	80	86	67	73	55.1	60.0	59.7	58.5	60.6	60.1	60.0	59.8	10.2	10.1	9.4	11.5	9.7	7.4	9.4	9.6						
<i>ARS-Crescent</i>	34	65	70	63	84	84	66	72	56.2	58.8	58.5	59.0	61.4	59.9	59.7	59.5	9.2	10.0	8.5	10.4	9.4	7.0	9.8	9.2						
<i>Jasper</i>	33	78	67	55	82	82	82	68	55.2	59.5	59.0	57.7	60.5	60.0	58.8	59.2	10.3	10.4	9.1	11.0	10.3	7.6	9.3	9.6						
<i>Norwest Duet</i>	36	74	71	53	82	79	72	72	56.8	60.3	59.1	59.7	61.8	60.7	60.2	60.3	10.7	10.5	9.3	10.8	10.6	7.2	9.4	9.6						
<i>ARS-Castella (ARS20060123-31C)</i>	36	71	69	62	77	82	63	71	56.2	59.2	57.8	58.4	62.0	59.1	58.6	59.2	9.5	9.2	9.4	10.1	8.9	7.5	9.0	9.0						
<i>SY Command</i>	36	78	71	62	87	69	57	71	54.3	59.5	58.2	58.4	60.2	59.3	58.8	59.1	9.7	9.0	9.6	9.8	9.1	7.4	9.7	9.1						
<i>Curiosity CL+</i>	38	70	66	62	73	82	67	70	58.1	60.0	59.2	60.8	60.6	60.1	60.3	60.2	9.4	9.2	8.5	10.4	8.2	7.0	8.5	8.7						
<i>LCS Huik</i>	36	70	70	59	76	79	62	69	57.3	61.8	60.9	60.8	62.6	62.2	61.7	61.7	10.3	10.2	10.0	10.8	10.4	7.5	10.3	9.9						
<i>Norwest Tandem</i>	42	68	65	60	76	70	70	68	57.7	60.7	58.9	59.7	61.6	60.7	60.8	60.4	9.2	9.4	9.3	10.3	9.9	8.5	9.8	9.5						
<i>SY Candor (09PN006#72)</i>	--	68	69	52	72	83	64	68	--	61.1	60.0	59.4	62.3	61.1	61.4	60.9	--	10.3	10.1	11.5	9.7	8.2	10.9	10.1						
<i>Puma</i>	36	76	63	57	77	80	53	68	56.8	60.7	59.0	60.0	61.5	60.2	59.8	60.2	10.1	9.7	9.2	11.1	10.2	7.9	9.9	9.7						
<i>UI Sparrow</i>	36	58	65	55	76	80	71	68	55.8	59.1	58.7	59.3	59.8	59.7	59.1	59.3	9.6	10.8	10.2	10.5	8.7	7.3	9.3	9.5						
<i>ORCF-102</i>	35	74	64	55	79	78	54	67	58.2	61.4	59.3	60.2	61.4	61.4	60.7	60.7	10.6	9.7	9.3	11.2	10.1	8.5	9.6	9.7						
<i>WB1529</i>	39	70	67	59	71	78	58	67	58.9	61.4	60.5	61.5	63.0	62.4	62.6	61.9	9.5	10.2	9.8	10.9	9.5	8.0	10.5	9.8						
<i>Mela CL+</i>	34	65	64	54	72	82	65	67	57.6	59.8	60.0	61.0	60.8	60.7	61.0	60.6	9.7	9.5	9.7	10.5	8.9	7.1	8.0	9.0						
<i>WB1783</i>	40	62	60	59	78	73	70	67	60.2	61.7	60.3	61.7	63.4	62.6	62.4	62.0	10.3	10.9	10.2	11.1	11.1	8.4	10.4	10.3						
<i>SY Banks</i>	32	71	63	54	72	77	63	67	55.7	59.6	59.1	57.8	60.6	59.7	59.3	59.3	10.4	9.7	10.1	10.8	9.4	7.6	10.3	9.7						
<i>UI Castle CL+</i>	33	74	64	51	70	81	54	66	58.0	61.0	60.0	59.6	61.7	60.7	60.9	60.6	10.5	10.8	9.9	11.4	9.1	7.7	10.0	9.8						
<i>Briehi</i>	34	71	61	49	75	69	69	65	57.0	57.3	57.8	59.0	60.0	58.5	60.3	58.8	9.9	10.0	10.1	11.5	9.4	7.4	9.9	9.7						
<i>Otto</i>	33	66	59	53	73	75	66	65	57.2	60.0	60.0	60.4	61.3	60.6	60.4	60.4	10.2	10.4	10.0	11.0	10.6	7.3	9.5	9.8						
<i>Eltan</i>	35	64	63	53	67	80	64	65	57.0	60.0	60.3	60.0	61.0	60.0	60.3	60.3	9.8	9.4	8.8	10.9	9.4	7.3	8.6	9.1						
<i>WB1604</i>	30	66	72	47	68	67	65	64	56.4	60.6	59.8	60.5	62.2	60.3	62.0	60.9	10.4	10.1	10.2	10.6	9.9	7.8	10.5	9.8						
<i>UI Magic CL+</i>	36	68	64	51	71	70	60	64	59.0	61.3	59.5	61.0	62.7	60.5	61.2	61.0	10.7	9.9	9.2	11.3	10.0	7.8	10.2	9.7						
<i>WB1376CLP</i>	33	74	56	53	69	72	58	64	58.9	62.8	60.2	61.1	63.5	63.0	61.9	62.1	11.1	11.0	10.3	11.6	11.1	8.9	12.3	10.9						
<i>ORCF-103</i>	23	64	46	43	61	65	60	57	54.5	60.0	58.6	60.8	60.4	60.4	59.4	59.9	11.8	10.0	10.5	11.6	8.8	8.1	9.2	9.7						
<b>Experimental Lines</b>																														
<i>UIL 07-28017B</i>	--	81	79	55	92	80	66	75	--	61.8	59.9	59.9	62.3	61.3	60.6	61.0	--	9.4	9.0	10.3	9.2	7.9	10.2	9.3						
<i>KXB-01</i>	--	73	72	61	89	74	72	74	--	60.9	58.6	60.0	61.1	59.7	59.5	60.0	--	9.9	9.6	10.4	10.3	7.2	9.9	9.6						
<i>WA 8270</i>	--	70	70	62	84	87	64	73	--	58.3	57.8	58.7	60.9	59.6	57.5	58.8	--	11.1	9.4	10.6	10.5	7.7	10.0	9.9						
<i>UIL 09-15702A</i>	--	70	76	57	85	76	69	72	--	60.9	59.9	60.3	61.9	61.0	60.5	60.8	--	10.8	9.1	11.4	10.6	8.0	9.7	9.9						

**2018 WSU Variety Testing Soft White Winter Wheat Trial Summary**

Precipitation Zone <12"

Variety Name (Club <i>italicized</i> )	Yield (Bu/A)										Test Wt (Lbs/Bu)										Protein (%)									
	Bickleton <sup>1</sup>	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Bickleton <sup>1</sup>	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Bickleton <sup>1</sup>	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average						
WA 8271	--	68	69	54	89	88	65	72	--	61.4	60.6	60.3	62.0	61.9	61.8	61.3	--	10.3	9.2	11.0	10.0	8.2	9.5	9.7						
<i>ARSDH08X117-83C</i>	--	71	73	54	84	88	61	72	--	61.6	59.9	60.2	62.1	60.7	60.7	60.9	--	9.9	8.7	11.4	9.0	7.0	11.0	9.5						
YS-205	--	71	65	54	83	85	63	70	--	61.2	60.7	60.1	61.3	63.0	61.3	61.3	--	10.1	9.6	11.0	11.2	8.1	9.9	10.0						
WA 8291	--	69	71	54	74	84	65	70	--	60.1	59.9	59.5	61.3	61.1	60.6	60.4	--	10.0	10.2	11.8	10.4	7.7	10.2	10.0						
<i>LWW14-72916</i>	--	61	71	58	65	87	67	68	--	61.2	57.7	60.2	62.1	60.0	60.5	60.3	--	9.5	8.5	9.8	9.4	7.5	10.4	9.2						
WA 8290	--	71	63	54	80	76	65	68	--	60.4	59.0	59.7	61.3	60.0	60.0	60.1	--	10.2	9.9	10.7	10.2	7.8	10.2	9.9						
<i>LWW15-71945</i>	--	67	76	61	79	69	58	68	--	58.9	56.5	57.5	60.0	57.9	57.0	58.0	--	10.2	9.0	10.4	9.2	7.5	10.9	9.5						
<i>OR12150031 CL+</i>	--	70	64	49	71	76	64	66	--	60.6	59.6	58.8	62.0	61.1	59.9	60.4	--	11.3	10.7	12.1	10.3	8.7	11.4	10.7						
<i>OR2121086</i>	--	73	54	58	73	77	57	65	--	60.9	58.3	60.1	61.4	61.3	59.7	60.3	--	9.8	10.5	10.9	8.8	8.1	10.6	9.8						
<i>ARSWA2J100065C</i>	--	58	65	60	70	81	58	65	--	57.9	57.4	56.8	59.1	59.0	57.8	58.0	--	9.9	8.6	10.5	7.9	7.1	10.1	9.0						
<i>KWS147</i>	--	68	76	40	65	74	62	64	--	62.1	60.0	61.6	62.7	62.4	61.4	<b>61.7</b>	--	10.9	9.8	11.3	11.2	9.1	10.2	10.4						
<i>IDO1005</i>	--	64	60	50	79	72	60	64	--	60.5	58.4	60.2	61.6	60.7	60.2	60.3	--	11.2	10.4	11.6	11.3	8.9	10.7	10.7						
<i>IDO1708</i>	--	61	56	61	78	74	53	64	--	58.3	58.1	58.0	60.3	58.3	58.8	58.6	--	9.7	10.0	10.2	10.3	7.6	10.4	9.7						
<b>C.V. %</b>	8	7	7	9	8	8	9	8	1.0	0.8	1.6	1.0	0.7	0.9	1.3	1.1	5.1	6.0	7.2	3.3	7.2	6.9	8.2	6.5						
<b>LSD (0.05)</b>	4	7	7	7	9	9	8	3	0.8	0.7	1.3	0.8	0.6	0.7	1.1	0.4	0.7	0.8	0.9	0.5	1.0	0.7	1.1	0.4						
<b>Average</b>	35	70	67	56	77	79	64	69	57.1	60.3	59.2	59.7	61.4	60.5	60.2	60.2	10.1	10.1	9.5	10.9	9.8	7.7	9.9	9.7						
<b>Highest</b>	42	81	79	65	92	91	75	77	60.2	62.8	60.9	61.7	63.5	63.0	62.6	62.1	11.8	11.3	10.7	12.1	11.3	9.1	12.3	10.9						
<b>Lowest</b>	23	58	46	40	61	65	53	57	54.3	57.3	56.5	56.8	59.1	57.9	57.0	58.0	9.2	9.0	8.5	9.8	7.9	6.8	8.0	8.7						

<sup>1</sup> - Bickleton data is excluded from Average calculation due to very different set of entries at that location.

Table 16.

## 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
SY Assure	93	107	<b>100</b>	61.4	58.8	<b>60.1</b>	11.8	13.2	12.5
LCS Drive	94	105	<b>99</b>	59.5	58.3	<b>58.9</b>	11.9	12.9	12.4
LCS Artdeco	95	99	<b>97</b>	59.3	58.3	<b>58.8</b>	11.0	12.2	11.6
SY Raptor	91	100	<b>96</b>	56.9	55.5	56.2	12.4	12.6	12.5
Norwest Tandem	93	96	95	59.3	58.4	<b>58.9</b>	11.9	13.0	12.5
LCS Shark	87	100	94	59.7	58.4	<b>59.0</b>	12.3	12.8	12.6
PNW Hailey	95	93	94	60.7	57.3	<b>59.0</b>	12.2	12.8	12.5
WB1783	85	103	94	61.3	59.3	<b>60.3</b>	13.2	13.4	13.3
WB1529	88	98	93	61.1	55.4	58.2	11.6	12.9	12.2
LCS Hulk	95	90	92	60.1	54.8	57.5	12.7	14.3	13.5
WB1604	96	88	92	60.7	58.5	<b>59.6</b>	12.0	13.2	12.6
Norwest Duet	96	86	91	59.3	50.2	54.7	11.9	14.3	13.1
SY Ovation	84	97	91	58.7	55.0	56.9	12.4	12.7	12.6
Purl (WA 8234)	88	92	90	58.5	55.1	56.8	12.4	13.6	13.0
UI Magic CL+	94	85	89	61.1	56.2	58.7	11.9	14.0	13.0
Bobtail	89	89	89	57.2	50.6	53.9	11.6	12.8	12.2
Dyna-Gro Impact	92	86	89	59.7	52.9	56.3	12.4	14.0	13.2
Puma	91	86	88	58.9	53.8	56.3	12.8	13.7	13.2
Resilience CL+	96	81	88	60.8	55.3	58.0	12.4	13.8	13.1
WB-528	82	94	88	59.9	54.7	57.3	12.2	14.0	13.1
Jasper	94	80	87	57.4	52.2	54.8	12.7	13.7	13.2
Rosalyn	84	88	86	58.3	50.1	54.2	11.7	13.8	12.8
SY Dayton	81	89	85	57.3	51.1	54.2	12.6	13.0	12.8
UI Palouse CL+	90	76	83	58.5	49.7	54.1	12.7	15.5	14.1
WB1532	75	90	83	57.2	53.2	55.2	14.4	14.7	14.6
WB1376CLP	77	84	81	61.4	54.6	58.0	13.4	16.2	14.8
UI Castle CL+	82	75	79	59.8	51.2	55.5	13.0	15.0	14.0
<i>Experimental Lines</i>									
LWW14-72916	99	107	<b>103</b>	61.6	58.3	<b>59.9</b>	11.1	11.7	11.4
LWW14-74143	99	99	<b>99</b>	58.5	56.8	57.6	10.6	11.7	11.1
LWW15-71945	100	97	<b>99</b>	57.4	50.6	54.0	11.8	13.4	12.6
XB1104	94	98	<b>96</b>	61.5	56.6	<b>59.1</b>	12.0	14.5	13.3
UIL 07-28017B	91	101	<b>96</b>	60.2	57.6	<b>58.9</b>	12.4	13.6	13.0
IDN 15-72458DH	94	85	89	58.4	50.2	54.3	11.6	14.4	13.0
WA 8275 CL+	93	82	88	60.1	49.1	54.6	12.3	15.2	13.8
IDO1708	71	95	83	54.7	50.7	52.7	12.6	13.2	12.9
OR2121086	83	82	82	58.2	57.1	57.6	12.5	13.3	12.9
WA 8232	80	82	81	58.7	54.0	56.4	12.7	14.2	13.4

## 2018 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<b>WA 8293</b>	80	81	81	58.1	50.5	54.3	13.0	14.6	13.8
<b>ORI2150031 CL+</b>	92	68	80	58.8	50.3	54.5	13.1	14.9	14.0
<b>WA 8274 CL+</b>	93	67	80	58.4	49.5	53.9	13.0	15.8	14.4
<b>ORI2150061 CL+</b>	80	80	80	61.2	57.1	<b>59.1</b>	13.6	14.7	14.2
<b>YS-205</b>	71	71	71	58.2	52.0	55.1	12.9	14.5	13.7
<b>C.V. %</b>	9	8	8	1.4	3.9	2.8	3.3	5.3	4.5
<b>LSD (0.05)</b>	11	9	7	1.1	2.9	1.5	0.6	1.0	0.6
<b>Average</b>	89	89	89	59.2	54.3	56.7	12.4	13.8	13.1
<b>Highest</b>	100	107	103	61.6	59.3	60.3	14.4	16.2	14.8
<b>Lowest</b>	71	67	71	54.7	49.1	52.7	10.6	11.7	11.1

Table 17.

**WSU Variety Testing Soft White Winter Wheat Trial Multi-Year Summary**  
**Precipitation Zone >20"**  
**(Colton, Fairfield, Farmington, Pullman)**

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 7 loc/yr			2016-2018, 11 loc/yr			2014-2018, 18 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Released Varieties</i></b>									
Rosalyn	135	59.4	9.1	144	60.2	9.1	128	58.5	9.6
Jasper	131	59.5	9.7						
Norwest Duet	129	60.3	9.8	133	61.1	10.0			
Bobtail	127	57.9	9.4	132	59.3	9.7	121	57.6	10.0
LCS Hulk	126	61.5	10.0	132	62.3	10.1			
Xerpha	126	60.0	9.8	130	60.9	9.9	123	60.0	10.0
Norwest Tandem	125	60.7	10.0						
SY Dayton	124	61.0	9.8	129	61.5	10.1			
LCS Artdeco	123	60.1	9.7	130	60.6	9.8	118	59.5	9.9
UI Castle CL+	122	61.4	10.3	130	61.9	10.3			
SY Raptor	122	60.5	9.8						
SY Ovation	122	60.4	9.8	126	61.1	10.0	115	60.2	10.2
<i>ARS-Crescent</i>	121	59.4	9.6	130	60.5	9.7	122	59.6	9.9
Purl (WA 8234)	121	61.2	9.8	129	62.0	10.0			
SY Assure	121	61.8	10.3	127	62.3	10.5			
UI Sparrow	120	58.7	9.8	130	59.4	9.7			
UI Magic CL+	119	61.6	10.2	123	62.1	10.4			
LCS Shark	119	59.5	10.2						
Puma	118	60.5	10.0	125	61.1	10.1	118	60.1	10.1
ORCF-102	117	61.1	10.2	124	61.6	10.3	115	60.7	10.6
WB1529	117	62.5	10.3	119	62.9	10.7			
WB1604	117	61.4	10.1	123	62.0	10.3			
WB1783	117	62.3	10.2						
LCS Drive	117	59.2	10.1						
Resilience CL+	116	60.7	10.3	123	61.4	10.4	115	60.6	10.7
WB-528	113	61.5	10.3	120	62.2	10.5	111	61.4	10.7
UI Palouse CL+	113	60.1	10.2	120	60.7	10.3			
Madsen	113	60.4	10.5	120	61.1	10.5	110	60.0	10.9
WB1376CLP	110	63.4	11.3	112	63.6	11.6			
<b><i>Experimental Lines</i></b>									
KXB-01	130	60.0	10.1	135	60.7	10.4			
LWW14-72916	125	60.5	9.5						
UIL 07-28017B	125	61.7	10.1	129	62.3	10.2			
WA 8232	125	61.5	9.5	133	62.2	9.7			
OR2121086	119	60.6	10.1						
WA 8274 CL+	118	59.8	10.6						
ORI2150031 CL+	106	60.6	10.9						
C.V. %	7	1.1	4.6	7	1.0	4.4	6	1.0	4.9
LSD (.05)	4	0.3	0.2	3	0.2	0.2	2	0.2	0.2
Average	121	60.6	10.0	127	61.4	10.2	118	59.8	10.2
Highest	135	63.4	11.3	144	63.6	11.6	128	61.4	10.9
Lowest	106	57.9	9.1	112	59.3	9.1	110	57.6	9.6

Table 18.

## WSU Variety Testing Soft White Winter Wheat Trial Multi-Year Summary

Precipitation Zone = 16-20"

(Dayton, Mayview, St. John, Walla Walla)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 8 loc/yr			2016-2016, 11 loc/yr			2014-2018, 19 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Released Varieties</i></b>									
<b>Rosalyn</b>	136	60.8	9.4	138	60.7	9.6	115	58.9	10.2
<b>Bobtail</b>	131	59.9	9.8	133	59.9	10.1	110	58.3	10.5
<b>LCS Artdeco</b>	126	61.4	9.6	129	60.7	9.8	110	59.5	10.2
<b>Norwest Tandem</b>	125	62.3	10.3						
<b>SY Dayton</b>	124	62.3	10.0	124	61.9	10.2			
<b>LCS Shark</b>	124	61.4	10.2						
<b>SY Raptor</b>	124	61.6	9.7						
<b>SY Ovation</b>	122	61.8	10.0	123	61.7	10.4	109	60.6	10.7
<b>Purl (WA 8234)</b>	121	62.8	10.2	123	62.5	10.4			
<b>Jasper</b>	121	61.1	10.4						
<b>Puma</b>	121	62.1	10.3	121	61.7	10.4	109	60.3	10.8
<b>Norwest Duet</b>	121	62.2	10.0	123	62.1	10.2			
<b>WB1604</b>	119	62.3	10.3	120	62.0	10.5			
<b>LCS Drive</b>	119	60.8	9.9						
<b>LCS Hulk</b>	118	62.0	10.2	121	62.1	10.5			
<b>SY Assure</b>	118	62.7	10.5	120	62.3	10.7			
<b>Xerpha</b>	117	61.8	10.0	119	61.5	10.3	108	60.2	10.7
<b>UI Sparrow</b>	116	60.3	9.9	118	60.3	10.2			
<b>ARS-Crescent</b>	115	61.0	9.4	116	60.8	9.9	103	59.4	10.5
<b>WB1529</b>	114	63.4	10.5	116	63.0	10.6			
<b>WB-528</b>	114	62.8	10.6	117	62.6	10.8	104	61.6	11.0
<b>WB1783</b>	113	64.0	10.7						
<b>Madsen</b>	113	61.9	10.9	114	61.5	11.2	100	60.2	11.6
<b><i>Experimental Lines</i></b>									
<b>LWW14-72916</b>	131	62.2	9.6						
<b>UIL 07-28017B</b>	124	63.0	10.3	125	62.7	10.5			
<b>OR2121086</b>	121	62.2	10.4						
<b>WA 8232</b>	120	62.8	10.2	121	62.7	10.3			
<b>C.V. %</b>	6	0.7	5.3	6	0.8	5.0	7	1.2	5.8
<b>LSD (.05)</b>	4	0.2	0.3	3	0.2	0.2	2	0.2	0.2
<b>Average</b>	121	62.0	10.1	122	61.7	10.3	107	59.9	10.7
<b>Highest</b>	136	64.0	10.9	138	63.0	11.2	115	61.6	11.6
<b>Lowest</b>	113	59.9	9.4	114	59.9	9.6	100	58.3	10.2

Table 19.

## WSU Variety Testing Soft White Winter Wheat Trial Multi-Year Summary

Precipitation Zone = 12-16"

(Almira, Anatone, Creston, Dusty, Lamont, Reardan)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 9 loc/yr			2016-2016, 14 loc/yr			2014-2018, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
Jasper	123	59.9	9.8						
Norwest Duet	122	61.3	9.7	116	61.7	9.7			
LCS Sonic	120	60.2	9.8	120	60.6	9.7			
Norwest Tandem	119	61.1	9.8						
ARS-Castella (ARS20060123-31C) <sup>1</sup>	118	61.0	9.8	108	61.6	9.9			
LCS Hulk	118	61.0	9.9	116	61.7	9.9			
WB1783	115	63.0	10.3						
SY Banks	115	60.1	9.9	111	60.6	9.9			
Xerpha	115	60.4	9.6	112	61.0	9.6	102	60.1	10.1
SY Command	113	59.4	9.7	112	60.1	9.7			
Puma	112	60.9	10.3	111	61.0	10.1	98	60.2	10.6
Pritchett	112	59.6	9.6	109	60.1	9.8	97	59.4	10.4
UI Sparrow	112	59.3	9.6	110	59.9	9.5			
ARS-Crescent	112	60.5	9.4	109	60.9	9.5	96	59.6	10.1
ORCF-102	110	61.5	10.3	106	61.6	10.2	94	60.8	10.8
UI Magic CL+	109	61.5	10.5	103	61.7	10.5			
WB1529	108	62.7	10.3	105	62.6	10.2			
WB1604	107	61.7	10.4	105	61.8	10.2			
UI Castle CL+	107	61.5	10.6	106	62.0	10.5			
Bruehl	103	58.2	10.0	105	59.0	9.8	92	58.2	10.5
Curiosity CL+	101	60.6	10.0	101	60.9	9.9	89	60.2	10.4
Otto	101	60.2	10.2	101	60.5	10.2	90	59.7	10.8
Eltan	99	60.3	9.6	99	60.8	9.5	90	60.1	10.2
Mela CL+	99	60.5	9.9	96	61.0	9.9	87	60.3	10.5
WB1376CLP	94	63.3	11.5	93	63.3	11.5			
ORCF-103	93	60.2	10.2	94	60.7	10.0	86	59.9	10.5
<b>Experimental Lines</b>									
UIL 09-15702A	118	60.9	10.5						
KXB-01	117	60.8	9.7	112	61.2	9.8			
UIL 07-28017B	116	61.5	10.0						
OR2121086	112	60.8	9.9						
WA 8270	109	59.4	10.1						
WA 8271	106	61.4	10.0						
ORI2150031 CL+	105	60.8	10.8						
<b>C.V. %</b>	7	1.0	6.3	8	1.0	7.1	7	1.0	6.7
<b>LSD (.05)</b>	4	0.3	0.3	3	0.2	0.3	2	0.2	0.2
<b>Average</b>	110	60.8	10.1	107	61.1	10.0	93	59.8	10.4
<b>Highest</b>	123	63.3	11.5	120	63.3	11.5	102	60.8	10.8
<b>Lowest</b>	93	58.2	9.4	93	59.0	9.5	86	58.2	10.1

<sup>1</sup> - 8 & 12 loc/yr respectfully

Table 20.

## WSU Variety Testing Soft White Winter Wheat Trial Multi-Year Summary

Precipitation Zone = <12"

(Connell, Harrington, Horse Heaven, Lind, Ritzville, St. Andrews)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 12 loc/yr			2016-2018, 16 loc/yr			2014-2018, 24 loc/yr		
	Yield	TW	Protein	Yield	TW	Protein	Yield	TW	Protein
	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%
<b>Released Varieties</b>									
<b>Xerpha</b>	69	59.7	9.5	68	59.3	10.1	58	59.4	10.7
<i>ARS-Castella (ARS20060123-31C)</i>	69	59.1	9.5	67	58.7	10.0			
<b>Norwest Duet</b>	69	60.1	9.9	67	59.6	10.5			
<i>Pritchett</i>	68	58.8	9.6	66	58.8	10.1	56	59.4	10.8
<b>LCS Sonic</b>	68	59.6	10.0	67	59.0	10.6			
<b>Mela CL+</b>	67	60.4	9.6	65	60.1	10.1	56	60.3	10.7
<b>LCS Hulk</b>	67	60.5	10.2	66	60.1	10.8			
<b>Curiosity CL+</b>	66	60.4	9.3	64	60.1	9.9	55	60.3	10.6
<b>Jasper</b>	66	58.5	10.2						
<b>SY Banks</b>	65	59.2	10.1	64	58.8	10.6			
<i>ARS-Crescent</i>	63	59.3	9.9	62	58.7	10.4	53	59.1	11.0
<b>WB1529</b>	63	61.6	10.5	63	61.3	10.8			
<b>Norwest Tandem</b>	63	60.1	10.0						
<b>Otto</b>	63	59.9	10.4	62	59.6	11.0	54	59.8	11.5
<b>ORCF-102</b>	62	60.6	10.3	62	60.2	10.9	52	60.1	11.5
<i>Bruehl</i>	62	58.5	10.2	62	58.2	10.7	52	58.6	11.2
<b>UI Sparrow</b>	62	59.0	10.1	61	58.6	10.5			
<b>SY Command</b>	61	58.8	9.8	63	58.4	10.1			
<b>Eltan</b>	61	59.9	9.6	59	59.7	10.2	52	60.0	10.8
<b>Puma</b>	61	60.3	10.1	61	59.7	10.7	52	59.9	11.3
<b>UI Magic CL+</b>	59	60.7	10.4	58	60.4	10.9			
<b>UI Castle CL+</b>	59	60.3	10.6	58	59.9	11.1			
<b>WB1604</b>	59	60.8	10.5	59	60.5	10.9			
<b>WB1376CLP</b>	57	61.8	11.6	58	61.4	12.0			
<b>ORCF-103</b>	52	59.7	10.2	53	59.4	10.6	47	59.7	11.2
<b>Experimental Lines</b>									
<b>KXB-01</b>	73	59.8	10.0	71	59.5	10.4			
<b>UIL 07-28017B</b>	68	60.0	9.8	67	60.0	10.3			
<b>WA 8271</b>	67	61.2	10.1						
<b>WA 8270</b>	66	58.2	10.4						
<b>UIL 09-15702A</b>	66	60.4	10.9						
<b>OR2121086</b>	61	60.0	10.3						
<b>ORI2150031 CL+</b>	57	59.9	11.2						
<b>C.V. %</b>	9	2.0	6.6	9	1.9	6.3	8	1.8	5.8
<b>LSD (.05)</b>	2	0.5	0.3	2	0.4	0.2	1	0.3	0.2
<b>Average</b>	64	59.9	10.1	63	59.6	10.6	53	59.7	11.0
<b>Highest</b>	73	61.8	11.6	71	61.4	12.0	58	60.3	11.5
<b>Lowest</b>	52	58.2	9.3	53	58.2	9.9	47	58.6	10.6

Table 21.

**WSU Variety Testing Soft White Winter Wheat Trial Multi-Year Summary**  
**Precipitation Zone - Irrigated**  
**(Moses Lake, Pasco\*)**

Variety Name	2 Years 2017-2018, 4 loc/lys			3 Years 2016-2018, 6 loc/lys			5 Years 2014-2018, 8 loc/lys		
	Yield (Bu/A)	TW (Lbs/Bu)	Protein (%)	Yield (Bu/A)	TW (Lbs/Bu)	Protein (%)	Yield (Bu/A)	TW (Lbs/Bu)	Protein (%)
<i>Released Varieties</i>									
Norwest Duet	116	58.5	11.9	121	59.1	12.1			
LCS Hulk	115	59.5	11.8	129	60.1	11.9			
SY Assure	115	61.7	11.4	124	61.4	11.7			
LCS Drive	115	60.0	11.2						
LCS Artdeco	115	59.9	10.6	125	59.4	10.8	129	59.2	10.8
LCS Shark	113	60.4	11.5	126	60.1	11.5			
Norwest Tandem	113	60.5	11.4						
Rosalyn	112	57.4	11.3	120	58.1	11.4	121	57.6	11.5
Bobtail	112	56.6	11.2	120	57.3	11.5	125	56.9	11.6
Purl (WA 8234)	111	59.7	11.5						
WB-528	111	60.3	11.8						
WB1783	111	62.2	12.1						
WB1604	111	61.2	11.4	118	61.0	11.7			
Jasper	110	58.2	11.9						
SY Ovation	110	59.6	11.3	124	59.8	11.4	131	59.4	11.6
WB1529	110	60.9	11.2	113	61.0	11.8			
Puma	110	59.1	11.8	119	59.4	12.0	124	58.9	12.1
UI Magic CL+	109	60.6	11.7	118	60.4	11.8			
SY Dayton	108	58.1	11.5	116	58.7	11.6			
WB1376CLP	99	61.4	13.0	109	61.5	13.0			
UI Castle CL+	99	59.0	12.3	108	59.6	12.4			
UI Palouse CL+	96	57.7	12.6	108	58.3	12.4			
<i>Experimental Lines</i>									
LWW14-74143	123	58.6	10.2						
LWW14-72916	120	61.2	10.7						
UIL 07-28017B	115	60.8	11.9	130	60.8	11.9			
WA 8232	106	59.8	11.7	117	60.2	11.8			
OR2121086	101	59.9	11.6						
ORI2150031 CL+	96	58.2	12.7						
<b>C.V. %</b>	7	2.0	4.0	8	1.7	3.8	9	1.7	3.6
<b>LSD (0.05)</b>	5	0.8	0.3	5	0.6	0.3	5	0.5	0.2
<b>Average</b>	110	59.7	11.6	119	59.8	11.8	126	58.4	11.5
<b>Highest</b>	123	62.2	13.0	130	61.5	13.0	131	59.4	12.1
<b>Lowest</b>	96	56.6	10.2	108	57.3	10.8	121	56.9	10.8

\* Pasco irrigated was added in 2016



Table 22. 2018 WSU Variety Testing Soft Winter Wheat Trial, Almira

Variety Name <i>Club Italicized</i>	2018					2 Year Average (Bu/A)	3 Year Average (Bu/A)	5 Year Average (Bu/A)
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date			
<i>Released Varieties</i>								
<b>Xerpha</b>	<b>122</b>	60.5	8.2	41	154	110	108	95
<b>M-Press</b>	<b>122</b>	59.9	8.5	39	154			
<b>Norwest Duet</b>	<b>121</b>	61.2	8.2	47	154	127	121	
<b>Dyna-Gro Impact</b>	<b>121</b>	61.5	8.8	40	152			
<i>Pritchett</i>	<b>120</b>	59.0	7.7	43	153	109	104	87
<b>Norwest Tandem</b>	<b>120</b>	60.7	8.8	37	151	121		
<b>LCS Sonic</b>	119	60.2	7.9	40	150	115	119	
<b>SY Command</b>	119	59.1	8.1	39	152	111	107	
<b>WB1783</b>	118	62.6	8.7	42	150	115		
<i>ARS-Crescent</i>	118	59.8	7.8	39	156	108	107	86
<b>Jasper</b>	116	60.0	8.0	40	152	112		
<b>LCS Hulk</b>	115	61.9	8.3	39	151	115	116	
<b>UI Magic CL+</b>	115	61.0	8.6	38	150	106	98	
<b>WB1529</b>	114	62.0	8.5	36	150	107	106	
<b>Curiosity CL+</b>	114	61.1	8.5	44	155	106	105	89
<b>UI Sparrow</b>	113	59.5	8.4	43	155	112	111	
<i>Bruehl</i>	113	58.5	8.6	43	156	102	106	88
<b>SY Candor (09PN008#72)</b>	112	62.0	9.1	40	153			
<i>ARS-Castella (ARS20060123-31C)</i>	112	59.4	8.0	40	151	108	102	
<b>Otto</b>	111	61.1	8.3	42	156	102	104	88
<b>UI Castle CL+</b>	111	61.3	9.3	42	153	102	103	
<b>Puma</b>	111	60.9	8.7	45	152	105	105	89
<b>Mela CL+</b>	110	61.5	8.4	46	155	103	101	86
<b>WB1532</b>	110	61.1	8.9	39	153			
<b>SY Banks</b>	110	60.3	8.6	41	154	114	110	
<b>Eltan</b>	109	60.2	8.1	44	155	100	101	86
<b>ORCF-102</b>	109	61.1	8.6	44	154	105	104	85
<b>WB1604</b>	106	60.9	8.8	37	149	102	100	
<b>WB1376CLP</b>	99	<b>63.5</b>	10.1	38	151	93	92	
<b>ORCF-103</b>	97	60.0	8.6	38	156	84	88	78
<i>Experimental Lines</i>								
<b>LWW15-71945</b>	<b>129</b>	57.9	8.2	37	151			
<b>UIL 09-15702A</b>	<b>127</b>	61.0	9.4	40	151	116		
<b>KXB-01</b>	<b>125</b>	60.9	8.5	42	155	122	113	
<b>UIL 07-28017B</b>	<b>124</b>	61.6	8.7	41	151	114	111	
<b>LWW14-72916</b>	<b>120</b>	59.8	7.7	34	149			
<b>WA 8290</b>	119	60.1	7.9	44	154			
<i>ARSDH08X117-83C</i>	117	61.0	8.0	39	151			
<i>ARSWA2J100065C</i>	116	58.6	7.8	39	156			
<b>WA 8291</b>	113	60.9	8.3	48	154			
<b>OR2121086</b>	113	60.5	8.4	41	153	110		
<b>YS-205</b>	112	62.8	8.4	39	154			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Almira

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>ORI2150031 CL+</b>	112	61.5	9.3	41	153	103		
<b>WA 8270</b>	110	59.9	8.8	41	156	110		
<b>IDO1005</b>	108	60.7	9.3	41	155			
<b>WA 8271</b>	107	61.8	8.7	39	155	108		
<b>IDO1708</b>	106	58.8	8.7	38	148			
<b>KWS147</b>	100	61.7	9.9	35	150			
<b>C.V. %</b>	6	0.6	5.7	5	1	7	8	8
<b>LSD (0.05)</b>	9	0.5	0.7	3	1	8	6	5
<b>Average</b>	114	60.6	8.5	41	153	108	106	87
<b>Highest</b>	129	63.5	10.1	48	157	127	121	95
<b>Lowest</b>	97	57.9	7.7	34	148	84	88	78

### Agronomic Information

Planting Date:	9/14/2017
Harvest Date:	8/15/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	111
P (ppm-bicarb) 2-ft sample	74
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.29

Herbicide:  
Fungicides applied with herbicide application on 05/19

### Trial Notes:

1. The Almira nursery was located about 9 miles north of Almira, WA.
2. The nursery was fertilizer prior to seeding. An additional 25N was applied in spring after soil sampling.
3. Overall yield was 14% more than 2017, and grain test weight was 2.0 lb/bu more than last year.

**Cooperator** D. McKay

Table 23. 2018 WSU Variety Testing Soft Winter Wheat Trial, Anatone

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
<b>SY Candor (09PN008#72)</b>	<b>107</b>	61.1	7.3	39	149	0			
<b>LCS Sonic</b>	<b>106</b>	59.1	6.5	40	145	0	101	101	
<b>UI Sparrow</b>	<b>104</b>	58.0	6.3	41	150	0	97	96	87
<b>LCS Hulk</b>	<b>104</b>	61.4	7.3	36	147	0	98	96	
<b>WB1604</b>	<b>102</b>	60.6	7.0	36	143	0	98	98	
<b>Norwest Duet</b>	<b>101</b>	59.9	6.7	43	148	0	97	93	
<b>WB1529</b>	<b>100</b>	61.8	7.3	37	146	0	94	89	
<b>Puma</b>	<b>100</b>	60.0	6.8	42	148	0	98	97	87
<b>SY Banks</b>	<b>99</b>	59.9	6.8	38	148	0	96	96	
<i>ARS-Castella (ARS20060123-31C)</i>	<b>99</b>	59.7	6.7	41	146	0			
<b>Jasper</b>	<b>99</b>	59.8	6.8	38	147	0	100		87
<b>M-Press</b>	98	59.9	6.4	36	147	0			
<b>SY Command</b>	97	58.6	6.6	37	146	0	94	94	
<i>ARS-Crescent</i>	97	60.1	6.3	40	150	0	96	93	84
<i>Pritchett</i>	97	58.1	6.3	41	147	0	96	95	
<b>WB1783</b>	95	61.7	7.0	38	145	0	95		
<b>Xerpha</b>	95	58.7	6.2	38	149	0	94	94	86
<b>ORCF-103</b>	94	59.0	7.5	39	152	0	84	86	81
<b>ORCF-102</b>	94	60.6	7.0	40	148	0	88	87	
<b>Norwest Tandem</b>	93	60.4	6.7	34	144	0	93		
<b>Dyna-Gro Impact</b>	91	60.1	6.4	36	146	0			
<b>WB1532</b>	89	60.0	6.9	36	148	0			
<b>WB1376CLP</b>	88	<b>62.8</b>	7.9	36	145	0	86	85	
<b>UI Magic CL+</b>	87	60.3	7.0	35	145	0	87	88	
<b>UI Castle CL+</b>	86	60.0	7.0	38	148	0	86	90	
<b>Mela CL+</b>	85	59.7	6.6	44	151	0	84	85	79
<b>Eltan</b>	84	59.0	6.7	41	152	0	82	85	80
<i>Bruehl</i>	83	57.5	6.6	41	150	0	84	85	79
<b>Curiosity CL+</b>	81	58.9	6.4	43	151	3	82	88	80
<b>Otto</b>	75	59.6	6.9	42	152	3	78	86	79
<b>Experimental Lines</b>									
<b>LWW14-72916</b>	<b>109</b>	60.3	6.6	34	144	0			
<b>LWW15-71945</b>	<b>105</b>	57.3	6.3	37	146	0			
<b>WA 8291</b>	<b>101</b>	60.2	7.1	42	150	0			
<b>XB1104</b>	<b>100</b>	61.7	7.4	34	143	0			
<b>UIL 07-28017B</b>	<b>99</b>	61.0	6.7	37	144	0	93		
<b>WA 8270</b>	97	59.8	6.8	43	149	0	81		
<i>ARSDH08X117-83C</i>	97	60.3	6.1	39	145	0			
<b>UIL 09-15702A</b>	96	60.8	6.9	38	146	0	91		
<i>ARSWA2J100065C</i>	95	58.6	6.0	40	149	0			
<b>IDO1708</b>	95	58.1	6.4	37	144	0			
<b>KXB-01</b>	94	58.9	6.3	39	148	0	94	92	
<b>WA 8290</b>	93	58.5	6.7	41	148	0			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Anatone

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>OR2121086</b>	92	60.8	6.9	39	146	0	89		
<b>IDO1005</b>	91	59.4	7.4	39	149	0			
<b>ORI2150031 CL+</b>	88	60.3	7.6	39	149	0	87		
<b>YS-205</b>	86	<b>62.6</b>	6.4	37	148	0			
<b>KWS147</b>	82	61.7	7.3	35	145	0			
<b>WA 8271</b>	78	60.1	7.0	39	151	2	83		
<b>C.V. %</b>	7	0.5	4.0	2	1	414	8	9	8
<b>LSD (0.05)</b>	10	0.4	0.4	1	1	1	7	6	4
<b>Average</b>	94	59.9	6.8	39	147	0	91	91	83
<b>Highest</b>	109	62.8	7.9	44	152	3	101	101	87
<b>Lowest</b>	75	57.3	6.0	34	143	0	78	85	79

### Agronomic Information

Planting Date:	9/26/2017
Harvest Date:	7/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	190
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	6.5

### Trial Notes:

1. The Anatone nursery was located about 7 miles north of Anatone, WA.
2. The nursery was fertilizer at planting 60N 10P 10S with a no-till drill with hoe opener.
3. Overall yield was 9% greater than 2017 and grain test weight was about 1.7 lb/bu greater than last year.

**Cooperator: B Ausman**

Herbicide:

PowerFlex HL, Huskie, Tilt on 04/19



Table 24. 2018 WSU Variety Testing Hard Winter Wheat Trial, Bickleton

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Norwest Tandem	42	57.7	9.2	24		--	--
WB1783	40	60.2	10.3	27		--	--
WB1529	39	58.9	9.5	26		--	--
Curiosity CL+	38	58.1	9.4	28		--	--
M-Press	37	57.8	10.1	28		--	--
Pritchett	37	56.2	9.8	26		--	--
Xerpha	37	58.2	9.9	26	28	--	--
UI Magic CL+	36	59.0	10.7	25		--	--
LCS Sonic	36	55.1	10.2	29		--	--
Norwest Duet	36	56.8	10.7	28		--	--
UI Sparrow	36	55.8	9.6	29		--	--
ARS-Castella (ARS20060123-31C)	36	56.2	9.5	25		--	--
SY Command	36	54.3	9.7	26		--	--
Puma	36	56.7	10.1	28		--	--
LCS Hulk	36	57.3	10.3	25		--	--
Dyna-Gro Impact	35	58.8	9.9	25		--	--
ORCF-102	35	58.2	10.7	28		--	--
Eltan	35	57.0	9.8	28		--	--
ARS-Crescent	34	56.2	9.2	25		--	--
Mela CL+	34	57.6	9.7	27		--	--
Bruehl	34	57.0	9.9	27		--	--
WB1532	34	56.4	10.8	26		--	--
Otto	33	57.2	10.2	27		--	--
Jasper	33	55.2	10.3	28	29	--	--
UI Castle CL+	33	58.0	10.5	27		--	--
WB1376CLP	33	58.9	11.1	27		--	--
SY Banks	32	55.7	10.4	26		--	--
Resilience CL+	32	58.1	10.8	24		--	--
WB1604	30	56.4	10.4	26		--	--
ORCF-103	23	54.5	11.8	25		--	--
C.V. %	8	1.0	5.1	5	12	--	--
LSD (0.05)	4	0.8	0.7	2	4	--	--
Average	35	57.1	10.2	27	29	--	--
Highest	42	60.2	11.8	29	29	--	--
Lowest	23	54.3	9.2	24	28	--	--

**Agronomic Information**

Planting Date:	10/26/2017
Harvest Date:	8/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	113
P (ppm-bicarb) 2-ft sample	65
S (lb/ac) 2-ft sample	28
pH (top 6 inches)	5.89

Herbicide:  
Herbicides applied by growers

**Trial Notes:**

1. The Bickleton nursery was located about 4 miles southeast of Bickleton.
2. The nursery was fertilized at seeding with no-till hoe drill: 50N 9P 9S.
3. This was a new location in 2017 and limited data was collected.

Cooperator R Juris

Table 25.

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Colton

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Rosalyn	151	60.5	9.0	39	151	148	156	133
UI Sparrow	147	61.1	9.8	42	152	140	146	
<i>ARS-Crescent</i>	146	61.9	9.5	41	154	138	143	131
Xerpha	144	61.4	9.6	41	154	146	145	132
Norwest Duet	144	62.4	9.6	43	151	144	143	
SY Ovation	144	60.8	9.6	36	150	132	136	124
Bobtail	144	59.7	9.3	36	151	137	143	128
Jasper	144	61.7	9.4	38	151	146		
SY Dayton	143	61.7	9.6	36	150	142	146	
SY Candor (09PN008#72)	143	62.6	10.1	39	152			
LCS Artdeco	143	61.0	9.4	34	150	147	146	130
SY Raptor	139	61.9	9.5	39	150	137		
WB1529	135	63.5	9.9	35	149	131	134	
M-Press	135	62.1	9.5	37	150			
WB-528	135	62.7	10.0	38	153	127	134	119
SY Banks	135	60.9	9.1	38	153			
Dyna-Gro Impact	134	62.6	10.0	37	150			
LCS Shark	134	60.1	10.1	37	149	134		
PNW Hailey	134	63.2	9.8	39	151			
Purl (WA 8234)	133	62.4	9.6	39	149	135	144	
Puma	133	61.8	10.0	44	151	129	130	123
WB1604	132	62.3	10.0	35	150	130	137	
WB1783	131	<b>63.9</b>	9.8	37	149	132		
<i>ARS-Castella (ARS20060123-31C)</i>	131	61.6	9.6	41	151			
WB1532	131	62.8	10.3	37	152			
UI Castle CL+	130	62.6	10.4	39	152	132	139	
UI Magic CL+	130	62.4	9.9	36	149	132	137	
LCS Hulk	130	63.4	9.6	36	151	135	143	
Norwest Tandem	128	61.6	9.9	33	148	139		
LCS Drive	128	60.3	9.8	31	150	130		
UI Palouse CL+	123	61.5	9.9	36	152	121	126	
Resilience CL+	121	62.5	10.2	37	153	128	134	121
ORCF-102	121	61.8	10.3	40	152	127	130	119
Madsen	119	61.5	10.2	39	154	126	131	118
SY Assure	118	62.6	10.1	36	154	128	136	
WB1376CLP	115	<b>64.2</b>	11.3	37	150	122	124	
<i>Experimental Lines</i>								
LWW15-71945	<b>164</b>	59.4	9.5	37	150			
LWW14-74143	149	58.4	8.6	38	149			
WA 8232	149	63.5	9.5	42	153	141	144	
IDN 15-72458DH	146	61.5	9.3	39	151			
KXB-01	143	61.6	9.5	40	153	141	144	
UIL 07-28017B	138	62.2	10.1	38	151	136	141	
WA 8274 CL+	137	62.0	10.2	40	154	133		
<i>ARS06132-45C</i>	137	60.5	9.5	38	150			
LWW14-72916	136	61.6	9.4	33	148	136		

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Colton

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>IDO1708</b>	134	60.7	9.3	37	154			
<b>WA 8275 CL+</b>	134	62.5	9.9	37	151			
<b>OR2121086</b>	133	62.0	9.9	40	150	136		
<b>WA 8293</b>	128	61.9	9.8	40	152			
<i>ARSDH08X103-102C</i>	125	60.9	9.8	36	152			
<b>YS-205</b>	125	63.4	9.7	38	152			
<b>XB1104</b>	119	63.1	10.3	32	154			
<b>ORI2150031 CL+</b>	115	62.3	10.9	40	151	118		
<b>ORI2150061 CL+</b>	95	63.0	12.0	35	154			
<b>C.V. %</b>	5	0.4	2.2	3	1	7	7	6
<b>LSD (0.05)</b>	10	0.4	0.3	2	1	9	7	5
<b>Average</b>	134	61.9	9.8	38	151	134	139	125
<b>Highest</b>	164	64.2	12.0	44	154	148	156	133
<b>Lowest</b>	95	58.4	8.6	31	148	118	124	118

### Agronomic Information

Planting Date:	9/29/2017
Harvest Date:	8/22/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Lentils
Spring soil test:	
N (lb/ac) 4-ft sample	252
P (ppm-bicarb) 2-ft sample	120
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.76
Herbicides and fungicides applied by grower	

### Trial Notes:

1. The Colton nursery was located about 1 mile south of Colton, WA.
2. The nursery was fertilized at seeding with no-till hoe drill: 120N 21P 21S. No additional nitrogen was applied.
3. Overall yield was the same as 2017, and grain test weight was 1.4 lb/bu more than last year

**Cooperator** A Schultheis

Table 26. 2018 WSU Variety Testing Soft Winter Wheat Trial, Connell

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
<b>SY Command</b>	<b>78</b>	59.5	9.0	37	135	0	65	69	
<b>Jasper</b>	<b>78</b>	59.5	10.4	37	135	0	66		46
<b>Dyna-Gro Impact</b>	<b>77</b>	61.1	10.1	38	134	0			
<b>Puma</b>	<b>76</b>	60.7	9.7	41	134	0	63	66	50
<i>Pritchett</i>	<b>76</b>	58.8	9.8	36	136	0	71	70	53
<b>M-Press</b>	<b>75</b>	60.4	9.7	37	135	0			
<b>ORCF-102</b>	<b>74</b>	61.4	9.7	39	135	0	64	65	49
<b>UI Castle CL+</b>	<b>74</b>	61.0	10.8	38	134	0	57	59	
<b>Norwest Duet</b>	<b>74</b>	60.3	10.5	40	136	0	70	70	
<b>WB1376CLP</b>	<b>74</b>	<b>62.8</b>	11.0	39	133	0	52	58	
<b>LCS Sonic</b>	72	60.0	10.1	38	135	0	65	67	
<i>ARS-Castella (ARS20060123-31C)</i>	71	59.2	9.2	38	136	0	71	70	
<b>Xerpha</b>	71	59.7	9.3	38	136	0	68	70	53
<i>Bruehl</i>	71	57.3	10.0	39	138	0	61	61	47
<b>SY Banks</b>	71	59.6	9.7	37	135	0	64	65	
<b>Curiosity CL+</b>	70	60.0	9.2	40	137	0	68	66	53
<b>LCS Hulk</b>	70	61.8	10.2	36	135	0	63	66	
<b>WB1529</b>	70	61.4	10.2	35	135	0	63	65	
<b>SY Candor (09PN008#72)</b>	68	61.1	10.3	35	136	0			
<b>Norwest Tandem</b>	68	60.7	9.4	33	134	0	59		
<b>UI Magic CL+</b>	68	61.3	9.9	33	134	0	57	61	
<b>WB1604</b>	66	60.6	10.1	35	133	0	59	62	
<b>Otto</b>	66	60.0	10.4	38	140	3	63	61	48
<i>ARS-Crescent</i>	65	58.8	10.0	37	138	0	61	61	47
<b>Mela CL+</b>	65	59.8	9.5	39	137	0	68	66	51
<b>ORCF-103</b>	64	60.0	10.0	34	138	0	59	60	45
<b>Eltan</b>	64	60.0	9.4	37	138	0	61	62	50
<b>WB1783</b>	62	61.7	10.9	36	135	0	55		
<b>UI Sparrow</b>	58	59.1	10.8	35	138	0	56	56	50
<b>Experimental Lines</b>									
<b>UIL 07-28017B</b>	<b>81</b>	61.8	9.4	36	133	0	67	70	
<b>KXB-01</b>	73	60.9	9.9	39	137	0	71	72	
<b>OR2121086</b>	73	60.9	9.8	36	134	0	63		
<b>YS-205</b>	71	61.2	10.1	37	136	0			
<i>ARSDH08X117-83C</i>	71	61.6	9.9	37	136	0			
<b>WA 8290</b>	71	60.4	10.2	38	136	0			
<b>WA 8270</b>	70	58.3	11.1	38	137	0	60		
<b>ORI2150031 CL+</b>	70	60.6	11.3	38	135	0	56		
<b>UIL 09-15702A</b>	70	60.9	10.8	39	135	0	61		
<b>WA 8291</b>	69	60.1	10.0	39	138	0			
<b>KWS147</b>	68	<b>62.1</b>	10.9	35	134	0			
<b>WA 8271</b>	68	61.4	10.3	37	138	0	64		
<b>LWW15-71945</b>	67	58.9	10.2	35	135	0			
<b>IDO1005</b>	64	60.5	11.2	38	137	0			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Connell

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>LWW14-72916</b>	61	61.2	9.5	29	135	0			
<b>IDO1708</b>	61	58.3	9.7	36	134	0			
<i>ARSWA2J100065C</i>	58	57.9	9.9	35	138	0			
<b>C.V. %</b>	7	0.8	6.0	4	1	1200	9	7	7
<b>LSD (0.05)</b>	7	0.7	0.8	2	1	1	5	4	2
<b>Average</b>	70	60.3	10.1	37	136	0	63	65	49
<b>Highest</b>	81	62.8	11.3	41	140	3	71	72	53
<b>Lowest</b>	58	57.3	9.0	29	133	0	52	56	45

### Agronomic Information

Planting Date:	9/6/2017
Harvest Date:	7/24/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	252
P (ppm-bicarb) 2-ft sample	120
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.8

### Trial Notes:

1. The Connell nursery was located about 9 miles east of Connell, WA.
2. The nursery was fertilized prior to planting 100N
3. Overall yield was 30% greater than 2017 and grain test weight was about 0.8 lb/bu less than last year.

**Cooperator: Dan Bauermeister**

Herbicides and Fungicides applied by cooperator

Table 27. 2018 WSU Variety Testing Soft Winter Wheat Trial, Creston

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Norwest Duet	109	61.7	10.5	40	154	129	128	
ARS-Crescent	106	61.0	10.2	37	157	117	116	93
LCS Sonic	106	61.2	10.4	37	150	128	129	
Jasper	105	60.3	9.9	35	153	139		
Xerpha	104	61.3	9.8	36	155	123	119	101
LCS Hulk	102	63.0	10.4	34	153	125	124	
Dyna-Gro Impact	101	62.4	10.3	33	153			
SY Command	101	59.9	9.8	35	154	113	119	
M-Press	101	61.4	9.8	35	153			
Bruehl	101	60.1	10.7	37	157	114	115	95
Puma	101	61.9	10.6	38	153	122	119	96
ORCF-102	100	62.2	10.4	37	153	118	116	96
UI Sparrow	99	60.1	10.2	38	155	122	122	
ARS-Castella (ARS20060123-31C)	99	60.5	9.4	35	151	127	120	
Norwest Tandem	98	61.4	10.0	32	150	124		
Pritchett	97	59.9	10.1	36	154	118	117	96
UI Castle CL+	96	62.7	11.6	36	154	114	114	
Eltan	93	62.0	10.5	36	155	112	111	94
Curiosity CL+	93	62.0	10.3	38	155	113	112	90
Otto	92	61.3	11.0	37	156	115	112	90
WB1529	92	63.4	11.0	32	151	114	114	
WB1604	91	62.8	11.3	32	149	109	109	
SY Banks	91	60.2	10.6	34	153	118	117	
UI Magic CL+	91	62.8	11.3	33	151	117	111	
Mela CL+	90	61.6	9.9	38	155	105	105	89
WB1783	89	63.4	11.4	36	152	123		
SY Candor (09PN008#72)	88	61.8	10.3	34	154			
WB1532	83	62.0	11.4	32	152			
ORCF-103	82	61.1	10.5	35	156	98	103	88
WB1376CLP	78	63.1	11.8	33	150	91	97	
<b>Experimental Lines</b>								
LWW15-71945	113	58.8	9.4	35	152			
UIL 09-15702A	109	61.7	10.6	35	152	133		
WA 8291	107	62.0	10.2	39	155			
LWW14-72916	107	61.3	9.5	31	150			
WA 8290	105	60.9	10.5	37	154			
ARSDH08X117-83C	103	62.8	10.4	36	153			
KXB-01	103	61.4	9.9	37	154	124	122	
WA 8270	101	59.8	9.7	37	155	126		
ARSWA2J100065C	100	60.0	10.1	34	155			
UIL 07-28017B	97	61.8	10.3	36	153	122		
KWS147	97	61.8	11.0	31	152			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Creston

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>OR2121086</b>	94	61.2	10.3	37	153	114		
<b>ORI2150031 CL+</b>	91	61.1	11.5	36	153	107		
<b>WA 8271</b>	88	62.3	10.3	33	155	113		
<b>IDO1708</b>	88	60.2	11.2	33	150			
<b>YS-205</b>	87	62.4	10.6	34	153			
<b>IDO1005</b>	87	60.7	11.5	34	154			
<b>C.V. %</b>	7	0.6	6.4	3	0	8	8	7
<b>LSD (0.05)</b>	9	0.5	0.9	1	1	9	7	5
<b>Average</b>	97	61.5	10.5	35	153	118	116	93
<b>Highest</b>	113	63.4	11.8	40	157	139	129	101
<b>Lowest</b>	78	58.8	9.4	31	149	91	97	88

### Agronomic Information

Planting Date:	9/14/2017
Harvest Date:	8/9/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	200
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.25

Herbicide:

Herbicides and fungicides applied by grower

### Trial Notes:

1. The Creston nursery was located about 7 miles north of Creston, WA
2. The nursery was fertilizer by the cooperator prior to seeding and no additional applications were made
3. Overall yield was 28% less than 2017, and grain test weight was 0.4 lb/bu less than last year.

**Cooperator J Krause**

Table 28. 2018 WSU Variety Testing Soft Winter Wheat Trial, Dayton

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Rosalyn	111	60.1	8.6	36	145	133	130	107
M-Press	111	61.4	8.7	36	144			
SY Raptor	110	61.4	9.2	33	141	119		
Norwest Tandem	107	62.1	9.1	31	141	123		
LCS Artdeco	106	60.7	9.0	34	140	126	121	100
Bobtail	105	58.8	8.9	35	145	120	119	96
Xerpha	104	61.6	9.0	37	151	120	121	102
Jasper	104	60.1	9.8	37	147	111		88
Dyna-Gro Impact	104	62.6	9.2	35	144			
LCS Hulk	103	62.5	9.0	36	145	111	110	
LCS Drive	102	60.6	8.7	30	139	113		92
PNW Hailey	102	63.1	9.3	36	146			
LCS Shark	102	61.4	9.1	34	140	123		
Norwest Duet	102	62.0	9.1	41	145	115	114	
Mary	101	62.2	9.4	35	142	116	116	100
SY Dayton	101	61.8	9.3	35	146	121	118	
LCS Sonic	100	61.1	9.0	38	143	110		
SY Command	99	60.3	8.4	36	144	115		
SY Ovation	99	61.9	9.3	34	146	114	112	96
Puma	98	61.7	9.4	40	146	108	111	94
Purl (WA 8234)	98	62.6	9.2	34	143	116	114	
SY Candor (09PN008#72)	96	62.6	9.3	37	145	115		
WB-528	95	62.3	9.9	36	142	113	112	94
WB1604	95	60.1	9.6	34	142	109	108	
SY Assure	94	62.9	9.1	35	139	117	116	
ARS-Castella (ARS20060123-31C)	94	61.0	9.0	37	144		103	
UI Sparrow	94	60.3	8.7	38	151	107	108	94
WB1529	93	63.1	9.8	33	142	110	112	
WB1783	93	<b>64.0</b>	9.7	36	142	107		
ARS-Crescent	92	60.5	8.8	37	152	102	102	86
SY Banks	90	60.0	9.1	36	146	111		
Stephens	90	60.9	10.0	36	141	106		81
WB1532	89	61.1	10.4	34	151			
Madsen	87	61.7	10.3	34	150	107	106	89
<i>Experimental Lines</i>								
LWW15-71945	112	59.5	9.2	35	144			
LWW14-74143	110	59.2	7.9	35	139	130		
UIL 07-28017B	107	63.0	9.4	36	141	127	120	
IDN 15-72458DH	103	60.7	8.7	37	142			
WA 8293	101	61.1	9.1	37	148			
OR2121086	99	62.1	9.4	36	143	116		
WA 8292	99	62.0	10.1	37	149			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Dayton

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>LWW14-72916</b>	98	61.8	9.1	31	141	123		
<b>XB1104</b>	98	63.5	9.6	31	139			
<b>OR2121285</b>	95	62.2	9.9	33	143	113		
<i>ARS06132-45C</i>	95	60.1	8.9	33	145			
<b>YS-205</b>	94	62.9	9.1	32	150			
<b>WA 8232</b>	94	62.6	9.6	36	149	114	112	
<i>ARSDH08X117-83C</i>	92	62.5	9.3	37	145			
<i>ARSDH08X028-9C</i>	91	60.5	9.8	33	146			
<b>IDO1005</b>	91	61.4	10.1	38	146			
<i>ARSDH08X103-102C</i>	90	60.2	9.7	34	148			
<b>OR2130081</b>	89	61.0	9.4	38	145			
<b>IDO1708</b>	85	59.4	9.1	35	141			
<b>YS-201</b>	84	61.8	9.2	34	143			
<b>C.V. %</b>	5	0.8	4.5	4	1	5	5	6
<b>LSD (0.05)</b>	6	0.6	0.6	2	2	5	4	4
<b>Average</b>	98	61.4	9.3	35	144	115	114	94
<b>Highest</b>	112	64.0	10.4	41	152	133	130	107
<b>Lowest</b>	84	58.8	7.9	30	139	102	102	81

### Agronomic Information

Planting Date:	10/11/2017
Harvest Date:	8/1/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chickpeas
Spring soil test:	
N (lb/ac) 4-ft sample	155
P (ppm-bicarb) 2-ft sample	80
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.54
Herbicide:	
Herbicides and fungicides applied by grower	

### Trial Notes:

1. The Dayton nursery was located about 10 miles northwest of Dayton, WA.
2. The nursery was fertilizer at 125N 15P 15S 10Cl. An additional 25N was applied in the spring after soil sampling.
3. Overall yield was 23% less than 2017 and grain test weight was 1.3 lb/bu less than last year.

**Cooperator J Penner**

Table 29. 2018 WSU Variety Testing Soft Winter Wheat Trial, Dusty

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year*	5 Year**
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
PNW Hailey	101	62.5	8.9	8.9	34	139			
Norwest Tandem	100	61.3	8.3	8.3	30	139	115		
Rosalyn	98	59.6	8.1	8.1	34	141			99
LCS Artdeco	97	60.6	8.6	8.6	31	138			
ARS-Crescent	96	60.5	7.2	7.2	36	144	108	103	106
Jasper	95	60.2	8.2	8.2	35	140	107	103	109
Puma	95	61.5	8.9	8.9	37	140	106	105	106
Xerpha	94	60.7	7.7	7.7	37	142	104	98	107
Dyna-Gro Impact	93	61.4	8.5	8.5	31	140			
ARS-Castella (ARS20060123-31C)	92	60.1	7.9	7.9	36	141	101	101	
LCS Hulk	91	62.4	8.6	8.6	33	141	105		
Bobtail	91	58.3	7.9	7.9	32	142			112
LCS Shark	90	60.3	8.8	8.8	32	138			
LCS Drive	89	58.8	8.4	8.4	30	138			
SY Dayton	88	60.9	8.5	8.5	31	141			
UI Sparrow	88	60.2	8.7	8.7	36	145	104		108
UI Magic CL+	87	61.3	8.8	8.8	32	139	100		
UI Palouse CL+	87	60.8	9.2	9.2	31	141			
SY Raptor	87	59.5	8.2	8.2	33	138			
M-Press	87	60.5	7.8	7.8	33	141			
Purl (WA 8234)	85	61.1	8.3	8.3	33	140			
SY Assure	85	61.6	8.7	8.7	33	135			
Resilience CL+	85	61.4	8.8	8.8	33	144			
ORCF-102	85	61.3	9.2	9.2	34	142	96	95	
WB1783	84	62.7	9.0	9.0	33	140	100		
UI Castle CL+	84	61.8	9.0	9.0	33	144	100		
Norwest Duet	82	61.2	8.2	8.2	38	142	104	101	
SY Ovation	82	61.0	8.8	8.8	34	141		88	
WB1529	79	62.5	8.7	8.7	31	139	93	90	
WB1604	79	60.8	8.8	8.8	32	136	92		
WB1376CLP	79	<b>63.3</b>	<b>9.6</b>	9.6	33	140	91		
SY Candor (09PN008#72)	79	61.6	9.2	9.2	33	142			
WB1532	77	60.9	9.1	9.1	31	143			
WB-528	77	60.9	8.7	8.7	32	138			72
Madsen	76	61.1	8.9	8.9	32	144		79	90
SY Banks	66	59.6	8.8	8.8	32	142	99		
<b>Experimental Lines</b>									
LWW15-71945	98	58.3	7.8	7.8	33	139			
UIL 07-28017B	95	61.9	8.2	8.2	34	137	108		
KXB-01	94	61.2	8.4	8.4	35	144	104	99	
WA 8293	92	61.3	8.5	8.5	34	141			
LWW14-72916	91	59.7	7.7	7.7	29	138			
IDN 15-72458DH	89	60.6	7.9	7.9	32	139			
ARS06132-45C	87	59.2	7.8	7.8	34	140			
YS-205	86	<b>62.9</b>	<b>8.7</b>	8.7	32	142			
LWW14-74143	86	58.3	7.7	7.7	33	137	75		
WA 8274 CL+	86	61.0	9.0	9.0	33	143			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Dusty

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year*	5 Year**	
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>WA 8232</b>	83	61.9	8.3	8.3	33	141			
<b>WA 8275 CL+</b>	83	61.5	8.6	8.6	33	141			
<i>ARSDH08X103-102C</i>	82	60.5	8.7	8.7	32	143			
<b>OR2121086</b>	81	61.2	8.7	8.7	34	139	106		
<b>XB1104</b>	76	62.1	9.0	9.0	30	136			
<b>ORI2150031 CL+</b>	75	60.8	8.8	8.8	36	141	91		
<b>IDO1708</b>	72	58.5	8.6	8.6	33	139			
<b>ORI2150061 CL+</b>	60	61.3	11.3	11.3	33	139			
<b>C.V. %</b>	8	0.5	4.3	4.3	4	1	8	7	7
<b>LSD (0.05)</b>	9	0.4	0.5	0.5	2	1	7	5	4
<b>Average</b>	86	60.9	8.6	8.6	33	140	100	97	101
<b>Highest</b>	101	63.3	11.3	11.3	38	145	115	105	112
<b>Lowest</b>	60	58.3	7.2	7.2	29	135	75	79	72

### Agronomic Information

Planting Date:	9/25/2017
Harvest Date:	7/17/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	22
Previous Crop:	No-till Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	78
P (ppm-bicarb) 2-ft sample	65
S (lb/ac) 2-ft sample	15
pH (top 6 inches)	5.22
Herbicide:	
PowerFlex HL and Huskie with 4 oz/ac Tilt on 4/18/18	

### Trial Notes:

1. The Dusty nursery was located about 8 miles west of Dusty, WA.
2. The nursery was fertilized at planting 85 N 15P 15S with a no-till drill with hoe opener
3. Overall yield was 21% less than 2017 and grain test weight were also lower than 2017.

**Cooperator** T Startin

\* - 3-year data from 2018, 2017, 2015

\*\* - 5-year data from 2018, 2017, 2015, 2014, 2013

Table 30. 2018 WSU Variety Testing Soft Winter Wheat Trial, Eureka

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
<b>SY Raptor</b>	<b>107</b>	60.3	9.4	35	134	79	--	--
<b>Norwest Duet</b>	<b>101</b>	61.8	9.9	39	138	80	--	--
<b>Jasper</b>	<b>100</b>	60.3	9.7	35	138	81	--	--
<b>LCS Hulk</b>	99	62.6	10.8	35	138	78	--	--
<b>Rosalyn</b>	98	60.2	9.4	36	137	81	--	--
<b>Norwest Tandem</b>	98	61.6	9.8	32	134	78	--	--
<b>Bobtail</b>	97	58.2	10.0	33	137	85	--	--
<i>ARS-Castella (ARS20060123-31C)</i>	97	59.9	9.2	35	138	75	--	--
<b>M-Press</b>	97	61.5	9.5	35	137		--	--
<i>ARS-Crescent</i>	97	60.2	9.3	35	142	70	--	--
<b>Xerpha</b>	97	61.0	9.1	35	140	80	--	--
<b>Puma</b>	96	61.7	9.8	40	138	74	--	--
<b>SY Command</b>	95	60.0	9.3	34	136	69	--	--
<b>Dyna-Gro Impact</b>	95	61.5	10.2	35	136		--	--
<b>UI Sparrow</b>	95	60.3	9.0	36	142	70	--	--
<b>LCS Artdeco</b>	95	61.1	9.5	33	133	72	--	--
<b>PNW Hailey</b>	95	<b>63.0</b>	9.8	35	136		--	--
<b>SY Dayton</b>	94	61.2	9.6	33	138	76	--	--
<b>LCS Drive</b>	94	60.3	10.1	30	133	70	--	--
<b>SY Ovation</b>	93	61.8	9.7	34	137	72	--	--
<b>LCS Sonic</b>	93	61.6	9.6	36	136	76	--	--
<b>Mary</b>	91	61.6	10.4	34	135	70	--	--
<b>Purl (WA 8234)</b>	91	61.7	10.0	36	135	66	--	--
<b>SY Assure</b>	88	62.3	10.2	34	132	67	--	--
<b>LCS Shark</b>	88	61.3	10.8	34	135	73	--	--
<b>WB1529</b>	87	<b>63.3</b>	10.6	32	137	70	--	--
<b>WB-528</b>	87	62.1	10.3	36	134		--	--
<b>SY Banks</b>	87	60.2	10.1	35	138	71	--	--
<b>WB1532</b>	86	61.1	11.0	34	138		--	--
<b>Madsen</b>	83	60.9	10.8	34	138		--	--
<b>WB1783</b>	83	<b>63.4</b>	11.3	37	136	64	--	--
<b>Stephens</b>	83	59.9	10.5	37	135	63	--	--
<b>SY Candor (09PN008#72)</b>	81	61.3	11.3	35	138	65	--	--
<b>WB1604</b>	80	61.2	10.3	33	133		--	--
<i>Experimental Lines</i>								
<b>IDN 15-72458DH</b>	<b>102</b>	60.9	9.3	36	137		--	--
<b>LWW14-72916</b>	97	61.2	9.7	33	134	84	--	--
<i>ARS06132-45C</i>	97	59.6	8.8	34	137		--	--
<b>LWW15-71945</b>	95	59.0	9.8	33	137		--	--
<b>ARSDH08X117-83C</b>	94	61.9	9.4	35	137		--	--
<b>WA 8232</b>	94	62.8	9.8	38	138	71	--	--
<i>ARSDH08X103-102C</i>	93	60.8	9.7	35	138		--	--

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Eureka

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
OR2121086	93	61.9	9.8	37	136	73	--	--
WA 8293	93	61.0	9.7	34	139		--	--
LWW14-74143	93	60.1	9.5	34	134	70	--	--
YS-205	91	61.7	10.4	33	140		--	--
XB1104	90	<b>63.5</b>	10.7	32	131		--	--
UIL 07-28017B	90	61.9	10.1	34	135	74	--	--
WA 8292	87	61.6	11.0	34	140		--	--
OR2121285	86	61.7	10.7	34	136	71	--	--
ARSDH08X028-9C	85	60.1	9.8	32	138			
OR2130081	83	60.5	10.4	36	138			
YS-201	80	61.2	10.6	34	137			
IDO1005	79	61.0	11.0	35	139			
IDO1708	79	58.6	10.0	35	135			
<b>C.V. %</b>	5	0.6	4.1	4	1	6	--	--
<b>LSD (0.05)</b>	7	0.5	0.5	2	1	5	--	--
<b>Average</b>	92	61.1	10.0	35	137	73	--	--
<b>Highest</b>	107	63.5	11.3	40	142	85	--	--
<b>Lowest</b>	79	58.2	8.8	30	131	63	--	--

### Agronomic Information

Planting Date:	10/5/2017
Harvest Date:	7/18/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	193
P (ppm-bicarb) 2-ft sample	51
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	5.42
Herbicide:	
4 oz/ac propiconazole was applied with herbicide application	

### Trial Notes:

1. The Eureka nursery was located about 17 miles west of Prescott, WA.
2. Base fertilizer was 100N 20P 20S
3. Yield was 77% greater than 2017 and grain test weight were 2.3 lb/bu lower than 2017.

**Cooperator** G Struthers

Table 31. 2018 WSU Variety Testing Soft Winter Wheat Trial, Fairfield

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Rosalyn	77	59.0	8.4	32	153	100	112	101
ORCF-102	76	60.6	10	34	153	91	99	
Norwest Tandem	76	60.9	10	28	152	99		
Bobtail	76	57.8	8.9	30	154	92	98	95
PNW Hailey	75	62.4	10.1	32	153			
SY Ovation	75	59.8	9.3	29	151	85	93	90
Norwest Duet	74	60.3	9.5	36	156	97	104	
ARS-Crescent	74	60.2	9.3	33	158	98	109	107
Jasper	74	59.2	9.8	31	153	92		
UI Sparrow	73	59.8	9.9	34	156	83	99	98
Puma	72	60.8	9.7	35	153	89	98	93
Xerpha	72	60.6	9.6	31	154	91	100	94
SY Candor (09PN008#72)	72	60.9	9.9	31	153			
LCS Artdeco	71	59.6	9.3	27	152	85	94	91
UI Palouse CL+	71	58.9	9.9	30	153	87	96	
LCS Hulk	70	61.5	9.8	32	154	91	99	
SY Assure	70	61.2	10.2	28	151	92	96	
M-Press	69	60.4	9.4	30	153			
ARS-Castella (ARS20060123-31C)	69	59.2	9	30	153			
LCS Shark	68	59.5	10.4	30	151	87		
Resilience CL+	67	60.8	10.6	31	155	86	95	
UI Magic CL+	67	61.1	10.2	28	151	82	88	
UI Castle CL+	67	61.0	10.8	34	156	84	95	
WB1604	67	61.3	10	29	151	83	91	
Dyna-Gro Impact	66	61.2	10.2	30	153			
Purl (WA 8234)	65	60.9	9.7	30	152	85	97	
SY Dayton	63	60.2	9.8	29	152	89	98	
WB1532	62	60.5	10.8	28	154			
WB1783	61	60.9	10.8	30	153	81		
SY Raptor	61	60.3	9.7	30	153	82		
Madsen	61	59.9	9.7	31	157	81	91	91
LCS Drive	60	59.0	10.5	26	152	76		
WB1376CLP	60	62.0	11.2	31	152	77	82	
WB1529	59	60.7	10.5	29	152	89	94	
SY Banks	54	58.2	9.5	31	156			
WB-528	48	58.6	10.7	31	152	78	87	85
<i>Experimental Lines</i>								
LWW14-74143	80	57.7	8.6	33	152			
UIL 07-28017B	79	61.8	10	31	152	93	99	
IDN 15-72458DH	77	60.1	9.5	33	152			
LWW15-71945	76	57.9	9.1	30	153			
WA 8274 CL+	75	60.1	10.6	33	155	90		

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Fairfield

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>KXB-01</b>	73	60.6	10.4	33	155	95	102	
<b>LWW14-72916</b>	72	59.8	9	28	152	92		
<b>WA 8232</b>	68	60.9	9.2	31	154	89	97	
<b>WA 8293</b>	68	60.7	10.4	33	155			
<b>WA 8275 CL+</b>	67	60.2	9.9	31	154			
<i>ARS06132-45C</i>	65	58.5	9.6	27	153			
<i>ARSDH08X103-102C</i>	65	59.1	9.7	30	155			
<b>OR2121086</b>	62	59.2	9.8	31	153	83		
<b>ORI2150031 CL+</b>	61	60.0	10.5	32	154	75		
<b>YS-205</b>	60	60.6	10.2	31	157			
<b>XB1104</b>	58	61.1	10.3	26	151			
<b>IDO1708</b>	58	58.3	9.9	28	151			
<b>ORI2150061 CL+</b>	52	60.4	11.5	29	151			
<b>C.V. %</b>	10	1.2	4.9	5	1	12	10	9
<b>LSD (0.05)</b>	9	1.0	0.7	2	2	10	7	5
<b>Average</b>	68	60.1	9.9	31	153	87	97	94
<b>Highest</b>	80	62.4	11.5	36	158	100	112	107
<b>Lowest</b>	48	57.7	8.4	26	151	75	82	85

\* - 5-year data from 2018, 2017, 2016, 2014, 2013

### Agronomic Information

Planting Date:	9/29/2017
Harvest Date:	8/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Lentils
Spring soil test:	
N (lb/ac) 4-ft sample	185
P (ppm-bicarb) 2-ft sample	40
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.64

### Trial Notes:

1. The Fairfield nursery was located about 6 miles west of Fairfield, WA.
2. The nursery was fertilized at seeding with no-till hoe drill: 100N 17P 17S.
3. Overall yield was 34% less than 2017, and grain test weight was 0.3 lb/bu less than last year.

**Cooperator** D Degon

Table 32. 2018 WSU Variety Testing Soft Winter Wheat Trial, Farmington

Variety Name <i>Club Italicized</i>	2018					2 Year*	3 Year**	5 Year***
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Rosalyn	150	61.0	8.3	39	151	161	139	122
LCS Artdeco	144	61.7	8.9	36	148	150	125	118
Jasper	144	61.9	8.5	40	154			
SY Ovation	141	61.3	9.0	37	148	139	120	110
Bobtail	141	59.7	8.3	38	151	146	121	112
UI Castle CL+	141	62.6	8.9	41	152	144		
LCS Drive	137	60.3	9.8	33	149			
SY Dayton	137	62.1	8.8	37	153	136		
ARS-Castella (ARS20060123-31C)	136	61.6	8.5	43	150	141	123	
LCS Hulk	136	63.1	10.0	39	152	145		
Norwest Duet	136	62.0	8.5	45	153	147		
SY Raptor	136	61.9	9.0	38	152			
WB1604	135	62.7	9.3	37	148	136	111	
UI Sparrow	135	60.6	8.9	44	154	140		
Xerpha	135	61.2	8.3	40	154	144	128	119
SY Assure	135	62.9	9.6	35	147	142		
Norwest Tandem	133	62.4	9.1	34	149			
M-Press	132	61.4	8.4	36	152			
UI Magic CL+	132	62.2	8.7	36	147	137		
Purl (WA 8234)	131	62.6	8.4	38	150	140	125	
PNW Hailey	130	63.5	8.5	40	153			
Dyna-Gro Impact	130	61.7	9.7	39	152			
LCS Shark	130	60.9	9.0	38	149			
SY Banks	129	61.8	8.6	39	153			
SY Candor (09PN008#72)	129	63.0	9.7	39	153			
Puma	129	61.8	8.6	43	152	144	133	119
ARS-Crescent	128	60.9	8.4	40	154	137	124	112
WB-528	125	62.8	9.5	39	148	131	115	107
WB1783	124	64.0	9.2	39	150			
ORCF-102	123	62.6	9.1	41	153	136	117	
UI Palouse CL+	122	61.4	9.1	37	153	130		
WB1529	120	63.8	9.6	37	148	121	106	
Resilience CL+	119	61.9	9.4	38	154	130	115	
WB1532	118	62.5	8.9	38	152			
Madsen	117	61.8	9.7	39	154	129	112	103
WB1376CLP	114	<b>64.9</b>	9.7	38	149	115		
<b>Experimental Lines</b>								
LWW14-74143	152	59.2	7.8	38	148			
IDN 15-72458DH	150	61.6	8.6	40	150			
LWW15-71945	148	59.5	8.7	38	150			
KXB-01	139	60.9	9.2	41	153	148		
WA 8232	138	63.2	8.0	42	154	149	135	
ARS06132-45C	137	60.5	8.8	39	152			
LWW14-72916	136	62.8	9.0	35	149			
UIL 07-28017B	135	62.8	8.9	38	150	139		
XB1104	130	64.0	10.0	34	148			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Farmington

Variety Name <i>Club Italicized</i>	2018					2 Year*	3 Year**	5 Year***
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>WA 8293</b>	130	61.5	9.2	41	153			
<b>WA 8275 CL+</b>	129	62.2	9.6	38	154			
<b>OR2121086</b>	129	62.5	8.8	40	150			
<b>YS-205</b>	128	64.0	9.0	39	153			
<i>ARSDH08X103-102C</i>	123	61.8	9.1	37	152			
<b>IDO1708</b>	123	61.0	9.1	37	147			
<b>WA 8274 CL+</b>	123	61.2	10.0	39	153			
<b>OR12150031 CL+</b>	120	62.3	9.9	39	154			
<b>OR12150061 CL+</b>	103	63.8	11.4	35	148			
<b>C.V. %</b>	4	0.8	6.4	3	1	6	6	6
<b>LSD (0.05)</b>	7	0.6	0.8	2	2	7	6	4
<b>Average</b>	132	62.0	9.1	39	151	139	122	114
<b>Highest</b>	152	64.9	11.4	45	154	161	139	122
<b>Lowest</b>	103	59.2	7.8	33	147	115	106	103

### Agronomic Information

Planting Date:	10/4/2017
Harvest Date:	8/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Chickpeas
Spring soil test:	
N (lb/ac) 4-ft sample	181
P (ppm-bicarb) 2-ft sample	94
S (lb/ac) 2-ft sample	40
pH (top 6 inches)	5.2

### Trial Notes:

1. The Farmington nursery was located about 1 mile south west of Farmington, WA
2. The nursery was fertilized prior to seeding with 113N 20S 5P.
3. Overall yield was 13% more than in 2017, and grain test weight was 0.4 lb/bu more than in 2017

**Cooperator** B Nelson

\* - 2-year data from 2018, 2016

\*\* - 3-year data from 2018, 2016, 2015

\*\*\* - 5-year data from 2018, 2016, 2015, 2014, 2013

Table 33.

### 2018 WSU Variety Testing Soft Winter Wheat Trial, Harrington

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<b>LCS Sonic</b>	<b>76</b>	<b>59.7</b>	9.4	32	78	77	
<i>Pritchett</i>	<b>73</b>	57.6	8.5	34	69	70	
<b>Xerpha</b>	<b>72</b>	58.9	8.6	32	73	79	75
<b>WB1604</b>	<b>72</b>	<b>59.8</b>	10.2	30	71	72	
<b>Norwest Duet</b>	71	59.1	9.3	37	76	77	
<b>SY Command</b>	71	58.2	9.6	32	70	76	
<b>LCS Hulk</b>	70	<b>60.9</b>	10.0	30	78	80	
<i>ARS-Crescent</i>	70	58.5	8.5	32	70	73	72
<b>Dyna-Gro Impact</b>	70	<b>59.9</b>	8.7	31			
<i>ARS-Castella (ARS20060123-31C)</i>	69	57.8	9.4	29	72	76	
<b>SY Candor (09PN008#72)</b>	69	<b>60.0</b>	10.1	31			
<b>M-Press</b>	68	59.1	9.7	29			
<b>Jasper</b>	67	59.0	9.1	32	73		
<b>WB1529</b>	67	<b>60.5</b>	9.8	30	71	73	
<b>Curiosity CL+</b>	66	59.2	8.5	36	70	70	70
<b>Norwest Tandem</b>	65	58.9	9.3	28	67		
<b>UI Sparrow</b>	65	58.7	10.2	33	66	73	72
<b>UI Castle CL+</b>	64	<b>60.0</b>	9.9	32	68	68	
<b>UI Magic CL+</b>	64	59.5	9.2	30	72	71	
<b>Mela CL+</b>	64	<b>60.0</b>	9.7	36	71	73	69
<b>ORCF-102</b>	64	59.3	9.3	35	68	72	
<b>SY Banks</b>	63	59.1	10.1	31	70	74	
<b>Eltan</b>	63	<b>60.3</b>	8.8	32	66	65	65
<b>Puma</b>	63	59.0	9.2	35	65	71	66
<i>Bruehl</i>	61	57.8	10.1	32	71	74	71
<b>WB1783</b>	60	<b>60.3</b>	10.2	34	66		
<b>Otto</b>	59	<b>59.9</b>	10.0	32	66	70	69
<b>WB1376CLP</b>	56	<b>60.2</b>	10.3	31	61	67	
<b>ORCF-103</b>	46	58.6	10.5	30	54	59	60
<b>Experimental Lines</b>							
<b>UIL 07-28017B</b>	<b>79</b>	<b>59.9</b>	9.0	33	83	83	
<b>KWS147</b>	<b>76</b>	<b>60.0</b>	9.8	29			
<b>LWW15-71945</b>	<b>76</b>	56.5	9.0	30			
<b>UIL 09-15702A</b>	<b>76</b>	<b>59.9</b>	9.1	33	77		
<i>ARSDH08X117-83C</i>	<b>73</b>	<b>59.9</b>	8.7	32			
<b>KXB-01</b>	<b>72</b>	58.6	9.6	33	83	83	
<b>WA 8291</b>	71	<b>59.9</b>	10.2	36			
<b>LWW14-72916</b>	71	57.7	8.5	26			
<b>WA 8270</b>	70	57.8	9.4	33	72		

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Harrington

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>WA 8271</b>	69	<b>60.6</b>	9.2	32	68		
<b>YS-205</b>	65	<b>60.7</b>	9.6	32			
<i>ARSWA2J100065C</i>	65	57.4	8.6	29			
<b>ORI2150031 CL+</b>	64	<b>59.6</b>	10.7	32	65		
<b>WA 8290</b>	63	59.0	9.9	34			
<b>IDO1005</b>	60	58.4	10.4	31			
<b>IDO1708</b>	56	58.1	10.0	30			
<b>OR2121086</b>	54	58.3	10.5	34	62		
<b>C.V. %</b>	7	1.6	7.2	4	9	9	9
<b>LSD (0.05)</b>	7	1.3	0.9	2	6	5	4
<b>Average</b>	67	59.2	9.5	32	70	73	69
<b>Highest</b>	79	60.9	10.7	37	83	83	75
<b>Lowest</b>	46	56.5	8.5	26	54	59	60

### Agronomic Information

Planting Date:	9/11/2017
Harvest Date:	8/1/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	154
P (ppm-bicarb) 2-ft sample	76
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.36
Herbicide:	
No fungicides applications	

### Trial Notes:

1. The Harrington nursery was located about 7 miles west of Harrington, WA.
2. The nursery was fertilizer at 55N 10P prior to seeding.
3. Overall yield was 8% less than 2017 and grain test weight was 0.2 lb/bu less than last year.

**Cooperator** M Kramer

\* - 5-year data from 2018, 2017, 2016, 2014, 2013

Table 34.

### 2018 WSU Variety Testing Soft Winter Wheat Trial, Horse Heaven

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<b>Xerpha</b>	<b>65</b>	60.1	10.2	32	50	46	41
<i>Pritchett</i>	<b>63</b>	58.8	10.5	31	49	44	
<i>ARS-Crescent</i>	<b>63</b>	59.0	10.4	29	46	40	37
<i>ARS-Castella (ARS20060123-31C)</i>	<b>62</b>	58.4	10.1	29	49	45	
<b>Curiosity CL+</b>	<b>62</b>	60.8	10.4	33	51	47	42
<b>SY Command</b>	<b>62</b>	58.4	9.8	29	46	43	
<b>Dyna-Gro Impact</b>	<b>62</b>	60.8	10.3	29			
<b>Norwest Tandem</b>	<b>60</b>	59.7	10.3	27	45		
<b>WB1529</b>	<b>59</b>	61.5	10.9	27	44	42	
<b>WB1783</b>	<b>59</b>	61.7	11.1	29	44		
<b>LCS Hulk</b>	<b>59</b>	60.8	10.8	30	49	45	
<b>M-Press</b>	57	59.9	10.5	29			
<b>Puma</b>	57	60.0	11.1	33	45	43	39
<b>Jasper</b>	55	57.7	11.0	29	44		40
<b>LCS Sonic</b>	55	58.5	11.5	30	46	44	
<b>UI Sparrow</b>	55	59.3	10.5	32	45	42	39
<b>ORCF-102</b>	55	60.2	11.2	32	44	43	
<b>Mela CL+</b>	54	61.0	10.5	34	47	45	41
<b>SY Banks</b>	54	57.8	10.8	31	44	41	
<b>Otto</b>	53	60.4	11.0	34	42	40	38
<b>Eltan</b>	53	60.0	10.9	31	45	43	39
<b>WB1376CLP</b>	53	61.1	11.6	31	43	40	
<b>Norwest Duet</b>	53	59.7	10.8	31	45	43	
<b>SY Candor (09PN008#72)</b>	52	59.4	11.5	29			
<b>UI Magic CL+</b>	51	61.0	11.3	27	42	40	
<b>UI Castle CL+</b>	51	59.6	11.4	31	42	39	
<i>Bruehl</i>	49	59.0	11.5	33	41	39	37
<b>WB1604</b>	47	60.5	10.6	29	38	37	
<b>WB1532</b>	46	58.9	12.2	28			
<b>ORCF-103</b>	43	60.8	11.6	30	36	36	35
<b>Experimental Lines</b>							
<b>WA 8270</b>	<b>62</b>	58.7	10.6	32	48		
<b>KXB-01</b>	<b>61</b>	60.0	10.4	33	53	48	
<b>LWW15-71945</b>	<b>61</b>	57.5	10.4	30			
<b>IDO1708</b>	<b>61</b>	58.0	10.2	32			
<i>ARSWA2J100065C</i>	<b>60</b>	56.8	10.5	28			
<b>OR2121086</b>	<b>58</b>	60.1	10.9	33	46		
<b>LWW14-72916</b>	<b>58</b>	60.2	9.8	27			
<b>UIL 09-15702A</b>	57	60.3	11.4	30	41		
<b>UIL 07-28017B</b>	55	59.9	10.3	29	41	40	
<b>WA 8291</b>	54	59.5	11.8	32			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Horse Heaven

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>YS-205</b>	54	60.1	11.0	29			
<b>WA 8290</b>	54	59.7	10.7	32			
<i>ARSDH08X117-83C</i>	54	60.2	11.4	28			
<b>WA 8271</b>	54	60.3	11.0	30	44		
<b>IDO1005</b>	50	60.2	11.6	30			
<b>ORI2150031 CL+</b>	49	58.8	12.1	29	42		
<b>XB1104</b>	44	<b>62.6</b>	11.0	26			
<b>KWS147</b>	40	61.6	11.3	27			
<b>C.V. %</b>	9	1.0	3.3	5	9	8	8
<b>LSD (0.05)</b>	7	0.8	0.5	2	4	3	2
<b>Average</b>	55	59.8	10.9	30	45	42	39
<b>Highest</b>	65	62.6	12.2	34	53	48	42
<b>Lowest</b>	40	56.8	9.8	26	36	36	35

### Agronomic Information

Planting Date:	10/26/2017
Harvest Date:	7/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	No-till Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	138
P (ppm-bicarb) 2-ft sample	46
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.8

### Trial Notes:

1. The Horse Heavens nursery was located about 14 miles southwest of Benton City, WA.
2. The nursery was fertilized at planting 35N 6P 6S with a no-till hoe drill.
3. Overall yield was 67% greater than 2017.

**Cooperator** C Smith

Herbicide: Tilt at 4 oz/ac was applied with herbicide on 04/20/17

\* 5-Year average from 2018, 2017, 2016, 2014, 2013

Table 35. 2018 WSU Variety Testing Soft Winter Wheat Trial, Lind

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Xerpha</b>	<b>87</b>	60.6	9.5	38	143	73	67	54
<b>M-Press</b>	<b>87</b>	61.4	9.0	38	140			
<b>SY Command</b>	<b>87</b>	60.2	9.1	37	139	66	66	
<i>ARS-Crescent</i>	<b>84</b>	61.4	9.4	38	144	70	67	54
<b>Dyna-Gro Impact</b>	<b>83</b>	62.3	10.1	35	140			
<b>Jasper</b>	<b>82</b>	60.5	10.3	38	141	67		50
<b>Norwest Duet</b>	<b>82</b>	61.8	10.6	42	142	76	71	
<b>LCS Sonic</b>	<b>80</b>	60.6	9.7	38	139	74	71	
<b>ORCF-102</b>	<b>79</b>	61.4	10.1	39	140	68	64	49
<b>WB1783</b>	<b>78</b>	<b>63.4</b>	11.1	38	140			
<i>ARS-Castella (ARS20060123-31C)</i>	77	62.0	8.9	39	140	77	72	
<i>Pritchett</i>	77	60.3	9.6	39	143	69	65	52
<b>Puma</b>	77	61.5	10.2	38	140	63	63	51
<b>Norwest Tandem</b>	76	61.6	9.9	33	137	67		
<b>UI Sparrow</b>	76	59.8	8.7	39	143	64	63	54
<b>LCS Hulk</b>	76	62.6	10.4	36	140	71	69	
<i>Bruehl</i>	75	60.0	9.4	38	144	63	65	50
<b>Curiosity CL+</b>	73	60.6	8.2	40	144	68	65	53
<b>Otto</b>	73	61.3	10.6	37	144	68	66	54
<b>Mela CL+</b>	72	60.8	8.9	40	144	70	66	55
<b>SY Candor (09PN008#72)</b>	72	62.3	9.7	36	140			
<b>SY Banks</b>	72	60.6	9.4	36	140	67	64	
<b>WB1529</b>	71	<b>63.0</b>	9.5	36	135	63	64	
<b>UI Magic CL+</b>	71	62.7	10.0	34	135	57	54	
<b>UI Castle CL+</b>	70	61.7	9.1	36	140	58	56	
<b>WB1376CLP</b>	69	<b>63.5</b>	11.1	39	139	56	57	
<b>WB1604</b>	68	62.2	9.9	37	133	60	57	
<b>Eltan</b>	67	61.0	9.4	38	144	60	56	48
<b>ORCF-103</b>	61	60.4	8.8	35	143	48	48	42
<b>Experimental Lines</b>								
<b>UIL 07-28017B</b>	<b>92</b>	62.3	9.2	37	138	72	66	
<b>KXB-01</b>	<b>89</b>	61.1	10.3	37	143	81	74	
<b>WA 8271</b>	<b>89</b>	62.0	10.0	36	143	79		
<b>UIL 09-15702A</b>	<b>85</b>	61.9	10.6	37	137	70		
<i>ARSDH08X117-83C</i>	<b>84</b>	62.1	9.0	37	140			
<b>WA 8270</b>	<b>84</b>	60.9	10.5	38	143	73		
<b>YS-205</b>	<b>83</b>	61.3	11.2	37	142			
<b>WA 8290</b>	80	61.3	10.2	39	142			
<b>IDO1005</b>	79	61.6	11.3	37	141			
<b>LWW15-71945</b>	79	60.0	9.2	35	140			
<b>IDO1708</b>	78	60.3	10.3	38	137			
<b>WA 8291</b>	74	61.3	10.4	40	143			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Lind

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>OR2121086</b>	73	61.4	8.8	38	138	62		
<b>ORI2150031 CL+</b>	71	62.0	10.3	36	140	59		
<i>ARSWA2J100065C</i>	70	59.1	7.9	36	143			
<b>KWS147</b>	65	62.7	11.2	35	139			
<b>LWW14-72916</b>	65	62.1	9.4	32	137			
<b>C.V. %</b>	8	0.7	7.1	3	1	10	9	9
<b>LSD (0.05)</b>	9	0.6	1.0	1	2	7	5	3
<b>Average</b>	77	61.4	9.8	37	140	67	64	51
<b>Highest</b>	92	63.5	11.3	42	144	81	74	55
<b>Lowest</b>	61	59.1	7.9	32	133	48	48	42

### Agronomic Information

Planting Date:	9/4/2017
Harvest Date:	7/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	222
P (ppm-bicarb) 2-ft sample	21
S (lb/ac) 2-ft sample	27
pH (top 6 inches)	6.0

### Trial Notes:

1. The Lind nursery was located about 3.5 miles northeast of Lind, WA.
2. The nursery was fertilized prior to planting 50N 10S.
3. Overall yield was 40% greater than 2017 and test weights are similar.

**Cooperator: WSU Lind Dryland Experiment Station**

Table 36. 2018 WSU Variety Testing Soft Winter Wheat Trial, Mayview

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
<b>SY Ovation</b>	<b>133</b>	61.0	9.6	36	147	114	114	96
<b>SY Assure</b>	132	63.1	10.4	34	144	113	116	
<b>UI Magic CL+</b>	130	62.6	10.5	35	146	114	114	
<b>Rosalyn</b>	129	60.2	9.0	37	150	115	119	98
<b>Bobtail</b>	128	59.8	9.2	37	151	110	112	94
<b>LCS Hulk</b>	128	63.0	10.4	37	150	111	112	
<b>PNW Hailey</b>	127	<b>63.2</b>	10.5	38	150			
<b>Dyna-Gro Impact</b>	127	62.2	10.0	37	149			
<b>Norwest Duet</b>	127	62.1	9.5	43	151	109	90	
<b>LCS Artdeco</b>	125	61.1	9.5	35	144	113	117	94
<b>Jasper</b>	125	61.7	9.9	38	150	114		
<b>Puma</b>	125	62.0	10.3	43	150	105	95	85
<b>LCS Drive</b>	124	60.0	10.0	31	144	110		
<b>Norwest Tandem</b>	123	62.1	10.1	33	147	109		
<b>M-Press</b>	122	61.6	9.2	36	149			
<b>WB1604</b>	122	62.0	10.3	37	145	110	112	
<i>ARS-Crescent</i>	122	61.7	8.9	38	153	109	109	89
<b>UI Castle CL+</b>	122	62.7	10.7	40	150	105	98	
<b>LCS Shark</b>	122	60.4	9.7	34	145	113		
<b>SY Candor (09PN008#72)</b>	120	62.6	10.0	35	150			
<b>WB-528</b>	119	62.9	10.2	37	147	108	109	92
<b>Xerpha</b>	119	61.9	10.1	38	152	110	103	89
<b>SY Raptor</b>	118	61.4	9.5	37	149	112		
<b>SY Dayton</b>	118	61.7	9.4	35	148	110	115	
<b>UI Sparrow</b>	116	60.5	9.7	40	153	103	104	
<b>Purl (WA 8234)</b>	114	62.5	9.8	35	148	108	106	
<b>WB1783</b>	114	<b>63.7</b>	11.1	36	149	101		
<b>WB1529</b>	114	<b>63.4</b>	10.1	35	148	107	104	
<b>Resilience CL+</b>	112	62.1	9.9	37	151	105	107	91
<b>UI Palouse CL+</b>	110	60.7	9.7	37	151	97	98	
<b>ORCF-102</b>	109	62.1	10.3	38	150	104	103	92
<b>WB1532</b>	107	62.4	10.7	35	151			
<b>Madsen</b>	106	61.4	10.6	35	152	100	101	85
<b>SY Banks</b>	104	60.8	10.0	35	150			
<b>WB1376CLP</b>	101	<b>63.7</b>	11.1	36	148	94	94	
<i>ARS-Castella (ARS20060123-31C)</i>	100	60.8	9.2	40	149			
<i>Experimental Lines</i>								
<b>IDN 15-72458DH</b>	<b>139</b>	61.4	9.7	38	146			
<b>LWW14-72916</b>	<b>137</b>	62.0	9.4	33	145	117		
<b>LWW14-74143</b>	<b>136</b>	59.2	9.0	38	145			
<b>LWW15-71945</b>	<b>136</b>	59.6	9.8	37	150			
<b>KXB-01</b>	124	61.9	10.3	40	152	118	113	

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Mayview

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>WA 8232</b>	123	<b>63.2</b>	9.7	37	150	111	111	
<b>UIL 07-28017B</b>	122	62.4	10.4	37	147	109	112	
<i>ARSDH08X103-102C</i>	120	62.7	10.4	36	150			
<b>IDO1708</b>	120	60.4	9.6	37	144			
<b>XB1104</b>	118	<b>63.7</b>	10.2	32	144			
<b>WA 8275 CL+</b>	117	61.9	10.1	37	151			
<b>WA 8293</b>	117	62.1	10.0	36	150			
<b>YS-205</b>	117	<b>63.4</b>	10.5	36	151			
<b>OR2121086</b>	116	62.1	10.2	38	149	105		
<i>ARS06132-45C</i>	114	60.9	10.0	37	150			
<b>ORI2150031 CL+</b>	108	62.4	10.3	39	150	94		
<b>WA 8274 CL+</b>	106	61.5	10.5	36	151	99		
<b>ORI2150061 CL+</b>	89	62.9	11.7	33	146			
<b>C.V. %</b>	5	0.6	5.9	3	1	6	7	7
<b>LSD (0.05)</b>	8	0.5	0.8	2	1	6	6	4
<b>Average</b>	119	61.9	10.0	37	149	108	107	91
<b>Highest</b>	139	63.7	11.7	43	153	118	119	98
<b>Lowest</b>	89	59.2	8.9	31	144	94	90	85

### Agronomic Information

Planting Date:	10/2/2017
Harvest Date:	8/8/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	264
P (ppm-bicarb) 2-ft sample	77
S (lb/ac) 2-ft sample	42
pH (top 6 inches)	5.01
Herbicide:	
Herbicides and fungicides applied by grower	

### Trial Notes:

1. The Mayview nursery was located about 20 miles northeast of Pomeroy, WA.
2. The nursery was fertilizer at 85N 12S.
3. Overall yield was 27% more than 2017 and grain test weight was 1.7 lb/bu more than last year.

**Cooperator** Roger and Randy Koller

Table 37.

**2018 WSU Variety Testing Soft Winter Irrigated Wheat Trial, Moses Lake**

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Norwest Duet	96	59.3	11.9	31	150	112	124	
Resilience CL+	96	60.8	12.4	28	148		121	129
WB1604	96	60.7	12.0	24	144	110	119	
PNW Hailey	95	60.7	12.2	29	148			
LCS Hulk	95	60.1	12.7	26	147	111	127	
LCS Artdeco	95	59.3	11.0	25	148	108	126	133
Jasper	94	57.4	12.7	30	150	106		128
LCS Drive	94	59.5	11.9	22	145	109		120
UI Magic CL+	94	61.1	11.9	26	146	108	119	
Norwest Tandem	93	59.3	11.9	24	146	109		
SY Assure	93	61.4	11.8	24	141	108	126	
Dyna-Gro Impact	92	59.7	12.4	27	144			
SY Raptor	91	56.9	12.4	27	147			
Puma	91	58.9	12.8	31	150	106	118	127
UI Palouse CL+	90	58.5	12.7	26	146	97	110	
Bobtail	89	57.2	11.6	27	148	102	116	124
Purl (WA 8234)	88	58.5	12.4	27	149	107		
WB1529	88	61.1	11.6	23	145	106	112	
LCS Shark	87	59.7	12.3	24	150	106	126	
WB1783	85	61.3	13.2	28	149	103		
SY Ovation	84	58.7	12.4	26	150	100	123	134
Rosalyn	84	58.3	11.7	26	148	104	120	121
UI Castle CL+	82	59.8	13.0	30	149	96	113	
WB-528	82	59.9	12.2	24	146	105		126
SY Dayton	81	57.3	12.6	26	151	100	118	
WB1376CLP	77	61.4	13.4	25	146	94	109	
WB1532	75	57.2	14.4	27	146			
<i>Experimental Lines</i>								
LWW15-71945	100	57.4	11.8	26	146			
LWW14-72916	99	61.6	11.1	24	146	111		
LWW14-74143	99	58.5	10.6	26	147	120		
XB1104	94	61.5	12.0	23	142			
IDN 15-72458DH	94	58.4	11.6	27	148			
WA 8275 CL+	93	60.1	12.3	27	146			
WA 8274 CL+	93	58.4	13.0	29	147			
ORI2150031 CL+	92	58.8	13.1	32	147	96		
UIL 07-28017B	91	60.2	12.4	22	146	111	128	
OR2121086	83	58.2	12.5	28	148	98		
ORI2150061 CL+	80	61.2	13.6	27	142			
WA 8293	80	58.1	13.0	28	151			
WA 8232	80	58.7	12.7	28	152	102	117	
IDO1708	71	54.7	12.6	26	146			
YS-205	71	58.2	12.9	27	153			

## 2018 WSU Variety Testing Soft Winter Irrigated Wheat Trial, Moses Lake

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>C.V. %</b>	9	1.4	3.3	6	1	7	8	9
<b>LSD (0.05)</b>	11	1.1	0.6	2	2	7	7	6
<b>Average</b>	89	59.2	12.4	27	147	105	120	127
<b>Highest</b>	100	61.6	14.4	32	153	120	128	134
<b>Lowest</b>	71	54.7	10.6	22	141	94	109	120

### Agronomic Information

Planting Date:	10/18/2017
Harvest Date:	8/2/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	366
P (ppm-bicarb) 2-ft sample	50
S (lb/ac) 2-ft sample	173
pH (top 6 inches)	6.17
Herbicide:	
	Huskie, Tilt on 04/19

### Trial Notes:

1. The Moses Lake nursery was located about 21 miles northeast of Moses Lake, WA.
2. The nursery was fertilizer at 215N 20P 50S. No additional N was applied in the spring after soil sampling.
3. Overall yield was 25% less than 2017 and grain test weight was 1.1 lb/bu less than last year.

**Cooperator** S Stahl

Table 38. 2018 WSU Variety Testing Soft Winter Irrigated Wheat Trial, Pasco

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>									
SY Assure	107	58.8	13.2	31	126	0	122	122	--
LCS Drive	105	58.3	12.9	30	125	0	120		--
WB1783	103	59.3	13.4	36	132	0	119		--
LCS Shark	100	58.3	12.8	36	127	0	120	127	--
SY Raptor	100	55.5	12.6	32	128	0			--
LCS Artdeco	99	58.3	12.2	29	127	0	121	124	--
WB1529	98	55.4	12.9	32	132	0	115	114	--
SY Ovation	97	55.0	12.7	35	132	0	121	125	--
Norwest Tandem	96	58.4	13.0	29	126	0	116		--
WB-528	94	54.6	14.0	34	128	0	117		--
PNW Hailey	93	57.3	12.8	36	130	0			--
Purl (WA 8234)	92	55.1	13.6	33	130	0	116		--
WB1532	90	53.2	14.7	34	134	2			--
LCS Hulk	90	54.8	14.3	33	134	0	120	131	--
SY Dayton	89	51.1	13.0	35	134	0	116	115	--
Bobtail	89	50.6	12.8	35	133	0	122	125	--
WB1604	88	58.4	13.2	31	128	0	111	117	--
Rosalyn	88	50.1	13.8	38	134	10	120	120	--
Puma	86	53.8	13.7	41	134	0	113	119	--
Norwest Duet	86	50.2	14.3	40	132	17	119	118	--
Dyna-Gro Impact	86	52.9	14.0	36	132	0			--
UI Magic CL+	85	56.2	14.0	31	127	0	110	117	--
WB1376CLP	84	54.6	16.2	36	134	0	105	109	--
Resilience CL+	81	55.3	13.8	33	135	0		103	--
Jasper	80	52.2	13.7	33	133	0	114		--
UI Palouse CL+	76	49.7	15.5	32	134	0	95	106	--
UI Castle CL+	75	51.2	15.0	35	135	0	103	104	--
<i>Experimental Lines</i>									
LWW14-72916	107	58.3	11.7	30	127	0	129		--
UIL 07-28017B	101	57.6	13.6	34	127	0	120	131	--
LWW14-74143	99	56.7	11.7	34	127	0	126		--
XB1104	98	56.6	14.5	32	125	0			--
LWW15-71945	97	50.6	13.4	34	132	0			--
IDO1708	95	50.7	13.2	35	131	0			--
IDN 15-72458DH	85	50.2	14.4	36	133	0			--
OR2121086	82	57.0	13.3	34	129	0	103		--
WA 8232	82	54.0	14.2	38	134	0	110	116	--
WA 8275 CL+	82	49.1	15.2	34	133	0			--
WA 8293	81	50.5	14.6	37	134	0			--
ORI2150061 CL+	80	57.1	14.7	34	130	0			--
YS-205	71	52.0	14.5	33	135	0			--
ORI2150031 CL+	68	50.3	14.9	37	135	0	96		--
WA 8274 CL+	67	49.5	15.8	34	135	10			--

## 2018 WSU Variety Testing Soft Winter Irrigated Wheat Trial, Pasco

<b>C.V. %</b>	8	3.9	5.3	5	1	538	6	8	--
<b>LSD (0.05)</b>	9	2.9	1.0	2	1	7	7	7	--
<b>Average</b>	89	54.3	13.8	34	131	1	115	118	--
<b>Highest</b>	107	59.3	16.2	41	135	17	129	131	--
<b>Lowest</b>	67	49.1	11.7	29	125	0	95	103	--

### Agronomic Information

Planting Date:	10/16/2017
Harvest Date:	7/11/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Onions
Spring soil test:	
N (lb/ac) 4-ft sample	133
P (ppm-bicarb) 2-ft sample	66
S (lb/ac) 2-ft sample	42
pH (top 6 inches)	7.5
Herbicide:	

### Trial Notes:

1. The Pasco nursery was located about 11 miles northeast of Pasco, WA.
2. Base fertilizer (applied after soil test) was 300# N
3. Overall yield was 35% lower than 2017 and lower than anticipated grain test weight.

**Cooperator J Macbeth**

Table 39. 2018 WSU Variety Testing Soft Winter Wheat Trial, Pullman

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
Rosalyn	181	59.2	9.8	41	152	0	149	154	140
Bobtail	179	58.2	10.1	39	152	0	145	145	136
LCS Hulk	178	61.8	10.6	41	152	0	146	145	
SY Ovation	177	61.3	10.4	41	151	0	138	139	126
Jasper	173	56.9	10.1	41	153	0	147		
PNW Hailey	171	62.3	10.4	42	152	0			
UI Castle CL+	170	58.5	11.1	43	153	0	143	145	
Norwest Duet	169	55.7	10.6	48	154	0	144	144	
SY Raptor	166	61.1	10.4	40	151	0	139		
SY Candor (09PN008#72)	165	60.4	11.0	42	154	0			
Dyna-Gro Impact	161	58.4	10.7	41	153	0			
LCS Drive	160	59.6	10.6	33	149	0	134		
ARS-Castella (ARS20060123-31C)	160	59.4	11.2	44	151	0			
WB1532	159	56.8	11.5	41	154	0			
Purl (WA 8234)	159	59.2	10.8	42	151	0	137	141	
Puma	156	58.9	10.5	46	153	0	131	136	130
SY Dayton	156	60.9	10.2	39	150	0	136	138	
SY Banks	156	58.0	10.3	42	154	0			
Norwest Tandem	156	58.8	10.6	36	149	0	133		
UI Sparrow	155	53.3	10.3	47	155	0	129	138	
ARS-Crescent	155	54.5	10.2	44	157	0	124	132	129
M-Press	155	59.7	10.4	38	152	0			
WB1783	155	59.5	10.2	42	153	0	134		
WB1604	154	61.9	10.7	39	148	0	130	131	
UI Magic CL+	153	62.2	10.6	39	150	0	137	136	
Madsen	153	58.3	11.3	42	155	0	129	132	124
SY Assure	153	62.4	11.0	37	148	0	136	137	
WB1529	151	63.3	10.7	39	149	0	130	129	
UI Palouse CL+	151	59.8	10.7	38	153	0	127	132	
LCS Artdeco	150	58.1	11.0	38	148	0	128	135	128
Resilience CL+	150	58.1	10.8	39	154	0	134	136	129
ORCF-102	150	59.0	10.5	43	154	0	131	133	128
WB-528	149	61.2	11.0	40	139	0	130	133	125
Xerpha	147	55.6	10.5	43	154	0	135	136	134
WB1376CLP	146	63.1	11.6	40	150	0	129	128	
LCS Shark	137	56.4	11.5	39	149	0	129		
<b>Experimental Lines</b>									
LWW14-74143	185	58.3	9.6	41	148	0			
IDN 15-72458DH	180	58.9	9.8	42	150	0			
LWW15-71945	179	57.9	10.4	39	151	0			
KXB-01	176	56.1	10.8	43	155	0	150	150	
UIL 07-28017B	172	60.6	10.5	40	151	0	142	140	
YS-205	165	59.1	10.2	41	154	0			
ARS06132-45C	164	60.6	10.2	41	151	0			
WA 8293	162	54.6	10.9	44	154	0			
WA 8275 CL+	161	58.9	10.6	40	154	0			
LWW14-72916	160	61.5	10.3	35	148	0	142		

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Pullman

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>IDO1708</b>	158	60.4	9.9	40	139	0			
<b>OR2121086</b>	157	59.2	10.6	42	151	0	131		
<b>WA 8232</b>	156	59.8	10.3	44	154	17	138	146	
<i>ARSDH08X103-102C</i>	155	58.8	10.6	39	154	0			
<b>XB1104</b>	147	<b>63.1</b>	10.9	34	148	0			
<b>WA 8274 CL+</b>	146	55.4	11.1	41	153	0	128		
<b>ORI2150031 CL+</b>	132	60.3	11.5	42	153	0	117		
<b>ORI2150061 CL+</b>	112	<b>62.5</b>	12.4	36	148	0			
<b>C.V. %</b>	5	1.9	2.1	3	2	1273	5	5	5
<b>LSD (0.05)</b>	11	1.5	0.3	1	5	5	6	5	4
<b>Average</b>	159	59.2	10.6	41	151	0	135	138	130
<b>Highest</b>	185	63.3	12.4	48	157	17	150	154	140
<b>Lowest</b>	112	53.3	9.6	33	139	0	117	128	124

### Agronomic Information

Planting Date:	10/5/2017
Harvest Date:	8/3/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Chickpeas
Spring soil test:	
N (lb/ac) 4-ft sample	223
P (ppm-bicarb) 2-ft sample	102
S (lb/ac) 2-ft sample	48
pH (top 6 inches)	5.46

Herbicide:

Herbicides and fungicides applied by grower

### Trial Notes:

1. The Pullman nursery was located about 5 miles southeast of Pullman, WA.
2. An additional 100N was applied in the spring after soil sampling.
3. Overall yield was 45% more than 2017 and grain test weight was 0.4 lb/bu less than last year.

**Cooperator** Roy & Kurt Druffel

Table 40. 2018 WSU Variety Testing Soft Winter Wheat Trial, Reardan

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Jasper</b>	<b>125</b>	61.4	11.0	38	152	141		
<b>Xerpha</b>	<b>124</b>	62.0	11.2	38	155	134	129	108
<i>Pritchett</i>	<b>120</b>	60.3	11.2	39	155	126	118	
<b>M-Press</b>	<b>120</b>	61.8	10.6	35	153			
<b>LCS Sonic</b>	<b>120</b>	61.6	10.8	40	150	134	127	
<b>SY Command</b>	<b>119</b>	60.4	10.5	38	152	132	125	
<i>ARS-Crescent</i>	117	61.0	10.4	37	156	122	120	105
<b>Norwest Duet</b>	115	62.1	10.8	41	155	133	123	
<b>ORCF-102</b>	113	61.5	11.3	38	153	128	119	97
<b>UI Castle CL+</b>	112	62.8	11.6	39	154	120	112	
<i>ARS-Castella (ARS20060123-31C)</i>	112	61.6	10.5	38	151	133	124	
<b>Dyna-Gro Impact</b>	112	62.3	11.4	36	151			
<b>LCS Hulk</b>	112	62.7	10.8	36	152	132	127	
<b>Norwest Tandem</b>	111	61.8	10.8	33	150	132		
<b>WB1783</b>	110	<b>63.5</b>	11.4	37	151	129		
<b>Puma</b>	109	62.0	11.4	40	152	123	119	99
<b>UI Magic CL+</b>	107	62.4	11.3	34	151	122	112	
<b>WB1529</b>	106	<b>63.7</b>	11.5	34	150	120	111	
<b>UI Sparrow</b>	104	60.2	10.7	38	156	115	114	
<b>Otto</b>	103	61.6	11.3	39	158	110	105	92
<b>WB1532</b>	102	62.2	11.7	34	153			
<b>Curiosity CL+</b>	102	62.2	11.2	40	156	108	103	
<b>Eltan</b>	101	62.4	10.7	38	156	107	103	93
<b>SY Banks</b>	100	60.2	11.0	36	153	123	118	
<i>Bruehl</i>	99	59.3	11.3	39	157	115	113	95
<b>WB1604</b>	99	62.4	11.5	35	149	121	111	
<b>Mela CL+</b>	98	62.4	11.4	40	157	106	98	
<b>SY Candor (09PN008#72)</b>	97	62.0	11.3	36	153			
<b>ORCF-103</b>	94	61.4	11.3	35	156	102	100	87
<b>WB1376CLP</b>	88	63.2	12.7	36	151	100	93	
<b>Experimental Lines</b>								
<b>LWW15-71945</b>	<b>129</b>	60.0	10.9	36	152			
<b>LWW14-72916</b>	<b>127</b>	62.0	10.1	32	150			
<i>ARSWA2J100065C</i>	117	60.2	10.1	37	156			
<b>KXB-01</b>	116	61.7	11.0	38	155	127	121	
<b>UIL 07-28017B</b>	116	62.3	10.5	37	151	133	122	
<i>ARSDH08X117-83C</i>	113	63.0	10.9	37	151			
<b>UIL 09-15702A</b>	112	61.6	11.5	37	151	132		
<b>KWS147</b>	109	62.1	11.1	34	152			
<b>WA 8290</b>	108	61.6	11.1	39	155			
<b>WA 8270</b>	108	60.5	11.1	38	156	121		
<b>ORI2150031 CL+</b>	106	61.7	11.8	39	152	121		

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Reardan

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>OR2121086</b>	106	61.2	11.2	38	152	128		
<b>WA 8291</b>	106	61.9	11.0	41	155			
<b>YS-205</b>	105	62.7	11.5	36	155			
<b>WA 8271</b>	103	62.7	10.8	37	155	117		
<b>IDO1708</b>	101	60.6	11.0	34	149			
<b>IDO1005</b>	97	60.8	12.5	36	154			
<b>C.V. %</b>	7	0.5	3.8	3	1	7	7	6
<b>LSD (0.05)</b>	10	0.4	0.6	2	2	8	6	4
<b>Average</b>	109	61.7	11.1	37	153	123	115	97
<b>Highest</b>	129	63.7	12.7	41	158	141	129	108
<b>Lowest</b>	88	59.3	10.1	32	149	100	93	87

### Agronomic Information

Planting Date:	9/15/2017
Harvest Date:	8/10/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	227
P (ppm-bicarb) 2-ft sample	79
S (lb/ac) 2-ft sample	31
pH (top 6 inches)	4.94
Herbicide:	
Fungicides applied with herbicide application on 05/14	

### Trial Notes:

1. The Reardan nursery was located about 7 miles west of Reardan, WA.
2. The nursery was fertilizer at seeding with no-till hoe drill: 800N 14P 17S. An additional 100N was applied in spring.
3. Overall yield was 19% less than 2017, and grain test weight was 0.9 lb/bu more than last year.

**Cooperator** H Johnson

Table 41. 2018 WSU Variety Testing Soft Winter Wheat Trial, Ritville

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year*	5 Year**
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Xerpha</b>	<b>91</b>	59.2	6.8	38	141	88	71	66
<i>Pritchett</i>	<b>91</b>	58.6	7.2	39	141	89	72	
<b>LWW14-72916</b>	<b>87</b>	60.0	7.5	34	138			
<b>LCS Sonic</b>	<b>86</b>	60.1	7.4	40	139	87		
<b>Dyna-Gro Impact</b>	<b>85</b>	60.9	7.8	36	139			
<i>ARS-Crescent</i>	<b>84</b>	59.9	7.0	39	143	82	67	60
<b>SY Candor (09PN008#72)</b>	<b>83</b>	61.1	8.2	41	140			
<b>Mela CL+</b>	<b>82</b>	60.7	7.1	40	144	81	66	62
<b>Curiosity CL+</b>	<b>82</b>	60.1	7.0	40	143	81	65	62
<i>ARS-Castella (ARS20060123-31C)</i>	<b>82</b>	59.1	7.5	39	139	86	71	
<b>Jasper</b>	<b>82</b>	59.9	7.6	38	140	82	68	63
<b>UI Castle CL+</b>	81	60.7	7.7	38	139	82		
<b>Puma</b>	80	60.2	7.9	40	140	83	68	62
<b>Eltan</b>	80	60.0	7.3	40	144	75	63	61
<b>UI Sparrow</b>	80	59.7	7.3	39	142	80		68
<b>LCS Hulk</b>	79	62.2	7.5	37	140	86		
<b>Norwest Duet</b>	79	60.7	7.2	43	141	85	70	
<b>ORCF-102</b>	78	61.4	8.5	41	140	81	66	
<b>WB1529</b>	78	<b>62.4</b>	8.0	36	139	84	68	
<b>M-Press</b>	77	59.3	7.3	39	139			
<b>SY Banks</b>	77	59.7	7.6	40	140	85		
<b>Otto</b>	75	60.6	7.3	40	143	78	65	62
<b>WB1783</b>	73	<b>62.6</b>	8.4	39	138	77		
<b>WB1376CLP</b>	72	<b>63.0</b>	8.9	39	137	79		
<b>Norwest Tandem</b>	70	60.7	8.5	34	137	77		
<b>UI Magic CL+</b>	70	60.5	7.8	35	136	75		
<b>SY Command</b>	69	59.3	7.4	37	139	75		
<i>Bruehl</i>	69	58.5	7.4	41	143	75	63	58
<b>WB1604</b>	67	60.3	7.8	37	135	75		
<b>ORCF-103</b>	65	60.4	8.1	36	145	66	58	55
<b>Experimental Lines</b>								
<b>WA 8271</b>	<b>88</b>	61.9	8.2	36	143	87		
<i>ARSDH08X117-83C</i>	<b>88</b>	60.7	7.0	38	140			
<b>WA 8270</b>	<b>87</b>	59.6	7.7	41	142	86		
<b>YS-205</b>	<b>85</b>	<b>63.0</b>	8.1	37	140			
<b>WA 8291</b>	<b>84</b>	61.1	7.7	43	142			
<i>ARSWA2J100065C</i>	81	59.0	7.1	36	143			
<b>UIL 07-28017B</b>	80	61.3	7.9	37	138	84		
<b>OR2121086</b>	77	61.3	8.1	40	139	80		
<b>ORI2150031 CL+</b>	76	61.0	8.7	38	140	73		
<b>WA 8290</b>	76	60.0	7.8	40	141			
<b>UIL 09-15702A</b>	76	61.0	8.0	40	139	80		
<b>KWS147</b>	74	<b>62.4</b>	9.1	35	139			
<b>KXB-01</b>	74	59.7	7.2	38	141	85	70	

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Ritville

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year*	5 Year**
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>IDO1708</b>	74	58.3	7.6	38	136			
<b>IDO1005</b>	72	60.7	8.9	40	141		52	
<b>LWW15-71945</b>	69	57.9	7.5	36	140			
<b>C.V. %</b>	8	0.9	6.9	5	1	7	7	7
<b>LSD (0.05)</b>	9	0.7	0.7	2	1	6	4	3
<b>Average</b>	79	60.5	7.7	38	140	81	66	62
<b>Highest</b>	91	63.0	9.1	43	145	89	72	68
<b>Lowest</b>	65	57.9	6.8	34	135	66	52	55

### Agronomic Information

Planting Date:	9/6/2017
Harvest Date:	7/25/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	152
P (ppm-bicarb) 2-ft sample	41
S (lb/ac) 2-ft sample	18
pH (top 6 inches)	6.1

Herbicide: Applied by cooperator. No fungicides

### Trial Notes:

1. The Ritville nursery is located about 5 miles west of Ritville, WA.
2. The nursery was fertilized prior to planting at 50N 5S.
3. Overall yield was 4% less than 2017 and test weights are similar.

**Cooperator: R. Jirava**

\* 3-year average from 2018, 2017, 2015

\*\* 5-year average from 2018, 2017, 2015, 2014, 2013

Table 42. 2018 WSU Variety Testing Soft Winter Wheat Trial, St. Andrews

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
<b>Xerpha</b>	<b>75</b>	60.3	9.3	39	152	62	--	--
<b>Norwest Duet</b>	<b>72</b>	60.2	9.4	40	151	59	--	--
<b>M-Press</b>	<b>72</b>	60.4	8.9	37	151		--	--
<i>Pritchett</i>	<b>71</b>	58.4	8.6	37	153	63	--	--
<b>UI Sparrow</b>	<b>71</b>	59.1	9.3	40	155	58	--	--
<b>WB1783</b>	<b>70</b>	<b>62.4</b>	10.4	40	150	59	--	--
<b>Norwest Tandem</b>	<b>70</b>	60.8	9.8	32	149	63	--	--
<i>Bruehl</i>	<b>69</b>	60.3	9.9	39	154	61	--	--
<b>Jasper</b>	<b>68</b>	58.8	9.3	37	149	62	--	--
<b>Curiosity CL+</b>	<b>67</b>	60.3	8.5	41	154	59	--	--
<b>LCS Sonic</b>	<b>67</b>	60.0	9.4	36	150	56	--	--
<i>ARS-Crescent</i>	66	59.7	9.8	36	152	52	--	--
<b>Otto</b>	66	60.4	9.5	39	152	59	--	--
<b>WB1604</b>	65	<b>62.0</b>	10.5	34	148	51	--	--
<b>Mela CL+</b>	65	61.0	8.0	40	154	64	--	--
<b>Dyna-Gro Impact</b>	64	61.3	10.5	37	149		--	--
<b>SY Candor (09PN008#72)</b>	64	61.4	10.9	36	150		--	--
<b>Eltan</b>	64	60.3	8.6	40	153	60	--	--
<i>ARS-Castella (ARS20060123-31C)</i>	63	58.6	9.0	36	150	58	--	--
<b>SY Banks</b>	63	59.3	10.3	37	151	59	--	--
<b>LCS Hulk</b>	62	<b>61.7</b>	10.3	35	151	55	--	--
<b>UI Magic CL+</b>	60	61.1	10.2	32	148	54	--	--
<b>ORCF-103</b>	60	59.4	9.2	37	153	51	--	--
<b>WB1529</b>	58	<b>62.6</b>	10.5	33	149	55	--	--
<b>WB1376CLP</b>	58	<b>61.9</b>	12.3	37	149	48	--	--
<b>SY Command</b>	57	58.8	9.7	34	151	46	--	--
<b>ORCF-102</b>	54	60.7	9.6	39	152	47	--	--
<b>UI Castle CL+</b>	54	60.9	10.0	37	153	49	--	--
<b>Puma</b>	53	59.8	9.9	40	149	45	--	--
<i>Experimental Lines</i>								
<b>KXB-01</b>	<b>72</b>	59.5	9.9	37	152	64	--	--
<b>UIL 09-15702A</b>	<b>69</b>	60.5	9.7	39	149	65	--	--
<b>LWW14-72916</b>	<b>67</b>	60.5	10.4	33	148		--	--
<b>UIL 07-28017B</b>	66	60.6	10.2	36	149	60	--	--
<b>WA 8290</b>	65	60.0	10.2	42	151		--	--
<b>WA 8271</b>	65	<b>61.8</b>	9.5	35	152	58	--	--
<b>WA 8291</b>	65	60.6	10.2	42	153		--	--
<b>ORI2150031 CL+</b>	64	59.9	11.4	40	150	50	--	--

## 2018 WSU Variety Testing Soft Winter Wheat Trial, St. Andrews

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>WA 8270</b>	64	57.5	10.0	39	151	58	--	--
<b>YS-205</b>	63	61.3	9.9	36	151		--	--
<b>KWS147</b>	62	61.4	10.2	34	149		--	--
<i>ARSDH08X117-83C</i>	61	60.7	11.0	36	149		--	--
<b>IDO1005</b>	60	60.2	10.7	37	151		--	--
<i>ARSWA2J100065C</i>	58	57.8	10.1	33	152		--	--
<b>LWW15-71945</b>	58	57.0	10.9	34	149		--	--
<b>OR2121086</b>	57	59.7	10.6	38	151	54	--	--
<b>IDO1708</b>	53	58.8	10.4	36	148		--	--
<b>C.V. %</b>	9	1.3	8.2	6	1	10	--	--
<b>LSD (0.05)</b>	8	1.1	1.1	3	1	5	--	--
<b>Average</b>	64	60.2	9.9	37	151	56	--	--
<b>Highest</b>	75	62.6	12.3	42	155	65	--	--
<b>Lowest</b>	53	57.0	8.0	32	148	45	--	--

### Agronomic Information

Planting Date:	9/7/2017
Harvest Date:	8/14/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	139
P (ppm-bicarb) 2-ft sample	50
S (lb/ac) 2-ft sample	12
pH (top 6 inches)	5.72
Herbicide:	
Fungicides applied with herbicide application on 04/20	

### Trial Notes:

1. The St. Andrews nursery was located about 7 miles west of Coulee City, WA.
2. The nursery was fertilized prior to seeding.
3. Overall yield was 36% less than 2017, and grain test weight was 1.8 lb/bu more than last year.

**Cooperator** L. Tanneberg

Table 43. 2018 WSU Variety Testing Soft Winter Wheat Trial, St. John

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Rosalyn	131	60.9	8.4	39	146	145	152	128
Bobtail	125	59.8	8.7	37	147	145	153	132
<i>ARS-Crescent</i>	118	61.1	7.8	40	151	125	126	118
Jasper	118	61.5	9.0	38	146	130		
SY Dayton	115	62.0	9.0	36	148	129	131	
Norwest Duet	114	62.0	8.5	45	146	127	133	
M-Press	114	61.0	8.5	37	146			
SY Ovation	113	60.6	8.7	37	152	122	129	116
WB1604	112	62.1	9.2	36	152	125	134	
PNW Hailey	112	63.2	9.4	40	146			
UI Castle CL+	112	62.3	9.2	38	147	125	126	
<i>ARS-Castella (ARS20060123-31C)</i>	112	60.8	9.1	40	147			
Purl (WA 8234)	111	62.3	9.2	39	152	127	133	
Puma	111	61.5	9.2	42	148	126	123	117
LCS Artdeco	111	60.7	8.7	32	152	116	128	114
Dyna-Gro Impact	111	62.1	8.8	36	146			
UI Sparrow	109	60.1	8.5	41	149	119	124	
WB1529	109	63.2	9.4	36	150	118	119	
SY Assure	108	62.1	9.4	35	152	116	121	
LCS Shark	108	60.9	9.2	36	152	125		
UI Magic CL+	108	62.3	9.2	36	151	120	128	
Xerpha	108	61.7	8.9	39	149	115	115	110
LCS Hulk	108	63.2	9.3	37	147	121	131	
Norwest Tandem	107	62.0	9.1	33	152	128		
SY Raptor	106	61.6	9.0	38	147	120		
WB-528	105	62.3	9.2	37	152	115	122	111
SY Candor (09PN008#72)	104	62.3	9.8	37	146			
UI Palouse CL+	104	60.4	9.3	36	149	114	122	
LCS Drive	104	60.0	8.8	30	152	116		
WB1532	103	62.2	9.4	37	148			
ORCF-102	102	61.9	9.3	40	146	109	114	109
WB1783	101	63.5	10.0	40	146	121		
Madsen	100	61.3	10.0	38	148	118	122	110
SY Banks	94	60.7	9.5	37	146			
Resilience CL+	93	61.7	10.1	37	148	116	123	108
WB1376CLP	92	63.0	10.2	37	147	109	119	
<i>Experimental Lines</i>								
LWW15-71945	131	59.4	8.6	38	146			
LWW14-74143	127	58.9	7.9	38	152			
LWW14-72916	124	61.7	8.2	33	152	142		
IDN 15-72458DH	120	61.0	8.1	39	147			
KXB-01	114	61.1	8.9	39	147	130	132	

## 2018 WSU Variety Testing Soft Winter Wheat Trial, St. John

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>ARS06132-45C</i>	114	59.8	8.3	39	147			
<b>OR2121086</b>	112	62.1	9.3	40	145	132		
<b>WA 8232</b>	111	63.1	8.9	41	147	123	130	
<b>UIL 07-28017B</b>	110	62.2	9.6	38	151	126	136	
<b>YS-205</b>	110	<b>63.5</b>	8.6	37	147			
<b>ORI2150031 CL+</b>	110	62.3	10.2	39	147	119		
<b>IDO1708</b>	108	59.5	8.8	36	153			
<i>ARSDH08X103-102C</i>	107	62.0	9.0	35	145			
<b>XB1104</b>	106	<b>63.8</b>	9.4	32	152			
<b>WA 8275 CL+</b>	103	61.7	9.5	36	146			
<b>WA 8293</b>	100	61.6	8.9	36	147			
<b>WA 8274 CL+</b>	96	61.1	9.6	36	148	118		
<b>ORI2150061 CL+</b>	84	62.1	11.3	34	152			
<b>C.V. %</b>	5	0.5	4.6	3	1	5	6	6
<b>LSD (0.05)</b>	8	0.5	0.6	2	2	6	6	4
<b>Average</b>	109	61.6	9.1	37	149	123	128	116
<b>Highest</b>	131	63.8	11.3	45	153	145	153	132
<b>Lowest</b>	84	58.9	7.8	30	145	109	114	108

### Agronomic Information

Planting Date:	10/3/2017
Harvest Date:	8/16/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	312
P (ppm-bicarb) 2-ft sample	50
S (lb/ac) 2-ft sample	36
pH (top 6 inches)	5.39

Herbicide:

Fungicides applied with herbicide application on 05/08/18

### Trial Notes:

1. The St. John nursery was located about 4 miles east of St. John, WA.
2. The nursery was fertilizer by the cooperator prior to seeding, 85N 10S.
3. Overall yield was 19% less than 2017, and grain test weight was equal to last year.

**Cooperator M Mills**

Table 44. 2018 WSU Variety Testing Soft Winter Wheat Trial, Walla Walla

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Bobtail</b>	<b>149</b>	61.0	9.8	39	138	149	142	120
<b>UI Sparrow</b>	<b>140</b>	61.5	10.9	43	142	135	131	
<b>Norwest Tandem</b>	<b>139</b>	62.7	10.8	36	136	141		
<b>Puma</b>	<b>138</b>	62.6	10.8	45	140	143	139	131
<i>ARS-Castella (ARS20060123-31C)</i>	<b>138</b>	62.5	10.7	43	138			
<b>SY Raptor</b>	<b>137</b>	61.9	9.8	40	136	144		
<b>Rosalyn</b>	<b>136</b>	61.8	9.8	40	139	149	147	128
<b>Jasper</b>	<b>136</b>	62.4	10.7	41	140	128		
<b>LCS Artdeco</b>	135	62.1	10.2	38	131	148	149	134
<b>LCS Sonic</b>	133	63.0	11.1	41	138	138		
<b>Xerpha</b>	132	62.6	10.5	41	141	124	127	127
<b>SY Ovation</b>	132	62.3	11.0	37	140	139	134	129
<b>SY Command</b>	132	61.0	10.1	38	139	133		
<i>ARS-Crescent</i>	131	61.8	10.0	41	142	124	123	120
<b>Purl (WA 8234)</b>	131	63.3	10.9	42	138	134	133	
<b>PNW Hailey</b>	128	<b>64.1</b>	10.8	41	139			
<b>SY Dayton</b>	126	62.8	10.6	36	139	138	134	
<b>LCS Shark</b>	126	62.0	11.4	38	133	135		
<b>LCS Hulk</b>	126	<b>64.0</b>	10.2	40	139	131	128	
<b>Dyna-Gro Impact</b>	125	63.3	11.0	42	138			
<b>M-Press</b>	125	61.9	9.9	38	139			
<b>Norwest Duet</b>	124	63.2	11.0	43	138	131	132	
<b>WB1604</b>	124	63.3	10.8	39	136	133	125	
<b>LCS Drive</b>	122	61.1	10.9	33	134	135		
<b>Mary</b>	121	63.0	11.1	38	137	135	134	126
<b>SY Assure</b>	121	63.4	11.0	39	133	126	126	
<b>Stephens</b>	118	62.4	10.7	40	137	123		
<b>WB1532</b>	117	63.4	12.2	37	139			
<b>WB-528</b>	116	63.2	11.5	41	135	120	122	118
<b>WB1783</b>	115	<b>64.3</b>	11.7	40	137	125		
<b>Madsen</b>	114	62.8	11.2	40	141	126	124	117
<b>WB1529</b>	114	63.8	11.3	37	138	123	122	
<b>SY Banks</b>	110	62.0	11.2	41	139	130		
<b>SY Candor (09PN008#72)</b>	103	63.2	11.6	38	138	121		
<b>Experimental Lines</b>								
<b>LWW15-71945</b>	<b>148</b>	60.5	10.2	40	138			
<b>WA 8293</b>	<b>139</b>	62.9	10.8	41	140			
<b>LWW14-74143</b>	135	60.5	9.8	41	132	148		
<b>UIL 07-28017B</b>	129	63.6	10.8	40	136	134	128	
<i>ARSDH08X117-83C</i>	127	62.9	9.9	41	139			
<b>IDN 15-72458DH</b>	127	62.2	10.1	40	137			
<b>WA 8292</b>	127	63.0	11.3	42	141			

## 2018 WSU Variety Testing Soft Winter Wheat Trial, Walla Walla

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>LWW14-72916</b>	127	62.3	9.5	36	134	143		
<i>ARS06132-45C</i>	126	61.1	10.3	40	139			
<b>OR2121285</b>	125	63.1	11.3	38	137	134		
<b>OR2130081</b>	125	62.3	11.1	42	139			
<i>ARSDH08X028-9C</i>	124	61.7	10.5	40	140			
<i>ARSDH08X103-102C</i>	122	62.7	10.1	38	141			
<b>WA 8232</b>	122	<b>63.9</b>	11.1	42	140	130	129	
<b>XB1104</b>	120	<b>64.0</b>	10.9	36	130			
<b>YS-205</b>	119	<b>63.9</b>	11.6	39	141			
<b>OR2121086</b>	118	63.0	11.4	41	136	131		
<b>IDO1708</b>	113	61.5	11.0	39	136			
<b>IDO1005</b>	110	62.1	11.7	39	140			
<b>YS-201</b>	105	62.0	11.5	38	138			
<b>C.V. %</b>	8	0.5	4.3	5	1	8	7	8
<b>LSD (0.05)</b>	13	0.4	0.6	2	1	10	7	6
<b>Average</b>	126	62.6	10.8	40	138	134	131	125
<b>Highest</b>	149	64.3	12.2	45	142	149	149	134
<b>Lowest</b>	103	60.5	9.5	33	130	120	122	117

### Agronomic Information

Planting Date:	10/4/2017
Harvest Date:	8/07/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	
Spring soil test:	
N (lb/ac) 4-ft sample	247
P (ppm-bicarb) 2-ft sample	109
S (lb/ac) 2-ft sample	40
pH (top 6 inches)	5.07

Herbicide:

Herbicides and fungicides applied by grower

### Trial Notes:

1. The Walla Walla nursery was located about 11 miles east of Walla Walla, WA.
2. The nursery was fertilized prior to planting by the cooperator. No additional was applied in the spring after soil sampling.
3. Overall yield was 8% less than 2017 and grain test weight was 0.6 lb/bu less than last year.

**Cooperator M Lyons**

Table 45.

STRIPE RUST INFECTION TYPE (IT<sup>a</sup>) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER WHEAT VARIETY TRIAL NURSERY (EXP02) (COORDINATED BY AARON ESSER AND VADIM JITKOV) AT SPILLMAN FARM (LOC 01), PLANT PATH FARM (LOC 03) AND PCFS FARM (LOC 04) NEAR PULLMAN; MT VERNON (LOC 05); WALLA WALLA (LOC 06); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2018

Name	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Palouse Conservati on Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Summary <sup>c</sup>	Overall rating <sup>d</sup>	Possible HTAP resistance <sup>e</sup>
		LOC 01	LOC 03	LOC 04	LOC 05 <sup>b</sup>		LOC 06	LOC 07			
		6/12	6/11	6/6	4/25	6/5	5/24	6/14			
		Fks 10.53	10.53	10.53	6	10.54	10.54	11.2			
IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %				
Dyna-Gro Impact	SWW	2 1	2 1	2 1	2 5	2 2	2 5	5 10	R	2	High
LWW14-72916	SWW	2 1	2 1	2 2	2 20	5 15	2 5	0 0	MR	3	High
LCS Hulk	SWW	2 1	2 5	2 2	2 30	2 5	2 5	0 0	R	1	Unknown
LWW15-71945	SWW	2 1	2 1	2 1	2 20	3 3	2 2	0 0	R	1	High
Norwest Duet	SWW	2 1	2 2	2 1	2 30	2 5	2 5	0 0	R	1	High
Norwest Tandem	SWW	2 1	2 1	2 1	2 20	2 20	2 2	0 0	R	2	High
OR2121086	SWW	2 2	2 2	2 1	2 20	2 15	2 2	0 0	R	2	High
ORCF-102	SWWI	5 10	2 5	3 5	2 30	5 40	3 2	8 20	MR-MS	5	Moderate
ORI2150031 CL+	SWWI	2 1	2 1	2 1	2 10	2 5	2 5	3 5	R	1	High
SY Candor (09PN008#72)	SWW	2 1	2 1	2 1	2 10	2 5	2 2	0 0	R	1	High
SY Banks	SWW	2 1	2 1	2 1	2 10	2 5	2 5	0 0	R	1	High
M-Press	SWW	3 5	3 1	2 2	2 10	2 10	5 2	0,8 0,20	MR	3	Moderate
IDO1708	SWW	2 5	2 2	2 5	2 20	2 10	2 5	0 0	R	2	Moderate
UI Castle CL+	SWWI	2 1	2 1	2 1	2 10	3 5	2 2	8 40	MS	6	Moderate
UI Magic CL+	SWWI	5 10	3 5	2 1	2 10	5 20	5 15	8 15	MR-MS	5	Moderate
UI Sparrow	SWW	2 10	2 5	2 1	2 10	3 5	2 5	8 50	MS	7	Low
UIL 07-28017B	SWW	2 1	2 1	2 1	2 20	2 2	2 2	0 0	R	1	High
ARS-Castella	WC	2 2	2 1	2 2	2 10	2 10	3 2	3 15	MR	3	Low
ARS-Crescent	WC	3 5	3 10	3 5	2 20	5 15	5 10	2 15	MR	3	Low
WB1376CLP	SWWI	2 5	2 5	2 5	2 20	2 30	2 5	2 5	MR	3	Moderate
<b>PS279 (S. check)</b>		<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 80</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>S</b>	<b>9</b>	<b>No</b>
WB1529	SWW	3 2	2 1	2 1	2 5	5 60	5 25	3 15	MR	4	High
WB1604	SWW	2 1	2 1	2 1	2 5	2 2	2 5	0 0	R	1	High
WB1783	SWW	2 1	2 1	2 1	2 10	2 2	2 2	0,8 0,5	MR	3	Moderate
WB1532	SWW	2 1	2 1	2 1	2 10	3 1	2 2	8 10	MR-MS	5	Moderate
XB1104	SWW	2 2	2 1	2 1	2 10	8 15	3 2	8 20	MR-MS	5	Moderate
Jasper	SWW	2 1	2 1	2 1	2 10	2 2	2 2	5 10	MR	3	High
KXB-01	SWW	5 10	2 2	5 5	2 10	5 15	2 2	0,8 0,10	MR	4	Moderate
Puma	SWW	5 10	3 2	2 5	2 10	5 30	3 5	8 30	MS	6	High
Xerpha	SWW	5 50	5 15	5 10	2 20	5 60	5 15	8 50	MS	7	Low
YS-205	SWW	2 1	2 1	2 2	2 10	2 1	2 2	0 0	R	1	High
LCS Artdeco	SWW	2 2	2 1	2 2	2 10	5 15	2 10	8 30	MS	6	Moderate
LCS Drive	SWW	2 1	2 1	2 1	2 10	2 1	2 5	0 0	R	1	High
LCS Shark	SWW	2 1	2 2	2 1	2 10	2 2	2 2	0	R	1	Moderate
LWW14-74143	SWW	2 1	2 1	2 2	2 10	5 10	2 5	0 0	R	2	High
Bobtail	SWW	2 1	2 1	2 1	2 20	2 5	2 2	0 0	R	1	High
ORI2150061 CL+	SWWI	3 2	2 1	2 1	2 10	5 25	3 5	2 15	MR	3	High
Rosalyn	SWW	2 1	2 1	2 2	2 10	3 5	2 2	0 0	R	1	High
PNW Hailey	SWW	2 1	2 1	2 2	2 5	3 2	5 5	8 10	MR-MS	5	Moderate
SY Assure	SWW	2 1	2 1	2 1	2 10	2 10	3 2	2 5	R	2	High
<b>PS279 (S. check)</b>		<b>8 100</b>	<b>8 90</b>	<b>8 100</b>	<b>8 80</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>S</b>	<b>9</b>	<b>No</b>
SY Dayton	SWW	2 2	2 1	2 2	2 20	5 50	5 5	2 10	MR	4	High
SY Raptor	SWW	2 1	2 1	2 2	2 20	2 5	3 2	0 0	R	1	High
SY Ovation	SWW	2 2	2 1	3 5	5 60	5 50	5 10	2 5	MR	4	Moderate
UI Palouse CL+	SWWI	3 5	2 5	2 5	2 20	8 50	5 10	8 60	MS	7	Moderate
IDN 15-72458DH	SWW	5 2	2 5	2 2	2 20	2 5	5 5	0 0	R	2	High
ARS06132-45C	WC	2 1	2 2	2 5	2 20	2 5	2 5	0 0	R	2	Moderate
ARSDH08X103-102C	WC	2 2	2 2	2 2	2 20	2 3	2 2	0 0	R	2	Moderate
Madsen	SWW	2 1	2 10	2 1	2 20	2 5	2 2	0,8 0,5	R	2	High
WB-528	SWW	2 1	2 2	2 2	2 20	5 25	2 5	8 15	MR	4	Moderate
Resilience CL+	SWWI	2 1	2 10	2 1	2 20	2 20	2 2	0 0	R	2	High

Name	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Palouse Conservati on Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Summary <sup>c</sup>	Overall rating <sup>d</sup>	Possible HTAP resistance <sup>e</sup>
		LOC 01	LOC 03	LOC 04	LOC 05 <sup>b</sup>		LOC 06	LOC 07			
		6/12	6/11	6/6	4/25	6/5	5/24	6/14			
		Fks 10.53	10.53	10.53	6	10.54	10.54	11.2			
IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %				
WA 8232	SWW	2 1	2 1	2 1	2 20	2 5	2 2	0,8 0,20	R	2	High
Purl (WA 8234)	SWW	2 1	2 5	2 1	2 20	3 3	2 2	8 5	MR	4	Moderate
WA 8274 CL+	SWWI	2 2	2 10	2 2	2 20	2 20	2 5	0,8 0,30	MR	3	High
WA 8275 CL+	SWWI	2 1	2 10	2 1	2 20	2 20	2 5	0,8 0,10	MR	3	Moderate
WA 8293	SWW	2 1	2 1	3 2	2 20	3 2	3 2	0,3 0,5	R	2	High
KWS147	SWW	3 5	2 1	8 5	2 20	8 50	5 20	3 10	MR-MS	5	Low
LCS Sonic	SWW	2 1	2 5	2 5	2 20	2 30	5 10	5 15	MR	3	High
ORCF-103	SWWI	8 30	8 20	8 20	4 30	8 40	5 20	8 70	S	8	Low
SY Command	SWW	2 1	2 1	2 1	2 20	2 15	2 10	0,8 0,5	MR	3	High
<b>PS279 (S. check)</b>		<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 80</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>S</b>	<b>9</b>	<b>No</b>
IDO1005	SWW	2 1	2 1	2 1	2 20	5 30	2 2	8 20	MR-MS	5	Moderate
UIL 09-15702A	SWW	2 1	2 1	2 1	2 10	5 15	3 2	3 10	MR	3	High
ARSDH08X117-83C	WC	2 1	2 5	2 1	2 20	2 2	2 2	8 15	MR-MS	5	Low
ARSWA2J100065C	WC	2 1	2 2	2 1	2 10	2 5	2 2	0 0	R	1	Unknown
Pritchett	WC	5 5	2 2	3 1	2 10	2 30	5 2	0,8 0,80	MR	4	Low
Bruehl	WC	2 2	2 1	2 1	2 10	2 30	2 5	0 0	R	2	High
Curiosity CL+	SWWI	5 15	5 10	3 5	2 20	5 35	5 10	8 50	MS	7	Low
Eltan	SWW	8 30	5 10	5 10	2 10	5 40	5 15	8 70	S	8	Low
Mela CL+	SWWI	3 1	5 5	3 1	2 10	5 20	5 15	8 60	MS	7	Low
Otto	SWW	2 2	2 1	2 2	2 10	3 10	2 5	0,8 0,10	R	2	High
WA 8270	SWW	2 1	2 1	2 1	2 10	2 10	2 2	8 15	MR-MS	5	Low
WA 8271	SWW	2 0	2 2	3 2	2 5	2 25	2 2	8 5	MR	4	Moderate
WA 8290	SWW	2 1	2 2	2 1	2 10	2 2	2 2	0 0	R	1	High
WA 8291	SWW	3 10	2 5	3 2	4 30	5 20	5 10	8 20	MR-MS	5	Moderate

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale with ITs 8 and 9 combined as 8 (the most susceptible reaction) in field data. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by "," for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants with continuous ITs.

<sup>b</sup> Entries with a high IT in the first note, but a low IT in the second note at Mt. Vernon may indicate that they have high-temperature, adult-plant (HTAP) resistance.

<sup>c</sup> R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

<sup>d</sup> 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity to discourage use of race-specific resistance.

<sup>e</sup> The high-temperature adult-plant (HTAP) resistance data were based on greenhouse tests (see data in the "Greenhouse Tests" worksheet. Unknown = Whether the entry has HTAP resistance or not couldn't be determined as it was resistant to all tested races in the seedling stage. TBT = to be tested. Entries with the combination of Yr5 and/or Yr15 may not have HTAP resistance but their resistance should be highly effective as no races virulent to either of the genes are found in the US.

Data was collected, analyzed and reported by Dr. X. Chen, USDA-ARS



Name	Class	Seedling test (4-20°C) <sup>b</sup>										Adult plant tests (10-30°C) <sup>b</sup>										Possible HTAP <sup>c</sup> resistance				
		PSTV-4		PSTV-14		PSTV-37		PSTV-40		PSTV-51		PSTV-198		PSTV-14 (17-142)		PSTV-37 (17-142)		PSTV-40 (09-78)		PSTV-51			PSTV-198			
		13-268	17-004	17-142	09-78	17-005	16-183	REP1	REP2	REP3	REP1	REP2	REP3	REP1	REP2	REP3	REP1	REP2	REP3	REP1	REP2		REP3	REP1	REP2	REP3
ARS06132-45C	WC	2	8	2	8	2	2	3.33	5.55	5.55	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	Moderate	
ARSDH08X103-102C	WC	3	2	7	8	2	2	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	Moderate	
Madsen	SWW	8	2.5	2.5	2.5	8	2	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
WB-528	SWW	8	8	8	8	8	2	2.23	3.33	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	Moderate	
Resilience CL+	SWW	2.5	2.3	3	2.5	2.5	2	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
WA 8232	SWW	8	8	8	8	8	8	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
Purl (WA 8234)	SWW	8	8	8	8	8	2.8	2.22	2.23	3.33	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	Moderate	
WA 8274 CL+	SWW	8	8	8	8	8	2.5	2.33	3.33	3.33	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
WA 8275 CL+	SWW	8	8	8	2.5	8	2	2.22	3.33	3.33	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	Moderate	
WA 8293	SWW	8	8	8	8	8	2	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
KWS147	SWW	8	8	8	8	8	8	3.33	3.35	3.35	5.55	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	Low	
LCS Sonic	SWW	5	5	5	8	5	5	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
ORCF-103	SWW	8	8	8	8	8	8	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	Low	
SY Command	SWW	8	8	8	8	8	8	2.22	2.25	2.35	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
<b>PS279 (S Check)</b>		<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>No</b>	
IDO1005	SWW	8	8	8	8	8	2.8	3.35	2.35	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	Moderate	
JUL 09-15702A	SWW	2	2	8	8	2	8	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High	
ARSDH08X117-83C	WC	2	8	8	8	2	2	5.55	3.55	5.55	5.55	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	Low	
ARSWA2J100065C	WC	2	2.8	2	2	2	2	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	Unknown	
Pritchett	WC	2	8	8	8	8	8	3.33	3.33	4.44	2.23	2.35	2.33	2.33	2.35	2.35	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	Low
Bruehl	WC	2	2	2	2	2	2.8	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High
Curiosity CL+	SWW	2	8	8	8	2	8	2.24	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	Low	
Ellan	SWW	8	8	8	8	8	8	4.55	5.55	5.55	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	8.88	Low
Mela CL+	SWW	3	8	8	8	5	8	3.34	3.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55	Low	
Otto	SWW	2	8	2	2	2	2	2.22	2.23	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High
WA 8270	SWW	8	8	8	8	8	8	5.55	5.55	5.55	3.33	2.55	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	Low
WA 8271	SWW	2	8	8	8	8	8	2.22	3.33	2.23	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	Moderate
WA 8290	SWW	8	8	8	8	8	8	2.22	2.22	2.23	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	High
WA 8291	SWW	8	8	8	8	8	2	2.22	2.22	2.23	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	Moderate

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by " " for most plants with the first IT and few plants with the second IT or connected with "-"; for entries containing plants with continuous ITs. Entries with a high IT in the seedling test, but a low IT in the adult-plant test may indicate that they have high-temperature, adult-plant (HTAP) resistance.

<sup>b</sup> Virulence/avirulence formulae (Yr genes) of the tested races:

- PSTV-4: 1,6,9,17,27,SP,Type/5,7,8,10,15,24,32,43,44,Tr1,Exp2
- PSTV-14: 1,6,7,8,9,17,27,43,44,Tr1,Exp2,Type/5,10,15,24,32,SP
- PSTV-37: 6,7,8,9,17,27,43,44,Tr1,Exp2/1,5,10,15,24,32,SP,Type
- PSTV-40: 6,7,8,9,10,24,27,32,43,44,Tr1,Exp2/1,5,15,17,SP,Type
- PSTV-51: 1,6,7,8,9,10,17,24,27,32,43,44,SP,Tr1,Exp2,Type/5,15
- PSTV-198: 6,7,8,9,27,43,44,Exp2/1,5,10,15,17,24,32,SP,Tr1,76

<sup>b</sup> For the seedling tests, about 5 to 10 plants were used. Inoculation was done at the 2-leaf stage and incubated in the dew chamber at 10C for about 24 h in dark. The inoculated plants were then grown in a greenhouse growth chamber at a diurnal temperature cycle gradually changing from 4 C at 2:00 am to 20 C at 2:00 pm with a 16 h photoperiod in the day time. Infection type was recorded for the line about 20 days after inoculation. For the adult-plant tests, One-leaf seedlings were started to vernalized at 2-4 C for about 6 weeks and vernalized seedlings were transplanted into a big pots. 3 plants were used in each race test. Inoculation was done at the boot to heading stages and incubated in the dew chamber at 10C for about 24 h in dark. The inoculated plants were then grown in a greenhouse growth chamber at a diurnal temperature cycle gradually changing from 10 C at 2:00 am to 30 C at 2:00 pm with a 16 h photoperiod in the day time. Infection type was recorded for each individual plant using the flag leaf about 20 days after inoculation.

<sup>c</sup> Unknown = Whether the entry has HTAP resistance or not could not be determined as it was resistant to all tested races in the seedling stage.

Data was collected, analyzed and reported by Dr. X. Chen, USDA-ARS



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Table 47. 2018 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone - >16"

Variety Name	Dayton	Pullman	Walla Walla	Average	Dayton	Pullman	Walla Walla	Average	Dayton	Pullman	Walla Walla	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
<i>Released Varieties</i>												
LCS Rocket (NSA10-2196)	107	179	138	<b>141</b>	60.9	60.0	62.1	61.0	9.3	10.8	10.6	10.2
LCS Jet	104	170	121	132	61.7	62.3	62.8	62.3	9.5	11.7	11.4	10.9
WB4303	95	171	123	129	61.3	61.8	63.0	62.0	10.4	11.2	11.0	10.9
Keldin	92	171	111	125	63.2	63.8	64.1	63.7	9.1	11.0	11.7	10.6
SY Touchstone	93	167	109	123	62.5	63.2	63.9	63.2	10.1	11.6	11.7	11.1
WB4311	88	154	106	116	62.9	63.1	64.5	63.5	10.8	11.9	11.4	<b>11.4</b>
Mandala	75	149	114	113	63.0	63.5	64.2	63.6	10.1	12.3	11.5	<b>11.3</b>
LCS Evina <sup>1</sup>	88		137	112	62.0		63.5	62.8	10.2		12.2	11.2
Whetstone	68	152	108	109	60.5	64.1	64.0	62.9	9.6	12.3	11.4	11.1
LCS Aymeric <sup>1</sup>	92		125	109	59.2		61.8	60.5	8.5		10.1	9.3
Norwest 553 <sup>1</sup>	93		110	101	62.3		63.5	62.9	10.3		11.7	11.0
WB-Arrowhead <sup>1</sup>	88		112	100	63.1		64.0	63.6	10.2		11.3	10.7
Langin <sup>1</sup>	83		116	99	62.1		63.2	62.6	9.4		10.9	10.2
Metropolis <sup>1</sup>	84		99	91	62.8		64.4	63.6	11.6		11.8	<b>11.7</b>
Rebelde <sup>1</sup>	84		94	89	63.4		65.1	64.2	10.0		13.2	<b>11.6</b>
<i>Experimental Lines</i>												
NSA12-2472	95	190	141	<b>142</b>	60.1	60.4	62.8	61.1	8.5	10.8	11.0	10.1
XB4542	97	184	128	<b>136</b>	63.5	59.9	65.2	62.9	9.2	11.2	11.2	10.5
WA 8289	101	166	132	133	61.2	60.2	63.0	61.4	9.0	10.3	10.6	10.0
WA 8288	96	169	127	131	61.2	57.2	63.3	60.6	9.9	11.1	11.2	10.7
NSA11-10108 (LCS Abraham)	105	162	122	130	60.9	61.0	61.6	61.2	9.0	10.6	11.2	10.3
WA 8268	104	151	115	123	61.9	57.1	63.0	60.6	10.3	11.9	11.4	11.2
LWW14-73915	93	166	110	123	60.8	60.4	61.5	60.9	10.1	11.2	10.6	10.6
OR2130021R	87	154	112	118	62.5	61.4	63.8	62.6	10.6	12.2	11.7	<b>11.5</b>
WA 8294 <sup>1</sup>	95		119	107	60.8		62.6	61.7	10.7		12.8	<b>11.7</b>
OR2120358H <sup>1</sup>	88		126	107	61.6		63.6	62.6	10.0		11.6	10.8
OR2130118H <sup>1</sup>	96		107	101	64.0		65.1	<b>64.6</b>	10.4		11.4	10.9
OR2110679 <sup>1</sup>	89		108	99	61.9		63.7	62.8	9.9		10.7	10.3
CO12D2011 <sup>1</sup>	84		113	98	64.6		65.4	<b>65.0</b>	10.3		11.7	11.0
YS-401 <sup>1</sup>	82		109	96	61.9		63.4	62.6	10.1		11.3	10.7
OR2140074R <sup>1</sup>	77		105	91	60.0		62.7	61.3	9.5		11.5	10.5
C.V. %	7	5	8	7	1.2	1.1	0.5	1.0	7.4	2.0	3.8	4.7
LSD (0.05)	9	13	13	7	1.0	0.9	0.5	0.5	1.0	0.3	0.6	0.4
Average	91	166	117	114	61.9	61.2	63.5	62.5	9.9	11.4	11.4	10.8
Highest	107	190	141	142	64.6	64.1	65.4	65.0	11.6	12.3	13.2	11.7
Lowest	68	149	94	89	59.2	57.1	61.5	60.5	8.5	10.3	10.1	9.3

<sup>1</sup> - Entries grown only in cooperative trials at Dayton & Walla Walla. Average of two locations

Table 48. 2018 WSU Variety Testing Hard Red Winter Wheat Trial Summary  
Precipitation Zone 12-16"

Variety Name	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
	Almira	Antatone	Lamont	Rearidan	Average	Almira	Antatone	Lamont	Rearidan	Average	Almira	Antatone	Lamont	Rearidan	Average
<i>Released Varieties</i>															
LCS Rocket (NSA10-2196)	129	105	73	98	101	60.3	59.3	61.1	61.6	60.6	8.9	7.3	10.2	10.9	9.3
LCS Jet	119	119	66	98	100	61.6	60.5	61.9	62.0	61.5	9.6	7.3	11.6	11.9	10.1
WB4303	123	108	65	88	96	61.4	60.7	61.8	61.9	61.4	9.4	8.0	11.6	11.4	10.1
Keldin	119	96	68	98	95	62.6	61.8	63.8	63.5	62.9	9.0	7.2	11.6	11.4	9.8
SY Touchstone	109	94	65	94	90	63.0	61.5	63.5	63.0	62.7	9.7	8.1	12.1	11.9	10.5
SY Clearstone CL2	104	107	58	89	89	61.4	61.6	61.5	61.8	61.6	9.1	7.9	12.9	12.1	10.5
Mandala	103	94	63	83	86	62.9	63.2	62.1	62.5	62.7	9.6	7.4	13.1	12.3	10.6
WB4623CLP	106	89	52	84	83	63.7	63.5	61.3	62.4	62.7	10.7	8.9	14.0	13.5	11.8
Whetstone	98	88	43	92	80	63.2	62.5	62.9	63.1	62.9	10.0	7.9	13.9	11.8	10.9
Farnum	95	81	47	86	77	61.2	60.3	61.0	61.1	60.9	9.9	8.5	13.1	12.3	11.0
Sequoia	95	64	52	86	74	61.3	57.9	60.4	62.0	60.4	9.4	8.1	11.7	11.5	10.2
WB4311 <sup>1</sup>	103	45			-- <sup>1</sup>	61.9	60.5			-- <sup>1</sup>	8.0	13.3			-- <sup>1</sup>
<i>Experimental Lines</i>															
NSA11-10108 (LCS Abraham)	128	107	69	94	100	60.5	60.4	60.4	60.7	60.5	9.7	7.1	11.7	11.2	9.9
NSA12-2472	117	111	64	103	99	59.8	59.6	59.6	60.8	60.0	8.6	7.2	11.6	10.7	9.5
WA 8287	121	96	66	103	96	60.5	59.3	61.9	60.5	60.6	8.9	7.9	11.6	11.7	10.0
LWW14-73915	104	110	68	92	94	59.8	58.9	60.9	61.2	60.2	9.9	7.6	12.2	11.8	10.4
WA 8273	101	91	66	95	88	63.5	63.1	64.0	63.6	63.5	9.1	8.0	11.0	11.6	9.9
WA 8286	102	91	58	92	86	62.2	62.2	61.5	61.7	61.9	9.1	8.0	12.3	11.4	10.2
C.V. %	9	6	11	10	9	0.7	0.9	1.4	0.7	1.0	6.1	5.9	4.2	3.4	4.8
LSD (0.05)	14	9	9	13	6	0.6	0.8	1.2	0.6	0.4	0.8	0.6	0.7	0.6	0.3
Average	110	97	60	93	90	61.7	61.0	61.7	62.0	61.6	9.4	7.8	12.2	11.7	10.3
Highest	129	119	73	103	101	63.7	63.5	64.0	63.6	63.5	10.7	8.9	14.0	13.5	11.8
Lowest	95	64	43	83	74	59.8	57.9	59.6	60.5	60.0	8.6	7.1	10.2	10.7	9.3

<sup>1</sup> - No averages, entry grown at two locations only

Note - Data for 2018 Eureka location is excluded from the summary due to a different set of entries grown at that location

Table 49. 2018 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone <12"

Variety Name	Yield (Bu/A)										Test Wt (Lbs/Bu)										Protein (%)									
	Bickleton <sup>1</sup>	Connell	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Bickleton <sup>1</sup>	Connell	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Bickleton <sup>1</sup>	Connell	Horse Heaven	Lind	Ritzville	St. Andrews	Average									
<i>Released Varieties</i>																														
LCS Jet	42	74	51	78	97	66	73	59.0	60.7	59.6	62.0	61.1	60.8	60.8	8.7	10.1	11.8	11.3	8.0	10.0	10.3									
SY Clearstone CL2	38	66	49	66	78	60	64	61.0	61.1	60.5	62.1	61.9	61.5	61.4	9.2	11.4	11.5	10.8	9.1	10.1	10.6									
Keldin	40	67	53	64	69	57	62	62.8	61.7	61.2	63.3	61.4	62.6	62.0	8.3	9.6	11.6	11.1	7.7	10.1	10.0									
LCS Rocket (NSA10-2196)	40	53	52	64	87	47	60	57.6	59.7	59.1	61.1	59.2	59.0	59.6	8.9	10.7	11.2	10.3	7.8	9.8	10.0									
Sequoia	--	64	51	58	79	48	60	--	60.4	61.3	62.1	61.1	60.5	61.1	--	10.6	11.9	10.9	8.8	9.8	10.4									
WB4303	34	68	36	58	82	52	59	60.1	60.9	60.3	61.9	61.6	61.5	61.2	9.6	11.0	11.6	11.4	8.4	9.8	10.4									
Mandala	34	57	54	61	67	56	59	60.8	60.5	59.9	62.5	62.9	61.6	61.5	10.0	12.1	12.0	11.5	8.0	10.9	10.9									
WB4623CLP	32	61	44	60	75	51	58	62.0	62.6	60.8	62.2	63.2	62.4	62.2	10.2	11.8	13.3	13.0	9.3	12.0	11.9									
SY Touchstone	38	51	52	67	73	48	58	63.1	61.7	60.3	63.2	61.9	62.0	61.8	9.4	11.4	12.4	11.7	8.7	11.6	11.2									
Wheatstone	29	58	43	57	73	61	58	61.5	60.1	60.7	62.7	62.9	63.1	61.9	10.2	11.4	12.7	11.1	9.1	11.7	11.2									
Farnum	44	41	41	50	70	44	50	58.3	59.9	59.9	60.3	61.8	58.3	59.7	12.1	12.2	11.6	11.6	9.5	10.8	11.2									
<i>Experimental Lines</i>																														
LWW14-73915	--	77	45	81	95	69	73	--	57.8	59.4	61.2	58.9	59.7	59.4	--	11.0	11.5	11.3	8.5	10.3	10.5									
NSA12-2472	--	82	45	83	89	61	72	--	60.0	58.4	61.0	59.0	59.6	59.6	--	9.4	11.5	9.8	7.2	9.4	9.5									
NSA11-10108 (LCS Abraham)	38	72	56	73	79	66	69	58.3	59.1	58.4	60.3	59.8	60.5	59.6	9.5	11.3	11.8	10.4	7.2	9.9	10.1									
WA 8287	--	53	44	61	89	62	62	--	58.8	58.8	59.2	59.3	59.6	59.1	--	11.2	11.8	11.2	8.1	9.8	10.4									
WA 8273	--	60	49	63	72	56	60	--	62.1	61.9	63.2	62.7	63.2	62.6	--	11.0	11.6	11.0	9.3	9.4	10.5									
WA 8286	--	53	49	64	77	52	59	--	59.6	58.8	61.1	62.6	60.6	60.5	--	11.6	11.8	10.5	8.5	11.1	10.7									
C.V. %	4	9	8	10	10	11	10	1.0	0.9	1.1	1.1	1.1	1.4	1.1	3.7	5.3	3.8	6.2	7.3	7.6	6.0									
LSD (0.05)	2	7	6	9	11	9	4	0.8	0.8	0.9	1.0	1.0	1.2	0.4	0.5	0.8	0.6	0.9	0.9	1.1	0.4									
Average	37	62	48	65	79	56	62	60.6	60.3	60.0	61.7	61.2	61.0	60.8	9.4	11.1	11.9	11.1	8.4	10.4	10.6									
Highest	42	82	56	83	97	69	73	63.1	62.6	61.9	63.3	63.2	63.2	62.6	10.2	12.1	13.3	13.0	9.5	12.0	11.9									
Lowest	29	44	36	50	67	44	50	57.6	57.8	58.4	59.2	58.9	58.3	59.1	8.3	9.4	11.2	9.8	7.2	9.4	9.5									

<sup>1</sup> - Bickleton data is excluded from Average calculation due to very different set of entries at that location.

Table 50.

## 2018 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
LCS Rocket (NSA10-2196)	98	115	<b>107</b>	59.8	56.2	58.0	12.3	13.3	12.8
LCS Jet	97	110	<b>104</b>	60.3	56.8	58.6	12.9	14.1	13.5
LCS Aymeric	96	105	<b>101</b>	57.9	50.1	54.0	11.7	13.4	12.6
WB4303	92	109	100	61.3	57.5	59.4	13.4	14.6	14.0
Keldin	98	101	100	62.1	56.3	59.2	13.1	15.0	14.0
WB4311	86	107	97	62.6	60.4	<b>61.5</b>	13.6	14.8	14.2
SY Touchstone	82	95	89	61.8	57.9	<b>59.9</b>	12.5	14.5	13.5
Metropolis	75	95	85	61.3	58.2	59.8	14.8	15.6	15.2
Rebelde	75	92	84	61.5	57.9	59.7	14.5	16.1	15.3
Mandala	80	86	83	60.9	54.9	57.9	13.7	14.9	14.3
<i>Experimental Lines</i>									
NSA12-2472	100	114	<b>107</b>	60.6	56.5	58.5	13.2	13.6	13.4
NSA11-10108 (LCS Abraham)	96	111	<b>104</b>	59.7	56.5	58.1	12.6	13.5	13.0
XB4542	90	110	100	62.5	58.1	<b>60.3</b>	12.2	13.5	12.9
LWW14-73915	89	110	99	59.2	53.0	56.1	12.5	14.6	13.6
WA 8268	100	96	98	61.1	53.4	57.2	12.6	15.2	13.9
WA 8289	90	96	93	60.4	51.7	56.1	11.7	14.2	13.0
WA 8288	95	87	91	61.0	53.0	57.0	12.1	15.1	13.6
OR2130021R	72	103	87	61.0	57.8	59.4	13.5	14.4	14.0
C.V. %	7	7	7	1.0	4.1	2.9	3.3	4.3	3.9
LSD (0.05)	9	10	6	0.9	3.2	1.6	0.6	0.9	0.5
Average	89	102	96	60.8	55.9	58.4	12.9	14.5	13.7
Highest	100	115	107	62.6	60.4	61.5	14.8	16.1	15.3
Lowest	72	86	83	57.9	50.1	54.0	11.7	13.3	12.6

Table 51.

## WSU Variety Testing Hard Red Winter Wheat Trial Multi-Year Summary

Precipitation Zone = >16"  
(Dayton, Pullman, Walla Walla)

Variety Name	2 Years			3 Years			5 Years		
	2017-2018, 6 loc/yr			2016-2018, 9 loc/yr			2014-2018, 15 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
LCS Rocket (NSA10-2196)	138	61.2	10.5	137	61.0	10.7			
LCS Jet	134	62.8	11.1	133	62.3	11.3	121	61.3	11.8
SY Touchstone	126	63.7	11.6	122	63.2	11.8			
Keldin	124	63.9	11.0	126	63.1	11.1	118	62.3	11.7
WB4311	117	64.4	11.8						
Whetstone	111	63.5	11.6	111	63.0	11.7	105	61.8	12.2
Mandala	110	64.2	11.7						
<b>Experimental Lines</b>									
WA 8268	128	61.9	11.4						
LWW14-73915	125	61.7	11.0						
C.V. %	6	1.4	4.4	6	1.4	3.9	7	1.3	4.3
LSD (0.05)	4	0.5	0.3	3	0.4	0.2	3	0.3	0.2
Average	124	63.0	11.3	126	62.5	11.3	115	61.8	11.9
Highest	138	64.4	11.8	137	63.2	11.8	121	62.3	12.2
Lowest	110	61.2	10.5	111	61.0	10.7	105	61.3	11.7

Table 52.

## WSU Variety Testing Hard Red Winter Wheat Trial Multi-Year Summary

Precipitation Zone = 12-16"

(Almira, Anatone, Lamont, Reardan)

Variety Name	2 Years			3 Years			5 Years		
	2017-2018, 7 loc/yr			2016-2018, 10 loc/yr			2014-2018, 16 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
LCS Jet	106	61.0	10.5	105	61.4	10.7	91	60.4	11.5
Keldin	102	62.8	10.1	100	62.8	10.4	91	62.2	11.2
SY Touchstone	95	62.3	11.0	93	62.6	11.2			
Mandala	93	62.4	11.0						
SY Clearstone CL2	92	61.0	10.9	89	61.3	11.2			
Whetstone	89	62.2	11.2	86	62.4	11.3	78	61.8	11.8
WB4623CLP	86	62.4	12.0						
Farnum	82	60.2	11.3	82	60.7	11.4	75	59.5	12.1
Sequoia	80	60.1	10.7	79	60.9	10.6			
<b>Experimental Lines</b>									
LWW14-73915	98	59.4	10.8						
WA 8273	91	62.6	10.6						
C.V. %	8	1.4	5.5	8	1.2	5.7	8	1.1	5.2
LSD (0.05)	4	0.4	0.3	3	0.3	0.3	2	0.2	0.2
Average	92	61.5	10.9	91	61.7	11.0	84	61.0	11.7
Highest	106	62.8	12.0	105	62.8	11.4	91	62.2	12.1
Lowest	80	59.4	10.1	79	60.7	10.4	75	59.5	11.2

Table 53.

## WSU Variety Testing Hard Red Winter Wheat Trial Multi-Year Summary

Precipitation Zone = <12"

(Connell, Horse Heavern, Lind, Ritzville, St. Andrews)

Variety Name	2 Years			3 Years			5 Years		
	2017-2018, 10 loc/yr			2016-2018, 13 loc/yr			2014-2018, 19 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<i>Released Varieties</i>									
LCS Jet	67	60.3	10.6	65	60.0	11.1	53	60.1	11.8
SY Clearstone CL2	58	60.9	11.4	56	60.5	11.9			
Keldin	58	62.0	10.7	57	61.7	11.2	49	62.0	11.9
Sequoia	57	61.2	10.7	55	60.7	11.2	47	61.2	11.7
Mandala	55	61.2	11.5						
Whetstone	53	61.9	11.7	52	61.4	12.1	46	61.8	12.5
WB4623CLP	53	61.7	12.6						
SY Touchstone	52	61.8	11.9	51	61.4	12.2			
Farnum	48	59.2	11.7	46	58.8	12.1	42	59.0	12.5
<i>Experimental Lines</i>									
LWW14-73915	67	59.1	10.9						
WA 8273	56	62.2	11.1						
C.V. %	10	1.8	5.6	9	1.7	5.4	9	1.6	5.1
LSD (.05)	2	0.5	0.3	2	0.4	0.2	1	0.3	0.2
Average	57	61.0	11.3	55	60.7	11.7	47	60.8	12.1
Highest	67	62.2	12.6	65	61.7	12.2	53	62.0	12.5
Lowest	48	59.1	10.6	46	58.8	11.1	42	59.0	11.7

Table 54.

**WSU Variety Testing Hard Red Winter Wheat Trial Multi-Year Summary**  
 Precipitation Zone - Irrigated  
 (Moses Lake, Pasco\*)

Variety Name	2 Years 2017-2018, 4 loc/yr			3 Years 2016-2018, 6 loc/yr			5 Years 2014-2018, 8 loc/yr		
	Yield (Bu/A)	TW (Lbs/Bu)	Protein (%)	Yield (Bu/A)	TW (Lbs/Bu)	Protein (%)	Yield (Bu/A)	TW (Lbs/Bu)	Protein (%)
<i>Released Varieties</i>									
LCS Rocket (NSA10-2196)	124	60.2	12.1	130	59.6	12.2			
LCS Jet	123	61.3	12.5	136	61.4	12.6	141	61.0	12.6
Keldin	116	62.1	12.9	117	61.9	12.7	125	61.7	12.7
LCS Aymeric	116	57.4	11.7	126	57.6	11.7			
WB4311	114	63.7	13.1						
SY Touchstone	108	62.4	12.7	120	62.2	12.8			
Metropolis	105	62.5	14.0						
Rebelde	99	62.7	14.3	112	62.5	14.2			
Mandala	99	61.5	13.3	114	61.8	13.3			
<i>Experimental Lines</i>									
LWW14-73915	119	59.1	12.4						
WA 8268	115	60.4	12.9						
<b>C.V. %</b>	6	2.2	4.1	8	1.9	3.9	8	1.7	3.6
<b>LSD (0.05)</b>	4	0.9	0.4	5	0.6	0.3	5	0.5	0.2
<b>Average</b>	113	61.2	12.9	122	61.0	12.8	133	61.4	12.7
<b>Highest</b>	124	63.7	14.3	136	62.5	14.2	141	61.7	12.7
<b>Lowest</b>	99	57.4	11.7	112	57.6	11.7	125	61.0	12.6

\* Pasco irrigated was added in 2016

Table 55. 2018 WSU Variety Testing Hard Winter Wheat Trial, Almira

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
LCS Rocket (NSA10-2196)	129	60.3	8.9	37	148			
LCS Abraham	128	60.5	9.7	34	150			
WB4303	123	61.4	9.4	38	147			
Keldin	119	62.6	9.0	40	150	111	106	90
LCS Jet	119	61.6	9.6	38	150	113	108	89
SY Touchstone	109	63.0	9.7	36	150	100	94	
WB4623CLP	106	63.7	10.7	40	149	90		
SY Clearstone CL2	104	61.4	9.1	45	150	96	92	
Mandala	103	62.9	9.6	41	153	100		
Whetstone	98	63.2	10.0	38	148	93	88	73
Farnum	95	61.2	9.9	52	157	93	90	76
Sequoia	95	61.3	9.4	57	156	88	87	75
<b>Experimental Lines</b>								
WA 8287	121	60.5	8.9	46	155			
NSA12-2472	117	59.8	8.6	41	148			
LWW14-73915	104	59.8	9.9	38	147	109		
WA 8286	102	62.2	9.1	43	155			
WA 8273	101	63.5	9.1	52	153	97		
C.V. %	9	0.7	6.1	4	1	9	9	8
LSD (0.05)	14	0.6	0.8	2	1	9	7	5
<b>Average</b>	109	61.7	9.5	43	151	99	95	81
<b>Highest</b>	129	63.7	10.7	57	157	113	108	90
<b>Lowest</b>	95	59.8	8.6	34	147	88	87	73

**Agronomic Information**

Planting Date:	9/14/2017
Harvest Date:	8/15/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	111
P (ppm-bicarb) 2-ft sample	74
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.29
Herbicide:	
Fungicides applied with herbicide application on 05/19	

**Trial Notes:**

1. The Almira nursery was located about 9 miles north of Almira, WA.
2. The nursery was fertilized prior to seeding. An additional 93N was applied in spring after soil sampling.
3. Overall yield was 14% more than 2017, and grain test weight was 1.2 lb/bu more than last year.

Cooperator D. McKay

Table 56. 2018 WSU Variety Testing Hard Winter Wheat Trial, Anatone

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Jet	119	60.5	7.3	37	145	0	106	--	--
WB4303	108	60.7	8.0	37	143	0		--	--
LCS Abraham	107	60.4	7.1	35	145	0		--	--
SY Clearstone CL2	107	61.6	7.9	45	145	0	95	--	--
LCS Rocket (NSA10-2196)	105	59.3	7.3	35	144	0		--	--
WB4311	103	61.9	8.0	36	143	0	95	--	--
Keldin	96	61.8	7.2	39	145	0	91	--	--
Mandala	94	<b>63.2</b>	7.4	45	146	0	88	--	--
SY Touchstone	94	61.5	8.1	33	145	0	86	--	--
WB4623CLP	89	<b>63.5</b>	8.9	41	145	0	82	--	--
Whetstone	88	62.5	7.9	39	143	0	84	--	--
Farnum	81	60.3	8.5	52	155	45	76	--	--
Sequoia	64	57.9	8.1	55	153	85	66	--	--
<b>Experimental Lines</b>									
WA 8286	91	62.2	8.0	46	149	0		--	--
WA 8273	91	<b>63.1</b>	8.0	51	149	32	83	--	--
WA 8287	96	59.3	7.9	43	150	0		--	--
LWW14-73915	<b>110</b>	58.9	7.6	39	143	0	89	--	--
NSA12-2472	<b>111</b>	59.6	7.2	40	144	0		--	--
C.V. %	6	0.9	5.9	3	1	91	8	--	--
LSD (0.05)	9	0.8	0.6	2	2	11	7	--	--
Average	97	61.0	7.8	42	146	9	87	--	--
Highest	119	63.5	8.9	55	155	85	106	--	--
Lowest	64	57.9	7.1	33	143	0	66	--	--

**Agronomic Information**

Planting Date:	9/26/2017
Harvest Date:	7/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	160
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	6.5

Herbicide:

PowerFlex HL, Huskie, Tilt on 04/19

**Trial Notes:**

1. The Anatone nursery was located about 7 miles north of Anatone, WA.
2. The nursery was fertilizer at planting 80N 14P 14S with a no-till drill with hoe opener.
3. Overall yield was 24% greater than 2017 and grain test weight was about 0.7 lb/bu less than last year. Despite additional spring top dress N, protein levels were still low.

**Cooperator: B Ausman**

Table 57. 2018 WSU Variety Testing Hard Winter Wheat Trial, Bickleton

Variety Name	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
LCS Jet	42	59.0	8.7	27	--	--	--
LCS Rocket (NSA10-2196)	41	57.6	8.9	30	--	--	--
Keldin	40	62.8	8.3	29	--	--	--
WB4311	39	63.1	9.1	27	--	--	--
SY Touchstone	38	63.1	9.4	27	--	--	--
SY Clearstone CL2	38	61.0	9.2	31	--	--	--
Mandala	34	60.8	10.0	29	--	--	--
Sprinter	34	58.6	10.0	32	--	--	--
WB4303	34	60.1	9.6	26	--	--	--
WB4623CLP	32	62.0	10.2	26	--	--	--
Whetstone	29	61.5	10.2	26	--	--	--
<b>Experimental Lines</b>							
NSA11-10108 (LCS Abraham)	38	58.3	9.5	27	--	--	--
C.V. %	4	1.0	3.7	5	--	--	--
LSD (0.05)	2	0.8	0.5	2	--	--	--
Average	37	60.7	9.4	28	--	--	--
Highest	42	63.1	10.2	32	--	--	--
Lowest	29	57.6	8.3	26	--	--	--

**Agronomic Information**

Planting Date:	10/26/2017
Harvest Date:	8/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	113
P (ppm-bicarb) 2-ft sample	65
S (lb/ac) 2-ft sample	28
pH (top 6 inches)	5.89

Herbicide:

Herbicides applied by growers

**Trial Notes:**

1. The Bickleton nursery was located about 4 miles southeast of Bickleton.
2. The nursery was fertilizer at seeding with no-till hoe drill: 50N 9P 9S.
3. This was a new location in 2017 and limited data was collected.

**Cooperator** R Juris

Table 58. 2018 WSU Variety Testing Hard Winter Wheat Trial, Connell

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Jet	74	60.7	10.1	34	134	0	66	70	53
LCS Abraham	72	59.1	11.3	33	134	0			
WB4303	68	60.9	11.0	36	133	0			
Keldin	67	61.7	9.6	36	135	0	61	65	51
SY Clearstone CL2	66	61.1	11.4	42	134	0	60	61	
Sequoia	64	60.4	10.6	50	135	10	62	59	45
WB4623CLP	61	<b>62.6</b>	11.8	38	134	0	50		
Whetstone	58	60.1	11.4	39	134	0	55	58	45
Mandala	57	60.5	12.1	34	137	0	55		
LCS Rocket (NSA10-2196)	53	59.7	10.7	32	134	0			
SY Touchstone	51	61.7	11.4	32	135	0	48	54	
Farnum	44	58.3	12.1	44	140	0	46	47	38
<b>Experimental Lines</b>									
NSA12-2472	<b>82</b>	60.0	9.4	37	134	0			
LWW14-73915	<b>77</b>	57.8	11.0	37	133	0	65		
WA 8273	60	<b>62.1</b>	11.0	44	136	0	57		
WA 8286	53	59.6	11.6	40	138	0			
WA 8287	53	58.8	11.2	36	138	0			
C.V. %	9	0.9	5.3	6	1	25	9	8	8
LSD (0.05)	7	0.8	0.8	3	1	0	5	4	2
Average	62	60.3	11.0	38	135	1	57	59	46
Highest	82	62.6	12.1	50	140	10	66	70	53
Lowest	44	57.8	9.4	32	133	0	46	47	38

**Agronomic Information**

Planting Date:	9/6/2017
Harvest Date:	7/24/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	252
P (ppm-bicarb) 2-ft sample	120
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.8

**Trial Notes:**

1. The Connell nursery was located about 9 miles east of Connell, WA.
2. The nursery was fertilized prior to planting 100N
3. Overall yield was 19% greater than 2017 and grain test weight was about 1.4 lb/bu less than last year.

**Cooperator: Dan Bauermeister**

Herbicides and Fungicides applied by cooperator

Table 59. 2018 WSU Variety Testing Hard Winter Wheat Trial, Dayton

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
LCS Rocket (NSA10-2196)	107	60.9	9.3	32	141	125	120	
LCS Abraham	105	60.9	9.0	33	139			
LCS Jet	104	61.7	9.5	34	140	120	118	101
WB4303	95	61.3	10.4	33	139	101		
SY Touchstone	93	62.5	10.1	32	143	114	111	
Norwest 553	93	62.3	10.3	32	141	115	116	93
LCS Aymeric	92	59.2	8.5	30	142	120		
Keldin	92	63.2	9.1	36	142	111	115	96
LCS Evina	88	62.0	10.2	40	146	104		83
WB-Arrowhead	88	63.1	10.2	38	141	110	110	93
WB4311	88	62.9	10.8	34	139	101		
Rebelde	84	63.4	10.0	31	140	106		
Metropolis	84	62.8	11.6	32	139	99		
Langin	83	62.0	9.4	31	138			
Mandala	75	63.0	10.1	39	145	87		
Whetstone	68	60.5	9.6	31	139	99	100	83
<i>Experimental Lines</i>								
WA 8268	104	61.9	10.3	35	143	120		
WA 8289	101	61.2	9.0	33	142			
XB4542	97	63.5	9.2	41	140			
OR2130118H	96	64.0	10.4	33	141			
WA 8288	96	61.2	9.9	32	144			
NSA12-2472	95	60.1	8.5	37	138			
WA 8294	95	60.8	10.7	36	142			
LWW14-73915	93	60.8	10.1	34	138	118		
OR2110679	89	61.9	9.9	35	140			
OR2120358H	88	61.6	10.0	32	142			
OR2130021R	87	62.5	10.6	33	145	106		
CO12D2011	84	64.6	10.3	34	138			
YS-401	82	61.9	10.1	40	138			
OR2140074R	77	60.0	9.5	32	143			
C.V. %	7	1.2	7.4	4	1	6	7	7
LSD (0.05)	9	1.0	1.0	2	1	6	5	4
Average	91	61.9	9.9	34	141	109	113	92
Highest	107	64.6	11.6	41	146	125	120	101
Lowest	68	59.2	8.5	30	138	87	100	83

**Agronomic Information**

Planting Date:	10/11/2017
Harvest Date:	8/1/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chickpeas
Spring soil test:	
N (lb/ac) 4-ft sample	155
P (ppm-bicarb) 2-ft sample	80
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.54

Herbicide:

Herbicides and fungicides applied by grower

**Trial Notes:**

1. The Dayton nursery was located about 10 miles northwest of Dayton, WA.
2. The nursery was fertilized at 125N 15P 15S 10Cl. An additional 125N was applied in the spring after soil sampling.
3. Overall yield was 27% less than 2017 and grain test weight was 1.9 lb/bu less than last year. Despite additional top-dress nitrogen, protein levels were still low.

Cooperator J Penner

Table 60. 2018 WSU Variety Testing Hard Winter Wheat Trial, Eureka

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
LCS Rocket (NSA10-2196)	105	60.8	10.3	34	134	80	--	--
LCS Jet	103	61.7	10.4	34	134	77	--	--
Keldin	99	63.5	9.7	37	136	79	--	--
WB4303	95	61.8	10.8	36	130	68	--	--
WB-Arrowhead	95	63.0	11.4	39	135	74	--	--
LCS Evina	93	61.7	10.8	38	140	71	--	--
LCS Abraham	92	60.6	10.2	32	134		--	--
Norwest 553	91	62.5	11.6	33	137	62	--	--
WB4311	91	63.4	10.6	34	132	74	--	--
LCS Aymeric	90	58.8	10.6	32	136	69	--	--
Langin	87	63.1	10.2	33	129		--	--
SY Touchstone	87	63.0	10.6	32	136	63	--	--
Whetstone	84	62.6	10.5	38	134	56	--	--
Mandala	83	62.5	10.4	38	140	59	--	--
Rebelde	80	63.3	11.3	32	135	55	--	--
Metropolis	74	63.3	12.0	31	134	54	--	--
<b>Experimental Lines</b>								
WA 8294	100	61.2	10.5	35	135		--	--
WA 8289	99	60.9	10.4	34	136		--	--
XB4542	96	64.2	10.4	43	135		--	--
WA 8288	96	62.0	10.2	32	137		--	--
WA 8268	95	61.9	10.5	34	137		--	--
NSA12-2472	94	61.1	9.8	38	133		--	--
LWW14-73915	94	60.8	10.4	36	133	72	--	--
OR2130118H	90	63.8	11.0	33	137		--	--
OR2130021R	86	62.6	11.0	32	137	61	--	--
OR2120358H	86	61.7	11.0	36	137		--	--
CO12D2011	85	64.8	11.8	35	131		--	--
OR2140074R	84	60.8	10.7	32	137		--	--
YS-401	83	62.2	10.1	40	130		--	--
OR2110679	82	61.6	10.4	34	136	58	--	--
C.V. %	6	0.5	5.2	3	0	7	--	--
LSD (0.05)	7	0.4	0.8	2	1	5	--	--
Average	91	62.2	10.7	35	135	67	--	--
Highest	105	64.8	12.0	43	140	80	--	--
Lowest	74	58.8	9.7	31	129	54	--	--

**Agronomic Information**

Planting Date:	10/5/2017
Harvest Date:	7/18/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	193
P (ppm-bicarb) 2-ft sample	51
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	5.42

Herbicide:

4 oz/ac propiconazole was applied with herbicide application

**Trial Notes:**

1. The Eureka nursery was located about 17 miles west of Prescott, WA.
2. Base fertilizer was 100N 20P 20S
3. Yield was 116% greater than 2017 and grain test weight were 1.6 lb/bu lower than 2017.

Cooperator G Struthers

Table 61.

**2018 WSU Variety Testing Hard Winter Wheat Trial, Horse Heaven**

Variety Name	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>							
LCS Abraham	56	58.4	11.8	28			
Mandala	54	59.9	12.0	29	45		
Keldin	53	61.2	11.6	30	46	46	42
SY Touchstone	52	60.3	12.4	25	42	40	
LCS Rocket (NSA10-2196)	52	59.1	11.2	29			
Sequoia	51	61.3	11.9	35	43	42	40
LCS Jet	51	59.6	11.8	25	42	41	
SY Clearstone CL2	49	60.5	11.5	34	42	42	
WB4623CLP	44	60.8	13.3	30	39		
Whetstone	43	60.7	12.7	27	36	36	34
WB4311	42	62.5	12.2	28	36		
Farnum	41	59.9	12.2	33	34	34	35
WB4303	36	60.3	11.6	27			
<i>Experimental Lines</i>							
WA 8273	49	61.9	11.6	36	40		
WA 8286	49	58.8	11.8	29			
NSA12-2472	45	58.4	11.5	30			
LWW14-73915	45	59.4	11.5	29	39		
WA 8287	44	58.8	11.8	31			
C.V. %	8	1.1	3.8	5	8	9	9
LSD (0.05)	6	0.9	0.6	2	3	3	2
Average	48	60.1	11.9	30	40	40	38
Highest	56	62.5	13.3	36	46	46	42
Lowest	36	58.4	11.2	25	34	34	34

**Agronomic Information**

Planting Date:	10/26/2017
Harvest Date:	7/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	138
P (ppm-bicarb) 2-ft sample	46
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.8

**Trial Notes:**

1. The Horse Heavens nursery was located about 14 miles southwest of Benton City, WA.
2. The nursery was fertilized at planting 50N 9P 9S with a no-till hoe drill.
3. Overall yield was 50% greater than 2017.

Cooperator C Smith

Herbicide: Tilt at 4 oz/ac was applied with herbicide on 04/20/17

\* 5-Year average from 2018, 2017, 2016, 2014, 2013

Table 62. 2018 WSU Variety Testing Hard Winter Wheat Trial, Lamont

Variety Name	2018					2 Year*	3 Year**	5 Year***
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
LCS Rocket (NSA10-2196)	73	61.1	10.2	30	148			
Keldin	68	63.8	11.6	33	150	84	88	82
LCS Jet	66	61.9	11.6	30	150	89	88	
WB4303	65	61.8	11.6	31	152			
SY Touchstone	65	63.5	12.1	29	146	80		
Mandala	63	62.1	13.1	34	145			
SY Clearstone CL2	58	61.5	12.9	35	150	70	75	
Sequoia	52	60.4	11.7	40	152	61	68	66
WB4623CLP	52	61.3	14.0	33	150			
Farnum	47	61.0	13.1	38	154	64	66	67
WB4311	45	60.4	13.3	28	147			
Whetstone	43	62.9	13.9	31	148	67	72	70
<i>Experimental Lines</i>								
NSA11-10108 (LCS Abraham)	69	60.4	11.7	29	145			
LWW14-73915	68	60.9	12.2	32	150			
WA 8287	66	61.9	11.6	35	148			
WA 8273	66	64.0	11.0	42	148			
NSA12-2472	64	59.6	11.6	32	148			
WA 8286	58	61.2	12.3	34	152			
C.V. %	11	1.4	4	5	2	10	10	9
LSD (0.05)	9	1.2	1	2	5	7	6	4
Average	60	61.7	12	33	149	73	76	71
Highest	73	64.0	14	42	154	89	88	82
Lowest	43	59.6	10	28	145	61	66	66

**Agronomic Information**

Planting Date:	9/25/2017
Harvest Date:	8/16/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	87
P (ppm-bicarb) 2-ft sample	82
S (lb/ac) 2-ft sample	27
pH (top 6 inches)	5.28
Herbicide:	
Fungicides applied with herbicide application on 05/08	

**Trial Notes:**

1. The Lamont nursery was located about 6 miles north east of Lamont, WA
2. The nursery was fertilized at planting 85N 15P 15S with a no-till drill with hoe opener.
3. Overall yield wa 18% lower than the two year average, and grain test weight was 0.2 lb/bu lower than in 2017.

Cooperator G White

\* - 2-year data from 2018, 2016

\*\* - 3-year data from 2018, 2016, 2015

\*\*\* - 5-year data from 2018, 2016, 2015, 2014, 2013

Table 63. 2018 WSU Variety Testing Hard Winter Wheat Trial, Lind

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
LCS Jet	78	62.0	11.3	33	134	76	69	50
LCS Abraham	73	60.3	10.4	31	139			
SY Touchstone	67	63.2	11.7	32	140	56	52	
SY Clearstone CL2	66	62.1	10.8	40	139	59	56	
Keldin	64	63.2	11.1	38	138	55	54	41
LCS Rocket (NSA10-2196)	64	61.1	10.3	34	135			
Mandala	61	62.5	11.5	36	141	56		
WB4623CLP	60	62.2	13.0	38	140	52		
Sequoia	58	62.1	10.9	48	142	61	58	46
WB4303	58	61.9	11.4	36	132			
Whetstone	57	62.7	11.1	36	137	49	50	42
Farnum	50	60.3	11.6	45	144	51	48	40
<i>Experimental Lines</i>								
NSA12-2472	83	61.0	9.8	35	135			
LWW14-73915	81	61.2	11.3	35	134	78		
WA 8286	64	61.0	10.5	38	142			
WA 8273	63	63.2	11.0	46	142	63		
WA 8287	61	59.2	11.2	37	143			
C.V. %	10	1.1	6.2	4	1	10	10	11
LSD (0.05)	9	1.0	0.9	2	2	6	5	3
Average	65	61.7	11.1	38	139	60	55	44
Highest	83	63.2	13.0	48	144	78	69	50
Lowest	50	59.2	9.8	31	132	49	48	40

**Agronomic Information**

Planting Date:	9/4/2017
Harvest Date:	7/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	222
P (ppm-bicarb) 2-ft sample	21
S (lb/ac) 2-ft sample	27
pH (top 6 inches)	6.0

**Trial Notes:**

1. The Lind nursery was located about 3.5 miles northeast of Lind, WA.
2. The nursery was fertilized prior to planting 50N 10S.
3. Overall yield was 40% greater than 2017 and test weights are similar.

**Cooperator: WSU Lind Dryland Experiment Station**

Table 64.

**2018 WSU Variety Testing Hard Winter Irrigated Wheat Trial, Moses Lake**

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
LCS Rocket (NSA10-2196)	98	59.8	12.3	24	143	113	126	
Keldin	98	62.1	13.1	26	146	109	115	129
LCS Jet	97	60.3	12.9	25	143	111	135	143
LCS Abraham	96	59.7	12.6	26	143			
LCS Aymeric	96	57.9	11.7	25	146	105	119	
WB4303	92	61.2	13.4	24	142			
WB4311	86	62.6	13.6	24	143	109		
SY Touchstone	82	61.8	12.5	25	146	99	114	
Mandala	80	60.9	13.7	29	147	93	111	
Rebelde	75	61.5	14.5	24	146	88	103	
Metropolis	75	61.3	14.8	23	141	93		
<i>Experimental Lines</i>								
NSA12-2472	100	60.6	13.2	26	142			
WA 8268	100	61.1	12.6	26	148	108		
WA 8288	95	61.0	12.1	23	145			
WA 8289	90	60.4	11.7	24	146			
XB4542	90	62.5	12.2	28	145			
LWW14-73915	89	59.2	12.5	26	140	104		
OR2130021R	72	61.0	13.5	25	147			
C.V. %	7	1.0	3.3	4	1	6	7	9
LSD (0.05)	9	0.9	0.6	1	3	6	6	6
Average	89	60.8	12.9	25	144	103	118	136
Highest	100	62.6	14.8	29	148	113	135	143
Lowest	72	57.9	11.7	23	140	88	103	129

**Agronomic Information**

Planting Date:	10/18/2017
Harvest Date:	8/2/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	366
P (ppm-bicarb) 2-ft sample	50
S (lb/ac) 2-ft sample	173
pH (top 6 inches)	6.17
Herbicide:	
Huskie, Tilt on 04/19	

**Trial Notes:**

1. The Moses Lake nursery was located about 21 miles northeast of Moses Lake, WA.
2. The nursery was fertilizer at 215N 20P 50S. No additional N was applied in the spring after soil sampling.
3. Overall yield was 23% less than 2017 and grain test weight was 2.5 lb/bu less than last year. Protein levels are acceptable.

**Cooperator** S Stahl

Table 65. 2018 WSU Variety Testing Hard Winter Irrigated Wheat Trial, Pasco

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>									
LCS Rocket (NSA10-2196)	115	56.2	13.3	35	126	0	135	134	--
LCS Abraham	111	56.5	13.5	34	126	0			--
LCS Jet	110	56.8	14.1	35	126	0	136	138	--
WB4303	109	57.5	14.6	35	125	0			--
WB4311	107	60.4	14.8	36	124	0	120		--
LCS Aymeric	105	50.1	13.4	33	131	0	126	133	--
Keldin	101	56.3	15	38	131	2	124	119	--
SY Touchstone	95	57.9	14.5	35	133	0	116	126	--
Metropolis	95	58.2	15.6	35	124	0	116		--
Rebelde	92	57.9	16.1	34	127	0	111	122	--
Mandala	86	54.9	14.9	42	134	0	105	118	--
<i>Experimental Lines</i>									
NSA12-2472	114	56.5	13.6	38	124	0			--
XB4542	110	58.1	13.5	43	129	0			--
LWW14-73915	110	53	14.6	37	124	0	135		--
OR2130021R	103	57.8	14.4	35	132	0			--
WA 8289	96	51.7	14.2	34	132	0			--
WA 8268	96	53.4	15.2	34	132	0	122		--
WA 8288	87	53	15.1	34	133	0			--
C.V. %	7	4.1	4.3	4	1	735	5	8	--
LSD (0.05)	10	3.2	0.9	2	1	1	6	8	--
Average	102	55.9	14.5	36	129	0	122	127	--
Highest	115	60.4	16.1	43	134	2	136	138	--
Lowest	86	50.1	13.3	33	124	0	105	118	--

**Agronomic Information**

Planting Date:	10/16/2017
Harvest Date:	7/11/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Onions
Spring soil test:	
N (lb/ac) 4-ft sample	133
P (ppm-bicarb) 2-ft sample	66
S (lb/ac) 2-ft sample	42
pH (top 6 inches)	7.5

**Trial Notes:**

1. The Pasco nursery was located about 11 miles northeast of Pasco, WA.
2. Base fertilizer (applied after soil test) was 300# N
3. Overall yield was 35% less than 2017 and grain test weight were lower than anticipated.

**Cooperator J Macbeth**

Table 66. 2018 WSU Variety Testing Hard Winter Wheat Trial, Pullman

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>									
LCS Rocket (NSA10-2196)	179	60.0	10.8	36	148	0	154	151	
Keldin	171	<b>63.8</b>	11.0	41	147	0	146	142	139
WB4303	171	61.8	11.2	38	147	0			
LCS Jet	170	62.3	11.7	38	148	0	145	144	141
SY Touchstone	167	<b>63.2</b>	11.6	36	149	0	138	133	
LCS Abraham	162	61.0	10.6	35	148	0			
WB4311	154	<b>63.1</b>	11.9	38	147	0	132		
SY Clearstone CL2	154	61.0	11.1	45	150	17	131	121	
Whetstone	152	<b>64.0</b>	12.3	41	148	0	126	123	122
Mandala	149	<b>63.5</b>	12.3	45	151	0	127		
WB4623CLP	132	<b>63.2</b>	12.9	42	155	0	120		
<i>Experimental Lines</i>									
NSA12-2472	190	60.4	10.8	42	148	0			
XB4542	184	59.9	11.2	49	151	0			
WA 8288	169	57.2	11.1	38	150	0			
LWW14-73915	166	60.4	11.2	41	147	0	138		
WA 8289	166	60.2	10.3	36	149	0			
OR2130021R	154	61.4	12.2	39	150	0			
WA 8268	151	57.1	11.9	36	150	0	133		
<b>C.V. %</b>	5	1.1	2.0	3	1	735	5	5	7
<b>LSD (0.05)</b>	13	0.9	0.3	1	3	9	7	6	6
<b>Average</b>	163	61.3	11.5	40	149	1	135	136	134
<b>Highest</b>	190	64.0	12.9	49	155	17	154	151	141
<b>Lowest</b>	132	57.1	10.3	35	147	0	120	121	122

**Agronomic Information**

Planting Date:	10/5/2017
Harvest Date:	8/3/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	24
Previous Crop:	Chickpeas
Spring soil test:	
N (lb/ac) 4-ft sample	223
P (ppm-bicarb) 2-ft sample	102
S (lb/ac) 2-ft sample	48
pH (top 6 inches)	5.46
Herbicide:	
Herbicides and fungicides applied by grower	

**Trial Notes:**

1. The Pullman nursery was located about 5 miles southeast of Pullman, WA.
2. An additional 128N was applied in the spring after soil sampling.
3. Overall yield was 46% more than 2017 and grain test weight was 1.6 lb/bu less than last year.

**Cooperator Roy & Kurt Druffel**

Table 67. 2018 WSU Variety Testing Hard Winter Wheat Trial, Reardan

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
LCS Rocket (NSA10-2196)	98	61.6	10.9	34	149			
LCS Jet	98	62.0	11.9	35	150	118	111	94
Keldin	98	63.5	11.4	36	152	122	112	98
SY Touchstone	94	62.9	11.9	33	149	116	105	
LCS Abraham	94	60.6	11.2	33	149			
Whetstone	92	63.1	11.8	35	148	111	99	86
SY Clearstone CL2	89	61.8	12.1	42	150	105	95	
WB4303	88	61.9	11.4	34	148			
Farnum	86	61.1	12.3	45	158	94	88	79
Sequoia	86	62.0	11.5	46	156	98	91	
WB4623CLP	84	62.4	13.5	38	150	102		
Mandala	83	62.4	12.3	39	151	104		
<b>Experimental Lines</b>								
NSA12-2472	103	60.8	10.7	37	148			
WA 8287	103	60.5	11.7	41	154			
WA 8273	95	63.6	11.6	31	153	105		
WA 8286	92	61.7	11.4	38	155			
LWW14-73915	92	61.2	11.8	36	148	110		
C.V. %	10	0.7	3.4	5	1	7	7	7
LSD (0.05)	13	0.6	0.6	2	2	8	6	4
Average	93	62.0	11.7	37	151	108	100	89
Highest	103	63.6	13.5	46	158	122	112	98
Lowest	83	60.5	10.7	31	148	94	88	79

**Agronomic Information**

Planting Date:	9/15/2017
Harvest Date:	8/10/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	227
P (ppm-bicarb) 2-ft sample	79
S (lb/ac) 2-ft sample	31
pH (top 6 inches)	4.94
Herbicide:	
Fungicides applied with herbicide application on 05/14	

**Trial Notes:**

1. The Reardan nursery was located about 7 miles west of Reardan, WA.
2. The nursery was fertilized at seeding with no-till hoe drill: 100N 14P 17S. An additional 100N was applied in spring.
3. Overall yield was 27% less than 2017, and grain test weight was 0.4 lb/bu less than last year.

**Cooperator** H Johnson

Table 68. 2018 WSU Variety Testing Hard Winter Wheat Trial, Ritzville

Variety Name	2018						2 Year	3 Year*	5 Year**
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Jet	97	61.1	8.0	38	137	0	94	72	
LCS Rocket (NSA10-2196)	87	59.2	7.8	36	136	0			
WB4303	82	61.6	8.4	38	133	0			
LCS Abraham	79	59.8	7.2	35	136	0			
Sequoia	79	61.1	8.8	51	141	58	75	61	57
SY Clearstone CL2	78	61.9	9.1	44	139	0	78	62	
WB4623CLP	75	63.2	9.3	40	139	0	77		
SY Touchstone	73	61.8	8.7	33	137	0	76		
Whetstone	73	62.9	9.1	38	136	0	76	59	54
Farnum	70	61.7	9.5	48	144	30	64	54	52
Keldin	69	61.4	7.7	40	136	0	73	56	55
Mandala	67	62.9	8.0	39	140	0	69		
<b>Experimental Lines</b>									
LWW14-73915	95	58.9	8.5	38	136	0	96		
WA 8287	89	59.3	8.1	43	141	3			
NSA12-2472	89	59.0	7.2	39	136	0			
WA 8286	77	62.6	8.5	43	141	2			
WA 8273	72	62.7	9.3	46	140	58	74		
C.V. %	10	1.1	7.3	5	0	153	8	8	8
LSD (0.05)	11	1.0	0.9	3	1	21	6	4	3
Average	79	61.2	8.4	41	138	9	77	61	54
Highest	97	63.2	9.5	51	144	58	96	72	57
Lowest	67	58.9	7.2	33	133	0	64	54	52

**Agronomic Information**

Planting Date:	9/6/2017
Harvest Date:	7/25/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	152
P (ppm-bicarb) 2-ft sample	41
S (lb/ac) 2-ft sample	18
pH (top 6 inches)	6.1

Herbicide: Applied by cooperator. No fungicides

**Trial Notes:**

1. The Ritzville nursery is located about 5 miles west of Ritzville, WA.
2. The nursery was fertilized prior to planting at 50N 5S.
3. Overall yield was equal to 2017 and test weights are similar. Proteins are very across the varieties and would of benefited from additional fertilizer.

**Cooperator: R. Jirava**

\* 3-year average from 2018, 2017, 2015

\*\* 5-year average from 2018, 2017, 2015, 2014, 2013

Table 69. 2018 WSU Variety Testing Hard Winter Wheat Trial, St. Andrews

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>									
LCS Jet	66	60.7	10.0	31	148	0	58	--	--
Whetstone	61	63.1	11.7	34	147	0	49	--	--
SY Clearstone CL2	60	61.5	10.1	42	148	0	49	--	--
Keldin	57	62.6	10.1	37	148	0	53	--	--
Mandala	56	61.6	10.9	36	151	0	49	--	--
WB4303	52	61.4	9.8	35	146	0		--	--
WB4623CLP	51	62.4	12.0	35	148	0	46	--	--
SY Touchstone	48	62.0	11.6	31	149	0	40	--	--
Sequoia	48	60.5	9.8	45	152	12	46	--	--
LCS Rocket (NSA10-2196)	47	59.0	9.8	32	147	0		--	--
Farnum	44	58.3	10.8	43	154	7	42	--	--
<i>Experimental Lines</i>									
LWW14-73915	69	59.7	10.3	35	146	0	60	--	--
NSA11-10108 (LCS Abraham)	66	60.5	9.9	29	147	0		--	--
WA 8287	62	59.6	9.8	40	151	0		--	--
NSA12-2472	61	59.6	9.4	34	146	0		--	--
WA 8273	56	63.2	9.4	46	149	8	47	--	--
WA 8286	52	60.6	11.1	39	151	3		--	--
C.V. %	11	1.4	7.6	6	1	329	11	--	--
LSD (0.05)	9	1.2	1.1	3	1	8	6	--	--
Average	56	61.0	10.4	37	149	2	49	--	--
Highest	69	63.2	12.0	46	154	12	60	--	--
Lowest	44	58.3	9.4	29	146	0	40	--	--

**Agronomic Information**

Planting Date:	9/7/2017
Harvest Date:	8/14/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	139
P (ppm-bicarb) 2-ft sample	50
S (lb/ac) 2-ft sample	12
pH (top 6 inches)	5.72

Herbicide:

Fungicides applied with herbicide application on 04/20

**Trial Notes:**

1. The St. Andrews nursery was located about 7 miles west of Coulee City, WA.
2. The nursery was fertilized prior to seeding.
3. Overall yield was 33% less than 2017, and grain test weight was 0.1 lb/bu more than last year.

**Cooperator** L. Tanneberg

Table 70. 2018 WSU Variety Testing Hard Winter Wheat Trial, Walla Walla

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>									
LCS Rocket (NSA10-2196)	138	62.1	10.6	37	134	0	136	139	
LCS Evina	137	63.5	12.2	46	140	0	138		
LCS Aymeric	125	61.8	10.1	36	134	0	136		
WB4303	123	63.0	11.0	38	130	0	123		
LCS Abraham	122	61.6	11.2	37	133	0			
LCS Jet	121	62.7	11.4	37	134	0	137	137	123
Langin	116	63.2	10.9	36	128	8			
Mandala	114	64.2	11.5	44	139	0	118		
WB-Arrowhead	112	64.0	11.3	44	135	0	106	112	111
Keldin	111	64.1	11.7	40	136	0	115	122	118
Norwest 553	110	63.5	11.7	35	136	0	121	125	114
SY Touchstone	109	63.9	11.7	35	136	0	127	122	
Whetstone	108	64.0	11.4	42	135	0	108	111	110
WB4311	106	64.5	11.4	38	131	0	118		
Metropolis	99	64.4	11.8	35	131	0	110		
Rebelde	94	65.1	13.2	34	132	0	113		
<i>Experimental Lines</i>									
NSA12-2472	141	62.8	11.0	43	132	0			
WA 8289	132	63.0	10.6	37	136	0			
XB4542	128	65.2	11.2	45	135	0			
WA 8288	127	63.3	11.2	36	137	0			
OR2120358H	126	63.6	11.6	41	138	0			
WA 8294	119	62.6	12.8	39	138	0			
WA 8268	115	63.0	11.4	38	136	0	132		
CO12D2011	113	65.4	11.7	41	132	33			
OR2130021R	112	63.8	11.7	39	137	0	122		
LWW14-73915	110	61.4	10.6	39	132	0	118		
YS-401	109	63.3	11.3	45	129	17			
OR2110679	108	63.7	10.7	41	136	0			
OR2130118H	107	65.1	11.4	38	137	0			
OR2140074R	105	62.7	11.5	37	137	0			
C.V. %	8	0.5	3.8	3	1	518	7	6	7
LSD (0.05)	13	0.5	0.6	2	1	14	8	6	5
Average	117	63.5	11.4	39	135	2	122	124	115
Highest	141	65.4	13.2	46	140	33	138	139	123
Lowest	94	61.4	10.1	34	128	0	106	111	110

**Agronomic Information**

Planting Date: 10/4/2017  
 Harvest Date: 8/07/2018  
 Seeding Rate (seeds/ft<sup>2</sup>): 21  
 Previous Crop:  
 Spring soil test:  
     N (lb/ac) 4-ft sample 247  
     P (ppm-bicarb) 2-ft sample 109  
     S (lb/ac) 2-ft sample 40  
     pH (top 6 inches) 5.07  
 Herbicide:  
 Herbicides and fungicides applied by grower

**Trial Notes:**

1. The Walla Walla nursery was located about 11 miles east of Walla Walla, WA.
2. The nursery was fertilized prior to planting by the cooperators. An additional 47N was applied in the spring after soil sampling.
3. Overall yield was 9% less than 2017 and grain test weight was 0.1 lb/bu more than last year.

Cooperator M Lyons

Table 71.

STRIPE RUST INFECTION TYPE (IT<sup>a</sup>) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER WHEAT VARIETY TRIAL NURSERY (EXP02) (COORDINATED BY AARON ESSER AND VADIM JITKOV) AT SPILLMAN FARM (LOC 01), PLANT PATH FARM (LOC 03) AND PCFS FARM (LOC 04) NEAR PULLMAN; MT VERNON (LOC 05); WALLA WALLA (LOC 06); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2018

Name	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Palouse Conservati on Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Summary <sup>c</sup>	Overall rating <sup>d</sup>	Possible HTAP resistance <sup>e</sup>
		LOC 01	LOC 03	LOC 04	LOC 05 <sup>b</sup>		LOC 06	LOC 07			
		6/12	6/11	6/6	4/25	6/5	5/24	6/14			
		Fks 10.53	10.53	10.53	6	10.54	10.54	11.2			
		IT %	IT %	IT %	IT %	IT %	IT %	IT %			
NSA11-10108 (LCS Abraham)	HRW	2 1	2 1	2 2	2 30	5 10	2 5	2 5	MR	3	Moderate
LCS Jet	HRW	2 1	2 1	2 1	2 10	5 5	2 2	8 5	MR	4	Moderate
LWW14-73915	HRW	2 1	2 1	2 2	2 10	2 1	2 2	0 0	R	1	High
LCS Rocket (NSA10-2196)	HRW	2 1	2 1	2 2	2 20	2 5	2 2	0,8 0,10	R	2	Moderate
NSA12-2472	HRW	2 1	2 1	2 2	2 20	3 1	3 5	2 5	R	2	Low
<b>PS279 (S. check)</b>		<b>8 100</b>	<b>8 100</b>	<b>8 90</b>	<b>8 80</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>S</b>	<b>9</b>	<b>No</b>
SY Clearstone CL2	HRWI	3 2	2 2	2 5	2 20	2 50	5 5	7 20	MR-MS	5	Moderate
SY Touchstone	HRW	2 1	2 5	3 2	2 10	2 10	2 5	0,8 0,5	MR	3	Moderate
Whetstone	HRW	3 5	2 2	2 1	2 10	5 10	5 5	8 20	MR-MS	5	Low
Mandala	HRW	3 2	3 2	3 2	8 60	5 20	2 5	2 5	MR	4	Low
Keldin	HRW	3 5	2 5	3 1	2 10	5 25	5 10	8 40	MS	6	Low
WB4303	HRW	5 10	2 10	2 1	2 20	5 35	5 10	8 20	MR-MS	5	Low
WB4623CLP	HRWI	3 2	2 5	2 5	2 20	5 30	5 5	2 10	MR	4	Moderate
WB4311	HRW	2 5	2 5	2 5	2 20	2 5	5 10	8 20	MR-MS	5	High
OR2130021R	HRW	2 1	2 2	2 1	3 20	2 5	2 5	0 0	R	1	High
XB4542	HRW	2 1	2 2	2 1	2 30	5 20	2 10	3 10	MR	4	Moderate
WA 8268	HRW	2 1	2 5	2 5	2 20	2 1	2 2	0,5 0,20	MR	4	Low
WA 8288	HRW	2 1	3 2	2 1	2 20	5 15	2 2	2 10	MR	3	Moderate
WA 8289	HRW	2 1	2 2	2 1	2 20	2 10	2 1	0 0	R	2	High
Farnum	HRW	2 1	2 2	2 1	2 10	2 10	2 2	0 0	R	2	High
Sequoia	HRW	8 5	3 5	2 5	2 20	5 50	3 3	8 15	MR-MS	5	Moderate
WA 8273	HRW	2 2	2 5	2 2	2 20	5 10	2 5	0,7 0,20	MR	4	Low
WA 8286	HRW	2 1	2 1	2 1	2 20	2 2	2 5	0 0	R	1	High
WA 8287	HRW	2 1	2 1	2 1	2 20	2 5	2 5	0 0	R	2	Moderate

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale with ITs 8 and 9 combined as 8 (the most susceptible reaction) in field data. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by "," for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants with continuous ITs.

<sup>b</sup> Entries with a high IT in the first note, but a low IT in the second note at Mt. Vernon may indicate that they have high-temperature, adult-plant (HTAP) resistance.

<sup>c</sup> R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

<sup>d</sup> 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity to discourage use of race-specific resistance.

<sup>e</sup> The high-temperature adult-plant (HTAP) resistance data were based on greenhouse tests (see data in the "Greenhouse Tests" worksheet. Unknown = Whether the entry has HTAP resistance or not couldn't be determined as it was resistant to all tested races in the seedling stage. TBT = to be tested. Entries with the combination of Yr5 and/or Yr15 may not have HTAP resistance but their resistance should be highly effective as no races virulent to either of the genes are found in the US.

Data was collected, analyzed and reported by Dr. X. Chen, USDA-ARS

Table 72.

STRIPE RUST INFECTION TYPE (ITa) ON SEEDLINGS AND ADULT-PLANTS OF CULTIVARS AND LINES IN THE WINTER EXTENSION DISEASE NURSERY (EXP 02) COORDINATED BY AARON ESSER AND VADIM JITKOV TESTED WITH SELECTED *Puccinia striiformis* f. sp. tritici (PST) RACES UNDER CONTROLLED GREENHOUSE CONDITIONS AT LOW TEMPERATURES (DIURNAL TEMPERATURES GRADUALLY CHANGING FROM 4 TO 20°C FOR THE SEEDLING TESTS AND AT HIGH TEMPERATURES (DIURNAL TEMPERATURES GRADUALLY CHANGING FROM 10 TO 30°C) FOR THE ADULT-PLANT TESTS

Name	Class	Seedling test (4-20°C) <sup>a</sup>										Adult plant tests (10-30°C) <sup>b</sup>										Possible HTAP <sup>c</sup> resistance						
		PSTv-4 13-268	PSTv-14 17-004	PSTv-14 17-142	PSTv-37 17-142	PSTv-40 09-78	PSTv-40 17-005	PSTv-51 16-183	PSTv-14 17-142	PSTv-37 17-142	PSTv-40 09-78	PSTv-40 17-005	PSTv-51 16-183	PSTv-14 17-142	PSTv-37 17-142	PSTv-40 09-78	PSTv-40 17-005	PSTv-51 16-183	PSTv-4 REP1	PSTv-51 REP1	PSTv-198 REP1							
NSA11-10108 (LCS Abraham)	HRW	8	2,8	8	8	2,8	8	2,8	2,8	2,8	2,8	8	2,2,3	2,2,3	3,3,5	3,3,5	3,3,5	3,3,5	3,3,5	3,3,5	3,3,5	3,3,5	2,2,3	2,2,3	2,2,3	Moderate		
LCS Jet	HRW	2	5	8	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate	
LWW14-73915	HRW	8	8	8	8	2	8	2,2,2	2,2,2	2,2,2	2,2,2	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High	
LCS Rocket (NSA10-2196)	HRW	8	8	8	8	2,5(2)	8	2,2,2	2,2,2	2,2,2	2,2,2	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate	
NSA12-2472	HRW	8	8	8	8	8	8	5,5,5	3,3,5	5,5,5	5,5,5	8	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	Low	
<b>PS279 (S Check)</b>		<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>8,8,8</b>	<b>No</b>	
SY Clearstone CL2	HRWI	8	8	8	8	5	8	3,3,4	3,4,4	3,3,4	3,3,4	8	3,3,4	3,3,4	3,3,4	4,4,4	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	Moderate	
SY Touchstone	HRW	8	8	8	8	8	8	5,5,5	2,3,3	3,3,3	3,3,3	8	5,5,5	3,3,4	5,5,5	2,2,2	2,3,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	Moderate	
Whetstone	HRW	8	8	8	8	8	8	5,5,5	3,3,3	5,5,5	5,5,5	8	5,5,5	3,3,5	5,5,5	2,2,2	2,3,5	2,2,2	2,3,5	2,2,2	2,3,5	2,2,2	2,3,5	2,2,2	2,3,5	2,2,2	Moderate	
Mandala	HRW	8	8	8	8	8	8	5,5,5	5,5,5	5,5,5	5,5,5	8	5,5,5	5,5,5	5,5,5	5,5,5	2,2,2	2,4,4	2,2,2	2,4,4	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Low	
Keldin	HRW	8	8	8	8	8	8	3,5,5	5,5,5	3,5,5	3,5,5	8	3,5,5	2,5,5	5,5,5	2,2,2	3,3,3	3,5,5	2,2,2	3,3,3	3,5,5	2,2,2	3,3,3	3,5,5	2,2,2	3,5,5	Low	
WB4303	HRW	8	8	8	8	8	8	3,3,3	5,5,5	5,5,5	8,8,8	8	3,3,3	8,8,8	8,8,8	2,3,3	5,5,5	5,5,5	2,2,2	5,5,5	5,5,5	2,2,2	5,5,5	5,5,5	2,2,2	5,5,5	Low	
WB4623CLP	HRWI	8	8	8	8	8	8	2,2,2	2,2,5	3,3,5	3,3,3	8	2,2,2	2,2,2	3,5,5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate	
WB4311	HRW	8	8	2	2	2	8	2,2,2	2,2,2	2,2,2	2,2,2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High	
OR2130021R	HRW	8	2,8	5	2	2,8	2,8	2,2,2	2,2,2	2,2,3	2,2,2	2,8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High	
XB4542	HRW	2	2	8	8	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate	
WA 8268	HRW	8	8	8	8	8	8	2,3,2	5,5,5	5,5,5	5,5,5	8	2,3,2	5,5,5	5,5,5	5,5,5	2,5,5	5,5,5	2,5,5	5,5,5	5,5,5	2,5,5	5,5,5	5,5,5	5,5,5	5,5,5	Low	
WA 8288	HRW	8	8	8	8	8	8	3,3,3	5,5,5	5,5,5	5,5,5	8	3,3,3	5,5,5	5,5,5	2,3,5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate	
WA 8289	HRW	2(3),8(6)	8	2	2	2	2	2,2,2	2,2,2	3,3,5	3,3,3	8	2,2,2	2,2,2	3,3,3	3,3,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High	
Farnum	HRW	8	8	8	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High	
Sequoya	HRW	2	2	8	8	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High	
WA 8273	HRW	8	8	8	8	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate	
WA 8286	HRW	2,8	2,5	2,5	2,5	2,5	2,5	2,2,2	2,2,2	2,2,2	2,5	2,5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Low	
WA 8287	HRW	2	2	8	8	2	2	2,2,2	2,2,2	2,2,2	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8287	HRW	2	2	8	8	2	2	2,2,2	2,2,2	2,2,2	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Moderate

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by " " for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants with continuous ITs. Entries with a high IT in the seedling test, but a low IT in the adult-plant test may indicate that they have high-temperature, adult-plant (HTAP) resistance.

**Virulence**=virulence formulae (Yr genes) of the tested races:

- PSTv-4: **1,6,9,17,27,SP,Type5,7,8,10,15,24,32,43,44,Tr1,Exp2**
- PSTv-14: **1,6,7,8,9,17,27,43,44,Tr1,Exp2,Type5,10,15,24,32,SP**
- PSTv-37: **6,7,8,9,17,27,43,44,Tr1,Exp2/1.5,10,15,24,32,SP,Type**
- PSTv-40: **6,7,8,9,10,24,27,32,43,44,Tr1,Exp2/1.5,15,17,SP,Type**
- PSTv-51: **1,6,7,8,9,10,17,24,27,32,43,44,SP,Tr1,Exp2,Type5,15**
- PSTv-198: **6,7,8,9,27,43,44,Exp2/1.5,10,15,17,24,32,SP,Tr1,76**

<sup>b</sup> For the seedling tests, about 5 to 10 plants were used. Inoculation was done at the 2-leaf stage and incubated in the dew chamber at 10C for about 24 h in dark. The inoculated plants were then grown in a greenhouse growth chamber at a diurnal temperature cycle gradually changing from 4 C at 2:00 am to 20 C at 2:00 pm with a 16 h photoperiod in the day time. Infection type was recorded for the line about 20 days after inoculation. For the adult-plant tests, One-leaf seedlings were started to vernalized at 2-4 C for about 6 weeks and vernalized seedlings were transplanted into a big pots. 3 plants were used in each race test. Inoculation was done at the boot to heading stages and incubated in the dew chamber at 10C for about 24 h in dark. The inoculated plants were then grown in a greenhouse growth chamber at a diurnal temperature cycle gradually changing from 10 C at 2:00 am to 30 C at 2:00 pm with a 16 h photoperiod in the day time. Infection type was recorded for each individual plant using the flag leaf about 20 days after inoculation.

<sup>c</sup> Unknown = Whether the entry has HTAP resistance or not could not be determined as it was resistant to all tested races in the seedling stage.

Data was collected, analyzed and reported by Dr. X. Chen, USDA-ARS



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Table 73. **2018 WSU Variety Testing Clearfield Trial, Dayton**

Variety Name <sup>1</sup> - <i>Hard Red</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
<b>Bobtail</b>	<b>116</b>	60.9	10.1	35	144	127	--	--
<b>LCS Artdeco</b>	<b>114</b>	62.3	9.8	33	140	127	--	--
<b>UI Palouse CL+</b>	<b>107</b>	61.8	11.4	36	145	112	--	--
<b>SY Dayton</b>	<b>105</b>	62.7	10.3	34	144		--	--
<b>UI Castle CL+</b>	<b>105</b>	63.0	11.8	38	144	113	--	--
<b>UI Magic CL+</b>	103	62.9	11.6	35	140	118	--	--
<b>ORCF-102</b>	102	63.2	11.2	41	143	110	--	--
<b>ORCF-101</b>	102	62.6	11.8	36	143	112	--	--
<b>Norwest Tandem</b>	100	62.6	10.7	32	139	118	--	--
<b>Curiosity CL+</b>	99	63.0	11.0	41	148	101	--	--
<b>SY Clearstone CL2<sup>1</sup></b>	98	63.1	11.6	42	141		--	--
<b>Resilience CL+</b>	95	63.2	10.8	35	144	114	--	--
<b>WB4623CLP<sup>1</sup></b>	91	<b>63.5</b>	13.0	37	139		--	--
<b>WB1376CLP</b>	85	<b>64.0</b>	11.8	36	141	104	--	--
<b>Brawl CL+<sup>1</sup></b>	76	<b>63.8</b>	13.2	36	137		--	--
<i>Experimental Lines</i>								
<b>WA 8274 CL+</b>	<b>111</b>	62.1	11.8	36	145	120	--	--
<b>WA 8275 CL+</b>	<b>106</b>	62.8	11.0	36	142	125	--	--
<b>ORI2150033 CL+</b>	103	62.5	12.2	39	142	114	--	--
<b>ORI2150030 CL+</b>	97	62.8	11.6	37	142		--	--
<b>ORI2150031 CL+</b>	95	62.8	11.3	37	143	110	--	--
<b>ORI2161244 CL+</b>	94	63.0	12.1	35	138		--	--
<b>ORI2161250 CL+</b>	94	63.0	11.4	38	139		--	--
<b>ORI2150061 CL+</b>	81	62.9	13.0	31	140	93	--	--
<b>KXB-01</b>	<b>112</b>	62.6	10.5	39	144	123	--	--
<b>C.V. %</b>	9	0.6	4.8	5	1	7		
<b>LSD (0.05)</b>	12	0.5	0.7	3	2	8		
<b>Average</b>	100	62.8	11.5	36	142	114		
<b>Highest</b>	116	64.0	13.2	42	148	127		
<b>Lowest</b>	76	60.9	9.8	31	137	93		

**Agronomic Information**

Planting Date:	10/11/2017
Harvest Date:	8/1/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chickpeas
Spring soil test:	
N (lb/ac) 4-ft sample	155
P (ppm-bicarb) 2-ft sample	80
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.54

Herbicide:

Herbicides and fungicides applied by grower

**Trial Notes:**

1. The Dayton nursery was located about 10 miles northwest of Dayton, WA.
2. The nursery was fertilizer at 125N 15P 15S 10Cl. An additional 25N was applied in the spring after soil sampling.
3. Overall yield was 17% less than 2017, and grain test weight was the same as last year.

**Cooperator J Penner**

Table 74. **2018 WSU Variety Testing Clearfield Trial, Eureka**

Variety Name <sup>1</sup> - <i>Hard Red</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
LCS Artdeco	102	60.8	9.3	33	133	71	--	--
SY Dayton	97	60.8	10.1	35	138		--	--
Norwest Tandem	97	61.2	10.3	33	135	73	--	--
Bobtail	93	57.8	9.9	35	137	81	--	--
UI Magic CL+	92	61.8	11.1	33	135	64	--	--
Curiosity CL+	90	60.8	9.2	39	142	75	--	--
ORCF-102	87	60.9	11.1	37	139	70	--	--
UI Palouse CL+	87	59.9	10.8	34	137	65	--	--
SY Clearstone CL2 <sup>1</sup>	86	61.7	11.3	39	138		--	--
Resilience CL+	86	61.2	10.5	35	139	68	--	--
UI Castle CL+	86	59.9	11.0	33	138	67	--	--
WB1376CLP	82	<b>63.0</b>	11.6	36	137	59	--	--
WB4623CLP <sup>1</sup>	80	<b>62.9</b>	12.3	38	136		--	--
ORCF-101	78	60.2	11.7	34	139	58	--	--
Brawl CL+ <sup>1</sup>	65	<b>63.1</b>	12.6	36	129		--	--
<i>Experimental Lines</i>								
KXB-01	95	60.7	9.5	36	139	73	--	--
WA 8275 CL+	88	60.3	11.5	33	140	70	--	--
ORI2161250 CL+	86	61.2	10.8	37	134		--	--
ORI2150033 CL+	85	60.1	11.8	37	138	64	--	--
ORI2161244 CL+	85	60.8	11.9	36	133		--	--
ORI2150031 CL+	85	60.2	11.6	37	139	64	--	--
WA 8274 CL+	84	60.0	11.4	34	139	65	--	--
ORI2150030 CL+	83	60.5	11.4	35	138		--	--
ORI2150061 CL+	74	61.8	12.4	33	136	54	--	--
C.V. %	5	0.9	5.3	4	1	7	--	--
LSD (0.05)	6	0.7	0.8	2	1	5	--	--
Average	86	60.9	11.0	35	137	67	--	--
Highest	102	63.1	12.6	39	142	81	--	--
Lowest	65	57.8	9.2	33	129	54	--	--

**Agronomic Information**

Planting Date:	10/5/2017
Harvest Date:	7/18/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	193
P (ppm-bicarb) 2-ft sample	51
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	5.42

Herbicide:

4 oz/ac propiconazole was applied with herbicide application

**Trial Notes:**

1. The Eureka nursery was located about 17 miles west of Prescott, WA.
2. Base fertilizer was 100N 20P 20S
3. Yield was 36% greater than 2017 and grain test weight were 2.4 lb/bu lower than 2017.

**Cooperator** G Struthers

Table 75. 2018 WSU Variety Testing Clearfield Trial, Walla Walla

Variety Name <sup>1</sup> - Hard Red	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Norwest Tandem	140	63.2	11.5	37	136	135	--	--
Bobtail	136	61.7	10.3	38	138	144	--	--
SY Dayton	132	63.8	11.3	37	139		--	--
ORCF-102	121	63.5	11.7	42	139	131	--	--
UI Palouse CL+	116	62.1	11.5	38	138	120	--	--
LCS Artdeco	116	62.4	10.5	36	131	138	--	--
UI Castle CL+	114	63.5	11.9	39	139	108	--	--
UI Magic CL+	113	63.7	12.2	36	136	123	--	--
ORCF-101	110	63.4	11.9	37	139	116	--	--
Resilience CL+	110	63.8	11.6	37	138	131	--	--
Curiosity CL+	109	63.6	11.4	42	143	96	--	--
SY Clearstone CL2 <sup>1</sup>	101	63.2	11.5	45	137		--	--
WB4623CLP <sup>1</sup>	97	64.3	13.9	41	136		--	--
Brawl CL+ <sup>1</sup>	91	<b>64.9</b>	12.8	39	129		--	--
WB1376CLP	91	<b>64.8</b>	12.8	39	137	115	--	--
<i>Experimental Lines</i>								
ORI2150033 CL+	129	63.4	11.9	41	138	136	--	--
KXB-01	118	62.9	11.4	40	142	119	--	--
ORI2150031 CL+	118	63.6	12.4	42	140	128	--	--
WA 8274 CL+	118	62.6	12.0	38	141	128	--	--
WA 8275 CL+	114	63.2	11.6	38	138	132	--	--
ORI2150030 CL+	112	63.6	12.4	42	138		--	--
ORI2161250 CL+	109	62.8	11.5	41	134		--	--
ORI2161244 CL+	104	63.2	11.9	38	131		--	--
ORI2150061 CL+	85	63.7	13.0	37	135	101	--	--
C.V. %	8	0.4	2.1	4	1	6		
LSD (0.05)	12	0.4	0.3	2	1	7		
Average	113	63.4	11.9	39	137	124		
Highest	140	64.9	13.9	45	143	144		
Lowest	85	61.7	10.3	36	129	96		

**Agronomic Information**

Planting Date:	10/4/2017
Harvest Date:	8/071/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	
Spring soil test:	
N (lb/ac) 4-ft sample	247
P (ppm-bicarb) 2-ft sample	109
S (lb/ac) 2-ft sample	40
pH (top 6 inches)	5.07

Herbicide:

Herbicides and fungicides applied by grower

**Trial Notes:**

1. The Walla Walla nursery was located about 11 miles east of Walla Walla, WA.
2. The nursery was fertilized prior to planting by the cooperator.
3. Overall yield was 10% less than 2017 and grain test weight was 0.1 lb/bu more than last year.

**Cooperator** M Lyons

Table 76.

**2018 WSU Variety Testing Winter Wheat Blends Trial, Reardan**

Variety Name / Blend	2018				
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date
Jasper	123	62.0	10.1	38	152
Puma / Jasper	117	62.1	11.0	39	153
Norwest Duet	117	62.7	10.2	43	154
Otto / NW Duet / Jasper	116	62.1	10.6	42	153
WB1783 / Jasper	114	63.0	11.2	38	151
Legion	110	61.2	10.7	39	154
Otto / Jasper	110	61.6	11.0	38	154
Puma	110	62.5	10.3	41	153
Puma / NW Duet	109	62.6	10.5	41	153
Otto / NW Duet	109	62.4	10.4	40	154
WB1783 / NW Duet / SY Banks	107	62.6	11.0	39	153
WB1783 / Puma / Jasper	106	62.7	11.0	38	152
Otto / Puma	106	62.3	10.8	41	153
WB1783	102	63.9	11.5	37	153
Puma / SY Banks	100	61.8	10.7	38	152
Otto / Legion	97	61.4	10.9	39	154
SY Banks	95	61.1	10.7	36	153
Otto	92	62.1	10.8	38	157
<b>C.V. %</b>	7	0.6	4.8	5	1
<b>LSD (0.05)</b>	10	0.6	0.7	3	1
<b>Average</b>	108	62.2	10.8	39	153
<b>Highest</b>	123	63.9	11.5	43	157
<b>Lowest</b>	92	61.1	10.1	36	151

**Agronomic Information**

Planting Date:	9/15/2017
Harvest Date:	8/10/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	21
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	227
P (ppm-bicarb) 2-ft sample	79
S (lb/ac) 2-ft sample	31
pH (top 6 inches)	4.94

Cooperator H Johnson

Herbicide:  
Fungicides applied with herbicide application on 05/14



Table 77. **2018 WSU Variety Testing Winter Triticale Trial Summary**

Precipitation Zone = <12"

Variety Name <i>Wheat Italicized</i>	Bickleton	Horse Heaven	Average	Bickleton	Horse Heaven	Average	Bickleton	Horse Heaven	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<b>ACS 16409</b>	42	60	<b>51</b>	51.9	53.4	52.7	8.6	9.7	9.2
<b>TriMark 099</b>	39	62	<b>51</b>	54.5	56.9	55.7	9.1	9.1	9.1
<b>ACS 12406</b>	42	56	<b>49</b>	55.5	58.0	56.8	9.3	9.6	9.5
<i>Xerpha</i>	34	56	45	58.5	57.8	<b>58.2</b>	9.0	11.3	10.2
<b>KTA 20425-2</b>	33	49	41	50.7	52.6	51.7	8.9	10.3	9.6
<b>K 3083</b>	34	38	36	53.3	50.4	51.9	9.2	10.6	9.9
<b>C.V. %</b>	7	6	6	0.4	2.3	1.7	1.6	2.4	2.1
<b>LSD (0.05)</b>	4	5	3	0.3	1.9	0.9	0.2	0.4	0.2
<b>Average</b>	37	53	45	54.1	54.8	54.5	9.0	10.1	9.6
<b>Highest</b>	42	62	51	58.5	58.0	58.2	9.3	11.3	10.2
<b>Lowest</b>	33	38	36	50.7	50.4	51.7	8.6	9.1	9.1

Table 78. 2018 WSU Variety Testing Winter Triticale Trial, Bickleton

Variety Name <i>Soft Wheat Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
ACS 16409	42	51.9	8.6	32	36	--	--
ACS 12406	42	55.5	9.3	38	36	--	--
TriMark 099	39	54.5	9.1	37		--	--
<i>Xerpha</i>	34	<b>58.5</b>	9.0	33	27	--	--
K 3083	34	53.3	9.2	38	27	--	--
KTA 20425-2	33	50.7	8.9	39		--	--
	<b>C.V. %</b>	7	0.4	1.6	6	13	--
	<b>LSD (0.05)</b>	4	0.3	0.2	3	4	--
	<b>Average</b>	37	54.1	9.0	36	32	--
	<b>Highest</b>	42	58.5	9.3	39	36	--
	<b>Lowest</b>	33	50.7	8.6	32	27	--

**Agronomic Information**

Planting Date:	10/26/2017
Harvest Date:	8/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	113
P (ppm-bicarb) 2-ft sample	65
S (lb/ac) 2-ft sample	28
pH (top 6 inches)	5.89
Herbicide:	
Herbicides applied by growers	

**Trial Notes:**

1. The Bickleton nursery was located about 4 miles southeast of Bickleton
2. The nursery was fertilized at seeding with no-till hoe drill: 50N 9P 9S
3. This was a new location in 2017 and limited data was collected

**Cooperator R Juris**

Table 79. 2018 WSU Variety Testing Winter Triticale Trial, Horse Heaven

Variety Name	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
TriMark 099	62	56.9	9.1	37	--	--	--
ACS 16409	60	53.4	9.7	37	--	--	--
Xerpha	56	57.8	11.3	32	--	--	--
ACS 12406	56	58.0	9.6	39	--	--	--
KTA 20425-2	49	52.6	10.3	39	--	--	--
K 3083	38	50.4	10.6	36	--	--	--
C.V. %	6	2.3	2.3	6	--	--	--
LSD (0.05)	5	1.9	0.4	3	--	--	--
Average	53	54.8	10.1	37	--	--	--
Highest	62	58.0	11.3	39	--	--	--
Lowest	38	50.4	9.1	32	--	--	--

**Agronomic Information**

Planting Date:	10/26/2017
Harvest Date:	7/20/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	138
P (ppm-bicarb) 2-ft sample	46
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.8

**Trial Notes:**

1. The Horse Heavens nursery was located about 14 miles southwest of Benton City, WA
2. The nursery was fertilized at planting 35N 6P 6S with a no-till hoe drill

**Cooperator** C Smith

Herbicide: Tilt 4 oz/a on 04/20/17



<b>2018 Soft White Spring Wheat</b>	127
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Table 80. 2018 WSU Variety Testing Soft White Spring Wheat Trial Summary  
Precipitation Zone >20"

Variety Name <i>Club Italicized</i>	Fairfield	Farmington	Palouse	Pullman	Average	Fairfield	Farmington	Palouse	Pullman	Average	Fairfield	Farmington	Palouse	Pullman	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>Released Varieties</b>															
<b>Ryan</b>	69	102	102	103	<b>94</b>	57.4	59.1	60.4	59.4	59.1	9.3	8.5	10.2	11.4	9.8
<b>Tekoa</b>	68	100	108	91	<b>92</b>	60.9	61.6	62.2	58.8	<b>60.9</b>	9.4	9.0	10.3	11.4	10.0
<b>Seahawk</b>	63	91	102	99	89	59.9	59.8	61.6	58.8	60.0	9.7	9.6	10.6	12.3	10.6
<i>Melba</i>	60	94	99	91	86	57.8	59.6	59.8	59.4	59.2	9.3	8.8	10.0	10.8	9.7
<b>Louise</b>	65	94	101	78	85	58.5	59.4	61.2	58.4	59.4	8.8	9.0	10.0	11.5	9.8
<i>JD</i>	62	92	90	92	84	58.8	61.3	61.9	60.8	<b>60.7</b>	9.5	9.7	10.9	11.7	10.4
<b>Diva</b>	61	93	102	78	83	58.2	59.3	61.2	59.4	59.5	9.2	9.4	10.4	11.4	10.1
<b>Whit</b>	69	92	86	83	83	60.2	60.2	60.8	58.1	59.8	9.6	9.1	10.4	11.7	10.2
<b>WB6341</b>	70	93	84	76	81	58.5	59.6	60.0	57.9	59.0	8.8	8.9	9.6	10.2	9.4
<b>WB6121</b>	62	82	93	86	80	59.3	60.8	62.2	61.1	<b>60.9</b>	10.5	10.3	11.5	12.5	11.2
<b>Babe</b>	64	91	81	73	77	59.7	60.3	60.2	57.4	59.4	8.6	8.8	10.0	10.7	9.5
<b>SY Saltese</b>	54	82	86	75	74	58.6	59.9	61.5	59.9	60.0	9.6	9.2	10.4	11.2	10.1
<b>WB-1035CL+</b>	59	78	75	56	67	57.5	58.5	58.9	58.1	58.3	10.4	10.6	11.2	12.6	11.2
<b>Experimental Lines</b>															
<b>WA 8277</b>	70	90	100	94	89	59.4	60.8	62.4	62.2	<b>61.2</b>	9.8	9.7	11.2	11.3	10.5
<b>WA 8298 CL+</b>	65	92	106	93	89	59.8	60.5	61.6	60.6	60.6	9.3	10.0	11.1	11.8	10.6
<i>WA 8295 CL+</i>	61	92	93	91	84	59.8	61.2	60.9	60.5	60.6	9.9	9.9	11.0	11.7	10.6
<b>08PN2001-07</b>	68	92	92	82	84	57.4	59.0	60.3	57.9	58.6	9.8	8.9	9.9	10.4	9.8
<b>WA 8296 CL+</b>	60	84	93	95	83	59.8	60.3	60.6	59.1	60.0	9.6	9.7	10.9	11.6	10.4
<b>11PN2532-507</b>	59	88	93	89	82	58.6	59.8	60.7	59.1	59.5	10.0	10.6	12.0	12.6	11.3
<b>WA 8297 CL+</b>	57	85	85	94	80	55.4	59.3	60.4	59.9	58.7	9.7	9.7	10.5	12.2	10.6
<b>14-SW-1059</b>	55	86	91	86	80	56.2	58.2	56.8	55.6	56.7	11.3	10.5	10.9	12.1	11.2
<b>WA 8266 CL+</b>	58	86	87	84	79	56.6	59.1	60.3	58.7	58.7	9.4	9.2	10.2	12.0	10.2
<b>14-FAC-2043</b>	58	89	87	72	77	56.6	58.2	58.3	56.1	57.3	10.2	9.7	10.7	12.7	10.8
<b>IDO1403S</b>	45	68	64	84	65	55.7	58.6	57.8	59.2	57.9	11.1	10.4	11.4	12.0	11.2
<b>C.V. %</b>	6	4	8	5	6	1.6	0.8	1.3	0.7	1.2	4.9	4.5	2.7	4.0	4.1
<b>LSD (0.05)</b>	5	5	10	5	3	1.3	0.7	1.0	0.6	0.5	0.7	0.6	0.4	0.6	0.3
<b>Average</b>	62	89	92	85	82	58.4	59.8	60.5	59.0	59.4	9.7	9.6	10.6	11.7	10.4
<b>Highest</b>	70	102	108	103	94	60.9	61.6	62.4	62.2	61.2	11.3	10.6	12.0	12.7	11.3
<b>Lowest</b>	45	68	64	56	65	55.4	58.2	56.8	55.6	56.7	8.6	8.5	9.6	10.2	9.4

Table 81. 2018 WSU Variety Testing Soft White Spring Wheat Trial Summary

Precipitation Zone = 16-20"

Variety Name <i>Club Italicized</i>	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)								
	Dayton	Mayview	Plaza	St. John	Walla Walla	Average	Dayton	Mayview	Plaza	St. John	Walla Walla	Average	Dayton	Mayview	Plaza	St. John	Walla Walla	Average	
<b>Released Varieties</b>																			
Ryan	63	68	79	102	89	80	58.7	61.4	61.0	61.5	62.4	61.0	9.2	9.4	9.6	10.9	10.7	10.0	
Tekoa	51	68	85	104	87	79	59.6	62.5	62.7	62.3	62.6	62.0	8.4	9.4	9.4	10.5	10.7	9.7	
Louise	60	67	83	104	82	79	58.3	61.0	61.6	61.3	61.7	60.8	9.1	9.4	9.8	10.8	10.7	10.0	
WB6341	60	68	79	99	84	78	59.5	61.5	61.7	60.9	62.5	61.2	8.7	9.4	8.9	9.5	10.0	9.3	
Whit	56	67	77	100	85	77	59.1	61.0	61.5	61.1	62.6	61.1	9.1	9.6	10.1	10.7	10.9	10.1	
Seahawk	53	71	74	97	87	76	58.2	60.9	61.9	61.5	62.8	61.1	7.8	9.6	10.2	10.6	10.8	9.8	
Diva	55	65	77	94	84	75	57.6	61.1	61.9	61.1	62.0	60.7	7.7	9.9	9.8	10.9	10.7	9.8	
Melba	59	71	78	100	63	74	56.4	61.0	62.6	61.9	60.7	60.5	8.5	9.3	9.3	10.1	11.2	9.7	
Babe	51	67	69	100	77	73	58.0	61.4	61.7	61.7	62.9	61.2	9.0	8.9	9.6	11.3	10.9	9.9	
JD	57	68	73	93	68	72	59.2	62.2	63.1	62.6	62.0	61.8	9.7	9.5	10.0	11.7	11.4	10.5	
WB6121	55	63	65	89	77	70	59.0	62.6	62.4	62.4	63.2	61.9	10.0	10.6	11.3	11.8	12.1	11.2	
SY Saltese	50	60	75	95	65	69	56.8	62.0	62.5	61.9	61.7	61.0	9.4	9.7	9.6	10.2	11.1	10.0	
WB-1035CL+	53	61	60	85	75	67	57.4	60.3	62.0	60.3	61.4	60.3	9.8	11.9	11.4	12.1	12.5	11.5	
<b>Experimental Lines</b>																			
08PN2001-07	60	75	80	104	85	81	56.9	60.1	60.3	59.9	61.5	59.7	8.3	9.5	9.5	10.1	9.8	9.4	
WA 8277	62	69	85	99	88	81	59.7	63.4	64.1	63.2	64.1	62.9	9.6	10.7	10.3	11.4	11.4	10.7	
WA 8298 CL+	53	69	87	100	91	80	57.7	61.8	62.5	61.8	63.0	61.4	9.3	11.0	10.3	11.0	11.3	10.6	
WA 8266 CL+	58	70	79	96	84	77	57.9	61.3	61.5	61.2	61.4	60.7	9.3	9.5	9.4	10.5	10.9	9.9	
WA 8297 CL+	57	68	78	93	83	76	57.8	61.4	61.8	61.2	61.2	60.7	10.1	10.6	9.6	11.1	11.6	10.6	
14-FAC-2043	52	66	79	95	79	74	55.3	57.9	60.4	59.2	59.6	58.5	8.9	10.3	9.9	10.7	11.3	10.2	
14-SW-1059	55	65	72	93	85	74	54.2	58.4	59.7	57.9	58.2	57.7	9.6	10.6	10.6	10.8	11.6	10.6	
WA 8296 CL+	56	65	75	91	69	71	59.8	61.4	61.6	61.2	62.2	61.2	8.5	10.5	10.4	10.6	11.1	10.2	
WA 8295 CL+	57	64	75	92	68	71	59.3	61.9	62.9	62.1	62.2	61.7	9.5	10.1	10.7	11.1	11.6	10.6	
11PN2532-507	41	61	69	89	81	68	56.5	60.5	61.5	61.0	62.0	60.3	9.5	11.7	10.9	11.8	12.6	11.3	
IDO1403S	47	57	56	78	45	57	55.6	60.7	61.4	60.2	60.4	59.7	10.0	11.1	10.8	11.9	13.0	11.4	
<b>C.V. %</b>	7	9	6	5	3	6	2.5	0.9	0.7	0.5	0.9	1.3	5.9	12.4	3.2	4.3	1.8	6.5	
<b>LSD (0.05)</b>	5	8	6	7	4	3	2.0	0.7	0.6	0.4	0.7	0.5	0.7	1.7	0.5	0.7	0.3	0.4	
<b>Average</b>	55	66	75	96	78	74	57.9	61.2	61.9	61.2	61.9	60.8	9.1	10.1	10.1	10.9	11.3	10.3	
<b>Highest</b>	63	75	87	104	91	81	59.8	63.4	64.1	63.2	64.1	62.9	10.1	11.9	11.4	12.1	13.0	11.5	
<b>Lowest</b>	41	57	56	78	45	57	54.2	57.9	59.7	57.9	58.2	57.7	7.7	8.9	8.9	9.5	9.8	9.3	

Table 82. 2018 WSU Variety Testing Soft White Spring Wheat Trial Summary  
Precipitation Zone = 12-16"

Variety Name <i>Club Italicized</i>	Almira	Endicott	Lamont	Reardan	Average	Almira	Endicott	Lamont	Reardan	Average	Almira	Endicott	Lamont	Reardan	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b><i>Released Varieties</i></b>															
<b>Ryan</b>	49	80	43	45	<b>54</b>	52.9	61.1	61.7	60.1	58.9	11.6	10.4	14.5	10.3	11.7
<i>JD</i>	55	71	46	42	<b>53</b>	57.9	61.9	63.3	61.3	<b>61.1</b>	11.4	10.0	15.7	10.9	12.0
<b>WB6341</b>	51	79	42	40	<b>53</b>	55.5	62.5	62.7	61.4	<b>60.5</b>	12.2	9.1	13.2	10.0	11.1
<b>Diva</b>	44	75	44	47	<b>53</b>	49.8	61.2	62.8	59.6	58.4	12.1	9.6	15.0	10.6	11.8
<b>Tekoa</b>	46	74	41	46	<b>52</b>	55.1	62.2	63.1	62.7	<b>60.8</b>	12.0	9.5	15.3	10.3	11.8
<b>Whit</b>	52	78	36	40	<b>52</b>	56.5	62.1	61.8	60.8	<b>60.3</b>	12.1	10.0	15.4	10.4	12.0
<i>Melba</i>	47	77	37	45	<b>52</b>	53.8	60.9	63.8	60.6	59.8	11.7	9.8	14.5	10.1	11.5
<b>Seahawk</b>	43	76	38	47	<b>51</b>	55.7	62.2	61.7	61.9	<b>60.4</b>	12.8	9.8	14.7	10.3	11.9
<b>Babe</b>	47	70	40	45	<b>51</b>	54.9	61.9	62.5	62.1	<b>60.3</b>	12.7	10.0	15.2	10.7	12.2
<b>WB6121</b>	51	74	37	38	<b>50</b>	54.3	63.2	62.3	60.7	60.1	13.2	10.9	16.4	11.9	13.1
<b>Louise</b>	42	65	45	48	<b>50</b>	50.9	59.1	62.3	61.1	58.4	12.5	10.3	14.9	10.2	12.0
<b>SY Saltese</b>	43	70	37	41	48	51.7	62.3	62.7	60.6	59.3	11.8	10.0	14.9	10.6	11.8
<b>WB-1035CL+</b>	44	66	36	35	45	50.1	61.2	62.9	57.8	58.0	13.8	10.8	15.2	12.7	13.1
<b><i>Experimental Lines</i></b>															
<b>08PN2001-07</b>	52	77	45	44	<b>54</b>	49.9	60.0	60.9	58.7	57.4	11.1	9.6	13.4	10.2	11.1
<b>WA 8277</b>	48	78	37	43	<b>52</b>	53.4	62.3	64.7	59.5	60.0	12.0	9.9	16.0	11.7	12.4
<i>WA 8295 CL+</i>	49	72	41	45	<b>52</b>	56.5	62.2	63.1	62.1	<b>61.0</b>	12.4	10.4	15.6	11.1	12.4
<b>WA 8298 CL+</b>	49	71	39	41	<b>50</b>	54.0	62.4	62.0	60.2	59.7	12.8	10.6	15.2	11.7	12.6
<b>WA 8266 CL+</b>	45	74	35	46	<b>50</b>	53.1	60.9	62.4	60.6	59.2	11.7	9.6	14.0	10.3	11.4
<b>WA 8296 CL+</b>	47	73	42	36	49	57.3	62.4	61.3	60.1	<b>60.3</b>	11.9	10.2	15.7	11.4	12.3
<b>14-FAC-2043</b>	39	74	36	44	48	49.2	58.8	61.5	59.8	57.3	14.0	10.8	14.4	11.0	12.6
<b>WA 8297 CL+</b>	45	71	38	39	48	54.3	61.1	61.6	58.9	59.0	11.7	10.0	14.4	11.6	11.9
<b>11PN2532-507</b>	44	68	37	42	48	56.0	61.7	61.4	60.1	59.8	12.9	11.3	17.9	11.3	13.4
<b>14-SW-1059</b>	43	76	33	32	46	48.5	58.5	59.2	58.8	56.3	14.8	10.2	17.0	12.5	13.6
<b>IDO1403S</b>	33	60	19	34	37	49.0	61.1	62.1	56.6	57.2	13.3	10.9	17.7	12.2	13.5
<b>C.V. %</b>	11	9	12	11	11	3.6	1.5	1.0	1.5	2.0	6.5	5.2	5.7	4.4	5.7
<b>LSD (0.05)</b>	7	10	7	7	4	2.7	1.3	0.9	1.2	0.8	1.1	0.7	1.2	0.7	0.5
<b>Average</b>	46	73	39	42	50	53.3	61.4	62.2	60.3	59.3	12.5	10.2	15.3	11.0	12.2
<b>Highest</b>	55	80	46	48	54	57.9	63.2	64.7	62.7	61.1	14.8	11.3	17.9	12.7	13.6
<b>Lowest</b>	33	60	19	32	37	48.5	58.5	59.2	56.6	56.3	11.1	9.1	13.2	10.0	11.1

Table 83.

**2018 WSU Variety Testing Soft White Spring Wheat Trial Summary**  
Precipitation Zone <12"

Variety Name (Club <i>Italicized</i> )	Bickleton	Horse Heaven	Lind	Average	Bickleton	Horse Heaven	Lind	Average	Bickleton	Horse Heaven	Lind	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
<b><i>Released Varieties</i></b>												
<i>Melba</i>	27	42	54	<b>41</b>	60.5	60.6	63.3	<b>61.5</b>	11.2	11.3	11.1	11.2
<i>JD</i>	30	38	50	<b>39</b>	61.8	59.8	63.4	<b>61.7</b>	11.3	11.3	12.1	11.6
<b>Louise</b>	28	37	52	<b>39</b>	58.0	60.3	63.5	60.6	11.0	11.8	11.5	11.4
<b>Tekoa</b>	26	39	50	38	60.7	61.3	63.6	<b>61.9</b>	11.0	10.8	11.4	11.1
<b>WB6341</b>	29	38	48	38	59.4	59.3	63.7	60.8	10.6	11.1	11.1	10.9
<b>Whit</b>	29	37	48	38	58.9	59.7	63.1	60.6	10.9	11.4	11.8	11.4
<b>Diva</b>	25	35	51	37	58.9	60.6	63.1	60.8	11.9	11.7	11.9	11.8
<b>Babe</b>	28	39	44	37	60.3	59.9	63.9	<b>61.4</b>	10.7	11.1	12.0	11.3
<b>WB-1035CL+</b>	27	38	44	36	60.6	60.5	63.4	<b>61.5</b>	11.2	11.6	13.9	12.2
<b>WB6121</b>	29	35	44	36	61.5	60.5	63.6	<b>61.9</b>	10.8	12.1	13.5	12.1
<b>Ryan</b>	28	35	45	36	58.3	59.9	63.8	60.7	11.1	11.3	12.4	11.6
<b>Seahawk</b>	21	40	46	36	61.6	60.3	63.6	<b>61.8</b>	11.7	10.7	11.8	11.4
<b>SY Saltese</b>	27	32	46	35	60.1	60.2	63.8	<b>61.4</b>	11.5	11.2	11.6	11.4
<b><i>Experimental Lines</i></b>												
<i>WA 8295 CL+</i>	28	38	49	<b>39</b>	61.9	60.9	63.6	<b>62.1</b>	11.1	11.5	12.2	11.6
<b>08PN2001-07</b>	25	41	50	<b>39</b>	56.9	59.9	61.2	59.4	10.9	10.9	11.3	11.0
<b>14-FAC-2043</b>	24	41	51	38	56.7	59.2	61.7	59.2	12.6	11.7	11.6	12.0
<b>WA 8297 CL+</b>	25	36	50	37	60.2	60.8	62.6	61.2	12.0	11.5	12.0	11.8
<b>WA 8277</b>	27	36	48	37	61.6	60.2	63.5	<b>61.7</b>	11.2	10.9	13.0	11.7
<b>WA 8266 CL+</b>	25	37	48	37	58.5	59.1	62.7	60.1	11.4	11.5	12.1	11.7
<b>WA 8296 CL+</b>	26	38	45	36	61.0	58.2	62.4	60.5	11.3	11.0	12.3	11.5
<b>WA 8298 CL+</b>	25	34	45	35	60.1	59.7	62.8	60.9	11.8	10.8	13.0	11.9
<b>14-SW-1059</b>	17	34	48	33	57.8	59.7	60.2	59.3	13.5	11.2	12.0	12.2
<b>11PN2532-507</b>	22	33	43	33	58.1	57.7	62.2	59.3	12.8	11.1	13.9	12.6
<b>IDO1403S</b>	18	30	35	28	60.7	61.4	62.1	<b>61.4</b>	12.3	10.8	13.6	12.2
<b>C.V. %</b>	8	10	5	8	1.3	1.9	0.6	1.4	4.2	6.6	2.4	4.6
<b>LSD (0.05)</b>	3	5	4	2	1.1	1.5	0.6	0.7	0.7	1.0	0.4	0.4
<b>Average</b>	26	37	47	37	59.7	60.0	63.0	60.9	11.5	11.3	12.2	11.7
<b>Highest</b>	30	42	54	41	61.9	61.4	63.9	62.1	13.5	12.1	13.9	12.6
<b>Lowest</b>	17	30	35	28	56.7	57.7	60.2	59.2	10.6	10.7	11.1	10.9

Table 84.

### 2018 WSU Variety Testing Soft White Spring Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name <i>Club Italicized</i>	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
<b>WB6341</b>	164	94	<b>129</b>	63.1	61.9	<b>62.5</b>	10.8	12.2	11.5
<b>Tekoa</b>	158	76	117	61.9	61.3	61.6	12.2	13.4	12.8
<b>Ryan</b>	140	86	113	62.0	60.7	61.4	11.8	14.1	12.9
<b>WB6121</b>	147	75	111	63.8	61.3	<b>62.6</b>	12.8	14.8	13.8
<b>Seahawk</b>	140	79	110	62.4	60.9	61.6	12.4	13.5	12.9
<b>Whit</b>	144	72	108	62.4	59.8	61.1	12.2	14.7	13.4
<i>Melba</i>	139	73	106	61.8	56.6	59.2	11.2	12.8	12.0
<b>Louise</b>	127	80	103	60.9	58.9	59.9	12.0	12.7	12.3
<b>SY Saltese</b>	134	69	101	63.1	55.5	59.3	11.9	13.8	12.9
<i>Experimental Lines</i>									
<b>WA 8298 CL+</b>	148	82	115	62.8	60.2	61.5	12.2	14.0	13.1
<b>YS-603</b>	147	77	112	63.5	60.7	<b>62.1</b>	12.3	15.3	13.8
<b>WA 8297 CL+</b>	141	82	111	61.2	60.2	60.7	12.1	13.9	13.0
<b>WA 8277</b>	130	84	107	63.7	62.3	<b>63.0</b>	12.5	13.8	13.1
<b>WA 8296 CL+</b>	136	73	104	63.2	60.8	<b>62.0</b>	12.0	14.1	13.1
<b>WA 8266 CL+</b>	129	79	104	60.1	58.7	59.4	11.8	13.0	12.4
<b>IDO1403S</b>	132	64	98	62.1	59.3	60.7	11.9	14.7	13.3
<b>14-SW-1059</b>	131	63	97	58.3	55.3	56.8	12.7	14.4	13.5
<b>14-FAC-2043</b>	126	62	94	59.6	57.0	58.3	12.2	14.8	13.5
<b>C.V. %</b>	6	8	7	1.1	2.3	1.7	2.1	3.0	2.7
<b>LSD (0.05)</b>	12	8	7	0.9	1.9	1.0	0.4	0.6	0.3
<b>Average</b>	140	76	108	62.0	59.5	60.8	12.1	13.9	13.0
<b>Highest</b>	164	94	129	63.8	62.3	63.0	12.8	15.3	13.8
<b>Lowest</b>	126	62	94	58.3	55.3	56.8	10.8	12.2	11.5

Table 85.

## WSU Variety Testing Soft White Spring Wheat Trial Multi-Year Summary

Precipitation Zone >20"

(Fairfield, Farmington, Palouse, Pullman)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 8 loc/yr/s			2016-2018, 12 loc/yr/s			2014-2018, 16 loc/yr/s		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
Ryan	81	59.6	9.6	82	59.9	9.7	80	59.4	10.0
Tekoa	80	61.4	9.8	83	61.6	9.9	80	60.9	10.2
Seahawk	78	60.6	10.4	81	61.1	10.4	78	60.5	10.8
Whit	75	60.0	10.0	76	60.1	10.0	75	59.6	10.3
Diva	74	59.6	9.8	78	60.2	9.8	76	59.8	10.1
Melba	74	59.7	9.6	78	60.3	9.8	76	60.1	10.0
Louise	74	59.3	9.8	76	59.6	9.9	73	59.0	10.2
WB6341	74	59.4	9.2	75	59.4	9.2	74	58.9	9.6
JD	73	61.1	10.1	75	61.5	10.3	74	61.2	10.6
WB6121	72	60.8	10.7	76	61.3	10.9			
Babe	71	60.2	9.5	69	59.8	9.6	70	59.5	9.9
SY Saltese	68	60.4	9.8	73	60.8	9.9			
WB-1035CL+	64	58.8	11.0	62	58.8	11.0	63	58.6	11.3
<b>Experimental Lines</b>									
WA 8277	77	61.7	10.1						
WA 8266 CL+	72	59.4	9.9	72	59.7	10.1			
14-FAC-2043	71	57.7	10.5						
14-SW-1059	70	57.6	11.0	76	58.1	10.9			
IDO1403S	61	59.3	10.8						
C.V. %	6	1.1	3.9	6	1.0	4.8	6	1.1	5.0
LSD (.05)	2	0.3	0.2	2	0.2	0.2	2	0.2	0.2
Average	73	59.8	10.1	76	60.1	10.1	74	59.8	10.3
Highest	81	61.7	11.0	83	61.6	11.0	80	61.2	11.3
Lowest	61	57.6	9.2	62	58.1	9.2	63	58.6	9.6

Table 86.

### WSU Variety Testing Soft White Spring Wheat Trial Multi-Year Summary

Precipitation Zone = 16-20"

(Dayton, Mayveiw, Plaza, St. John, Walla Walla)

Variety Name <i>Club Italicized</i>	2 Years 2017-2018, 8 loc/yr			3 Years 2016-2018, 13 loc/yr			5 Years 2014-2018, 20 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
Ryan	69	60.8	10.3	74	61.2	10.3	66	60.1	10.9
Tekoa	67	62.0	10.1	71	62.1	10.1	63	60.7	10.9
Louise	67	60.2	10.3	72	61.0	10.2	64	59.4	10.8
Seahawk	67	61.4	10.3	74	61.7	10.4	65	60.6	11.1
WB6341	66	60.8	9.8	71	61.0	9.7	64	59.8	10.3
Whit	65	60.7	10.5	69	61.0	10.4	63	59.6	11.1
Diva	65	60.5	10.2	71	61.2	10.3	64	60.1	10.9
<i>Melba</i>	64	60.7	10.1	72	61.5	10.0	64	60.1	10.8
Babe	63	61.0	10.4	64	61.2	10.3	59	60.2	10.9
<i>JD</i>	61	61.9	10.9	68	62.3	10.9	61	61.3	11.5
WB6121	61	61.6	11.4	66	61.9	11.5			
SY Saltese	59	60.9	10.3	66	61.5	10.2			
WB-1035CL+	58	60.1	12.0	60	60.4	11.9	55	59.5	12.5
<b>Experimental Lines</b>									
WA 8277	69	62.5	10.8						
WA 8266 CL+	67	60.5	10.4	71	61.1	10.4			
14-FAC-2043	64	58.7	10.7						
14-SW-1059	63	58.1	11.4	69	58.8	11.1			
IDO1403S	49	60.0	11.7						
C.V. %	6	1.2	5.8	6	1.1	5.7	6	1.2	4.9
LSD (.05)	2	0.3	0.3	2	0.2	0.2	1	0.2	0.2
Average	64	60.7	10.6	69	61.2	10.5	62	60.1	11.0
Highest	69	62.5	12.0	74	62.3	11.9	66	61.3	12.5
Lowest	49	58.1	9.8	60	58.8	9.7	55	59.4	10.3

Table 87.

### WSU Variety Testing Soft White Spring Wheat Trial Multi-Year Summary

Precipitation Zone = 12-16"

(Almira, Endicott, Lamont, Reardan)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 7 loc/yrs			2016-2018, 9 loc/yrs			2014-2018, 15 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
Ryan	52	60.0	10.9	57	60.4	10.9	46	59.1	12.0
WB6341	52	60.8	10.4	55	61.0	10.3	45	59.5	11.4
Babe	51	61.1	11.2	52	60.9	11.2	42	59.5	12.2
Diva	51	59.7	11.1	55	60.3	11.2	46	59.3	12.3
Whit	50	60.9	11.2	53	60.9	11.2	44	59.1	12.4
Tekoa	50	61.7	10.9	54	62.0	10.9	43	60.1	12.4
Seahawk	50	60.9	11.1	57	61.3	11.2	44	60.0	12.5
Melba	50	60.6	10.7	56	61.2	10.7	43	59.5	12.3
Louise	50	59.6	11.1	54	60.0	11.1	44	58.3	12.3
JD	50	61.7	11.3	55	62.1	11.4	43	60.5	12.7
WB6121	47	61.0	12.3	51	61.3	12.6			
SY Saltese	47	60.4	11.0	52	60.8	11.1			
WB-1035CL+	44	59.5	12.4	46	59.6	12.6	39	58.4	13.7
<b>Experimental Lines</b>									
WA 8277	51	61.2	11.5						
WA 8266 CL+	49	59.9	10.9	53	60.1	10.9			
14-FAC-2043	49	57.9	11.6						
14-SW-1059	46	57.5	12.5	55	58.0	12.2			
IDO1403S	37	59.0	12.6						
C.V. %	10	1.8	5.4	9	1.6	5.0	9	1.6	4.6
LSD (.05)	2	0.5	0.3	2	0.4	0.3	1	0.3	0.2
Average	49	60.2	11.4	54	60.7	11.3	44	59.4	12.4
Highest	52	61.7	12.6	57	62.1	12.6	46	60.5	13.7
Lowest	37	57.5	10.4	46	58.0	10.3	39	58.3	11.4

Table 88.

**WSU Variety Testing Soft White Spring Wheat Trial Multi-Year Summary**  
 Precipitation Zone < 12"  
 (Bickleton, Horse Heaven, Lind)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 5 loc/yrs			2016-2018, 7 loc/yrs			2014-2018, 13 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Released Varieties</i></b>									
<i>Melba</i>	39	61.9	11.7	40	62.8	11.6	31	61.1	12.3
<b>Tekoa</b>	37	62.2	11.6	39	62.9	11.7	30	61.3	12.5
<b>WB6341</b>	37	61.5	11.1	36	62.1	11.1	30	60.8	11.7
<b>Louise</b>	37	61.0	11.8	38	61.8	11.6	30	60.0	12.2
<i>JD</i>	37	62.3	12.0	37	63.0	12.0	30	62.0	12.4
<b>Ryan</b>	36	61.5	11.8	35	62.1	11.9	29	61.0	12.3
<b>Diva</b>	36	61.2	12.2	37	62.0	12.1	30	60.7	12.3
<b>Whit</b>	36	60.9	11.8	34	61.5	11.7	28	60.2	12.3
<b>WB6121</b>	35	62.3	12.6	34	62.7	12.8			
<b>Babe</b>	35	62.0	11.9	34	62.7	12.0	28	61.2	12.5
<b>SY Saltese</b>	35	61.9	11.8	35	62.5	11.7			
<b>WB-1035CL+</b>	35	61.5	12.8	34	62.0	12.9	28	60.7	13.6
<b>Seahawk</b>	35	61.6	12.0	35	62.4	11.9	28	61.1	12.4
<b><i>Experimental Lines</i></b>									
<b>14-FAC-2043</b>	38	59.7	12.2						
<b>WA 8266 CL+</b>	37	60.9	11.9	36	61.7	11.7			
<b>WA 8277</b>	36	62.0	12.2						
<b>14-SW-1059</b>	32	59.0	12.9	31	60.0	12.9			
<b>IDO1403S</b>	28	61.1	12.7						
<b>C.V. %</b>	8	1.5	4.0	8	1.3	3.6	8	1.4	3.6
<b>LSD (.05)</b>	2	0.5	0.3	2	0.4	0.2	1	0.3	0.2
<b>Average</b>	36	61.4	12.1	36	62.1	12.0	29	60.9	12.4
<b>Highest</b>	39	62.3	12.9	40	63.0	12.9	31	62.0	13.6
<b>Lowest</b>	28	59.0	11.1	31	60.0	11.1	28	60.0	11.7

Table 89.

### WSU Variety Testing Soft White Spring Wheat Trial Multi-Year Summary

Precipitation Zone = Irrigated

(Moses Lake, Pasco)

Variety Name <i>Club Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 4 loc/yrs			2016-2018, 6 loc/yrs			2014-2018, 7 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
<b>WB6341</b>	125	61.9	11.3	118	61.8	10.9	121	62.1	10.9
<b>Tekoa</b>	123	61.4	12.7	125	61.9	12.1	127	62.2	12.2
<b>WB6121</b>	117	62.1	13.3	113	62.5	13.1			
<b>Ryan</b>	113	60.1	12.8	112	60.8	12.5	117	61.1	12.6
<i>Melba</i>	111	59.5	12.0	111	60.6	11.8	116	60.8	11.6
<b>Whit</b>	109	60.6	13.2	112	61.2	12.5	115	61.4	12.6
<b>Seahawk</b>	106	60.3	13.0	112	61.3	12.6	116	61.7	12.6
<b>SY Saltese</b>	105	59.8	12.9	107	60.8	12.3			
<b>Louise</b>	101	59.1	12.6	102	60.1	12.3	109	60.6	12.3
<b>Experimental Lines</b>									
<b>YS-603</b>	122	62.0	13.3						
<b>14-SW-1059</b>	105	57.2	13.4	109	58.2	12.8			
<b>IDO1403S</b>	104	60.0	12.8						
<b>WA 8277</b>	103	62.0	13.2						
<b>WA 8266 CL+</b>	100	59.1	12.4	96	59.2	12.1			
<b>14-FAC-2043</b>	99	57.6	13.3						
<b>C.V. %</b>	8	1.7	2.7	7	1.5	2.9	7	1.5	2.8
<b>LSD (.05)</b>	6	0.7	0.2	4	0.5	0.2	4	0.5	0.2
<b>Average</b>	110	60.2	12.8	111	60.8	12.3	117	61.4	12.1
<b>Highest</b>	125	62.1	13.4	125	62.5	13.1	127	62.2	12.6
<b>Lowest</b>	99	57.2	11.3	96	58.2	10.9	109	60.6	10.9

Table 90. 2018 WSU Variety Testing Soft Spring Wheat Trial, Almira

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<i>JD</i>	55	57.9	11.4	27	47	54	50
<i>Whit</i>	52	56.5	12.1	32	47	53	49
<i>WB6121</i>	51	54.3	13.2	29	45	48	
<i>WB6341</i>	51	55.4	12.2	31	47	54	
<i>Ryan</i>	49	52.9	11.6	30	47	53	
<i>Babe</i>	47	54.9	12.7	26	45	49	48
<i>Melba</i>	47	53.8	11.7	29	45	54	48
<i>Tekoa</i>	46	55.1	12.0	31	43	48	45
<i>WB-1035CL+</i>	44	50.1	13.8	28	42	49	46
<i>Diva</i>	44	49.8	12.1	28	41	50	46
<i>Seahawk</i>	43	55.7	12.8	33	43	54	48
<i>SY Saltese</i>	43	51.7	11.8	28	41	49	
<i>Louise</i>	42	50.9	12.5	30	42	49	46
<b>Experimental Lines</b>							
<i>08PN2001-07</i>	52	49.9	11.1	32			
<i>WA 8298 CL+</i>	49	54.0	12.8	27			
<i>WA 8295 CL+</i>	49	56.5	12.4	30			
<i>WA 8277</i>	48	53.4	12.0	30	44		
<i>WA 8296 CL+</i>	47	57.3	11.9	29			
<i>WA 8266 CL+</i>	45	53.1	11.7	31	42	52	
<i>WA 8297 CL+</i>	45	54.3	11.7	29			
<i>11PN2532-507</i>	44	56.0	12.9	29			
<i>14-SW-1059</i>	43	48.5	14.8	28	40	54	
<i>14-FAC-2043</i>	39	49.2	14.0	31	41		
<i>IDO1403S</i>	33	49.0	13.3	26	34		
<b>C.V. %</b>	11	3.6	6.5	12	10	10	9
<b>LSD (0.05)</b>	7	2.7	1.1	5	4	4	3
<b>Average</b>	46	53.3	12.4	29	43	51	47
<b>Highest</b>	55	57.9	14.8	33	47	54	50
<b>Lowest</b>	33	48.5	11.1	26	34	48	45

**Agronomic Information**

Planting Date:	4/27/2018
Harvest Date:	9/4/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	127
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.1

**Trial Notes:**

1. The Almira nursery was located about 9 miles north of Almira, WA
2. The nursery was fertilized prior to seeding with 70N
3. Overall yield was 15% more than 2017 and grain test weight was 6.6 lb/bu less

**Cooperator: D. McKay**

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Herbicide: Huskie, Axial XL, Tilt on 06/07/18

Table 91. 2018 WSU Variety Testing Soft Spring Wheat Trial, Bickleton

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<i>JD</i>	30	61.8	11.3	25	--	--	--
<b>WB6121</b>	29	61.5	10.8	22	--	--	--
<b>Whit</b>	29	58.9	10.9	25	--	--	--
<b>WB6341</b>	29	59.4	10.6	22	--	--	--
<b>Ryan</b>	28	58.2	11.1	24	--	--	--
<b>Louise</b>	28	58.0	11.0	26	--	--	--
<b>Babe</b>	28	60.3	10.7	26	--	--	--
<b>WB-1035CL+</b>	27	60.5	11.2	23	--	--	--
<i>Melba</i>	27	60.5	11.2	23	--	--	--
<b>SY Saltese</b>	27	60.1	11.5	25	--	--	--
<b>Tekoa</b>	26	60.7	11.0	27	--	--	--
<b>Diva</b>	25	58.9	11.9	25	--	--	--
<b>Seahawk</b>	21	61.6	11.7	22	--	--	--
<b>Experimental Lines</b>							
<i>WA 8295 CL+</i>	28	61.8	11.1	25	--	--	--
<b>WA 8277</b>	27	61.5	11.2	26	--	--	--
<b>WA 8296 CL+</b>	26	61.0	11.3	24	--	--	--
<b>WA 8298 CL+</b>	25	60.1	11.8	25	--	--	--
<b>WA 8297 CL+</b>	25	60.2	12.0	22	--	--	--
<b>08PN2001-07</b>	25	56.9	10.9	27	--	--	--
<b>WA 8266 CL+</b>	25	58.5	11.4	25	--	--	--
<b>14-FAC-2043</b>	24	56.7	12.6	25	--	--	--
<b>11PN2532-507</b>	22	58.1	12.8	29	--	--	--
<b>IDO1403S</b>	18	60.7	12.3	21	--	--	--
<b>14-SW-1059</b>	17	57.8	13.5	23	--	--	--
C.V. %	8	1.3	4.2	5	--	--	--
LSD (0.05)	3	1.1	0.7	2	--	--	--
Average	26	59.7	11.5	24	--	--	--
Highest	30	61.8	13.5	29	--	--	--
Lowest	17	56.7	10.6	21	--	--	--

**Agronomic Information**

Planting Date:	5/2/2018
Harvest Date:	7/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	15
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	92
P (ppm-bicarb) 2-ft sample	80
S (lb/ac) 1-ft sample	18
pH (top 6 inches)	5.9

Herbicide: Grower applied

**Trial Notes:**

1. The Bickleton nursery was located about 4 miles northeast of Bickleton, WA
2. The nursery was fertilized at seeding with 40N 8P 8S

Cooperator: R. & A. Juris

Table 92. 2018 WSU Variety Testing Soft Spring Wheat Trial, Dayton

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Ryan	63	58.7	9.2	28	167	55	58	51
WB6341	60	59.5	8.7	27	167	49	55	48
Louise	60	58.3	9.1	33	168	51	54	47
<i>Melba</i>	59	56.4	8.5	27	169	51	58	49
<i>JD</i>	57	59.2	9.7	31	167	49	53	46
Whit	56	59.1	9.1	29	168	50	54	47
Diva	55	57.6	7.7	31	169	49	53	46
WB6121	55	59.0	10.0	27	167	47	52	
Seahawk	53	58.2	7.8	27	170	49	52	46
WB-1035CL+	53	57.4	9.8	27	167	45	48	42
Babe	51	58.0	9.0	29	168	46	50	44
Tekoa	51	59.6	8.4	29	169	49	50	43
SY Saltese	50	56.8	9.4	29	166	44	50	
<b>Experimental Lines</b>								
WA 8277	62	59.7	9.6	31	166	55		
08PN2001-07	60	56.9	8.3	31	168			
WA 8266 CL+	58	57.9	9.3	30	170	49	56	
<i>WA 8295 CL+</i>	57	59.3	9.5	31	168			
WA 8297 CL+	57	57.8	10.1	26	168			
WA 8296 CL+	56	59.8	8.5	29	168			
14-SW-1059	55	54.2	9.6	28	173	49	56	
WA 8298 CL+	53	57.7	9.3	33	167			
14-FAC-2043	52	55.3	8.9	29	169	46		
IDO1403S	47	55.6	10.0	27	168	42		
11PN2532-507	41	56.5	9.5	32	167			
C.V. %	7	2.5	5.9	3	1	6	6	6
LSD (0.05)	5	2.0	0.7	1	0	3	2	2
Average	55	57.9	9.1	29	168	49	53	46
Highest	63	59.8	10.1	33	173	55	58	51
Lowest	41	54.2	7.7	26	166	42	48	42

**Agronomic Information**

Planting Date:	4/23/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	63
P (ppm-bicarb) 2-ft sample	57
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	5.5

**Trial Notes:**

1. The Dayton nursery was located about 10 miles northwest of Dayton, WA.
2. The cooperator fertilized the trial prior to seeding.
3. Overall yield was 31% more than 2017, and grain test weight was 1.7 lb/bu less than last year.

**Cooperator: J. Penner**

Herbicide:

Huskie, Axial XL, Tilt on 06/05/18

Table 93. 2018 WSU Variety Testing Soft Spring Wheat Trial, Endicott

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year*	5 Year**
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<b>Ryan</b>	<b>80</b>	61.1	10.4	32	60	48	
<b>WB6341</b>	<b>79</b>	<b>62.5</b>	9.1	30	59	48	
<b>Whit</b>	<b>78</b>	<b>62.1</b>	10.0	32	59	48	45
<i>Melba</i>	<b>77</b>	60.9	9.8	31	55	45	43
<b>Seahawk</b>	<b>76</b>	<b>62.2</b>	9.8	31	59	46	44
<b>Diva</b>	<b>75</b>	61.2	9.6	36	59	48	47
<b>Tekoa</b>	<b>74</b>	<b>62.2</b>	9.5	32	55	43	47
<b>WB6121</b>	<b>74</b>	<b>63.2</b>	10.9	29	53	44	
<i>JD</i>	<b>71</b>	<b>61.9</b>	10.0	33	53	43	42
<b>SY Saltese</b>	70	<b>62.3</b>	10.0	34	52		
<b>Babe</b>	70	<b>61.9</b>	10.0	32	56	46	45
<b>WB-1035CL+</b>	66	61.2	10.8	30	48	40	40
<b>Louise</b>	65	59.1	10.3	36	51	43	45
<b>Experimental Lines</b>							
<b>WA 8277</b>	<b>78</b>	<b>62.3</b>	9.9	34	60		
<b>08PN2001-07</b>	<b>77</b>	60.0	9.6	35			
<b>14-SW-1059</b>	<b>76</b>	58.5	10.2	32	56		
<b>14-FAC-2043</b>	<b>74</b>	58.8	10.8	33	57		
<b>WA 8266 CL+</b>	<b>74</b>	60.9	9.6	33	57		
<b>WA 8296 CL+</b>	<b>73</b>	<b>62.3</b>	10.2	31			
<i>WA 8295 CL+</i>	<b>72</b>	<b>62.2</b>	10.4	32			
<b>WA 8297 CL+</b>	<b>71</b>	61.1	10.0	28			
<b>WA 8298 CL+</b>	<b>71</b>	<b>62.4</b>	10.6	34			
<b>11PN2532-507</b>	68	61.7	11.3	35			
<b>IDO1403S</b>	60	61.1	10.9	29	42		
<b>C.V. %</b>	9	1.5	5.2	4	10	10	9
<b>LSD (0.05)</b>	10	1.3	0.7	2	6	4	3
<b>Average</b>	73	61.4	10.2	32	55	45	44
<b>Highest</b>	80	63.2	11.3	36	60	48	47
<b>Lowest</b>	60	58.5	9.1	28	42	40	40

**Agronomic Information**

Planting Date:	4/3/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	45
P (ppm-bicarb) 2-ft sample	70
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	5.6

**Trial Notes:**

1. The Endicott nursery was located about 4 miles southwest of Endicott, WA
2. The nursery was fertilized prior to seeding with 75N
3. Overall yield was 97% more than 2017, and grain test weight was 0.2 lb/bu less than last year.

**Cooperator: M. Miller**

Herbicide:  
Huskie, Axial XL, Tilt on 05/23/18

\* 3-year average from 2018, 2017, 2015

\*\* 5-year average from 2018, 2017, 2015, 2014, 2013

Table 94. 2018 WSU Variety Testing Soft Spring Wheat Trial, Fairfield

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>WB6341</b>	70	58.5	8.8	32	177	62	60	
<b>Whit</b>	69	60.2	9.6	33	176	61	58	65
<b>Ryan</b>	69	57.4	9.3	33	178	62	59	
<b>Tekoa</b>	68	60.9	9.4	33	180	61	60	68
<b>Louise</b>	65	58.5	8.8	37	180	61	57	64
<b>Babe</b>	64	59.7	8.6	35	180	60	53	62
<b>Seahawk</b>	63	59.9	9.7	33	181	57	56	62
<i>JD</i>	62	58.8	9.5	34	180	57	53	59
<b>WB6121</b>	62	59.3	10.5	31	178	56	55	
<b>Diva</b>	61	58.2	9.2	36	179	58	58	64
<i>Melba</i>	60	57.8	9.3	31	181	56	52	56
<b>WB-1035CL+</b>	59	57.5	10.4	32	177	55	51	59
<b>SY Saltese</b>	54	58.6	9.6	33	177	54	51	
<b>Experimental Lines</b>								
<b>WA 8277</b>	70	59.4	9.8	35	176	62		
<b>08PN2001-07</b>	68	57.4	9.8	35	179			
<b>WA 8298 CL+</b>	65	59.8	9.3	36	178			
<i>WA 8295 CL+</i>	61	59.8	9.9	34	180			
<b>WA 8296 CL+</b>	60	59.8	9.6	33	178			
<b>11PN2532-507</b>	59	58.5	10.0	35	178			
<b>WA 8266 CL+</b>	58	56.6	9.4	33	180	58	55	
<b>14-FAC-2043</b>	58	56.6	10.2	33	180	56		
<b>WA 8297 CL+</b>	57	55.4	9.7	29	179			
<b>14-SW-1059</b>	55	56.2	11.3	34	180	53	55	
<b>IDO1403S</b>	45	55.7	11.1	29	181	48		
<b>C.V. %</b>	6	1.6	4.9	4	0	5	7	7
<b>LSD (0.05)</b>	5	1.3	0.7	2	1	3	3	2
<b>Average</b>	62	58.4	9.7	33	179	58	56	62
<b>Highest</b>	70	60.9	11.3	37	181	62	60	68
<b>Lowest</b>	45	55.4	8.6	29	176	48	51	56

**Agronomic Information**

Planting Date:	5/4/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	56
P (ppm-bicarb) 2-ft sample	82
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	5.3

Herbicide:  
Huskie, Axial XL, Tilt on 06/06/18

**Trial Notes:**

1. The Fairfield nursery was located about 8 miles northwest of Fairfield, WA.
2. The nursery was planted with the no-till Cross-Slot drill and fertilized at 100N 17P 17S.
3. Overall yield was 17% greater than 2017, and grain test weight was 3.8 lb/bu less than last year

**Cooperator: C. Denny**

\* 5-year average from 2018, 2017, 2016, 2014, 2013

Table 95. 2018 WSU Variety Testing Soft Spring Wheat Trial, Farmington

Variety Name <i>Club Italicized</i>	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Ryan</b>	<b>102</b>	59.1	8.5	37	176	82	89	83
<b>Tekoa</b>	<b>100</b>	<b>61.6</b>	9.0	37	179	79	87	83
<i>Melba</i>	94	59.6	8.8	34	180	74	83	80
<b>Louise</b>	94	59.4	9.0	39	179	76	82	75
<b>WB6341</b>	93	59.6	8.9	34	176	77	84	79
<b>Diva</b>	93	59.3	9.4	37	178	79	84	81
<b>Whit</b>	92	60.2	9.1	37	175	79	84	79
<i>JD</i>	92	<b>61.3</b>	9.7	40	179	74	79	77
<b>Seahawk</b>	91	59.8	9.6	35	183	76	82	79
<b>Babe</b>	91	60.2	8.8	38	178	77	82	79
<b>SY Saltese</b>	82	59.9	9.2	36	175	70	81	
<b>WB6121</b>	82	60.8	10.3	33	176	70	77	
<b>WB-1035CL+</b>	78	58.5	10.6	35	175	67	71	70
<b>Experimental Lines</b>								
<b>08PN2001-07</b>	92	59.0	8.9	37	180			
<b>WA 8298 CL+</b>	92	60.5	10.0	39	178			
<i>WA 8295 CL+</i>	92	<b>61.2</b>	9.9	40	179			
<b>WA 8277</b>	90	60.8	9.7	38	176	77		
<b>14-FAC-2043</b>	89	58.2	9.7	36	181	73		
<b>11PN2532-507</b>	88	59.8	10.6	39	178			
<b>WA 8266 CL+</b>	86	59.1	9.2	37	181	70	81	
<b>14-SW-1059</b>	86	58.2	10.5	37	184	68	78	
<b>WA 8297 CL+</b>	85	59.3	9.7	32	179			
<b>WA 8296 CL+</b>	84	60.3	9.7	36	178			
<b>IDO1403S</b>	68	58.6	10.4	32	180	60		
<b>C.V. %</b>	4	0.8	4.5	3	1	5	5	6
<b>LSD (0.05)</b>	5	0.7	0.6	2	2	4	3	3
<b>Average</b>	89	59.8	9.6	36	178	74	82	79
<b>Highest</b>	102	61.6	10.6	40	184	82	89	83
<b>Lowest</b>	68	58.2	8.5	32	175	60	71	70

**Agronomic Information**

Planting Date:	4/30/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	53
P (ppm-bicarb) 2-ft sample	86
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.4

Herbicide:  
Huskie, Tilt on 05/31/18

**Trial Notes:**

1. The Farmington nursery was located about 5 miles south of Farmington, WA.
2. The nursery was fertilized at 100N 20S.
3. Overall yield was 53% more than 2017, and grain test weight was 0.5 lb/bu more than last year.

**Cooperator: B. Nelson**

Table 96. 2018 WSU Variety Testing Soft Spring Wheat Trial, Horse Heaven

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<i>Melba</i>	42	60.6	11.3	25	45	39	31
<b>Seahawk</b>	40	60.3	10.7	24	43	36	30
<b>Babe</b>	39	59.9	11.1	27	41	36	29
<b>Tekoa</b>	39	61.3	10.8	28	43	39	31
<b>WB6341</b>	38	59.3	11.1	24	41	35	29
<b>WB-1035CL+</b>	38	60.5	11.6	23	40	34	28
<i>JD</i>	38	59.8	11.3	27	41	37	30
<b>Louise</b>	37	60.3	11.8	31	40	36	28
<b>Whit</b>	37	59.7	11.4	26	39	33	27
<b>Diva</b>	35	60.6	11.7	27	40	35	29
<b>WB6121</b>	35	60.5	12.1	25	40	33	
<b>Ryan</b>	35	59.9	11.3	26	41	34	28
<b>SY Saltese</b>	32	60.2	11.2	25	38	34	
<b>Experimental Lines</b>							
<b>08PN2001-07</b>	41	59.9	10.9	29			
<b>14-FAC-2043</b>	41	59.2	11.7	26	43		
<i>WA 8295 CL+</i>	38	60.9	11.5	28			
<b>WA 8296 CL+</b>	38	58.2	11.0	27			
<b>WA 8266 CL+</b>	37	59.1	11.5	28	42	37	
<b>WA 8297 CL+</b>	36	60.8	11.5	24			
<b>WA 8277</b>	36	60.2	10.9	29	41		
<b>14-SW-1059</b>	34	59.7	11.2	22	36	32	
<b>WA 8298 CL+</b>	34	59.7	10.8	29			
<b>11PN2532-507</b>	33	57.7	11.1	29			
<b>IDO1403S</b>	30	61.4	10.8	24	35		
<b>C.V. %</b>	10	1.9	6.6	4	8	9	9
<b>LSD (0.05)</b>	5	1.5	1.0	2	3	2	2
<b>Average</b>	37	60.0	11.3	26	41	35	29
<b>Highest</b>	42	61.4	12.1	31	45	39	31
<b>Lowest</b>	30	57.7	10.7	22	35	32	27

**Agronomic Information**

Planting Date:	3/23/2018
Harvest Date:	8/17/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	104
P (ppm-bicarb) 2-ft sample	25
S (lb/ac) 1-ft sample	8
pH (top 6 inches)	7.3

Herbicide:  
Huskie, Tilt on 05/16/18

**Trial Notes:**

1. The Horse Heavens nursery was located about 7 miles southwest of Benton City, WA.
2. The nursery was seeded with the no-till hoe drill and fertilizer was applied at 35N in the fall.
3. Overall yield was 16% less than 2017, and grain test weight was 0.9 lb/bu more than last year

**Cooperator: C. Smith**

Table 97. 2018 WSU Variety Testing Soft Spring Wheat Trial, Lamont

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<i>JD</i>	46	63.3	15.7	29	176	--	--	--
<b>Louise</b>	45	62.3	14.9	30	175	--	--	--
<b>Diva</b>	44	62.8	15.0	30	175	--	--	--
<b>Ryan</b>	43	61.7	14.5	29	173	--	--	--
<b>WB6341</b>	42	62.7	13.2	25	173	--	--	--
<b>Tekoa</b>	41	63.1	15.3	29	179	--	--	--
<b>Babe</b>	40	62.5	15.2	28	177	--	--	--
<b>Seahawk</b>	38	61.7	14.7	29	179	--	--	--
<i>Melba</i>	37	<b>63.8</b>	14.5	25	180	--	--	--
<b>WB6121</b>	37	62.3	16.4	27	175	--	--	--
<b>SY Saltese</b>	37	62.6	14.9	28	174	--	--	--
<b>WB-1035CL+</b>	36	62.9	15.2	25	174	--	--	--
<b>Whit</b>	36	61.8	15.4	26	176	--	--	--
<b>Experimental Lines</b>								
<b>08PN2001-07</b>	45	60.9	13.4	26	176	--	--	--
<b>WA 8296 CL+</b>	42	61.3	15.7	29	175	--	--	--
<i>WA 8295 CL+</i>	41	63.1	15.6	29	175	--	--	--
<b>WA 8298 CL+</b>	39	62.0	15.2	29	174	--	--	--
<b>WA 8297 CL+</b>	38	61.6	14.4	25	174	--	--	--
<b>WA 8277</b>	37	<b>64.7</b>	16.0	27	180	--	--	--
<b>11PN2532-507</b>	37	61.4	17.9	33	177	--	--	--
<b>14-FAC-2043</b>	36	61.5	14.4	29	180	--	--	--
<b>WA 8266 CL+</b>	35	62.4	14.0	27	179	--	--	--
<b>14-SW-1059</b>	33	59.1	17.0	25	180	--	--	--
<b>IDO1403S</b>	20	62.1	17.7	27	179	--	--	--
<b>C.V. %</b>	12	1.0	5.7	6	1	--	--	--
<b>LSD (0.05)</b>	7	0.9	1.2	2	2	--	--	--
<b>Average</b>	39	62.2	15.3	28	176	--	--	--
<b>Highest</b>	46	64.7	17.9	33	180	--	--	--
<b>Lowest</b>	19	59.1	13.2	25	173	--	--	--

**Agronomic Information**

Planting Date:	5/1/2018
Harvest Date:	7/29/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	52
P (ppm-bicarb) 2-ft sample	73
S (lb/ac) 1-ft sample	19
pH (top 6 inches)	5.3

**Trial Notes:**

1. The Lamont nursery was located about 8 miles southeast of Lamont, WA.
2. The nursery was seeded with a no-till Cross-Slot drill. Base fertilizer applied at planting 50N 9P 9S
3. Data was not released in 2017

**Cooperator: G. White**

Herbicide:

Huskie, Axial XL, Tilt on 06/06/18

Table 98. 2018 WSU Variety Testing Soft Spring Wheat Trial, Lind

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<i>Melba</i>	54	63.3	11.1	29	152	40	46	37
<i>Louise</i>	52	63.5	11.5	34	151	39	43	36
<i>Diva</i>	51	63.1	11.9	32	150	37	42	37
<i>Tekoa</i>	50	63.6	11.4	32	153	38	42	35
<i>JD</i>	50	63.4	12.1	32	151	36	41	34
<i>Whit</i>	48	63.1	11.8	30	148	35	38	32
<i>WB6341</i>	48	63.7	11.1	27	149	38	40	34
<i>SY Saltese</i>	46	63.8	11.6	33	148	36	39	
<i>Seahawk</i>	46	63.6	11.8	28	150	35	39	32
<i>Ryan</i>	45	63.8	12.4	30	147	35	37	32
<i>WB-1035CL+</i>	44	63.4	13.9	29	148	34	37	31
<i>Babe</i>	44	63.9	12.0	31	149	33	35	30
<i>WB6121</i>	44	63.6	13.5	29	148	34	36	
<b>Experimental Lines</b>								
<i>14-FAC-2043</i>	51	61.7	11.6	31	153	40		
<i>WA 8297 CL+</i>	50	62.6	12.0	28	150			
<i>08PN2001-07</i>	50	61.2	11.3	34	152			
<i>WA 8295 CL+</i>	49	63.6	12.2	31	151			
<i>WA 8266 CL+</i>	48	62.7	12.1	32	152	38	40	
<i>14-SW-1059</i>	48	60.2	12.0	30	155	36	36	
<i>WA 8277</i>	48	63.5	13.0	32	148	35		
<i>WA 8296 CL+</i>	45	62.4	12.3	32	150			
<i>WA 8298 CL+</i>	45	62.8	13.0	33	148			
<i>11PN2532-507</i>	43	62.2	13.9	35	149			
<i>IDO1403S</i>	35	62.1	13.6	27	149	26		
<b>C.V. %</b>	5	0.6	2.4	2	0	6	8	7
<b>LSD (0.05)</b>	4	0.5	0.4	1	1	2	2	2
<b>Average</b>	47	63.0	12.2	31	150	36	39	34
<b>Highest</b>	54	63.9	13.9	35	155	40	46	37
<b>Lowest</b>	35	60.2	11.1	27	147	26	35	30

**Agronomic Information**

Planting Date:	3/13/2018
Harvest Date:	7/25/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	191
P (ppm-bicarb) 2-ft sample	38
S (lb/ac) 2-ft sample	20
pH (top 6 inches)	6.1

**Trial Notes:**

1. The Lind nursery was located about 3.5 miles northeast of Lind, WA.
2. The nursery was fertilized prior to seeding with 70N 10S
3. Overall yield was 96% more than 2017, and grain test weight was 0.3 lb/bu less than last year.

**Cooperator: WSU Lind Dryland Experiment Station**

Herbicide:  
No Fungicide application

Table 99. 2018 WSU Variety Testing Soft Spring Wheat Trial, Mayview

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<i>Melba</i>	71	61.0	9.3	28	54	57	54
<b>Seahawk</b>	71	60.9	9.6	30	58	60	57
<b>Tekoa</b>	68	62.5	9.4	31	56	56	54
<i>JD</i>	68	62.2	9.5	32	51	52	52
<b>WB6341</b>	68	61.5	9.4	29	56	53	
<b>Ryan</b>	68	61.3	9.4	30	58	54	
<b>Louise</b>	67	61.0	9.4	33	54	53	53
<b>Babe</b>	67	61.4	8.9	30	54	49	51
<b>Whit</b>	67	61.0	9.6	31	53	53	54
<b>Diva</b>	65	61.1	9.9	32	53	53	53
<b>WB6121</b>	63	62.6	10.6	30	52	51	
<b>WB-1035CL+</b>	61	60.3	11.9	29	50	48	48
<b>SY Saltese</b>	60	62.0	9.7	30	47	46	
<b>Experimental Lines</b>							
<b>08PN2001-07</b>	75	60.1	9.5	32			
<b>WA 8266 CL+</b>	70	61.3	9.5	31	58	57	
<b>WA 8298 CL+</b>	69	61.8	11.0	33			
<b>WA 8277</b>	69	63.4	10.7	32	58		
<b>WA 8297 CL+</b>	68	61.4	10.6	26			
<b>14-FAC-2043</b>	66	57.9	10.3	31	54		
<b>WA 8296 CL+</b>	65	61.4	10.5	31			
<b>14-SW-1059</b>	65	58.4	10.6	30	54	55	
<b>WA 8295 CL+</b>	64	61.9	10.1	31			
<b>11PN2532-507</b>	61	60.5	11.7	34			
<b>IDO1403S</b>	57	60.7	11.1	28	44		
<b>C.V. %</b>	9	0.9	12.4	4	9	10	8
<b>LSD (0.05)</b>	8	0.7	1.7	2	5	4	3
<b>Average</b>	66	61.2	10.1	31	54	53	53
<b>Highest</b>	75	63.4	11.9	34	58	60	57
<b>Lowest</b>	57	57.9	8.9	26	44	46	48

**Agronomic Information**

Planting Date:	4/24/2018
Harvest Date:	8/22/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	63
P (ppm-bicarb) 2-ft sample	74
S (lb/ac) 2-ft sample	24
pH (top 6 inches)	5.1

**Trial Notes:**

1. The Mayview nursery was located about 20 miles northeast of Pomeroy, WA.
2. The nursery was fertilized at 93N 17P 24S.
3. Overall yield was 61% more than 2017 and grain test weight was 1.4 lb/bu more than last year.

**Cooperator: R. & R. Koller**

Herbicide:  
Huskie, Tilt on 06/01/18

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Table 100. 2018 WSU Variety Testing Soft Spring Wheat Trial, Moses Lake

Variety Name <i>Club Italicized</i>	2018						2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
<b>WB6341</b>	<b>164</b>	<b>63.1</b>	10.8	38	148	0	150	136	
<b>Tekoa</b>	<b>158</b>	61.9	12.2	41	152	10	150	145	143
<b>WB6121</b>	147	<b>63.8</b>	12.8	37	148	15	138	126	
<b>Whit</b>	144	62.4	12.2	37	148	10	133	128	128
<b>Ryan</b>	140	62.0	11.8	37	147	38	135	127	
<b>Seahawk</b>	140	62.3	12.4	40	151	23	126	128	127
<i>Melba</i>	139	61.8	11.2	38	151	0	137	135	132
<b>SY Saltese</b>	134	<b>63.0</b>	11.9	39	148	37	130	124	
<b>Louise</b>	127	60.9	12.0	42	152	55	120	117	121
<b>Experimental Lines</b>									
<b>WA 8298 CL+</b>	148	62.8	12.2	40	148	63			
<b>YS-603</b>	147	<b>63.5</b>	12.3	37	148	0	143		
<b>WA 8297 CL+</b>	141	61.2	12.1	36	151	8			
<b>WA 8296 CL+</b>	136	<b>63.2</b>	12.0	40	149	0			
<b>IDO1403S</b>	132	62.1	11.9	39	149	15	127		
<b>14-SW-1059</b>	131	58.3	12.7	41	153	0	131	130	
<b>WA 8277</b>	130	<b>63.7</b>	12.5	41	148	70	116		
<b>WA 8266 CL+</b>	129	60.1	11.8	41	153	25	119	116	
<b>14-FAC-2043</b>	126	59.6	12.2	40	153	0	122		
<b>C.V. %</b>	6	1.1	2.1	3	0	76	6	6	6
<b>LSD (0.05)</b>	12	0.9	0.4	2	1	22	8	6	5
<b>Average</b>	140	62.0	12.1	39	150	21	132	128	130
<b>Highest</b>	164	63.8	12.8	42	153	70	150	145	143
<b>Lowest</b>	126	58.3	10.8	36	147	0	116	116	121

**Agronomic Information**

Planting Date:	3/15/2018
Harvest Date:	8/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	25
Previous Crop:	Corn
Spring soil test:	
N (lb/ac) 4-ft sample	193
P (ppm-bicarb) 2-ft sample	109
S (lb/ac) 2-ft sample	130
pH (top 6 inches)	6.1

**Trial Notes:**

1. The Moses Lake nursery was located about 11 miles east of Moses Lake, WA.
2. The nursery was seeded with a double disk drill, base fertilizer was 300N
3. Overall yield was 14% greater than 2017, and grain test weight was 1.0 lb/bu more than last year

**Cooperator: N. & J. Getzinger**

\* 5-year average from 2018, 2017, 2016, 2014, 2013

Herbicide:

Grower applied

Table 101. 2018 WSU Variety Testing Soft Spring Wheat Trial, Palouse

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<b>Tekoa</b>	<b>108</b>	<b>62.2</b>	10.3	33	101	106	--
<b>Diva</b>	<b>102</b>	61.2	10.4	36	94	97	--
<b>Seahawk</b>	<b>102</b>	<b>61.6</b>	10.6	35	96	100	--
<b>Ryan</b>	<b>102</b>	60.4	10.2	33	95	99	--
<b>Louise</b>	<b>101</b>	61.2	10.0	37	93	97	--
<i>Melba</i>	99	59.8	10.0	34	91	97	--
<b>WB6121</b>	93	<b>62.2</b>	11.5	30	87	91	--
<i>JD</i>	90	<b>61.9</b>	10.9	37	87	89	--
<b>Whit</b>	86	60.8	10.4	34	91	93	--
<b>SY Saltese</b>	86	<b>61.5</b>	10.4	33	83	89	--
<b>WB6341</b>	84	60.0	9.6	30	89	91	--
<b>Babe</b>	81	60.2	10.0	33	83	85	--
<b>WB-1035CL+</b>	75	58.9	11.2	31	79	75	--
<b>Experimental Lines</b>							
<b>WA 8298 CL+</b>	<b>106</b>	<b>61.6</b>	11.1	36			--
<b>WA 8277</b>	<b>100</b>	<b>62.4</b>	11.2	35	92		--
<i>WA 8295 CL+</i>	93	60.9	11.0	38			--
<b>WA 8296 CL+</b>	93	60.6	10.9	35			--
<b>11PN2532-507</b>	93	60.7	12.0	37			--
<b>08PN2001-07</b>	92	60.3	9.9	34			--
<b>14-SW-1059</b>	91	56.8	10.9	35	86	93	--
<b>WA 8266 CL+</b>	87	60.3	10.2	34	86	87	--
<b>14-FAC-2043</b>	87	58.3	10.7	35	90		--
<b>WA 8297 CL+</b>	85	60.4	10.5	30			--
<b>IDO1403S</b>	64	57.8	11.4	31	67		--
<b>C.V. %</b>	8	1.2	2.7	5	7	6	--
<b>LSD (0.05)</b>	10	1.0	0.4	2	7	5	--
<b>Average</b>	92	60.5	10.6	34	88	93	--
<b>Highest</b>	108	62.4	12.0	38	101	106	--
<b>Lowest</b>	64	56.8	9.6	30	67	75	--

**Agronomic Information**

Planting Date:	4/25/2018
Harvest Date:	8/31/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	169
P (ppm-bicarb) 2-ft sample	103
S (lb/ac) 2-ft sample	29
pH (top 6 inches)	5.2

**Trial Notes:**

1. The Palouse nursery was located about 13 miles west of Palouse, WA.
2. Base fertilizer was 180N 20P 20S applied prior to seeding.
3. Overall yield was 8% greater than 2017, and grain test weight was 0.5 lb/bu less than last year.

**Cooperator: D. Lange**

Herbicide:

Brox M, Axial XL on 05/30/18

Table 102. 2018 WSU Variety Testing Soft Spring Wheat Trial, Pasco

Variety Name <i>Club Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
<b>WB6341</b>	<b>94</b>	<b>61.9</b>	12.2	30	101	100	--
<b>Ryan</b>	<b>86</b>	<b>60.7</b>	14.1	32	91	98	--
<b>Louise</b>	80	58.9	12.7	36	83	86	--
<b>Seahawk</b>	79	<b>60.9</b>	13.5	33	86	97	--
<b>Tekoa</b>	76	<b>61.3</b>	13.4	33	97	104	--
<b>WB6121</b>	75	<b>61.3</b>	14.8	31	96	99	--
<i>Melba</i>	73	56.6	12.8	35	85	86	--
<b>Whit</b>	72	59.8	14.7	32	85	95	--
<b>SY Saltese</b>	69	55.5	13.8	35	81	91	--
<b>Experimental Lines</b>							
<b>WA 8277</b>	84	<b>62.3</b>	13.8	35	91		--
<b>WA 8297 CL+</b>	82	60.2	13.9	28			--
<b>WA 8298 CL+</b>	82	60.2	14.0	35			--
<b>WA 8266 CL+</b>	79	58.7	13.0	35	81	77	--
<b>YS-603</b>	77	<b>60.7</b>	15.3	32	101		--
<b>WA 8296 CL+</b>	73	<b>60.8</b>	14.1	33			--
<b>IDO1403S</b>	64	59.3	14.7	30	82		--
<b>14-SW-1059</b>	63	55.3	14.4	32	79	89	--
<b>14-FAC-2043</b>	62	57.0	14.8	31	77		--
<b>C.V. %</b>	8	2.3	3.0	7	10	9	--
<b>LSD (0.05)</b>	8	1.9	0.6	3	8	6	--
<b>Average</b>	76	59.5	13.9	33	88	93	--
<b>Highest</b>	94	62.3	15.3	36	101	104	--
<b>Lowest</b>	62	55.3	12.2	28	77	77	--

**Agronomic Information**

Planting Date:	3/26/2018
Harvest Date:	8/6/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	25
Previous Crop:	Corn
Spring soil test:	
N (lb/ac) 4-ft sample	167
P (ppm-bicarb) 2-ft sample	292
S (lb/ac) 2-ft sample	37
pH (top 6 inches)	6.6

**Trial Notes:**

1. The Pasco nursery was located about 19 miles north of Pasco, WA.
2. Base fertilizer was applied prior to seeding 150N 60P 25K 60S.
3. Overall yield was 33% less than 2017, and grain test weight was equal to last year.

**Cooperator: S Coopers**

Herbicide:

Huskie, Tilt on 05/07/18

Table 103. 2018 WSU Variety Testing Soft Spring Wheat Trial, Plaza

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Tekoa</b>	85	62.7	9.4	37	177	69	78	--
<b>Louise</b>	83	61.6	9.8	39	176	70	80	--
<b>Ryan</b>	79	61.0	9.6	36	173	68	77	--
<b>WB6341</b>	79	61.7	8.9	33	174	68	75	--
<i>Melba</i>	78	62.6	9.3	32	177	68	79	--
<b>Diva</b>	77	61.9	9.8	40	176	66	79	--
<b>Whit</b>	77	61.5	10.1	37	173	66	74	--
<b>SY Saltese</b>	75	62.5	9.6	35	173	65	76	--
<b>Seahawk</b>	74	61.9	10.2	32	178	67	78	--
<i>JD</i>	73	63.1	10.0	37	177	66	75	--
<b>Babe</b>	69	61.7	9.6	36	176	63	67	--
<b>WB6121</b>	65	62.4	11.3	31	172	60	71	--
<b>WB-1035CL+</b>	60	62.0	11.4	33	172	55	63	--
<b>Experimental Lines</b>								
<b>WA 8298 CL+</b>	87	62.5	10.3	38	175			--
<b>WA 8277</b>	85	64.1	10.3	39	174	71		--
<b>08PN2001-07</b>	80	60.3	9.5	36	177			--
<b>WA 8266 CL+</b>	79	61.5	9.4	35	177	70	76	--
<b>14-FAC-2043</b>	79	60.4	9.9	34	177	70		--
<b>WA 8297 CL+</b>	78	61.8	9.6	32	175			--
<b>WA 8296 CL+</b>	75	61.6	10.4	34	176			--
<i>WA 8295 CL+</i>	75	62.9	10.7	36	175			--
<b>14-SW-1059</b>	72	59.7	10.6	29	178	60	70	--
<b>11PN2532-507</b>	69	61.5	10.9	37	175			--
<b>IDO1403S</b>	56	61.4	10.8	31	178	50		--
<b>C.V. %</b>	6	0.7	3.2	4	0	7	6	--
<b>LSD (0.05)</b>	6	0.6	0.4	2	1	4	4	--
<b>Average</b>	75	61.9	10.1	35	175	65	75	--
<b>Highest</b>	87	64.1	11.4	40	178	71	80	--
<b>Lowest</b>	56	59.7	8.9	29	172	50	63	--

**Agronomic Information**

Planting Date:	4/27/2018
Harvest Date:	9/2/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	160
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.2

Herbicide:

Grower applied

**Trial Notes:**

1. The Plaza nursery was located about 8 miles east of Rosalia, WA.
2. The nursery was fertilized prior to seeding with 120N 10P 10S
3. Overall yield was 36% greater than 2017, and grain test weight was 0.2 lb/bu less than last year

**Cooperator: G. Ward**

Table 104. 2018 WSU Variety Testing Soft Spring Wheat Trial, Pullman

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Ryan	103	59.4	11.4	38	168	84	82	
Seahawk	99	58.8	12.3	38	173	82	88	78
<i>JD</i>	92	60.8	11.7	42	171	74	79	73
<i>Melba</i>	91	59.4	10.8	36	170	75	81	74
Tekoa	91	58.8	11.4	37	171	77	80	73
WB6121	86	61.1	12.5	34	168	73	80	
Whit	83	58.1	11.7	36	168	70	70	69
Louise	78	58.4	11.5	39	171	66	68	65
Diva	78	59.4	11.4	39	170	66	71	67
WB6341	76	57.9	10.2	35	168	67	64	
SY Saltese	75	59.9	11.2	38	168	66	70	
Babe	73	57.3	10.7	37	170	64	57	57
WB-1035CL+	56	58.1	12.6	34	168	55	49	52
<b>Experimental Lines</b>								
WA 8296 CL+	95	59.1	11.6	38	170			
WA 8277	94	62.2	11.3	39	168	79		
WA 8297 CL+	94	59.9	12.2	33	170			
WA 8298 CL+	93	60.6	11.8	40	168			
<i>WA 8295 CL+</i>	91	60.5	11.7	42	171			
11PN2532-507	89	59.1	12.6	41	170			
14-SW-1059	86	55.6	12.1	39	173	72	78	
IDO1403S	84	59.2	12.0	36	171	71		
WA 8266 CL+	84	58.7	12.0	38	172	73	68	
08PN2001-07	82	57.9	10.4	38	171			
14-FAC-2043	72	56.1	12.7	37	172	66		
C.V. %	5	0.7	4.0	2	0	5	5	5
LSD (0.05)	5	0.6	0.6	1	1	4	3	2
Average	85	59.0	11.7	38	170	71	72	68
Highest	103	62.2	12.7	42	173	84	88	78
Lowest	56	55.6	10.2	33	168	55	49	52

**Agronomic Information**

Planting Date:	4/24/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	72
P (ppm-bicarb) 2-ft sample	73
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.7

Herbicide:  
Brox M, Axial XL on 05/22/18

**Trial Notes:**

1. The Pullman nursery was located about 3 miles east of Pullman, WA.
2. The nursery was seeded with a double disk drill. Base fertilizer was 180N 20P 20S applied prior to seeding
3. Overall yield was 44% less than 2017, and grain test weight was 0.3 lb/bu more than last year.

**Cooperator: Spillman Agronomy Farm**

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Table 105. 2018 WSU Variety Testing Soft Spring Wheat Trial, Reardan

Variety Name <i>Club Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Louise	48	61.1	10.2	37	172	58	63	61
Seahawk	47	61.9	10.3	34	175	55	65	61
Diva	47	59.6	10.6	37	172	56	63	62
Tekoa	46	62.7	10.3	35	172	57	64	61
Babe	45	62.1	10.7	36	173	57	55	57
Ryan	45	60.1	10.3	35	171	55	62	
Melba	45	60.6	10.1	32	174	55	66	62
JD	42	61.3	10.9	38	174	51	59	57
SY Saltese	41	60.6	10.6	34	172	52	60	
Whit	40	60.8	10.4	35	171	51	55	58
WB6341	40	61.4	10.0	33	172	55	57	
WB6121	38	60.7	11.9	31	172	48	55	
WB-1035CL+	35	57.8	12.7	33	171	45	46	50
<b>Experimental Lines</b>								
WA 8266 CL+	46	60.6	10.3	35	173	56	59	
WA 8295 CL+	45	62.1	11.1	39	173			
14-FAC-2043	44	59.8	11.0	35	172	55		
08PN2001-07	44	58.7	10.2	35	171			
WA 8277	43	59.5	11.7	36	172	54		
11PN2532-507	42	60.1	11.3	37	172			
WA 8298 CL+	41	60.2	11.7	36	171			
WA 8297 CL+	39	58.9	11.6	30	173			
WA 8296 CL+	36	60.1	11.4	34	172			
IDO1403S	34	56.6	12.2	30	173	44		
14-SW-1059	32	58.8	12.5	35	175	48	62	
C.V. %	11	1.5	4.4	4	1	8	7	7
LSD (0.05)	7	1.2	0.7	2	0	4	3	2
Average	42	60.2	11.0	35	172	53	59	59
Highest	48	62.7	12.7	39	175	58	66	62
Lowest	32	56.6	10.0	30	171	44	46	50

**Agronomic Information**

Planting Date:	4/26/2018
Harvest Date:	9/4/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	71
P (ppm-bicarb) 2-ft sample	56
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.1

**Trial Notes:**

1. The Reardan nursery was located about 7 miles west of Reardan, WA.
2. The nursery was fertilized at seeding with 100N.
3. Overall yield was 33% less than 2017, and grain test weight was 2.6 lb/bu less than last year.

**Cooperator: H. Johnson**

\* 5-Year average is from 2018, 2017, 2016, 2014, 2013

Herbicide:

Huskie, Axial XL, Tilt on 06/08/2018

Table 106. 2018 WSU Variety Testing Soft Spring Wheat Trial, St. John

Variety Name <i>Club Italicized</i>	2018					2 Year*	3 Year**	5 Year***
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>Tekoa</b>	<b>104</b>	62.3	10.5	34	173	87	66	68
<b>Louise</b>	<b>104</b>	61.3	10.8	38	171	91	67	67
<b>Ryan</b>	<b>102</b>	61.5	10.9	35	168	89	69	
<i>Melba</i>	<b>100</b>	61.9	10.1	32	172	91	69	68
<b>Whit</b>	<b>100</b>	61.1	10.7	35	168	85	65	65
<b>Babe</b>	<b>100</b>	61.7	11.3	34	170	88	68	65
<b>WB6341</b>	<b>99</b>	60.9	9.5	32	168	89	69	
<b>Seahawk</b>	<b>97</b>	61.5	10.6	35	175	85	65	65
<b>SY Saltese</b>	95	61.9	10.2	35	168	85		
<b>Diva</b>	94	61.1	10.9	36	170	85	64	69
<i>JD</i>	93	62.6	11.7	39	171	84	64	64
<b>WB6121</b>	89	62.4	11.8	30	168	74	58	
<b>WB-1035CL+</b>	85	60.3	12.1	32	168	73	56	57
<b>Experimental Lines</b>								
<b>08PN2001-07</b>	<b>104</b>	59.9	10.1	37	171			
<b>WA 8298 CL+</b>	<b>100</b>	61.8	11.0	38	168			
<b>WA 8277</b>	<b>99</b>	<b>63.2</b>	11.4	38	168			
<b>WA 8266 CL+</b>	96	61.2	10.5	36	174	85		
<b>14-FAC-2043</b>	95	59.2	10.7	34	173			
<b>14-SW-1059</b>	93	57.9	10.8	35	176	85		
<b>WA 8297 CL+</b>	93	61.2	11.1	31	170			
<i>WA 8295 CL+</i>	92	62.1	11.1	37	171			
<b>WA 8296 CL+</b>	91	61.2	10.6	35	171			
<b>11PN2532-507</b>	89	61.0	11.8	37	169			
<b>IDO1403S</b>	78	60.2	11.9	32	174			
<b>C.V. %</b>	5	0.5	4.3	4	1	6	6	6
<b>LSD (0.05)</b>	7	0.4	0.6	2	2	5	4	3
<b>Average</b>	96	61.2	10.9	35	171	85	65	65
<b>Highest</b>	104	63.2	12.1	39	176	91	69	69
<b>Lowest</b>	78	57.9	9.5	30	168	73	56	57

**Agronomic Information**

Planting Date:	4/23/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	50
P (ppm-bicarb) 2-ft sample	96
S (lb/ac) 2-ft sample	18
pH (top 6 inches)	5.3

**Trial Notes:**

1. The St. John nursery was located about 4 miles northwest of St. John, WA.
2. The nursery was fertilized prior to seeding with 80N 10S.
3. The St. John spring nursery was lost in 2017.

**Cooperator: M. Mills**

\* 2-Year average from 2018, 2016

\*\* 3-Year average from 2018, 2016, 2015

\*\* 5-Year average from 2018, 2016, 2015, 2014, 2013

Herbicide:

Huskie, Axial XL, Tilt on 05/31/18

Table 107. 2018 WSU Variety Testing Soft Spring Wheat Trial, Walla Walla

Variety Name <i>Club Italicized</i>	2018					2 Year*	3 Year**	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Ryan	89	62.4	10.7	34	150	106	95	--
Seahawk	87	62.8	10.8	33	154	108	93	--
Tekoa	87	62.6	10.7	35	156	100	89	--
Whit	85	62.6	10.9	33	151	94	86	--
Diva	84	62.0	10.7	37	155	98	87	--
WB6341	84	62.5	10.0	32	153	96	89	--
Louise	82	61.7	10.7	36	155	98	87	--
WB6121	77	63.2	12.1	30	153	94	86	--
Babe	77	62.9	10.9	31	153	79	77	--
WB-1035CL+	75	61.4	12.5	31	151	81	77	--
JD	68	62.0	11.4	33	156	86	80	--
SY Saltese	65	61.7	11.1	33	153	84		--
Melba	63	60.7	11.2	29	158	88	81	--
<b>Experimental Lines</b>								
WA 8298 CL+	91	63.0	11.3	37	152			--
WA 8277	88	64.1	11.4	37	153			--
14-SW-1059	85	58.2	11.6	34	158	91		--
08PN2001-07	85	61.5	9.8	36	155			--
WA 8266 CL+	84	61.4	10.9	34	157	92		--
WA 8297 CL+	83	61.2	11.6	29	155			--
11PN2532-507	81	62.0	12.6	38	153			--
14-FAC-2043	79	59.6	11.3	34	158			--
WA 8296 CL+	69	62.2	11.1	33	155			--
WA 8295 CL+	68	62.2	11.6	34	157			--
IDO1403S	45	60.4	13.0	26	157			--
C.V. %	3	0.9	1.8	3	1	4	4	
LSD (0.05)	4	0.7	0.3	2	1	3	3	
Average	78	61.8	11.2	33	155	93	86	
Highest	91	64.1	13.0	38	158	108	95	
Lowest	45	58.2	9.8	26	150	79	77	

**Agronomic Information**

Planting Date:	3/30/2018
Harvest Date:	7/31/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	88
P (ppm-bicarb) 2-ft sample	81
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.2

**Trial Notes:**

1. The Walla Walla nursery was located about 7 miles east of Walla Walla, WA.
2. The nursery was fertilized prior to planting 120N 15P 20S.
3. The Walla Walla spring nursery was lost in 2017.

**Cooperator: P McConnell**

\* 2-year average from 2018, 2016

\*\* 3-year average from 2018, 2016, 2015

Herbicide:

Herbicides and Fungicides applied by cooperator

Table 108.

**STRIPE RUST INFECTION TYPE (IT<sup>a</sup>) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING EXTENSION DISEASE NURSERY (EXP202) (COORDINATED BY AARON ESSER AND VADIM JITKOV AS SPRING WHEAT VARIETY TRIAL NURSERIES) AT SPILLMAN (LOC 01), PLANT PATH (LOC 03), AND PCFS (LOC 04) FARMS NEAR PULLMAN, MT VERNON (LOC 05); WALLA WALLA (LOC 6); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2018.**

Name	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Palouce Conservati on Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Field summary <sup>d</sup>	Overall rating <sup>e</sup>
		LOC 01	LOC 03	LOC 04	LOC 05 <sup>b</sup>		LOC 06	LOC 07		
		7/6	6/29	7/9	6/6	6/26	6/14	6/14		
		Fks <sup>c</sup> 10.53	Fks 10.53	Fks 10.53	Fks 6	Fks 10.5	Fks 11.2	Fks 10.51		
IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %			
14-FAC-2043	SWS	5 15	5 15	3 10	3 10	2 10	3 15	5 15	MR	3
14-SW-1059	SWS	5 10	2 10	3 10	3 10	2 10	0 0	5 10	MR	3
08PN2001-07	SWS	5 20	5 40	5 40	4 5	3 30	5 30	5 15	MR	4
11PN2532-507	SWSI	2 5	5 25	2 1	1 1	2 10	0 0	0 0	MR	4
SY Saltese	SWS	5 15	5 30	3 10	3 2	3 25	5 20	5 15	MR	4
IDO1403S	SWS	4 30	2 5	2 1	3 3	2 5	2 5	0 0	R	1
WB-1035CL+	SWSI	8 60	8 80	8 100	6 10	8 90	8 50	8 20	S	9
WB6121	SWS	5 10	2 10	2 5	2 2	2 5	0 0	5 2	MR	3
WB6341	SWS	5 30	8 90	8 100	6 5	8 95	3 20	8 20	S	9
Babe	SWS	8 40	8 80	8 90	8 5	8 90	5 20	5 20	S	9
Diva	SWS	5 20	5 20	3 10	3 5	3 20	3 15	8 20	MR-MS	5
JD	SC	5 10	5 15	2 5	3 1	2 10	0 0	0 0	MR	3
Louise	SWS	5 20	5 30	5 20	4 10	3 25	3 15	5 10	MR	4
Melba	SC	5 15	5 15	2 10	3 1	2 15	0 0	5 5	MR	3
Ryan	SWS	5 15	5 20	3 10	5 15	3 20	3 15	8 10	MR	3
Seahawk	SWS	2 5	2 2	2 1	0 0	2 2	0 0	0 0	R	1
Tekoa	SWS	3 10	5 15	2 10	3 1	2 15	2 5	8 20	MR-MS	5
WA 8266 CL+	SWSI	5 50	8 80	8 90	4 10	8 80	3 15	8 20	S	9
<b>AVS</b>		<b>8 80</b>	<b>8 90</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 40</b>	<b>8 40</b>	<b>S</b>	<b>9</b>
WA 8277	SWS	5 15	5 30	2 10	3 1	3 15	3 10	0 0	MR	4
WA 8295 CL+	SCI	5 10	5 20	2 2	3 1	2 20	2 5	0 0	MR	3
WA 8296 CL+	SWSI	2 10	2 5	2 2	2 1	2 2	0 0	0 0	R	1
WA 8297 CL+	SWSI	2 10	5 15	2 5	2 1	2 10	2 5	8 15	MR-MS	5
WA 8298 CL+	SWSI	2 5	5 15	2 5	2 1	2 5	2 5	8 15	MR-MS	5
Whit	SWS	5 40	5 60	8 15	7 5	3 20	5 20	8 15	MS	6
YS-603	SWS	5 30	5 15	2 10	8 10	2 15	3 15	8 15	MR-MS	5
<b>AVS</b>		<b>8 80</b>	<b>8 90</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 30</b>	<b>8 30</b>	<b>S</b>	<b>9</b>

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale with ITs 8 and 9 combined as 8 (the most susceptible reaction) in field data. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by "," for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants with

<sup>b</sup> Entries with a high IT in the first note, but a low IT in the second note at Mt. Vernon (LOC 05) may indicate that they have high-temperature, adult-plant (HTAP) resistance.

<sup>c</sup> Feekes scale for growth stage.

<sup>d</sup> R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

<sup>e</sup> 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity of adult plants to discourage use of race-specific resistance.

Data was collected, analyzed and reported by Dr. X. Chen, USDA-ARS

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Table 109. 2018 WSU Variety Testing Hard Red Spring Wheat Trial Summary

Precipitation Zone >20"

Variety Name <i>Durum Italicized</i>	Fairfield	Farmington	Palouse	Pullman	Average*	Fairfield	Farmington	Palouse	Pullman	Average*	Fairfield	Farmington	Palouse	Pullman	Average*
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
	<i>Released Varieties</i>														
<b>Dayn</b>	57	88	87	94	<b>90</b>	59.1	60.8	61.5	60.3	60.8	9.8	10.2	11.8	13.2	11.7
<b>Glee</b>	57	86	91	86	88	60.1	60.9	61.9	59.5	60.8	11.1	10.6	12.5	13.6	12.2
<b>SY Renegade (06PN3017-09)</b>	65	84	88	89	87	59.3	60.0	61.1	59.2	60.1	10.2	10.5	12.4	13.3	12.1
<b>WB7202CLP</b>	53	81	91	88	87	59.4	59.0	62.2	60.8	60.7	10.5	11.0	11.5	12.6	11.7
<b>LCS Luna</b>	47	76	86	92	85	56.6	60.0	61.0	60.0	60.3	11.9	11.6	13.3	13.4	12.8
<b>SY Gunsight</b>	51	82	86	87	85	58.4	60.7	59.4	58.9	59.7	10.8	10.5	12.2	13.0	11.9
<b>LCS Iron</b>	49	80	88	85	84	57.4	59.2	60.5	57.9	59.2	11.0	11.1	12.2	13.1	12.1
<b>SY Selway</b>	47	79	86	85	84	59.8	60.1	61.4	58.9	60.2	11.7	10.4	13.3	13.1	12.3
<b>Hollis</b>	53	86	85	76	82	58.4	59.6	60.8	60.0	60.1	11.3	12.4	13.2	13.6	13.1
<b>WB9717</b>	49	77	84	83	82	59.0	62.2	61.4	61.0	<b>61.5</b>	11.1	10.9	12.5	13.6	12.4
<b>Chet</b>	52	81	80	83	81	59.9	61.3	62.7	61.6	<b>61.9</b>	11.3	11.1	12.8	13.8	12.6
<b>Alum</b>	46	86	80	78	81	54.9	59.3	61.9	60.6	60.6	11.6	11.6	12.4	12.9	12.3
<b>WB9350</b>	53	76	85	82	81	56.4	59.0	59.9	57.5	58.8	11.9	10.6	12.6	13.7	12.3
<b>SY Coho</b>	46	75	83	80	79	56.3	58.0	59.1	56.6	57.9	12.0	11.6	12.6	13.9	12.7
<b>LCS Buck Pronto</b>	51	71	79	82	77	58.6	60.4	61.0	59.5	60.3	11.9	11.6	13.5	14.4	13.2
<b>WB9518</b>	50	65	81	83	76	58.4	59.9	59.8	59.3	59.7	12.4	11.3	14.8	14.7	13.6
<b>WB9668</b>	54	75	71	77	74	59.8	60.2	61.0	61.1	60.8	12.2	13.1	14.0	15.2	14.1
<b>Kelse</b>	53	72	75	75	74	59.7	59.3	60.8	59.3	59.8	11.5	12.4	13.4	14.2	13.3
<i>Soft Svevo</i>	51	71	71	78	73	56.4	59.7	60.2	60.0	60.0	3.1	11.1	12.8	14.4	12.7
<b>SY605 CL</b>	45	74	69	73	72	56.0	61.0	62.6	61.8	<b>61.8</b>	11.7	12.2	13.5	14.1	13.2
<b>WB9879CLP</b>	50	69	68	76	71	58.1	60.1	59.6	59.4	59.7	12.0	11.8	13.6	14.0	13.1
<b>WB9662</b>	41	59	73	71	68	56.0	57.4	59.7	59.4	58.8	12.6	13.2	14.4	15.1	14.2
<i>Experimental Lines</i>															
<b>12SB0197</b>	63	86	101	99	<b>95</b>	58.0	58.3	59.0	57.1	58.1	10.4	9.9	11.5	12.2	11.2
<b>WA 8282</b>	59	86	99	89	<b>92</b>	60.0	61.5	62.2	60.8	<b>61.5</b>	10.7	10.6	12.3	12.5	11.8
<b>WA 8299 CL+</b>	55	82	91	93	89	59.5	62.2	62.1	61.2	<b>61.9</b>	10.5	11.0	13.4	13.4	12.6
<b>12SB0224</b>	51	83	88	93	88	57.7	58.8	60.2	57.2	58.7	11.5	10.4	11.9	12.7	11.7
<b>16-HRS-5172</b>	52	86	102	74	87	54.1	57.6	56.7	54.6	56.3	10.9	10.2	11.3	13.2	11.6
<b>WA 8302 CL+</b>	57	84	88	90	87	60.1	61.4	62.9	61.8	<b>62.0</b>	10.8	11.8	12.7	13.0	12.5
<b>WA 8300 CL+</b>	54	82	87	91	87	59.3	60.9	62.3	60.2	61.1	10.6	11.0	12.6	13.7	12.4
<b>XB9591</b>	56	78	87	87	84	60.0	61.1	61.0	60.0	60.7	11.0	10.4	11.8	12.6	11.6
<b>WA 8280 CL+</b>	57	78	88	85	84	58.7	60.9	62.2	61.8	<b>61.6</b>	11.3	11.3	12.7	13.3	12.4
<b>WA 8301</b>	45	76	90	80	82	57.9	61.0	61.9	60.3	61.0	11.6	11.3	12.7	13.1	12.4
<b>XB9290</b>	48	75	71	88	78	58.5	61.3	62.1	61.1	<b>61.5</b>	11.0	10.7	12.8	13.6	12.4
<b>10PN3039-02</b>	58	78	72	82	77	58.8	60.5	60.4	60.6	60.5	10.9	10.8	12.6	13.0	12.1
<b>IDO1603S</b>	50	74	76	76	76	59.2	61.2	61.6	59.7	60.8	11.7	11.5	14.2	14.3	13.3
<b>IDO1701S</b>	47	74	74	75	75	59.0	62.1	62.1	61.5	<b>61.9</b>	11.9	11.4	14.1	14.1	13.2
<b>C.V. %</b>	13	6	10	6	8	2.4	0.9	1.4	0.7	1.0	11.9	6.3	3.5	3.3	4.4
<b>LSD (0.05)</b>	9	7	11	7	5	1.9	0.8	1.1	0.6	0.5	1.8	1.0	0.6	0.6	0.4
<b>Average</b>	52	78	83	84	82	58.3	60.2	61.0	59.7	60.3	11.1	11.2	12.8	13.5	12.5
<b>Highest</b>	65	88	102	99	95	60.1	62.2	62.9	61.8	62.0	12.6	13.2	14.8	15.2	14.2
<b>Lowest</b>	41	59	68	71	68	54.1	57.4	56.7	54.6	56.3	3.1	9.9	11.3	12.2	11.2

\* - Fairfield data is excluded from Average calculations due to high variation within trial and low yield

Table 110. 2018 WSU Variety Testing Hard Red Spring Wheat Trial Summary

Precipitation Zone = 16-20"

Variety Name <i>Club Italicized</i>	Dayton	Mayview	Plaza	St. John	Walla Walla	Average	Dayton	Mayview	Plaza	St. John	Walla Walla	Average	Dayton	Mayview	Plaza	St. John	Walla Walla	Average
	Yield (Bu/A)						Test Wt (Lbs/Bu)						Protein (%)					
<b>Released Varieties</b>																		
<b>WB7202CLP</b>	51	70	73	84	84	72	59.2	62.2	62.3	61.9	63.4	61.8	9.8	11.6	11.1	10.5	11.7	10.9
<b>Alum</b>	57	63	73	85	79	72	57.6	61.5	62.9	60.7	62.4	61.0	11.2	12.8	12.3	11.9	13.2	12.3
<b>Dayn</b>	48	67	78	84	76	71	59.9	62.2	63.0	60.9	62.3	61.7	9.4	12.6	10.6	11.2	12.6	11.3
<b>SY Renegade (06PN3017-09)</b>	51	66	72	81	79	70	59.2	61.4	61.5	60.6	62.7	61.1	10.4	13.5	11.7	11.4	13.2	12.0
<b>Glee</b>	56	65	73	74	80	70	59.1	62.2	63.1	61.4	63.4	61.8	11.1	11.9	11.7	10.8	12.7	11.6
<b>SY Selway</b>	51	59	68	88	80	69	57.1	60.8	61.7	60.7	61.9	60.4	10.1	13.5	11.9	11.8	12.4	11.9
<b>LCS Luna</b>	51	68	69	81	71	68	56.4	61.9	62.0	61.1	62.0	60.7	10.3	12.8	12.2	11.3	13.0	11.9
<b>SY Gunsight</b>	53	63	73	80	68	67	56.7	61.5	62.4	61.4	61.5	60.7	10.2	11.9	11.4	11.1	12.9	11.5
<b>LCS Iron</b>	54	64	70	81	66	67	57.2	61.7	61.3	60.5	61.3	60.4	10.4	11.0	12.1	10.6	12.5	11.3
<b>Kelse</b>	51	66	64	71	80	66	57.1	61.6	62.3	61.0	63.0	61.0	11.4	13.6	12.6	12.7	13.4	12.7
<b>Chet</b>	50	61	65	75	76	65	57.3	62.4	63.5	60.9	63.1	61.4	11.1	12.5	12.7	11.6	13.2	12.2
<b>LCS Buck Pronto</b>	49	57	63	73	74	63	56.7	60.7	61.8	60.7	62.2	60.4	12.0	14.1	13.5	12.2	13.7	13.1
<b>Hollis</b>	47	54	64	77	71	62	53.0	59.0	61.6	60.2	62.4	59.2	11.6	15.0	12.5	13.1	13.5	13.2
<b>SY Coho</b>	46	61	69	77	58	62	54.6	58.2	60.6	59.5	58.7	58.4	10.9	13.5	11.6	11.3	13.5	12.2
<b>WB9350</b>	49	60	64	78	59	62	55.2	60.2	61.0	60.5	60.2	59.4	11.1	12.9	12.0	11.1	12.7	11.9
<b>WB9717</b>	47	57	61	76	67	62	58.5	62.7	63.8	61.8	63.9	<b>62.1</b>	10.1	12.2	12.0	12.2	12.4	11.8
<b>WB9518</b>	46	61	59	81	58	61	57.8	60.2	61.7	59.6	61.1	60.1	12.2	14.7	13.3	14.0	14.9	13.8
<b>SY605 CL</b>	44	58	61	67	71	60	59.6	62.2	63.2	61.4	63.6	<b>62.0</b>	11.0	14.3	13.6	11.5	13.4	12.8
<b>WB9879CLP</b>	52	59	55	70	61	60	59.1	61.9	62.3	60.3	60.9	60.9	11.6	13.9	13.2	12.3	14.2	13.0
<b>WB9668</b>	43	56	60	67	69	59	56.9	62.3	62.8	60.7	63.0	61.1	12.6	14.1	13.5	12.6	14.2	13.4
<b>WB9662</b>	41	59	57	66	64	57	55.6	60.2	62.3	59.6	61.7	59.9	12.8	14.7	13.1	13.3	14.3	13.6
<b>Soft Svevo</b>	41	52	53	65	59	54	56.7	60.2	61.7	60.3	61.1	60.0	11.2	13.3	12.8	11.1	12.8	12.3
<b>Experimental Lines</b>																		
<b>12SB0197</b>	58	71	78	90	85	<b>76</b>	57.3	58.8	60.5	58.3	60.4	59.1	9.3	11.7	10.6	10.2	11.9	10.8
<b>WA 8301</b>	57	68	74	86	85	<b>74</b>	59.9	61.9	62.9	62.2	63.2	<b>62.0</b>	10.4	13.0	11.7	11.5	12.8	11.9
<b>WA 8282</b>	55	65	77	86	85	<b>74</b>	58.8	63.1	63.1	61.7	63.4	<b>62.0</b>	9.5	11.4	11.4	10.9	12.4	11.1
<b>WA 8300 CL+</b>	49	69	74	84	80	71	57.1	61.0	63.0	61.2	62.8	61.0	10.7	13.6	11.9	11.5	12.3	12.0
<b>WA 8280 CL+</b>	53	66	74	78	83	71	56.8	62.4	63.6	61.8	63.1	61.5	9.7	12.9	12.4	11.6	13.1	11.9
<b>WA 8302 CL+</b>	54	62	69	80	81	69	57.8	63.1	63.6	62.0	64.1	<b>62.1</b>	10.7	12.8	11.7	11.4	12.7	11.9
<b>WA 8299 CL+</b>	48	65	71	78	81	69	60.1	62.7	63.8	62.0	64.3	<b>62.6</b>	11.5	13.9	11.9	11.8	13.5	12.5
<b>12SB0224</b>	49	71	72	82	68	68	57.1	59.8	60.9	59.1	60.2	59.4	9.3	11.9	10.9	10.8	12.3	11.0
<b>XB9591</b>	51	67	67	83	70	68	59.3	62.7	63.3	62.1	63.0	<b>62.1</b>	10.4	12.4	11.5	10.3	12.1	11.4
<b>16-HRS-5172</b>	47	60	72	82	76	67	49.2	57.3	58.3	56.4	58.3	55.9	10.1	11.2	11.3	10.2	12.9	11.1
<b>XB9290</b>	50	67	63	76	62	63	59.5	63.0	63.4	62.4	62.8	<b>62.2</b>	10.9	12.8	12.1	11.0	13.3	12.0
<b>10PN3039-02</b>	47	61	61	67	71	62	58.1	61.6	62.4	61.3	62.8	61.2	10.9	12.9	12.8	10.7	12.7	12.0
<b>IDO1603S</b>	46	54	60	70	70	60	56.8	61.8	62.3	61.5	62.7	61.0	11.3	14.0	12.7	13.3	13.4	13.0
<b>IDO1701S</b>	43	49	60	66	73	58	57.3	62.6	63.7	62.9	63.4	<b>62.0</b>	10.8	13.0	12.9	11.8	13.7	12.4
<b>C.V. %</b>	8	5	7	8	4	7	3.4	1.0	0.7	1.0	0.5	1.6	5.9	6.2	4.1	8.0	4.5	5.9
<b>LSD (0.05)</b>	5	4	7	8	4	3	2.7	0.9	0.6	0.9	0.4	0.6	0.9	1.1	0.7	1.3	0.8	0.4
<b>Average</b>	50	62	67	77	73	66	57.4	61.4	62.3	60.8	62.2	60.8	10.8	13.0	12.2	11.6	13.0	12.1
<b>Highest</b>	58	71	78	90	85	76	60.1	63.1	63.8	62.9	64.3	62.6	12.8	15.0	13.6	14.0	14.9	13.8
<b>Lowest</b>	41	49	53	65	58	54	49.2	57.3	58.3	56.4	58.3	55.9	9.3	11.0	10.6	10.2	11.7	10.8

Table 111. 2018 WSU Variety Testing Hard Red Spring Wheat Trial Summary

Precipitation Zone = 12-16"

Variety Name <i>Club Italicized</i>	Almira	Endicott	Lamont	Reardan	Average	Almira	Endicott	Lamont	Reardan	Average	Almira	Endicott	Lamont	Reardan	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
	<i>Released Varieties</i>														
<i>LCS Luna</i>	55	62	37	41	49	59.6	62.4	61.3	60.1	60.8	12.7	11.4	14.4	13.3	13.0
<i>SY Gunsight</i>	57	64	31	42	49	59.2	62.3	62.0	60.2	60.9	13.1	11.0	15.0	12.2	12.8
<i>WB7202CLP</i>	66	54	31	42	48	61.6	62.3	64.1	61.1	<b>62.3</b>	11.7	10.7	13.1	12.7	12.1
<i>Dayn</i>	49	59	40	41	47	60.0	62.1	62.3	60.9	61.3	13.5	11.5	13.4	12.3	12.7
<i>Alum</i>	53	59	32	44	47	57.3	61.9	63.4	60.4	60.8	14.7	12.4	14.6	13.3	13.7
<i>Glee</i>	56	58	32	40	47	61.3	63.0	62.9	60.9	<b>62.0</b>	11.7	12.0	15.0	13.6	13.1
<i>LCS Iron</i>	56	58	31	40	46	57.1	62.1	59.9	59.4	59.6	12.2	11.1	15.2	12.6	12.8
<i>SY Selway</i>	52	56	34	42	46	59.6	61.6	60.3	60.4	60.5	13.3	11.8	14.7	12.6	13.1
<i>Kelse</i>	57	53	32	41	46	59.6	62.1	62.6	60.3	61.1	13.8	12.0	15.3	13.9	13.7
<i>WB9350</i>	52	55	33	41	45	56.6	61.3	61.5	59.4	59.7	13.4	12.0	14.7	13.3	13.3
<i>Chet</i>	51	52	37	41	45	59.1	61.8	63.0	59.7	60.9	14.1	12.8	16.5	14.3	14.5
<i>SY Coho</i>	50	55	37	39	45	56.8	60.5	59.7	57.1	58.5	13.3	11.3	15.6	13.2	13.3
<i>SY Renegade (06PN3017-09)</i>	51	57	31	40	45	59.4	61.9	60.4	58.9	60.2	14.2	11.8	14.7	12.9	13.4
<i>Hollis</i>	49	52	34	37	43	58.7	60.9	61.3	59.3	60.0	13.7	12.4	15.2	14.0	13.8
<i>LCS Buck Pronto</i>	47	59	30	35	43	59.6	61.5	61.5	59.2	60.5	13.0	13.2	16.5	15.5	14.6
<i>WB9879CLP</i>	51	48	34	33	42	58.0	60.5	60.9	58.2	59.4	14.1	13.2	15.7	15.2	14.6
<i>SY605 CL</i>	53	51	28	34	41	60.3	61.9	63.8	60.7	<b>61.7</b>	14.1	12.6	15.5	15.0	14.3
<i>WB9717</i>	50	53	21	38	40	59.5	63.0	63.2	61.2	<b>61.7</b>	13.0	11.8	14.7	12.8	13.1
<i>WB9668</i>	57	44	21	34	39	61.2	58.9	62.8	58.7	60.4	14.2	14.9	17.4	16.7	15.8
<i>WB9518</i>	45	51	26	33	39	59.1	57.7	60.5	58.9	59.0	13.4	13.6	16.8	14.5	14.6
<i>WB9662</i>	41	48	24	33	37	58.0	60.4	58.6	58.4	58.9	16.4	14.1	16.3	14.8	15.4
<i>Soft Svevo</i>	36	39	13	28	29	57.1	57.2	60.6	58.0	58.2	14.2	12.1	15.6	13.4	13.8
<i>Experimental Lines</i>															
<i>12SB0197</i>	55	71	44	45	<b>54</b>	55.9	60.5	59.7	59.0	58.8	13.2	10.9	14.2	12.4	12.7
<i>WA 8282</i>	62	60	37	43	<b>51</b>	60.7	62.8	62.7	61.0	<b>61.8</b>	12.0	11.6	14.7	13.4	12.9
<i>12SB0224</i>	51	66	38	40	49	56.1	60.9	59.5	59.2	58.9	13.3	10.9	14.4	12.2	12.7
<i>WA 8301</i>	56	60	32	46	49	60.7	62.7	63.4	61.4	<b>62.0</b>	13.9	12.1	15.7	13.8	13.9
<i>16-HRS-5172</i>	53	65	33	42	48	53.4	59.5	60.0	57.6	57.7	12.0	11.2	13.8	12.0	12.3
<i>XB9591</i>	58	58	35	40	48	61.4	62.7	62.9	60.9	<b>62.0</b>	11.7	11.4	14.2	13.5	12.7
<i>WA 8300 CL+</i>	53	61	32	43	47	60.2	62.2	63.6	60.8	<b>61.7</b>	13.5	12.1	15.5	13.2	13.6
<i>WA 8280 CL+</i>	56	59	29	42	46	58.9	62.7	63.9	59.4	61.2	13.9	11.6	14.9	14.1	13.6
<i>WA 8302 CL+</i>	49	59	37	41	46	60.7	63.5	61.8	60.9	<b>61.7</b>	12.2	12.2	14.5	13.8	13.2
<i>XB9290</i>	55	56	35	39	46	61.0	62.7	62.9	61.2	<b>62.0</b>	13.6	12.6	14.2	13.1	13.4
<i>WA 8299 CL+</i>	55	48	34	40	44	62.3	60.9	63.2	61.4	<b>61.9</b>	12.7	12.6	15.7	14.0	13.7
<i>10PN3039-02</i>	53	54	23	37	42	61.3	62.2	63.4	60.4	<b>61.8</b>	12.5	12.3	14.8	13.5	13.3
<i>IDO1701S</i>	46	50	30	36	41	61.3	61.2	63.2	60.6	<b>61.6</b>	13.3	13.3	15.4	14.2	14.1
<i>IDO1603S</i>	46	46	28	32	38	59.8	60.6	63.1	60.3	61.0	14.3	13.3	15.4	13.9	14.2
<b>C.V. %</b>	10	9	17	10	11	1.8	2.8	1.6	1.1	1.9	6.5	5.7	4.0	3.3	4.9
<b>LSD (0.05)</b>	7	7	7	5	3	1.5	2.3	1.3	0.9	0.8	1.2	0.9	0.8	0.6	0.5
<b>Average</b>	52	56	32	39	45	59.2	61.5	61.9	59.9	60.6	13.3	12.2	15.1	13.6	13.5
<b>Highest</b>	66	71	44	46	54	62.3	63.5	64.1	61.4	62.3	16.4	14.9	17.4	16.7	15.8
<b>Lowest</b>	36	39	13	28	29	53.4	57.2	58.6	57.1	57.7	11.7	10.7	13.1	12.0	12.1

Table 112.

### 2018 WSU Variety Testing Hard Red Spring Wheat Trial Summary

Precipitation Zone <12"

Variety Name (Club <i>Italicized</i> )	Bickleton	Horse Heaven	Lind	Average	Bickleton	Horse Heaven	Lind	Average	Bickleton	Horse Heaven	Lind	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
	<i>Released Varieties</i>											
LCS Iron	24	38	46	36	59.6	62.3	63.3	61.7	14.0	12.6	13.4	13.3
LCS Luna	29	34	45	36	61.1	61.7	62.6	61.8	12.8	13.3	14.0	13.4
Alum	26	36	46	36	61.8	63.4	63.2	62.8	13.0	13.2	14.4	13.5
SY Gunsight	25	35	46	36	60.9	61.7	63.2	61.9	13.1	12.9	13.7	13.2
SY Renegade (06PN3017-09)	24	37	44	35	59.9	60.4	62.9	61.1	13.3	13.2	13.6	13.4
WB7202CLP	29	33	42	35	61.7	61.7	63.5	62.3	12.5	12.2	13.2	12.7
Glee	27	33	43	34	61.5	63.1	63.7	62.7	12.8	13.2	14.2	13.4
Dayn	26	34	43	34	61.7	61.5	63.4	62.2	13.7	12.9	14.4	13.7
Chet	25	32	45	34	62.6	63.3	63.2	<b>63.1</b>	13.9	14.3	15.2	14.5
SY Coho	23	34	44	34	56.1	59.8	62.6	59.5	14.5	12.9	14.6	14.0
SY Selway	26	32	40	32	59.2	61.0	61.4	60.6	14.0	13.2	14.3	13.8
SY605 CL	27	30	39	32	61.6	62.5	63.1	62.4	14.1	14.5	15.5	14.7
WB9717	22	30	43	32	62.6	63.4	64.3	<b>63.4</b>	14.1	12.6	13.5	13.4
Kelse	24	34	38	32	60.8	63.4	62.9	62.4	14.4	14.4	15.2	14.7
Hollis	27	30	38	31	60.4	63.0	62.7	62.1	12.3	14.5	15.2	14.0
WB9879CLP	25	34	34	31	61.5	61.3	61.8	61.5	14.1	14.2	15.4	14.6
LCS Buck Pronto	25	27	38	30	60.7	60.8	63.2	61.6	14.2	14.2	15.7	14.7
WB9668	25	29	34	30	63.0	61.5	63.5	62.7	14.3	15.6	16.7	15.5
WB9350	25	29	32	28	59.4	60.7	63.1	61.1	13.9	13.4	15.2	14.1
WB9662	16	32	34	27	60.4	62.5	62.9	61.9	15.3	14.7	15.9	15.3
WB9518	19	29	33	27	60.4	60.9	62.4	61.2	15.2	14.9	16.0	15.4
<i>Soft Svevo</i>	22	21	29	24	61.0	61.7	62.1	61.6	14.0	14.3	14.9	14.4
<i>Experimental Lines</i>												
12SB0197	24	42	52	<b>40</b>	58.6	60.2	61.3	60.0	13.7	12.4	13.0	13.0
WA 8282	30	36	47	37	61.2	62.3	64.1	62.5	12.4	12.9	14.4	13.2
16-HRS-5172	22	35	51	36	56.3	57.8	61.3	58.5	12.9	12.6	12.8	12.8
12SB0224	20	37	49	35	58.0	60.1	62.5	60.2	14.9	12.6	13.6	13.7
WA 8280 CL+	24	35	46	35	61.7	63.6	63.2	62.9	13.6	13.9	14.8	14.1
WA 8300 CL+	24	33	47	35	60.4	61.9	63.2	61.8	14.2	13.1	14.0	13.8
XB9591	27	36	39	34	62.4	62.3	64.9	<b>63.2</b>	12.8	12.0	13.6	12.8
WA 8301	24	32	45	34	61.4	62.8	63.4	62.5	13.2	13.2	14.6	13.7
WA 8302 CL+	27	31	41	33	63.2	63.2	63.4	<b>63.3</b>	11.9	13.3	14.0	13.1
WA 8299 CL+	26	30	40	32	63.1	64.2	63.6	<b>63.6</b>	13.1	13.7	14.9	13.9
10PN3039-02	29	29	39	32	61.7	62.5	64.1	62.8	12.1	13.8	14.5	13.4
IDO1603S	23	29	39	30	61.4	60.0	62.4	61.3	15.4	14.6	14.8	14.9
XB9290	28	26	36	30	61.4	61.7	63.8	62.3	13.8	13.3	14.8	14.0
IDO1701S	26	24	37	29	61.8	61.8	63.1	62.2	14.0	14.7	15.1	14.6
C.V. %	10	9	6	8	1.2	1.6	0.6	1.2	5.4	2.2	2.4	3.6
LSD (0.05)	3	4	3	2	1.0	1.4	0.5	0.6	1.0	0.4	0.5	0.4
Average	25	32	41	33	60.8	61.8	63.0	61.9	13.7	13.5	14.5	13.9
Highest	30	42	52	40	63.2	64.2	64.9	63.6	15.4	15.6	16.7	15.5
Lowest	16	21	29	24	56.1	57.8	61.3	58.5	11.9	12.0	12.8	12.7

Table 113.

### 2018 WSU Variety Testing Hard Red Spring Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name <i>Durum Italicized</i>	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average	Moses Lake	Pasco	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
Dayn	165	76	121	63.4	61.3	62.3	13.6	15.7	14.7
SY Gunsight	152	88	120	62.4	61.2	61.8	13.7	15.0	14.4
SY Renegade (06PN3017-09)	155	83	119	62.6	61.0	61.8	13.5	14.9	14.2
LCS Iron	154	79	117	62.5	60.4	61.4	13.8	15.0	14.4
SY Basalt	152	81	116	61.7	59.7	60.7	14.1	15.2	14.7
Glee	147	85	116	63.3	62.1	62.7	14.1	15.8	15.0
SY Coho	149	73	111	61.4	58.4	59.9	14.6	16.5	15.5
WB7202CLP	153	69	111	63.9	61.9	62.9	13.0	15.9	14.5
WB9717	147	74	110	65.0	62.0	<b>63.5</b>	13.7	15.4	14.5
WB9668	141	74	107	63.0	61.6	62.3	15.8	17.9	16.8
WB9350	144	69	107	62.0	59.7	60.9	13.2	16.5	14.9
LCS Buck Pronto	135	77	106	62.4	61.2	61.8	15.6	16.8	16.2
WB9518	139	72	105	63.1	60.4	61.7	15.1	17.2	16.2
WB9662	147	63	105	63.0	59.4	61.2	15.2	17.3	16.2
Alum	140	67	104	62.1	61.3	61.7	14.8	16.2	15.5
LCS Luna	138	63	100	63.1	60.7	61.9	13.8	15.7	14.8
Soft Svevo	142	55	99	62.7	57.5	60.1	14.6	17.3	16.0
<i>Experimental Lines</i>									
12SB0197	159	84	121	61.2	58.5	59.9	13.1	14.7	13.9
WA 8282	147	89	118	64.0	62.2	<b>63.1</b>	14.7	15.1	14.9
09W821030-32	154	81	118	64.1	61.1	62.6	14.7	16.3	15.5
WA 8299 CL+	148	84	116	64.1	63.1	<b>63.6</b>	14.2	15.5	14.9
12SB0224	152	78	115	61.8	58.5	60.2	12.9	15.5	14.2
09W821030-15	150	77	114	64.4	61.0	62.7	14.4	16.1	15.3
WA 8283	147	76	111	63.1	61.4	62.3	14.6	16.2	15.4
XB9290	153	69	111	64.1	62.1	<b>63.1</b>	14.5	16.6	15.5
IDO1603S	144	73	109	61.9	61.1	61.5	14.7	17.2	15.9
WA 8280 CL+	145	72	108	63.4	61.7	62.6	14.5	15.5	15.0
WA 8300 CL+	142	73	107	60.9	61.5	61.2	14.0	15.5	14.7
IDO1701S	137	67	102	63.6	61.2	62.4	14.6	16.7	15.7
16-HRS-5172	127	58	92	57.8	52.2	55.0	13.8	15.0	14.4
C.V. %	5	8	6	0.9	0.9	0.9	1.8	3.2	2.7
LSD (0.05)	9	8	6	0.8	0.7	0.5	0.4	0.7	0.4
Average	147	74	111	62.7	60.5	61.6	14.2	16.0	15.1
Highest	165	89	121	65.0	63.1	63.6	15.8	17.9	16.8
Lowest	127	55	92	57.8	52.2	55.0	12.9	14.7	13.9

Table 114.

**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary**  
**Precipitation Zone >20"**

**(Fairfield, Farmington, Palouse, Pullman)**

Variety Name	2 Years 2017-2018, 6 loc/yr			3 Years 2016-2018, 10 loc/yr			5 Years 2014-2018, 14 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<i>Released Varieties</i>									
<b>SY Renegade (06PN3017-09)</b>	77	59.8	12.3						
<b>Glee</b>	76	60.9	12.3	78	61.0	12.1	74	60.3	12.4
<b>LCS Iron</b>	76	58.8	12.0	78	59.5	11.8	74	58.6	12.3
<b>SY Gunsight</b>	74	59.9	12.1	76	60.2	12.0			
<b>Chet</b>	74	61.9	13.1	75	62.2	12.8	71	61.2	13.4
<b>Alum</b>	73	60.7	12.4	76	61.1	12.2	72	60.0	12.7
<b>LCS Luna</b>	73	60.7	12.7	75	60.7	12.4	72	59.7	12.9
<b>SY Selway</b>	72	59.7	12.4	74	60.4	12.4			
<b>Hollis</b>	71	60.1	13.1	70	60.4	12.9	67	59.4	13.5
<b>WB9350</b>	70	59.4	12.4						
<b>LCS Buck Pronto</b>	69	59.8	13.8	70	60.1	13.5	67	59.3	13.9
<b>SY Coho</b>	68	57.9	13.1	73	58.2	12.7			
<b>Kelse</b>	68	60.3	13.3	67	60.1	13.1	66	59.5	13.5
<b>WB9518</b>	67	60.4	13.5	71	60.6	13.3			
<b>SY605 CL</b>	65	61.3	13.1	63	61.5	13.0	62	61.0	13.5
<b>WB9668</b>	64	61.0	14.0	68	61.4	14.0			
<b>WB9662</b>	60	59.9	13.9						
<i>Experimental Lines</i>									
<b>12SB0197</b>	81	58.4	11.5	84	58.8	11.6			
<b>WA 8282</b>	79	61.2	12.1						
<b>12SB0224</b>	76	58.9	11.8	79	59.0	11.8			
<b>WA 8280 CL+</b>	73	61.5	12.8						
<b>IDO1603S</b>	65	60.6	13.1						
<b>C.V. %</b>	7	1.2	4.5	7	1.0	4.5	7	1.3	5.3
<b>LSD (.05)</b>	3	0.4	0.3	2	0.3	0.3	2	0.3	0.3
<b>Average</b>	72	60.1	12.8	73	60.3	12.6	70	59.9	13.1
<b>Highest</b>	81	61.9	14.0	84	62.2	14.0	74	61.2	13.9
<b>Lowest</b>	60	57.9	11.5	63	58.2	11.6	62	58.6	12.3

Table 115.

**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = 16-20"

(Dayton, Mayview, Plaza, St. John, Walla Walla)

Variety Name	2 Years			3 Years			5 Years		
	2017-2018, 8 loc/yr			2016-2018, 12 loc/yr			2014-2018, 19 loc/yr		
	Yield	TW	Protein	Yield	TW	Protein	Yield	TW	Protein
	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%
<b>Released Varieties</b>									
Alum	61	61.1	12.7	65	61.6	12.7	58	60.4	13.4
SY Renegade (06PN3017-09)	61	60.7	12.5						
Glee	61	61.6	12.2	64	61.8	12.3	59	60.9	12.9
LCS Iron	61	60.1	11.6	64	60.6	11.9	58	59.0	12.6
LCS Luna	60	60.6	12.3	63	60.9	12.5	59	60.0	13.0
SY Selway	59	60.1	12.5	63	60.4	12.5			
Kelse	58	60.9	13.2	60	61.1	13.4	55	60.0	14.0
SY Gunsight	58	60.5	12.2	62	61.0	12.2			
Chet	58	61.5	13.1	60	62.0	13.3	56	61.1	14.0
LCS Buck Pronto	55	60.1	13.6	57	60.5	13.8	53	59.6	14.3
Hollis	54	59.4	13.7	55	60.2	13.6	51	59.4	14.2
SY Coho	54	58.1	12.9	60	58.9	12.8			
WB9518	53	60.3	14.3	57	60.6	14.5			
SY605 CL	52	61.7	13.3	56	61.9	13.5	50	61.2	14.1
WB9350	52	59.6	12.5						
WB9668	51	61.4	14.3	55	61.7	14.6			
WB9662	50	60.4	14.0						
<b>Experimental Lines</b>									
12SB0197	67	59.2	11.3	71	59.7	11.5			
WA 8282	63	61.7	11.8						
12SB0224	62	59.4	11.4	65	59.8	11.6			
WA 8280 CL+	60	61.5	12.6						
IDO1603S	52	60.7	13.5						
C.V. %	7	1.5	5.1	6	1.2	4.8	7	1.4	4.4
LSD (.05)	2	0.4	0.3	2	0.3	0.2	1	0.3	0.2
Average	57	60.5	12.8	61	60.8	12.9	55	60.2	13.6
Highest	67	61.7	14.3	71	62.0	14.6	59	61.2	14.3
Lowest	50	58.1	11.3	55	58.9	11.5	50	59.0	12.6

Table 116.

**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = 12-16"

(Almira, Endicott, Lamont, Reardan)

Variety Name	2 Years			3 Years			5 Years		
	2017-2018, 7 loc/yrs			2016-2018, 9 loc/yrs			2014-2018, 13 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<i>Released Varieties</i>									
LCS Luna	46	61.4	13.0	50	61.5	13.2	44	60.2	14.0
Alum	46	61.4	13.4	51	61.7	13.5	44	60.6	14.4
LCS Iron	46	60.0	12.6	52	60.5	12.8	43	59.4	13.7
SY Gunsight	46	61.6	12.6	50	61.7	12.8			
Chet	46	61.5	14.2	49	61.8	14.4	43	60.9	15.1
Glee	45	62.3	13.0	49	62.2	13.0	42	61.1	14.0
SY Selway	45	60.5	13.1	49	60.6	13.4			
SY Renegade (06PN3017-09)	44	60.8	13.0						
SY Coho	44	59.0	13.6	49	59.3	13.5			
Kelse	42	61.8	13.6	46	61.7	13.8	39	60.5	14.9
WB9350	42	60.8	12.9						
Hollis	42	60.3	14.0	43	60.5	14.1	38	59.7	14.8
LCS Buck Pronto	41	60.8	14.4	43	61.0	14.6	37	59.9	15.4
SY605 CL	40	62.1	13.7	42	62.0	14.2	36	61.0	15.2
WB9518	38	60.5	14.7	43	60.7	14.8			
WB9668	37	61.6	15.4	42	61.8	15.8			
WB9662	36	60.0	15.2						
<i>Experimental Lines</i>									
12SB0197	50	59.3	12.7	56	59.6	12.6			
12SB0224	48	59.8	12.4	54	59.9	12.4			
WA 8282	48	62.1	12.9						
WA 8280 CL+	46	62.1	13.3						
IDO1603S	38	61.4	14.1						
C.V. %	10	1.8	5.7	9	1.7	5.2	9	1.5	4.6
LSD (.05)	2	0.6	0.4	2	0.5	0.3	1	0.4	0.3
Average	44	61.0	13.5	48	61.0	13.7	41	60.3	14.6
Highest	50	62.3	15.4	56	62.2	15.8	44	61.1	15.4
Lowest	36	59.0	12.4	42	59.3	12.4	36	59.4	13.7

Table 117.

**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary**

Precipitation Zone &lt; 12"

(Bickleton, Horse Heaven, Lind)

Variety Name	2 Years 2017-2018, 5 loc/yrs			3 Years 2016-2018, 7 loc/yrs			5 Years 2014-2018, 13 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<i>Released Varieties</i>									
LCS Iron	36	61.1	13.8	34	61.8	13.8	28	60.3	14.1
LCS Luna	34	61.7	13.8	34	62.1	14.0	28	60.7	14.4
SY Gunsight	34	62.2	13.8	33	62.6	13.9			
Alum	34	62.5	14.1	34	63.1	14.2	28	61.6	14.8
SY Renegade (06PN3017-09)	34	61.4	13.7						
Glee	33	62.7	13.9	33	63.0	14.0	27	62.0	14.5
SY Selway	33	60.4	14.0	32	61.0	14.2			
SY Coho	33	59.6	14.3	33	60.3	14.2			
Chet	33	62.4	14.7	33	63.0	14.8	27	61.9	15.3
Kelse	31	62.1	15.1	31	62.4	15.0	26	60.9	15.5
SY605 CL	30	62.1	15.0	30	62.4	15.1	25	61.4	15.6
Hollis	30	61.1	14.4	30	61.6	14.4	25	60.4	15.2
LCS Buck Pronto	30	61.6	15.2	28	61.9	15.2	24	60.7	15.7
WB9668	29	62.4	15.9	28	62.8	16.3			
WB9350	29	61.2	14.3						
WB9662	28	60.9	15.4						
WB9518	27	61.4	15.9	26	61.8	15.9			
<i>Experimental Lines</i>									
12SB0197	39	60.4	13.4	39	61.0	13.3			
WA 8282	36	62.7	13.9						
12SB0224	35	60.7	13.9	35	61.2	13.8			
WA 8280 CL+	34	62.4	14.7						
IDO1603S	31	61.3	14.8						
C.V. %	8	1.7	3.3	8	1.4	3.2	8	1.7	3.1
LSD (.05)	2	0.6	0.3	1	0.5	0.2	1	0.4	0.2
Average	32	61.6	14.5	32	62.0	14.5	26	61.1	15.0
Highest	39	62.7	15.9	39	63.1	16.3	28	62.0	15.7
Lowest	27	59.6	13.4	26	60.3	13.3	24	60.3	14.1

Table 118.

**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary**  
 Precipitation Zone = Irrigated  
 (Moses Lake, Pasco)

Variety Name	2 Years 2017-2018, 4 loc/yrs			3 Years 2016-2018, 6 loc/yrs			5 Years 2014-2018, 7 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
Dayn	129	62.7	14.4	127	62.7	14.2	128	62.8	14.2
SY Gunsight	125	61.8	14.3	115	61.5	14.3			
LCS Iron	121	60.3	14.0	120	61.1	13.6	120	61.3	13.8
SY Renegade (06PN3017-09)	118	61.1	14.2						
SY Basalt	115	59.9	14.5	115	60.3	14.2			
WB9662	115	61.8	15.9						
WB9518	115	62.0	15.9	109	61.7	15.6			
LCS Buck Pronto	111	62.5	16.0	106	62.5	15.7	106	62.4	15.7
WB9668	111	62.4	16.0	106	62.5	15.8			
WB9350	111	60.4	14.3						
SY Coho	110	59.8	15.4	109	60.1	14.9			
Glee	109	62.4	14.8	109	62.8	14.4	110	62.8	14.5
LCS Luna	108	61.6	14.4	104	61.7	14.3	104	61.6	14.3
Alum	104	61.0	15.5	106	61.8	15.1	109	61.9	15.1
<b>Experimental Lines</b>									
12SB0197	124	59.9	13.6	119	59.5	13.4			
12SB0224	122	60.3	13.9	117	60.3	13.9			
WA 8283	114	62.1	15.1						
WA 8282	112	61.8	14.9						
IDO1603S	112	61.7	15.4						
WA 8280 CL+	110	62.2	14.9						
C.V. %	6	1.3	2.4	6	1.2	2.6	6	1.2	2.6
LSD (.05)	4	0.6	0.2	4	0.4	0.2	3	0.4	0.2
Average	115	61.4	14.9	113	61.4	14.6	113	62.2	14.6
Highest	129	62.7	16.0	127	62.8	15.8	128	62.8	15.7
Lowest	104	59.8	13.6	104	59.5	13.4	104	61.3	13.8

Table 119. 2018 WSU Variety Testing Hard Spring Wheat Trial, Almira

Variety Name	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Durum Italicized</i>							
<b>Released Varieties</b>							
WB7202CLP	66	61.6	11.7	24			--
SY Gunsight	57	59.2	13.1	26	47	51	--
Kelse	57	59.6	13.8	32	43	48	--
WB9668	57	61.2	14.2	25	45	46	--
LCS Iron	56	57.1	12.2	29	46	53	--
Glee	56	61.3	11.7	32	47	51	--
LCS Luna	55	59.6	12.7	26	44	48	--
SY605 CL	53	60.3	14.1	36	44	45	--
Alum	53	57.3	14.7	33	44	52	--
WB9350	52	56.6	13.4	23	42		--
SY Selway	52	59.6	13.3	33	45	51	--
SY Renegade (06PN3017-09)	51	59.4	14.2	30	44		--
Chet	51	59.1	14.1	42	47	49	--
WB9879CLP	51	58.0	14.1	30			--
SY Coho	50	56.8	13.3	27	42	48	--
WB9717	50	59.5	13.0	29			--
Dayn	49	60.0	13.5	29			--
Hollis	49	58.6	13.7	43	43	44	--
LCS Buck Pronto	47	59.6	13.0	31	40	43	--
WB9518	45	59.1	13.4	28	38	42	--
WB9662	41	58.0	16.4	30	34		--
<i>Soft Svevo</i>	36	57.1	14.2	26			--
<b>Experimental Lines</b>							
WA 8282	62	60.7	12.0	31	48		--
XB9591	58	61.4	11.7	26			--
WA 8280 CL+	56	58.9	13.9	31	46		--
WA 8301	56	60.7	13.9	32			--
XB9290	55	61.0	13.6	23			--
12SB0197	55	55.9	13.2	29	44	53	--
WA 8299 CL+	55	62.2	12.7	32			--
10PN3039-02	53	61.3	12.5	30			--
16-HRS-5172	53	53.4	12.0	27			--
WA 8300 CL+	53	60.1	13.5	34			--
12SB0224	51	56.1	13.3	28	42	49	--
WA 8302 CL+	49	60.7	12.2	31			--
IDO1603S	46	59.8	14.3	27	42		--
IDO1701S	46	61.3	13.3	30			--
C.V. %	10	1.8	6.5	4	10	10	--
LSD (0.05)	7	1.5	1.2	2	4	4	--
Average	52	59.2	13.3	30	43	48	--
Highest	66	62.2	16.4	43	48	53	--
Lowest	36	53.4	11.7	23	34	42	--

**Agronomic Information**

Planting Date:	4/27/2018
Harvest Date:	9/4/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	127
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.1

Herbicide: Huskie, Axial XL, Tilt on 06/07/18

**Trial Notes:**

1. The Almira nursery was located about 9 miles north of Almira, WA
2. The nursery was fertilized prior to seeding with 70N
3. Overall yield was 53% more than 2017, and grain test weight was 52.8 lb/bu less than last year.

**Cooperator: D. McKay**

Table 120. 2018 WSU Variety Testing Hard Spring Wheat Trial, Bickleton

Variety Name <i>Durum Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>							
WB7202CLP	29	61.7	12.5	23	--	--	--
LCS Luna	29	61.1	12.8	24	--	--	--
Glee	27	61.4	12.8	26	--	--	--
SY605 CL	27	61.6	14.1	27	--	--	--
Hollis	27	60.4	12.3	32	--	--	--
Dayn	26	61.6	13.7	25	--	--	--
SY Selway	26	59.2	14.0	27	--	--	--
Alum	26	61.8	13.0	26	--	--	--
WB9668	25	<b>63.0</b>	14.3	23	--	--	--
WB9350	25	59.4	13.9	21	--	--	--
Chet	25	<b>62.6</b>	13.9	29	--	--	--
SY Gunsight	25	60.9	13.1	23	--	--	--
WB9879CLP	25	61.5	14.1	23	--	--	--
LCS Buck Pronto	25	60.7	14.2	24	--	--	--
SY Renegade (06PN3017-09)	24	59.9	13.3	24	--	--	--
Kelse	24	60.8	14.4	27	--	--	--
LCS Iron	24	59.6	14.0	25	--	--	--
SY Coho	23	56.1	14.5	26	--	--	--
WB9717	22	<b>62.5</b>	14.1	23	--	--	--
<i>Soft Svevo</i>	22	61.0	14.0	21	--	--	--
WB9518	19	60.4	15.2	23	--	--	--
WB9662	16	60.3	15.3	20	--	--	--
<i>Experimental Lines</i>							
WA 8282	30	61.2	12.4	26	--	--	--
10PN3039-02	29	61.7	12.1	24	--	--	--
XB9290	28	61.3	13.8	21	--	--	--
WA 8302 CL+	27	<b>63.2</b>	11.9	26	--	--	--
XB9591	27	<b>62.4</b>	12.8	23	--	--	--
IDO1701S	26	61.8	14.0	25	--	--	--
WA 8299 CL+	26	<b>63.1</b>	13.1	26	--	--	--
WA 8280 CL+	24	61.7	13.6	24	--	--	--
12SB0197	24	58.6	13.7	24	--	--	--
WA 8300 CL+	24	60.4	14.2	26	--	--	--
WA 8301	24	61.4	13.2	26	--	--	--
IDO1603S	23	61.4	15.4	22	--	--	--
16-HRS-5172	22	56.3	12.9	22	--	--	--
12SB0224	20	57.9	14.9	21	--	--	--
C.V. %	10	1.2	5.4	7	--	--	--
LSD (0.05)	3	1.0	1.0	2	--	--	--
Average	25	60.8	13.7	24	--	--	--
Highest	30	63.2	15.4	32	--	--	--
Lowest	16	56.1	11.9	20	--	--	--

**Agronomic Information**

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Planting Date:	5/2/2018
Harvest Date:	7/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	15
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	92
P (ppm-bicarb) 2-ft sample	80
S (lb/ac) 1-ft sample	18
pH (top 6 inches)	5.9

Herbicide: Grower applied

**Trial Notes:**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. The Bickleton nursery was located about 4 miles northeast of Bickleton, WA</li><li>2. The nursery was fertilized at seeding with 40N 8P 8S</li></ol> |
|---|

**Cooperator: R. & A. Juris**

Table 121. 2018 WSU Variety Testing Hard Spring Wheat Trial, Dayton

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Durum Italicized</i>								
<b>Released Varieties</b>								
Alum	57	57.6	11.2	30	167	50	54	46
Glee	56	59.1	11.1	30	166	48	52	46
LCS Iron	54	57.2	10.4	26	170	50	55	48
SY Gunsight	53	56.7	10.2	24	168	46	49	
WB9879CLP	52	59.0	11.6	28	168			
Kelse	51	57.1	11.4	31	166	47	50	44
WB7202CLP	51	59.2	9.8	23	167			
LCS Luna	51	56.4	10.3	26	168	47	52	47
SY Renegade (06PN3017-09)	51	59.2	10.4	28	168	46		
SY Selway	51	57.1	10.1	30	166	45	50	
Chet	50	57.3	11.1	35	166	46	49	44
WB9350	49	55.2	11.1	22	167	42		
LCS Buck Pronto	49	56.7	12.0	27	166	43	45	40
Dayn	48	59.9	9.4	29	165			
WB9717	47	58.5	10.1	26	170			
Hollis	47	53.0	11.6	38	166	43	43	40
WB9518	46	57.8	12.2	25	169	41	44	
SY Coho	46	54.6	10.9	27	168	41	47	
SY605 CL	44	59.6	11.0	31	166	41	45	38
WB9668	43	56.9	12.6	24	167	39	44	
<i>Soft Svevo</i>								
WB9662	41	55.6	12.8	26	173	39		
<b>Experimental Lines</b>								
12SB0197	58	57.3	9.3	26	169	52	58	
WA 8301	57	59.9	10.4	30	166			
WA 8282	55	58.8	9.5	28	166	49		
WA 8302 CL+	54	57.8	10.7	30	166			
WA 8280 CL+	53	56.8	9.7	28	167	47		
XB9591	51	59.3	10.4	25	167			
XB9290	50	59.5	10.9	22	167			
WA 8300 CL+	49	57.1	10.7	30	167			
12SB0224	49	57.1	9.3	26	169	48	52	
WA 8299 CL+	48	60.1	11.5	28	165			
10PN3039-02	47	58.1	10.9	27	167			
16-HRS-5172	47	49.2	10.1	26	170			
IDO1603S	46	56.8	11.3	25	166	42		
IDO1701S	43	57.3	10.8	26	167			
C.V. %	8	3.4	5.9	4	1	6	6	7
LSD (0.05)	5	2.7	0.9	2	0	3	2	2
Average	50	57.4	10.8	27	167	45	49	44
Highest	58	60.1	12.8	38	173	52	58	48
Lowest	41	49.2	9.3	22	165	39	43	38

**Agronomic Information**

Planting Date:	4/23/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	63
P (ppm-bicarb) 2-ft sample	57
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	5.5

Herbicide: Huskie, Axial XL, Tilt on 06/05/18

**Trial Notes:**

1. The Dayton nursery was located about 10 miles northwest of Dayton, WA.
2. The cooperator fertilized the trial prior to seeding.
3. Overall yield was 28% more than 2017, and grain test weight was 2.5 lb/bu less than last year.

**Cooperator: J. Penner**

Table 122. 2018 WSU Variety Testing Hard Spring Wheat Trial, Endicott

Variety Name	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Durum Italicized</i>							
<b>Released Varieties</b>							
SY Gunsight	64	62.3	11.0	26	47	--	--
LCS Luna	62	62.4	11.4	27	52	--	--
Dayn	59	62.1	11.5	31		--	--
Alum	59	61.9	12.4	30	51	--	--
LCS Buck Pronto	59	61.5	13.2	30	46	--	--
LCS Iron	58	62.1	11.1	27	48	--	--
Glee	58	63.0	12.0	31	47	--	--
SY Renegade (06PN3017-09)	57	61.9	11.8	29	44	--	--
SY Selway	56	61.6	11.8	31	45	--	--
WB9350	55	61.3	12.0	23	42	--	--
SY Coho	55	60.4	11.3	28	45	--	--
WB7202CLP	54	62.3	10.7	26		--	--
Kelse	53	62.1	12.0	32	42	--	--
WB9717	53	63.0	11.8	26		--	--
Hollis	52	60.9	12.4	37	44	--	--
Chet	52	61.8	12.8	35	46	--	--
WB9518	51	57.7	13.6	25	42	--	--
SY605 CL	51	61.9	12.6	33	40	--	--
WB9879CLP	48	60.5	13.2	29		--	--
WB9662	48	60.4	14.1	27	40	--	--
WB9668	44	58.9	14.9	24	33	--	--
Soft Svevo	39	57.2	12.1	26		--	--
<b>Experimental Lines</b>							
12SB0197	71	60.5	10.9	29	57	--	--
12SB0224	66	60.9	10.9	27	56	--	--
16-HRS-5172	65	59.5	11.2	29		--	--
WA 8300 CL+	61	62.2	12.1	33		--	--
WA 8282	60	62.8	11.6	31	50	--	--
WA 8301	60	62.7	12.1	31		--	--
WA 8302 CL+	59	63.4	12.2	31		--	--
WA 8280 CL+	59	62.7	11.6	31	51	--	--
XB9591	58	62.7	11.4	25		--	--
XB9290	56	62.7	12.6	23		--	--
10PN3039-02	54	62.2	12.3	28		--	--
IDO1701S	50	61.2	13.3	29		--	--
WA 8299 CL+	48	60.9	12.6	30		--	--
IDO1603S	46	60.6	13.3	27	39	--	--
C.V. %	9	2.7	5.7	4	10	--	--
LSD (0.05)	7	2.3	0.9	2	5	--	--
Average	56	61.5	12.2	29	46	--	--
Highest	71	63.4	14.9	37	57	--	--
Lowest	39	57.2	10.7	23	33	--	--

**Agronomic Information**

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Planting Date:	4/3/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	45
P (ppm-bicarb) 2-ft sample	70
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	5.6

Herbicide:

Huskie, Axial XL, Tilt on 05/23/18

**Trial Notes:**

1. The Endicott nursery was located about 4 miles southwest of Endicott, WA
2. The nursery was fertilized prior to seeding with 75N
3. Overall yield was 65% more than 2017, and grain test weight was 0.1 lb/bu less than last year.

**Cooperator: M. Miller**

Table 123. 2018 WSU Variety Testing Hard Spring Wheat Trial, Fairfield

Variety Name	2018				2 Year*	3 Year	5 Year
	Yield	Test WT	Protein	Plant HT	Average	Average	Average
<i>Durum Italicized</i>	(Bu/A)	(Lbs/Bu)	(%)	(In)	(Bu/A)	(Bu/A)	(Bu/A)
<b>Released Varieties</b>							
<b>SY Renegade (06PN3017-09)</b>	<b>65</b>	<b>59.3</b>	10.2	32		--	--
<b>Dayn</b>	<b>57</b>	<b>59.1</b>	9.8	31	50	--	--
<b>Glee</b>	<b>57</b>	<b>60.1</b>	11.1	34	50	--	--
<b>WB9668</b>	54	<b>59.8</b>	12.2	29	45	--	--
<b>Kelse</b>	53	<b>59.7</b>	11.5	34	48	--	--
<b>Hollis</b>	53	<b>58.3</b>	11.3	42	47	--	--
<b>WB9350</b>	53	56.4	11.9	26		--	--
<b>WB7202CLP</b>	53	<b>59.4</b>	10.5	27		--	--
<b>Chet</b>	52	<b>59.9</b>	11.3	44	48	--	--
<i>Soft Svevo</i>	51	56.4	3.1	30		--	--
<b>LCS Buck Pronto</b>	51	<b>58.6</b>	11.9	33	43	--	--
<b>SY Gunsight</b>	51	<b>58.4</b>	10.8	29	46	--	--
<b>WB9518</b>	50	<b>58.4</b>	12.4	31	45	--	--
<b>WB9879CLP</b>	50	58.1	12.0	33	41	--	--
<b>LCS Iron</b>	49	57.4	11.0	31	46	--	--
<b>WB9717</b>	49	<b>59.0</b>	11.1	32		--	--
<b>LCS Luna</b>	47	56.6	11.9	26	43	--	--
<b>SY Selway</b>	47	<b>59.8</b>	11.7	33	44	--	--
<b>Alum</b>	46	54.9	11.6	33	47	--	--
<b>SY Coho</b>	46	56.3	12.0	31	42	--	--
<b>SY605 CL</b>	45	56.0	11.7	37	38	--	--
<b>WB9662</b>	41	56.0	12.6	26		--	--
<b>Experimental Lines</b>							
<b>12SB0197</b>	<b>63</b>	58.0	10.4	30	53	--	--
<b>WA 8282</b>	<b>59</b>	<b>60.0</b>	10.7	34		--	--
<b>10PN3039-02</b>	<b>58</b>	<b>58.8</b>	10.9	34		--	--
<b>WA 8302 CL+</b>	<b>57</b>	<b>60.1</b>	10.8	34		--	--
<b>WA 8280 CL+</b>	<b>57</b>	<b>58.7</b>	11.3	34		--	--
<b>XB9591</b>	<b>56</b>	<b>60.0</b>	11.0	26		--	--
<b>WA 8299 CL+</b>	55	<b>59.5</b>	10.5	37		--	--
<b>WA 8300 CL+</b>	54	<b>59.3</b>	10.6	35		--	--
<b>16-HRS-5172</b>	52	54.1	10.9	30		--	--
<b>12SB0224</b>	51	57.7	11.5	28	48	--	--
<b>IDO1603S</b>	50	<b>59.2</b>	11.7	30		--	--
<b>XB9290</b>	48	<b>58.5</b>	11.0	23		--	--
<b>IDO1701S</b>	47	<b>59.0</b>	11.9	31		--	--
<b>WA 8301</b>	45	57.9	11.6	33		--	--
<b>C.V. %</b>	13	2.4	11.9	5	11	--	--
<b>LSD (0.05)</b>	9	1.9	1.8	2	5	--	--
<b>Average</b>	52	58.3	11.1	32	46	--	--
<b>Highest</b>	65	60.1	12.6	44	53	--	--
<b>Lowest</b>	41	54.1	3.1	23	38	--	--

**Agronomic Information**

Planting Date:	5/4/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	56
P (ppm-bicarb) 2-ft sample	82
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	5.3

Herbicide:

Huskie, Axial XL, Tilt on 06/06/18

**Trial Notes:**

1. The Fairfield nursery was located about 8 miles northwest of Fairfield, WA.
2. The nursery was planted with the no-till Cross-Slot drill and fertilized at 100N 17P 17S.
3. The 2017 HRS nursery was lost.

**Cooperator: C. Denny**

\* 2-year average from 2018, 2016

Table 124. 2018 WSU Variety Testing Hard Spring Wheat Trial, Farmington

Variety Name <i>Durum Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Dayn	88	60.7	10.2	35	177			
Hollis	86	59.6	12.4	48	178	68	70	66
Glee	86	60.8	10.6	37	177	70	76	72
Alum	86	59.3	11.6	36	179	67	71	68
SY Renegade (06PN3017-09)	84	60.0	10.5	35	180	67		
SY Gunsight	82	60.7	10.5	30	177	65	71	
WB7202CLP	81	59.0	11.0	29	174			
Chet	81	61.3	11.1	48	177	65	71	68
LCS Iron	80	59.2	11.1	34	184	66	72	70
SY Selway	79	60.1	10.4	36	178	65	72	
WB9717	77	62.2	10.9	33	184			
LCS Luna	76	60.0	11.6	30	181	62	67	66
WB9350	76	59.0	10.6	26	178	60		
WB9668	75	60.2	13.1	30	176	59	63	
SY Coho	75	58.0	11.6	32	182	58	68	
SY605 CL	74	61.0	12.2	42	176	61	64	65
Kelse	72	59.3	12.4	35	179	60	65	64
LCS Buck Pronto	71	60.4	11.6	34	177	58	63	62
<i>Soft Svevo</i>	71	59.7	11.1	32	178			
WB9879CLP	69	60.1	11.8	35	180			
WB9518	65	59.9	11.3	30	183	57	63	
WB9662	59	57.4	13.2	29	186	52		
<b>Experimental Lines</b>								
16-HRS-5172	86	57.6	10.2	33	182			
WA 8282	86	61.5	10.6	36	177	69		
12SB0197	86	58.3	9.9	32	181	68	77	
WA 8302 CL+	84	61.4	11.8	36	176			
12SB0224	83	58.8	10.4	31	180	67	72	
WA 8300 CL+	82	60.9	11.0	37	180			
WA 8299 CL+	82	62.2	11.0	38	178			
WA 8280 CL+	78	60.9	11.3	34	180	62		
XB9591	78	61.1	10.4	29	177			
10PN3039-02	78	60.5	10.8	36	177			
WA 8301	76	61.0	11.3	35	176			
XB9290	75	61.3	10.7	26	175			
IDO1701S	74	62.1	11.4	33	176			
IDO1603S	74	61.2	11.5	32	176	58		
C.V. %	6	0.9	6.3	3	1	6	7	7
LSD (0.05)	7	0.8	1.0	1	3	4	4	3
Average	78	60.2	11.2	34	179	63	69	67
Highest	88	62.2	13.2	48	186	70	77	72
Lowest	59	57.4	9.9	26	174	52	63	62

**Agronomic Information**

Planting Date:	4/30/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	53
P (ppm-bicarb) 2-ft sample	86
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.4

Herbicide:

Huskie, Tilt on 05/31/18

**Trial Notes:**

1. The Farmington nursery was located about 5 miles south of Farmington, WA.
2. The nursery was fertilized at 100N 20S. An additional 40N was applied to hard trial.
3. Overall yield was 66% more than 2017, and grain test weight was 1.0 lb/bu more than last year.

**Cooperator: B. Nelson**

Table 125. 2018 WSU Variety Testing Hard Spring Wheat Trial, Horse Heaven

Variety Name <i>Durum Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
LCS Iron	38	62.3	12.6	26	41	33	28
SY Renegade (06PN3017-09)	37	60.4	13.2	26	39		
Alum	36	<b>63.4</b>	13.2	27	38	33	28
SY Gunsight	35	61.7	12.9	24	39	32	
LCS Luna	34	61.7	13.3	25	37	33	28
SY Coho	34	59.8	12.9	26	38	33	
Kelse	34	<b>63.4</b>	14.4	29	36	32	27
WB9879CLP	34	61.3	14.2	26			
Dayn	34	61.5	12.9	28			
WB7202CLP	33	61.7	12.2	22			
Glee	33	<b>63.1</b>	13.2	28	37	32	27
Chet	32	<b>63.3</b>	14.3	31	35	31	26
SY Selway	32	61.0	13.2	27	40	32	
WB9662	32	62.5	14.7	25	36		
WB9717	30	<b>63.4</b>	12.6	23			
SY605 CL	30	62.5	14.5	26	34	29	25
Hollis	30	<b>63.0</b>	14.5	35	32	29	25
WB9668	29	61.5	15.6	23	35	29	
WB9350	29	60.7	13.4	20	35		
WB9518	29	60.9	14.9	24	34	28	
LCS Buck Pronto	27	60.8	14.2	25	33	28	24
Soft Svevo	21	61.7	14.3	24			
<b>Experimental Lines</b>							
12SB0197	<b>42</b>	60.2	12.4	25	46	39	
12SB0224	37	60.1	12.6	24	40	36	
XB9591	36	62.3	12.0	24			
WA 8282	36	62.3	12.9	26	40		
WA 8280 CL+	35	<b>63.6</b>	13.9	28	38		
16-HRS-5172	35	57.8	12.6	25			
WA 8300 CL+	33	61.9	13.1	28			
WA 8301	32	<b>62.8</b>	13.2	27			
WA 8302 CL+	31	<b>63.2</b>	13.3	25			
WA 8299 CL+	30	<b>64.2</b>	13.7	29			
IDO1603S	29	60.0	14.6	23	36		
10PN3039-02	29	62.5	13.8	25			
XB9290	26	61.7	13.3	21			
IDO1701S	24	61.8	14.7	25			
C.V. %	9	1.6	2.1	7	9	9	9
LSD (0.05)	4	1.4	0.4	2	3	2	2
Average	32	61.8	13.5	26	37	32	26
Highest	42	64.2	15.6	35	46	39	28
Lowest	21	57.8	12.0	20	32	28	24

**Agronomic Information**

Planting Date:	3/23/2018
Harvest Date:	8/17/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Chem Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	104
P (ppm-bicarb) 2-ft sample	25
S (lb/ac) 1-ft sample	8
pH (top 6 inches)	7.3

Herbicide:  
Huskie, Tilt on 05/16/18

**Trial Notes:**

1. The Horse Heavens nursery was located about 7 miles southwest of Benton City, WA.
2. The nursery was seeded with the no-till hoe drill and fertilizer was applied at 35N in the fall.
3. Overall yield was 20% less than 2017, and grain test weight was 0.9 lb/bu more than last year

**Cooperator: C. Smith**

Table 126. 2018 WSU Variety Testing Hard Spring Wheat Trial, Lamont

Variety Name <i>Durum Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Released Varieties</i>								
Dayn	40	62.3	13.4	27	172	--	--	--
Chet	37	63.0	16.5	33	179	--	--	--
LCS Luna	37	61.3	14.4	26	176	--	--	--
SY Coho	37	59.7	15.6	27	177	--	--	--
Hollis	34	61.3	15.2	32	173	--	--	--
SY Selway	34	60.3	14.7	27	174	--	--	--
WB9879CLP	34	60.9	15.7	27	177	--	--	--
WB9350	33	61.5	14.7	20	174	--	--	--
Kelse	32	62.6	15.3	28	174	--	--	--
Glee	32	62.9	15.0	27	173	--	--	--
Alum	32	63.4	14.6	26	179	--	--	--
SY Gunsight	31	62.0	15.0	22	175	--	--	--
LCS Iron	31	59.9	15.2	26	178	--	--	--
SY Renegade (06PN3017-09)	31	60.4	14.7	25	176	--	--	--
WB7202CLP	31	64.1	13.1	20	172	--	--	--
LCS Buck Pronto	30	61.5	16.5	26	178	--	--	--
WB9518	26	60.4	16.8	23	175	--	--	--
WB9662	24	58.6	16.3	23	178	--	--	--
WB9668	21	62.8	17.4	21	173	--	--	--
WB9717	21	63.2	14.7	24	176	--	--	--
<i>Soft Svevo</i>	13	60.6	15.6	23	173	--	--	--
<i>Experimental Lines</i>								
12SB0197	44	59.7	14.2	26	179	--	--	--
12SB0224	38	59.5	14.4	26	179	--	--	--
WA 8302 CL+	37	61.8	14.5	26	173	--	--	--
WA 8282	37	62.7	14.7	27	173	--	--	--
XB9591	35	62.9	14.2	22	175	--	--	--
XB9290	35	62.9	14.2	21	175	--	--	--
WA 8299 CL+	34	63.2	15.7	28	172	--	--	--
16-HRS-5172	33	60.0	13.8	24	178	--	--	--
WA 8301	33	63.3	15.7	28	172	--	--	--
WA 8300 CL+	32	63.5	15.5	27	174	--	--	--
IDO1701S	30	63.2	15.4	26	172	--	--	--
WA 8280 CL+	29	63.9	14.9	26	177	--	--	--
IDO1603S	28	63.1	15.4	28	174	--	--	--
SY605 CL	28	63.7	15.5	26	177	--	--	--
10PN3039-02	23	63.4	14.8	24	173	--	--	--
C.V. %	17	1.6	4.0	6	1	--	--	--
LSD (0.05)	7	1.3	0.8	2	2	--	--	--
Average	32	61.9	15.1	26	175	--	--	--
Highest	44	64.1	17.4	33	179	--	--	--
Lowest	13	58.6	13.1	20	172	--	--	--

**Agronomic Information**

Planting Date:	5/1/2018
Harvest Date:	7/29/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	52
P (ppm-bicarb) 2-ft sample	73
S (lb/ac) 1-ft sample	19
pH (top 6 inches)	5.3

Herbicide:

Huskie, Axial XL, Tilt on 06/06/18

**Trial Notes:**

1. The Lamont nursery was located about 8 miles southeast of Lamont, WA.
2. The nursery was seeded with a no-till Cross-Slot drill. Base fertilizer applied at planting 50N 9P 9S
3. Data was not released in 2017

**Cooperator: G. White**

Table 127. 2018 WSU Variety Testing Hard Spring Wheat Trial, Lind

Variety Name	2018					2 Year	3 Year	5 Year
	Yield	Test WT	Protein	Plant HT	Head	Average	Average	Average
<i>Durum Italicized</i>	(Bu/A)	(Lbs/Bu)	(%)	(In)	Date	(Bu/A)	(Bu/A)	(Bu/A)
<b>Released Varieties</b>								
LCS Iron	46	63.3	13.4	30	150	37	38	31
SY Gunsight	46	63.2	13.7	28	150	35	37	
Alum	46	63.2	14.4	31	150	35	38	32
LCS Luna	45	62.6	14.0	29	149	35	37	31
Chet	45	63.2	15.2	36	149	34	38	31
SY Renegade (06PN3017-09)	44	62.9	13.6	30	150	34		
SY Coho	44	62.6	14.6	29	149	33	36	
WB9717	43	64.3	13.5	29	149			
Glee	43	63.7	14.2	32	147	32	35	29
Dayn	43	63.4	14.4	30	147			
WB7202CLP	42	63.5	13.2	26	147			
SY Selway	40	61.4	14.3	31	148	30	34	
SY605 CL	39	63.1	15.5	33	147	29	32	27
LCS Buck Pronto	38	63.2	15.7	29	147	28	31	25
Hollis	38	62.7	15.2	38	149	30	33	28
Kelse	38	62.9	15.2	34	149	30	33	28
WB9668	34	63.5	16.7	27	147	26	29	
WB9879CLP	34	61.8	15.4	30	152			
WB9662	34	62.9	15.9	27	148	25		
WB9518	33	62.4	16.0	28	147	25	27	
WB9350	32	63.1	15.2	23	148	24		
Soft Svevo	29	62.1	14.9	27	148			
<b>Experimental Lines</b>								
12SB0197	52	61.3	13.0	29	152	40	44	
16-HRS-5172	51	61.3	12.8	31	153			
12SB0224	49	62.5	13.6	27	149	37	40	
WA 8282	47	64.1	14.4	31	148	34		
WA 8300 CL+	47	63.2	14.0	32	149			
WA 8280 CL+	46	63.2	14.8	32	151	34		
WA 8301	45	63.4	14.6	32	148			
WA 8302 CL+	41	63.4	14.0	32	147			
WA 8299 CL+	40	63.6	14.9	32	147			
XB9591	39	64.9	13.6	26	147			
10PN3039-02	39	64.1	14.5	29	147			
IDO1603S	39	62.4	14.8	27	147	29		
IDO1701S	37	63.1	15.1	30	147			
XB9290	36	63.8	14.8	24	147			
C.V. %	6	0.5	2.4	3	0	6	7	7
LSD (0.05)	3	0.5	0.5	1	1	2	2	1
Average	41	63.0	14.5	30	149	32	35	29
Highest	52	64.9	16.7	38	153	40	44	32
Lowest	29	61.3	12.8	23	147	24	27	25

**Agronomic Information**

Planting Date:	3/13/2018
Harvest Date:	7/25/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	13
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	191
P (ppm-bicarb) 2-ft sample	38
S (lb/ac) 2-ft sample	20
pH (top 6 inches)	6.1

Herbicide:  
No Fungicide application

**Trial Notes:**

1. The Lind nursery was located about 3.5 miles northeast of Lind, WA.
2. The nursery was fertilized prior to seeding with 70N 10S
3. Overall yield was 95% more than 2017, and grain test weight was 0.9 lb/bu less than last year.

**Cooperator: WSU Lind Dryland Experiment Station**

Table 128. 2018 WSU Variety Testing Hard Spring Wheat Trial, Mayview

Variety Name	2018				2 Year	3 Year	5 Year*
	Yield	Test WT	Protein	Plant HT	Average	Average	Average
<i>Durum Italicized</i>	(Bu/A)	(Lbs/Bu)	(%)	(In)	(Bu/A)	(Bu/A)	(Bu/A)
<b>Released Varieties</b>							
WB7202CLP	70	62.2	11.6	27			
LCS Luna	68	61.9	12.8	27	55	53	
Dayn	67	62.2	12.6	30			
SY Renegade (06PN3017-09)	66	61.4	13.5	30	54		
Kelse	66	61.6	13.6	32	54	51	50
Glee	65	62.2	11.9	33	53	49	50
LCS Iron	64	61.7	11.0	29	55	51	50
Alum	63	61.5	12.8	32	53	53	53
SY Gunsight	63	61.5	11.9	28	49	50	
WB9518	61	60.2	14.7	27	50	47	
Chet	61	62.4	12.5	35	52	50	50
SY Coho	61	58.2	13.5	28	48	48	
WB9350	60	60.2	12.9	23	46		
SY Selway	59	60.8	13.5	32	50	47	
WB9879CLP	59	61.9	13.9	29			
WB9662	59	60.2	14.7	29	47		
SY605 CL	58	62.2	14.3	34	48	48	47
LCS Buck Pronto	57	60.7	14.1	31	47	46	46
WB9717	57	62.7	12.2	29			
WB9668	56	62.3	14.1	26	48	46	
Hollis	54	58.9	15.0	38	48	43	44
<i>Soft Svevo</i>	52	60.2	13.3	27			
<b>Experimental Lines</b>							
12SB0197	71	58.8	11.7	28	60	58	
12SB0224	71	59.8	11.9	29	58	59	
WA 8300 CL+	69	60.9	13.6	34			
WA 8301	68	61.9	13.0	31			
XB9591	67	62.7	12.4	26			
XB9290	67	63.0	12.8	23			
WA 8280 CL+	66	62.4	12.9	30	54		
WA 8299 CL+	65	62.7	13.9	33			
WA 8282	65	63.1	11.4	31	51		
WA 8302 CL+	62	63.1	12.8	32			
10PN3039-02	61	61.6	12.9	29			
16-HRS-5172	60	57.3	11.2	28			
IDO1603S	54	61.8	14.0	26	45		
IDO1701S	49	62.6	13.0	28			
C.V. %	5	1.0	6.2	6	5	6	6
LSD (0.05)	4	0.8	1.1	2	3	3	2
Average	62	61.4	13.0	30	51	50	49
Highest	71	63.1	15.0	38	60	59	53
Lowest	49	57.3	11.0	23	45	43	44

**Agronomic Information**

Planting Date:	4/24/2018
Harvest Date:	8/22/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	63
P (ppm-bicarb) 2-ft sample	74
S (lb/ac) 2-ft sample	24
pH (top 6 inches)	5.1

Herbicide:  
Huskie, Tilt on 06/01/18

**Trial Notes:**

1. The Mayview nursery was located about 20 miles northeast of Pomeroy, WA.
2. The nursery was fertilized at 93N 17P 24S.
3. Overall yield was 63% more than 2017 and grain test weight was 0.9 lb/bu more than last year.

**Cooperator: R. & R. Koller**

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Table 129. 2018 WSU Variety Testing Hard Spring Wheat Trial, Moses Lake

Variety Name <i>Durum Italicized</i>	2018						2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
Dayn	165	63.3	13.6	39	148	3	152	145	140
SY Renegade (06PN3017-09)	155	62.6	13.5	35	149	0	141		
LCS Iron	154	62.4	13.8	37	151	0	144	137	129
WB7202CLP	153	63.9	13.0	31	147	0			
SY Basalt	152	61.7	14.1	35	151	0	138	138	
SY Gunsight	152	62.4	13.7	35	150	0	145	135	
SY Coho	149	61.4	14.6	37	150	3	135	131	
WB9662	147	63.0	15.2	35	149	0	138		
WB9717	147	65.0	13.7	33	149	0			
Glee	147	63.2	14.1	37	147	15	130	122	121
WB9350	144	62.0	13.2	25	147	0	134		
<i>Soft Svevo</i>	142	62.7	14.6	36	148	17			
WB9668	141	63.0	15.8	33	148	0	133	124	
Alum	140	62.1	14.8	40	150	0	127	122	119
WB9518	139	63.1	15.1	33	148	0	134	126	
LCS Luna	138	63.0	13.8	34	149	0	131	121	
LCS Buck Pronto	135	62.4	15.6	39	147	7	129	117	115
<b>Experimental Lines</b>									
12SB0197	159	61.2	13.1	35	150	0	146	141	
09W821030-32	154	64.1	14.7	28	149	0			
XB9290	153	64.1	14.5	30	147	0			
12SB0224	152	61.8	12.9	35	150	7	145	136	
09W821030-15	150	64.4	14.4	32	150	0			
WA 8299 CL+	148	64.1	14.2	37	148	20			
WA 8282	147	64.0	14.7	37	148	20	132		
WA 8283	147	63.1	14.6	35	150	0	137		
WA 8280 CL+	145	63.4	14.5	40	150	7	134		
IDO1603S	144	61.9	14.7	34	148	0	133		
WA 8300 CL+	142	60.9	14.0	38	149	20			
IDO1701S	137	63.6	14.6	35	148	3			
16-HRS-5172	127	57.8	13.8	36	153	0			
<b>C.V. %</b>	5	0.9	1.8	3	0	247	5	5	5
<b>LSD (0.05)</b>	9	0.8	0.4	2	1	14	6	6	4
<b>Average</b>	147	62.7	14.2	35	149	4	137	130	125
<b>Highest</b>	165	65.0	15.8	40	153	20	152	145	140
<b>Lowest</b>	127	57.8	12.9	25	147	0	127	117	115

**Agronomic Information**

Planting Date:	3/15/2018
Harvest Date:	8/13/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	25
Previous Crop:	Corn
Spring soil test:	
N (lb/ac) 4-ft sample	193
P (ppm-bicarb) 2-ft sample	109
S (lb/ac) 2-ft sample	130
pH (top 6 inches)	6.1

**Trial Notes:**

1. The Moses Lake nursery was located about 11 miles east of Moses Lake, WA.
2. The nursery was seeded with a double disk drill, base fertilizer was 300N
3. Overall yield was 19% greater than 2017, and grain test weight was 0.5 lb/bu more than last year

**Cooperator: N. & J. Getzinger**

\* 5-year average from 2018, 2017, 2016, 2014, 2013

Herbicide:  
Grower applied

Table 130. 2018 WSU Variety Testing Hard Spring Wheat Trial, Pasco

Variety Name	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Durum Italicized</i>							
<b>Released Varieties</b>							
SY Gunsight	88	61.2	15.0	28	105	95	--
Glee	85	62.1	15.8	31	89	97	--
SY Renegade (06PN3017-09)	83	61.0	14.9	30	96		--
SY Basalt	81	59.6	15.2	26	93	92	--
LCS Iron	79	60.4	15.0	29	97	102	--
LCS Buck Pronto	77	61.2	16.8	29	94	95	--
Dayn	76	61.3	15.7	29	107	110	--
WB9668	74	61.6	17.9	25	89	89	--
WB9717	74	61.9	15.4	29			--
SY Coho	73	58.4	16.5	30	85	87	--
WB9518	72	60.4	17.2	26	95	92	--
WB9350	69	59.7	16.5	22	88		--
WB7202CLP	69	61.9	15.9	27			--
Alum	67	61.3	16.2	31	81	90	--
WB9662	63	59.4	17.3	30	91		--
LCS Luna	63	60.7	15.7	25	84	87	--
<i>Soft Svevo</i>	55	57.5	17.3	26			--
<b>Experimental Lines</b>							
WA 8282	89	62.2	15.1	30	93		--
WA 8299 CL+	84	63.1	15.5	30			--
12SB0197	84	58.5	14.7	28	102	97	--
09W821030-32	81	61.1	16.3	23			--
12SB0224	78	58.5	15.5	32	100	99	--
09W821030-15	77	61.0	16.1	26			--
WA 8283	76	61.4	16.2	27	92		--
IDO1603S	73	61.1	17.2	26	90		--
WA 8300 CL+	73	61.5	15.5	31			--
WA 8280 CL+	72	61.7	15.5	29	86		--
XB9290	69	62.1	16.6	24			--
IDO1701S	67	61.2	16.7	28			--
16-HRS-5172	58	52.2	15.0	31			--
C.V. %	8	0.9	3.2	7	7	7	--
LSD (0.05)	8	0.7	0.7	3	6	5	--
Average	74	60.5	16.0	28	93	95	--
Highest	89	63.1	17.9	32	107	110	--
Lowest	55	52.2	14.7	22	81	87	--

**Agronomic Information**

Planting Date:	3/26/2018
Harvest Date:	8/6/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	25
Previous Crop:	Corn
Spring soil test:	
N (lb/ac) 4-ft sample	167
P (ppm-bicarb) 2-ft sample	292
S (lb/ac) 2-ft sample	37
pH (top 6 inches)	6.6

Herbicide:  
Huskie, Tilt on 05/17/18

**Trial Notes:**

1. The Pasco nursery was located about 19 miles north of Pasco, WA.
2. Base fertilizer was applied prior to seeding 150N 60P 25K 60S. An additional 40N was applied to HR trial.
3. Overall yield was 33% less than 2017, and grain test weight was equal to last year.

Cooperator: S Coopers

Table 131. 2018 WSU Variety Testing Hard Spring Wheat Trial, Palouse

Variety Name <i>Durum Italicized</i>	2018				2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>							
Glee	91	61.9	12.5	34	84	91	--
WB7202CLP	91	62.2	11.5	27			--
SY Renegade (06PN3017-09)	88	61.1	12.4	31	87		--
LCS Iron	88	60.5	12.2	31	84	90	--
Dayn	87	61.5	11.8	31			--
SY Selway	86	61.4	13.3	32	81	83	--
LCS Luna	86	61.0	13.3	29	78	85	--
SY Gunsight	86	59.4	12.2	28	83	87	--
WB9350	85	59.9	12.6	23	80		--
Hollis	85	60.8	13.2	40	81	83	--
WB9717	84	61.4	12.5	30			--
SY Coho	83	59.1	12.6	29	77	87	--
WB9518	81	59.8	14.8	29	74	85	--
Chet	80	62.7	12.8	42	82	86	--
Alum	80	61.9	12.4	33	81	86	--
LCS Buck Pronto	79	61.0	13.5	32	78	84	--
Kelse	75	60.8	13.4	34	73	78	--
WB9662	73	59.7	14.4	30	66		--
Soft Svevo	71	60.2	12.8	27			--
WB9668	71	61.0	14.0	26	68	78	--
SY605 CL	69	62.6	13.5	36	68	72	--
WB9879CLP	68	59.6	13.6	32			--
<b>Experimental Lines</b>							
16-HRS-5172	102	56.7	11.3	30			--
12SB0197	101	59.0	11.5	30	93	98	--
WA 8282	99	62.2	12.3	33	93		--
WA 8299 CL+	91	62.1	13.4	34			--
WA 8301	90	61.9	12.7	33			--
WA 8280 CL+	88	62.2	12.7	31	84		--
WA 8302 CL+	88	62.9	12.7	32			--
12SB0224	88	60.2	11.9	28	82	89	--
XB9591	87	61.0	11.8	25			--
WA 8300 CL+	87	62.3	12.6	33			--
IDO1603S	76	61.6	14.2	28	72		--
IDO1701S	74	62.1	14.1	30			--
10PN3039-02	72	60.4	12.6	29			--
XB9290	71	62.1	12.8	23			--
C.V. %	10	1.4	3.5	6	9	7	--
LSD (0.05)	11	1.1	0.6	3	8	5	--
Average	83	61.0	12.8	31	80	85	--
Highest	102	62.9	14.8	42	93	98	--
Lowest	68	56.7	11.3	23	66	72	--

**Agronomic Information**

Planting Date:	4/25/2018
Harvest Date:	8/31/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	169
P (ppm-bicarb) 2-ft sample	103
S (lb/ac) 2-ft sample	29
pH (top 6 inches)	5.2

Herbicide:

Brox M, Axial XL on 05/30/18

**Trial Notes:**

1. The Palouse nursery was located about 13 miles west of Palouse, WA.
2. Base fertilizer was 180N 20P 20S applied prior to seeding.
3. Overall yield was 11% greater than 2017, and grain test weight was 1.6 lb/bu less than last year.

**Cooperator: D. Lange**

Table 132. 2018 WSU Variety Testing Hard Spring Wheat Trial, Plaza

Variety Name <i>Durum Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Dayn	78	63.0	10.6	35	173		--	--
Alum	73	62.9	12.3	35	176	62	--	--
Glee	73	63.1	11.7	35	172	65	--	--
WB7202CLP	73	62.3	11.1	29	170		--	--
SY Gunsight	73	62.4	11.4	29	175	61	--	--
SY Renegade (06PN3017-09)	72	61.5	11.7	33	175	64	--	--
LCS Iron	70	61.3	12.1	31	177	64	--	--
SY Coho	69	60.6	11.6	31	177	58	--	--
LCS Luna	69	62.0	12.2	30	176	60	--	--
SY Selway	68	61.7	11.9	36	174	57	--	--
Chet	65	<b>63.5</b>	12.7	44	175	58	--	--
WB9350	64	61.0	12.0	25	174	52	--	--
Hollis	64	61.6	12.5	45	174	52	--	--
Kelse	64	62.3	12.6	36	175	57	--	--
LCS Buck Pronto	63	61.8	13.5	36	172	56	--	--
SY605 CL	61	<b>63.2</b>	13.6	39	172	51	--	--
WB9717	61	<b>63.8</b>	12.0	31	177		--	--
WB9668	60	62.8	13.5	30	172	50	--	--
WB9518	59	61.7	13.3	31	176	51	--	--
WB9662	57	62.3	13.1	28	179	50	--	--
WB9879CLP	55	62.3	13.2	33	176		--	--
<i>Soft Svevo</i>	53	61.7	12.8	30	173		--	--
<b>Experimental Lines</b>								
12SB0197	78	60.5	10.6	30	177	68	--	--
WA 8282	77	63.1	11.4	36	173	65	--	--
WA 8301	74	62.9	11.7	34	173		--	--
WA 8280 CL+	74	<b>63.6</b>	12.4	35	176	60	--	--
WA 8300 CL+	74	63.0	11.9	36	175		--	--
16-HRS-5172	72	58.3	11.3	30	177		--	--
12SB0224	72	60.9	10.9	28	178	67	--	--
WA 8299 CL+	71	<b>63.8</b>	11.9	36	172		--	--
WA 8302 CL+	69	<b>63.6</b>	11.7	36	172		--	--
XB9591	67	<b>63.3</b>	11.5	28	172		--	--
XB9290	63	<b>63.4</b>	12.1	27	171		--	--
10PN3039-02	61	62.4	12.8	34	172		--	--
IDO1603S	60	62.3	12.7	30	173	50	--	--
IDO1701S	60	<b>63.7</b>	12.9	33	173		--	--
C.V. %	7	0.7	4.1	4	0	8	--	--
LSD (0.05)	7	0.6	0.7	2	1	4	--	--
Average	67	62.3	12.1	33	174	58	--	--
Highest	78	63.8	13.6	45	179	68	--	--
Lowest	53	58.3	10.6	25	170	50	--	--

**Agronomic Information**

Planting Date:	4/27/2018
Harvest Date:	9/2/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	160
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.2

Herbicide:

Grower applied

**Trial Notes:**

1. The Plaza nursery was located about 8 miles east of Rosalia, WA.
2. The nursery was fertilized prior to seeding with 120N 10P 10S
3. Overall yield was 40% greater than 2017, and grain test weight was 0.6 lb/bu less than last year

**Cooperator: G. Ward**

Table 133. 2018 WSU Variety Testing Hard Spring Wheat Trial, Pullman

Variety Name <i>Durum Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Dayn	94	60.3	13.2	36	167			
LCS Luna	92	60.0	13.4	31	170	79	84	
SY Renegade (06PN3017-09)	89	59.2	13.3	35	170	78		
WB7202CLP	88	60.8	12.6	31	166			
SY Gunsight	87	58.9	13.0	33	169	74	81	
Glee	86	59.5	13.6	37	168	75	77	73
LCS Iron	85	57.9	13.1	34	172	77	84	75
SY Selway	85	58.9	13.1	38	169	71	78	
WB9518	83	59.3	14.7	33	172	70	77	
WB9717	83	61.0	13.6	36	173			
Chet	83	61.6	13.8	48	170	73	77	73
LCS Buck Pronto	82	59.5	14.4	36	167	71	74	69
WB9350	82	57.5	13.7	28	169	69		
SY Coho	80	56.6	13.9	35	172	69	75	
Alum	78	60.6	12.9	36	171	72	78	74
<i>Soft Svevo</i>	78	60.0	14.4	32	169			
WB9668	77	61.1	15.2	31	168	66	73	
Hollis	76	59.9	13.6	47	169	65	66	64
WB9879CLP	76	59.4	14.0	37	170			
Kelse	75	59.3	14.2	37	169	69	67	65
SY605 CL	73	61.8	14.1	42	167	65	64	61
WB9662	71	59.4	15.1	34	173	64		
<b>Experimental Lines</b>								
12SB0197	99	57.1	12.2	34	170	83	90	
WA 8299 CL+	93	61.2	13.4	37	168			
12SB0224	93	57.2	12.7	34	172	80	86	
WA 8300 CL+	91	60.2	13.7	39	170			
WA 8302 CL+	90	61.7	13.0	36	167			
WA 8282	89	60.8	12.5	37	168	75		
XB9290	88	61.1	13.6	28	166			
XB9591	87	60.0	12.6	31	167			
WA 8280 CL+	85	61.8	13.3	37	171	72		
10PN3039-02	82	60.6	13.0	38	168			
WA 8301	80	60.3	13.1	36	167			
IDO1603S	76	59.7	14.3	32	168	66		
IDO1701S	75	61.5	14.1	35	168			
16-HRS-5172	74	54.5	13.2	32	172			
C.V. %	6	0.7	3.3	3	0	6	5	5
LSD (0.05)	7	0.6	0.6	1	1	4	3	2
Average	84	59.7	13.5	35	169	72	77	69
Highest	99	61.8	15.2	48	173	83	90	75
Lowest	71	55	12	28	166	64	64	61

**Agronomic Information**

Planting Date:	4/24/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	72
P (ppm-bicarb) 2-ft sample	73
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.7

Herbicide:

Brox M, Axial XL on 05/22/18

**Trial Notes:**

1. The Pullman nursery was located about 3 miles east of Pullman, WA.
2. The nursery was seeded with a double disk drill. Base fertilizer was 180N 20P 20S applied prior to seeding
3. Overall yield was 40% less than 2017, and grain test weight was 0.4 lb/bu more than last year.

**Cooperator: Spillman Agronomy Farm**

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Table 134. 2018 WSU Variety Testing Hard Spring Wheat Trial, Reardan

Variety Name <i>Durum Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Alum	44	60.4	13.3	34	172	51	58	56
SY Gunsight	42	60.2	12.2	28	173	51	57	
SY Selway	42	60.4	12.6	35	171	50	55	
WB7202CLP	42	61.1	12.7	27	172			
LCS Luna	41	60.1	13.3	28	172	48	55	
WB9350	41	59.3	13.3	25	172	48		
Dayn	41	60.9	12.3	33	171			
Chet	41	59.7	14.3	46	171	48	53	53
Kelse	41	60.3	13.9	33	171	48	53	53
Glee	40	60.9	13.6	35	171	48	54	55
SY Renegade (06PN3017-09)	40	58.9	12.9	33	172	49		
LCS Iron	40	59.4	12.6	32	174	51	60	59
SY Coho	39	57.1	13.2	30	175	46	55	
WB9717	38	61.2	12.8	31	175			
Hollis	37	59.3	14.0	46	171	44	45	48
LCS Buck Pronto	35	59.2	15.5	32	172	42	47	49
WB9668	34	58.7	16.7	29	172	42	50	
SY605 CL	34	60.7	15.0	40	171	42	44	48
WB9879CLP	33	58.2	15.2	34	173			
WB9662	33	58.4	14.8	28	175	42		
WB9518	33	58.9	14.5	28	173	42	50	
<i>Soft Svevo</i>	28	58.0	13.4	30	172			
<b>Experimental Lines</b>								
WA 8301	46	61.4	13.8	33	172			
12SB0197	45	59.0	12.4	30	174	53	63	
WA 8300 CL+	43	60.8	13.2	35	173			
WA 8282	43	60.9	13.4	33	171	51		
16-HRS-5172	42	57.6	12.0	31	174			
WA 8280 CL+	42	59.4	14.1	33	173	48		
WA 8302 CL+	41	60.9	13.8	34	171			
12SB0224	40	59.2	12.2	29	175	51	61	
XB9591	40	60.9	13.5	27	172			
WA 8299 CL+	40	61.4	14.0	36	171			
XB9290	39	61.2	13.1	25	172			
10PN3039-02	37	60.3	13.5	35	172			
IDO1701S	36	60.6	14.2	31	171			
IDO1603S	32	60.3	13.9	30	172	40		
C.V. %	10	1.1	3.3	4	1	7	7	7
LSD (0.05)	5	0.9	0.6	2	0	3	3	2
Average	39	59.9	13.6	32	172	47	54	53
Highest	46	61.4	16.7	46	175	53	63	59
Lowest	28	57.1	12.0	25	171	40	44	48

**Agronomic Information**

Planting Date:	4/26/2018
Harvest Date:	9/4/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	71
P (ppm-bicarb) 2-ft sample	56
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.1

## Herbicide:

Huskie, Axial XL, Tilt on 06/08/2018

**Trial Notes:**

1. The Reardan nursery was located about 7 miles west of Reardan, WA.
2. The nursery was fertilized at seeding with 100N.
3. Overall yield was 28% less than 2017, and grain test weight was 2.5 lb/bu less than last year.

**Cooperator: H. Johnson**

\* 5-Year average is from 2018, 2017, 2016, 2014, 2013

Table 135. 2018 WSU Variety Testing Hard Spring Wheat Trial, St. John

Variety Name <i>Durum Italicized</i>	2018					2 Year*	3 Year**	5 Year***
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
<b>SY Selway</b>	<b>88</b>	60.7	11.8	34	168	78	61	
<b>Alum</b>	<b>85</b>	60.7	11.9	34	170	76	61	60
<b>WB7202CLP</b>	<b>84</b>	61.9	10.5	25	167			
<b>Dayn</b>	<b>84</b>	60.9	11.2	31	167	78	62	59
<b>SY Renegade (06PN3017-09)</b>	<b>81</b>	60.6	11.4	31	169			
<b>LCS Iron</b>	<b>81</b>	60.5	10.6	30	173	77	61	59
<b>WB9518</b>	<b>81</b>	59.6	14.0	29	172	74	60	
<b>LCS Luna</b>	<b>81</b>	61.1	11.3	27	171	74	61	
<b>SY Gunsight</b>	<b>80</b>	61.4	11.1	26	169	72		
<b>WB9350</b>	<b>78</b>	60.5	11.1	24	170			
<b>Hollis</b>	<b>77</b>	60.2	13.1	44	167	67	55	55
<b>SY Coho</b>	<b>77</b>	59.5	11.3	28	172	76	60	
<b>WB9717</b>	<b>76</b>	61.8	12.2	30	174			
<b>Chet</b>	<b>75</b>	60.9	11.6	43	168	70	56	57
<b>Glee</b>	<b>74</b>	61.4	10.8	33	168	70	59	59
<b>LCS Buck Pronto</b>	<b>73</b>	60.6	12.2	32	167	67	53	54
<b>Kelse</b>	<b>71</b>	61.0	12.7	33	169	69	56	56
<b>WB9879CLP</b>	<b>70</b>	60.3	12.3	31	172	68	54	52
<b>WB9668</b>	<b>67</b>	60.7	12.6	27	168	63	53	
<b>SY605 CL</b>	<b>67</b>	61.4	11.5	37	166	62	51	49
<b>WB9662</b>	<b>66</b>	59.6	13.3	31	175			
<i>Soft Svevo</i>	<b>65</b>	60.3	11.1	27	167			
<b>Experimental Lines</b>								
<b>12SB0197</b>	<b>90</b>	58.3	10.2	30	172	85		
<b>WA 8301</b>	<b>86</b>	<b>62.2</b>	11.5	33	167			
<b>WA 8282</b>	<b>86</b>	61.7	10.9	32	168			
<b>WA 8300 CL+</b>	<b>84</b>	61.2	11.5	35	168			
<b>XB9591</b>	<b>83</b>	<b>62.1</b>	10.3	27	168			
<b>16-HRS-5172</b>	<b>82</b>	56.4	10.2	28	173			
<b>12SB0224</b>	<b>82</b>	59.1	10.8	29	174	78		
<b>WA 8302 CL+</b>	<b>80</b>	<b>62.0</b>	11.4	32	167			
<b>WA 8280 CL+</b>	<b>78</b>	61.8	11.6	33	171			
<b>WA 8299 CL+</b>	<b>78</b>	<b>62.0</b>	11.8	33	168			
<b>XB9290</b>	<b>76</b>	<b>62.4</b>	11.0	24	168			
<b>IDO1603S</b>	<b>70</b>	61.5	13.3	28	168			
<b>10PN3039-02</b>	<b>67</b>	61.3	10.7	31	168			
<b>IDO1701S</b>	<b>66</b>	<b>62.9</b>	11.8	31	167			
<b>C.V. %</b>	<b>8</b>	1.0	8.0	4	1	7	7	8
<b>LSD (0.05)</b>	<b>8</b>	0.9	1.3	2	1	5	4	3
<b>Average</b>	<b>77</b>	60.9	11.6	31	169	72	58	56
<b>Highest</b>	<b>90</b>	62.9	14.0	44	175	85	62	60
<b>Lowest</b>	<b>65</b>	56.4	10.2	24	166	62	51	49

**Agronomic Information**

Planting Date:	4/23/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	50
P (ppm-bicarb) 2-ft sample	96
S (lb/ac) 2-ft sample	18
pH (top 6 inches)	5.3

Herbicide:

Huskie, Axial XL, Tilt on 05/31/18

**Trial Notes:**

1. The St. John nursery was located about 4 miles northwest of St. John, WA.
2. The nursery was fertilized prior to seeding with 80N 10S.
3. The St. John spring nursery was lost in 2017.

**Cooperator: M. Mills**

\* 2-Year average from 2018, 2016

\*\* 3-Year average from 2018, 2016, 2015

\*\* 5-Year average from 2018, 2016, 2015, 2014, 2013

Table 136.

## 2018 WSU Variety Testing Hard Spring Wheat Trial, Walla Walla

Variety Name	2018					2 Year	3 Year*	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Durum Italicized</i>								
<i>Released Varieties</i>								
WB7202CLP	84	63.4	11.7	28	149			--
Glee	80	63.3	12.7	34	151	96	88	--
Kelse	80	63.0	13.4	34	153	84	76	--
SY Selway	80	61.9	12.4	34	152	100	89	--
SY Renegade (06PN3017-09)	79	62.7	13.2	31	153			--
Alum	79	62.4	13.2	34	154	90	80	--
Dayn	76	62.3	12.6	31	153	98	87	--
Chet	76	63.1	13.2	44	153	86	79	--
LCS Buck Pronto	74	62.2	13.7	31	150	85	78	--
LCS Luna	71	62.0	13.0	28	154	88	81	--
SY605 CL	71	63.6	13.4	36	150	83	75	--
Hollis	71	62.3	13.5	43	153	79	74	--
WB9668	69	63.0	14.2	29	152	85	79	--
SY Gunsight	68	61.5	12.9	25	154	87		--
WB9717	67	<b>63.9</b>	12.4	28	154			--
LCS Iron	66	61.3	12.5	29	155	84	80	--
WB9662	64	61.7	14.3	29	153			--
WB9879CLP	61	60.9	14.2	32	156	73	71	--
<i>Soft Svevo</i>	59	61.1	12.8	28	149			--
WB9350	59	60.2	12.7	22	152			--
SY Coho	58	58.7	13.5	27	154	81	75	--
WB9518	58	61.1	14.9	26	152	78	76	--
<i>Experimental Lines</i>								
WA 8301	85	63.2	12.8	35	152			--
WA 8282	85	63.4	12.4	34	152			--
12SB0197	85	60.4	11.9	31	156	99		--
WA 8280 CL+	83	63.1	13.1	35	155			--
WA 8299 CL+	81	<b>64.3</b>	13.5	34	151			--
WA 8302 CL+	81	<b>64.1</b>	12.7	34	151			--
WA 8300 CL+	80	62.8	12.3	36	153			--
16-HRS-5172	76	58.3	12.9	29	156			--
IDO1701S	73	63.4	13.7	32	151			--
10PN3039-02	71	62.8	12.7	33	152			--
XB9591	70	63.0	12.1	26	152			--
IDO1603S	70	62.7	13.4	29	150			--
12SB0224	68	60.2	12.3	28	155	82		--
XB9290	62	62.8	13.3	23	152			--
C.V. %	4	0.5	4.5	4	1	4	5	
LSD (0.05)	4	0.4	0.8	2	1	4	3	
Average	73	62.2	13.0	31	153	87	79	
Highest	85	64.3	14.9	44	156	100	89	
Lowest	58	58.3	11.7	22	149	73	71	

**Agronomic Information**

Planting Date:	3/30/2018
Harvest Date:	7/31/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	88
P (ppm-bicarb) 2-ft sample	81
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.2

Herbicide:

Herbicides and Fungicides applied by cooperator

**Trial Notes:**

1. The Walla Walla nursery was located about 7 miles east of Walla Walla, WA.
2. The nursery was fertilized prior to planting 120N 15P 20S. An additional 50N was applied at planting to hard trial.
3. The Walla Walla spring nursery was lost in 2017.

**Cooperator: P McConnell**

\* 2-year average from 2018, 2016

\*\* 3-year average from 2018, 2016, 2015

Table 137.

STRIPE RUST INFECTION TYPE (IT<sup>a</sup>) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING EXTENSION DISEASE NURSERY (EXP202) (COORDINATED BY AARON ESSER AND VADIM JITKOV AS SPRING WHEAT VARIETY TRIAL NURSERIES) AT SPILLMAN (LOC 01), PLANT PATH (LOC 03), AND PCFS (LOC 04) FARMS NEAR PULLMAN, MT VERNON (LOC 05); WALLA WALLA (LOC 6); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2018.

Name	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Palouce Concervati on Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Field summary <sup>d</sup>	Overall rating <sup>e</sup>
		LOC 01	LOC 03	LOC 04	LOC 05 <sup>b</sup>		LOC 06	LOC 07		
		7/6	6/29	7/9	6/6	6/26	6/14	6/14		
		Fks <sup>c</sup> 10.53	Fks 10.53	Fks 10.53	Fks 6	Fks 10.5	Fks 11.2	Fks 10.51		
		IT %	IT %	IT %	IT %	IT %	IT %	IT %		
12SB0197	HRS	2 10	2 20	2 10	3 10	2 10	0 0	5 5	R	2
12SB0224	HRW	2 5	2 10	2 5	2 30	2 5	0 0	0 0	R	2
16-HRS-5172	HRS	2 10	5 15	2 5	2 20	3 15	0 0	0 0	MR	3
LCS Buck Pronto	HRS	5 15	5 50	8 90	2 20	7 50	5 15	8 10	S	9
LCS Iron	HRS	2 5	2 10	2 1	2 30	2 5	0 0	0 0	R	2
LCS Luna	HRS	5 10	2 5	2 10	2 15	3 15	0 0	0 0	MR	3
SY Renegade	HRS	5 15	5 15	2 15	3 10	2 10	2 5	0 0	MR	3
10PN3039-02	HRSI	5 20	5 20	2 20	3 15	2 20	3 15	0 0	MR	3
SY Coho	HRS	2 10	5 15	2 1	2 10	2 15	0 0	8 10	MR	3
SY Gunsight	HRS	5 15	2 20	2 10	3 5	2 15	2 5	5 10	MR	3
SY Selway	HRS	5 15	5 20	2 10	6 10	3 20	3 10	8 10	MR-MS	5
SY605 CL	HRSI	5 20	8 80	8 100	3 5	8 100	8 30	8 10	S	9
IDO1603S	HRS	2 5	5 20	2 10	2 10	2 5	2 5	0 0	MR	3
IDO1701S	HRS	5 10	2 15	2 10	2 15	2 5	2 5	0 0	MR	3
WB7202CLP	HWS	2 10	2 10	2 2	2 15	2 5	0 0	0 0	R	2
WB9350	HRS	2 5	5 15	3 5	2 10	3 15	2 5	5 5	MR	3
WB9518	HRS	2 5	2 5	2 1	2 20	2 5	0 0	0 0	R	1
WB9662	HRS	2 5	2 5	2 2	2 30	2 5	0 0	0 0	R	1
WB9668	HRS	2 5	2 2	2 1	2 20	2 5	0 0	0 0	R	1
WB9717	HRS	2 10	2 5	2 2	2 10	2 5	0 0	0 0	R	1
<b>AVS</b>		<b>8 80</b>	<b>8 90</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 30</b>	<b>8 40</b>	S	9
WB9879CLP	HRSI	8 60	5 40	8 20	3 2	3 30	5 20	8 20	MS	7
XB9290	HRS	5 15	5 15	3 10	2 5	2 10	2 5	8 10	MR-MS	5
XB9591	HRS	5 15	5 20	3 10	4 5	2 5	3 10	8 10	MR-MS	5
Alum	HRS	5 20	5 20	2 10	3 2	2 10	3 10	8 5	MR	4
Chet	HRS	5 20	5 30	2 25	3 5	2 20	5 20	5 10	MR	4
Dayn	HWS	5 10	2 10	2 1	2 2	2 5	2 5	0 0	MR	3
Glee	HRS	5 20	5 40	2 30	3 5	2 15	5 20	8 10	MR-MS	5
Hollis	HRS	5 30	5 40	5 40	5 5	3 30	3 20	8 30	MS	6
Kelse	HRS	5 40	5 40	8 50	3 1	3 20	3 10	8 20	MS	6
WA 8280 CL+	HRSI	5 30	5 20	5 10	4 5	2 15	5 10	8 10	MR-MS	5
WA 8282	HRS	5 25	5 30	5 20	5 10	3 20	3 10	5 10	MR	4
WA 8299 CL+	HRSI	5 30	5 20	2 20	4 10	3 20	3 20	5 10	MR	4
WA 8300 CL+	HRSI	5 20	5 15	2 15	4 15	2 10	3 15	5 10	MR	4
WA 8301	HRS	5 20	5 20	5 10	3 15	3 20	5 20	5 10	MR	4
WA 8302 CL+	HRSI	5 20	5 30	5 15	3 5	3 30	5 20	8 15	MR-MS	5
Soft Svevo	Durum	2 20	5 15	2 10	2 2	2 10	-	5 10	MR	3
09W821030-15	HRS	2 5	2 5	2 2	2 2	2 5	0 0	0 0	R	1
09W821030-32	HRS	2 5	2 5	2 1	2 1	2 5	0 0	0 0	R	1
SY Basalt	HRS	2 5	2 5	2 2	2 2	2 5	0 0	0 0	R	1
<b>AVS</b>		<b>8 80</b>	<b>8 90</b>	<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 40</b>	<b>8 40</b>	S	9
WA 8283	HRS	2 5	2 10	2 1	2 5	2 5	2 5	0 0	R	1

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale with ITs 8 and 9 combined as 8 (the most susceptible reaction) in field data.

Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by "," for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants ...

<sup>b</sup> Entries with a high IT in the first note, but a low IT in the second note at Mt. Vernon (LOC 05) may indicate that they have high-temperature, adult-plant (HTAP) resistance.

<sup>c</sup> Feekees scale for growth stage.

<sup>d</sup> R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

<sup>e</sup> 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity of adult plants to discourage use of race-specific resistance.

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Table 138. 2018 WSU Variety Testing Barley Trial Summary  
Precipitation Zone >20"

Variety Name <i>Hulless Italicized</i>	Fairfield	Farmington	Palouse	Pullman	Average	Fairfield	Farmington	Palouse	Pullman	Average	Fairfield	Farmington	Palouse	Pullman	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>Released Varieties</b>															
LCS Opera	4600	7110	6770	4530	<b>5750</b>	48.1	49.9	50.7	50.4	49.8	10.7	9.5	10.4	8.5	9.8
Altorado	4410	6510	6550	4820	<b>5570</b>	45.6	51.1	52.4	51.2	50.1	10.8	10.3	10.7	8.9	10.2
Muir	4330	6570	6800	4430	<b>5540</b>	50.3	51.6	52.7	51.9	51.6	10.7	10.4	10.3	8.6	10.0
LCS Sienna	4260	6530	6900	4350	<b>5510</b>	49.1	50.9	51.9	52.1	51.0	10.6	10.0	10.3	8.6	9.9
LCS Odyssey	4070	6460	6910	4560	<b>5500</b>	47.8	50.2	50.5	50.0	49.6	10.8	10.0	10.4	8.8	10.0
Lenetah	3860	6540	7290	4170	<b>5460</b>	49.7	52.5	53.7	53.7	52.4	10.1	10.6	10.2	8.6	9.9
Claymore	3640	6320	7060	4380	5350	49.0	50.3	52.2	50.7	50.5	10.7	9.6	10.6	9.0	10.0
Lyon	4060	6850	6120	4090	5280	48.6	51.6	51.6	50.6	50.6	10.5	10.6	9.9	9.2	10.0
LCS Genie	4290	6590	6390	3780	5260	50.2	52.1	51.7	50.4	51.1	11.2	10.6	10.4	8.4	10.2
Oreana	4250	6580	6260	3940	5260	48.0	51.7	51.4	49.0	50.0	10.8	9.9	10.3	9.3	10.1
Champion	4160	5910	6200	4120	5100	51.1	53.0	53.2	53.2	52.6	10.4	9.7	9.8	8.9	9.7
LCS Vespa	3850	5610	6360	4120	4980	47.3	50.4	51.0	49.0	49.4	11.2	11.1	10.5	9.3	10.5
CDC Copeland	3770	5860	5850	3500	4750	47.9	50.4	50.8	47.9	49.3	10.7	10.5	10.5	9.8	10.4
Havener	3540	5820	6000	3240	4650	52.1	57.7	59.0	55.5	<b>56.1</b>	12.3	11.2	11.3	9.4	11.0
Survivor	3160	5650	5660	3840	4580	49.7	52.7	52.5	50.9	51.4	12.5	11.1	11.4	9.0	11.0
Meg's Song (X05013-T1)	3360	5450	5590	3340	4440	51.4	56.3	56.8	54.1	54.6	13.0	12.9	13.4	10.9	12.5
<b>Experimental Lines</b>															
13WA-101.2	4050	6130	7320	3840	5340	49.0	51.3	52.1	49.7	50.5	10.8	11.0	11.1	9.3	10.6
12WA-120.23	3950	6210	7020	4110	5320	47.2	50.8	51.9	51.4	50.3	10.8	11.3	11.2	9.0	10.6
12WA-120.14	3820	6560	6890	3990	5310	47.9	50.8	51.6	50.9	50.3	11.6	11.8	11.5	8.9	11.0
11WA-107.58	3960	6160	6780	4130	5260	52.0	53.3	53.8	53.4	53.1	11.4	11.0	11.1	8.6	10.5
11WA-107.43	4130	5980	6840	4030	5240	51.6	52.4	52.8	53.5	52.5	11.1	10.8	11.4	8.8	10.5
11WA-107.36	3600	5870	6780	4550	5200	46.7	51.8	53.0	52.3	51.0	11.5	10.0	10.5	8.4	10.1
BZ 512-319	3760	6130	6410	3690	5000	46.0	48.3	50.1	48.2	48.2	11.0	10.2	10.8	8.5	10.2
13WA-149.2	3940	6290	6190	3570	5000	49.4	52.0	52.9	51.1	51.3	10.8	10.6	11.4	8.8	10.4
<b>C.V. %</b>	7	6	11	14	10	2.6	1.1	1.0	2.7	2.0	4.2	5.3	4.6	6.2	5.0
<b>LSD (0.05)</b>	380	530	990	780	350	1.8	0.8	0.8	1.9	0.7	0.6	0.8	0.7	0.8	0.4
<b>Average</b>	3950	6240	6540	4050	5190	49.0	51.8	52.5	51.3	51.1	11.1	10.6	10.8	9.0	10.4
<b>Highest</b>	4600	7110	7320	4820	5750	52.1	57.7	59.0	55.5	56.1	13.0	12.9	13.4	10.9	12.5
<b>Lowest</b>	3160	5450	5590	3240	4440	45.6	48.3	50.1	47.9	48.2	10.1	9.5	9.8	8.4	9.7

Table 139. 2018 WSU Variety Testing Barley Trial Summary

Precipitation Zone = 16-20"

Variety Name <i>Hulless Italicized</i>	Dayton	Mayview	St. John	Walla Walla	Average	Dayton	Mayview	St. John	Walla Walla	Average	Dayton	Mayview	St. John	Walla Walla	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
<b>Released Varieties</b>															
LCS Opera	4320	5360	6260	6180	5530	50.2	51.2	52.0	53.1	51.6	9.5	10.8	9.3	11.4	10.3
LCS Sienna	4200	5030	4910	6050	5050	51.0	54.6	52.5	55.2	53.3	9.6	9.3	9.5	12.6	10.2
Altorado	4200	4780	5120	5790	4970	46.3	52.4	52.9	52.3	51.0	10.3	10.8	9.6	12.7	10.9
Claymore	4060	4620	5620	5550	4970	48.6	52.5	51.9	53.1	51.5	10.3	11.0	9.8	12.6	10.9
Lyon	4000	4880	4960	5900	4940	47.9	53.2	52.2	53.5	51.7	10.3	11.1	9.3	13.2	11.0
LCS Vespa	3870	5040	4670	5930	4880	48.6	52.6	51.6	53.3	51.5	10.3	11.3	9.6	12.6	10.9
Lenetah	3910	4730	5180	5720	4880	51.8	53.9	53.6	55.0	53.6	9.6	10.7	9.5	12.3	10.6
Muir	4000	4340	5270	5760	4840	49.1	52.9	53.0	53.4	52.1	9.7	10.7	9.2	12.8	10.6
Champion	4000	4500	4720	5990	4800	52.5	55.4	53.8	55.7	54.4	9.5	10.4	9.1	12.6	10.4
Oreana	3740	4700	4820	5700	4740	48.5	53.1	52.5	54.5	52.2	10.2	11.0	10.0	12.0	10.8
LCS Genie	3700	4820	4760	5530	4700	49.3	53.9	52.0	53.9	52.3	10.1	10.1	9.0	12.5	10.4
LCS Odyssey	3720	4670	4560	5400	4590	48.0	51.8	51.5	52.3	50.9	9.9	11.2	9.4	12.5	10.8
CDC Copeland	3480	4020	4490	5290	4320	45.2	48.8	50.6	51.1	48.9	10.2	11.3	9.3	12.4	10.8
Survivor	3500	3650	4500	4990	4160	48.0	53.2	52.7	54.0	52.0	10.9	13.0	9.6	13.7	11.8
Havener	3310	3690	4430	4860	4070	50.0	57.6	58.5	60.8	56.7	10.3	12.3	10.8	13.4	11.7
Meg's Song (X05013-T1)	2800	3560	3710	4790	3720	46.9	54.3	54.8	58.9	53.7	12.0	13.6	11.8	15.1	13.1
<b>Experimental Lines</b>															
12WA-120.23	3830	4250	5650	5500	4810	48.9	51.7	53.2	53.2	51.7	9.8	12.8	11.4	14.1	12.0
11WA-107.43	3610	4720	5060	5740	4780	50.9	54.4	53.5	55.1	53.5	10.5	11.7	10.6	12.8	11.4
11WA-107.58	3830	4760	4570	5630	4700	52.3	55.2	53.9	55.9	54.3	10.5	11.2	9.9	13.3	11.2
13WA-149.2	3320	4370	5270	5620	4640	47.5	54.0	53.3	54.3	52.3	10.9	10.5	10.5	13.1	11.3
13WA-101.2	3830	4340	4830	5520	4630	47.3	52.0	51.8	53.1	51.1	10.6	12.3	10.2	14.1	11.8
11WA-107.36	3620	4130	5090	5530	4590	47.7	53.4	52.9	53.9	52.0	9.8	12.5	9.3	12.9	11.1
12WA-120.14	3770	4340	4840	5140	4520	47.4	52.2	52.0	52.8	51.1	10.3	12.1	11.0	14.5	11.9
BZ 512-319	3430	3890	5060	5210	4400	45.1	49.5	50.1	50.2	48.7	11.1	11.3	9.8	12.6	11.2
C.V. %	7	6	10	4	7	2.0	1.2	1.5	1.0	1.5	4.3	7.3	7.1	2.2	5.4
LSD (0.05)	350	390	700	320	230	1.4	0.9	1.1	0.7	0.5	0.6	1.1	1.0	0.4	0.4
Average	3750	4470	4930	5560	4680	48.7	53.1	52.8	54.1	52.2	10.3	11.4	9.9	13.0	11.1
Highest	4320	5360	6260	6180	5530	52.5	57.6	58.5	60.8	56.7	12.0	13.6	11.8	15.1	13.1
Lowest	2800	3560	3710	4790	3720	45.1	48.8	50.1	50.2	48.7	9.5	9.3	9.0	11.4	10.2

Table 140. **2018 WSU Variety Testing Barley Trial Summary**  
 Precipitation Zone = 12-16"

Variety Name <i>Hulless Italicized</i>	Almira	Endicott	Reardan	Average	Almira	Endicott	Reardan	Average	Almira	Endicott	Reardan	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
	<i>Released Varieties</i>											
<b>LCS Opera</b>	4380	4490	3190	<b>4020</b>	44.2	51.5	51.5	49.1	11.4	10.0	10.6	10.7
<b>Altorado</b>	4440	4090	2980	<b>3840</b>	47.6	50.0	49.2	48.9	12.1	11.1	11.8	11.7
<b>Oreana</b>	4490	3740	3010	3750	49.4	49.8	50.1	49.8	12.1	11.6	12.4	12.0
<b>LCS Sienna</b>	4350	3740	2990	3690	49.6	52.2	52.9	51.6	11.4	10.5	11.7	11.2
<b>Lenetah</b>	4220	3880	2960	3690	51.0	52.5	51.9	51.8	11.7	9.8	11.2	10.9
<b>Muir</b>	4060	3900	3080	3680	46.6	50.7	50.5	49.3	12.5	10.6	11.6	11.5
<b>Claymore</b>	3880	4180	2920	3660	47.5	50.7	50.2	49.5	12.3	10.8	10.9	11.3
<b>Lyon</b>	3870	4160	2830	3620	49.7	50.3	49.4	49.8	12.8	11.1	12.5	12.1
<b>LCS Vespa</b>	4230	3480	2820	3510	49.2	49.6	49.0	49.3	11.6	10.7	12.1	11.5
<b>Champion</b>	3830	3610	3000	3480	52.3	52.6	52.8	52.6	11.5	10.4	11.7	11.2
<b>CDC Copeland</b>	3440	3790	2880	3370	44.9	48.3	48.3	47.2	13.0	11.0	11.6	11.9
<b>LCS Genie</b>	4000	3100	2950	3350	49.3	50.3	50.7	50.1	12.0	10.1	11.7	11.3
<b>Survivor</b>	3880	3520	2600	3330	50.3	50.8	50.9	50.7	13.0	11.3	12.5	12.2
<b>LCS Odyssey</b>	4190	3220	2320	3250	48.7	48.6	48.6	48.6	11.8	10.8	12.6	11.7
<i>Havener</i>	3590	3210	2430	3080	53.0	56.4	55.3	<b>54.9</b>	13.4	11.5	13.5	12.8
<i>Meg's Song (X05013-T1)</i>	3530	2750	2050	2780	51.2	54.4	51.4	52.3	13.7	13.0	14.6	13.8
<i>Experimental Lines</i>												
<b>11WA-107.58</b>	4480	3660	2900	3680	53.3	52.9	52.6	52.9	12.2	11.3	12.5	12.0
<b>11WA-107.43</b>	4040	4030	2500	3520	52.5	52.3	50.3	51.7	11.5	11.5	12.6	11.8
<b>12WA-120.23</b>	3820	3950	2770	3520	48.6	49.3	49.4	49.1	12.6	12.5	12.1	12.4
<b>13WA-101.2</b>	3940	3760	2860	3520	48.6	50.1	49.6	49.4	12.3	11.7	13.0	12.3
<b>11WA-107.36</b>	3900	3830	2690	3480	49.9	50.4	49.2	49.9	12.2	9.8	12.3	11.4
<b>12WA-120.14</b>	3720	4060	2590	3460	48.8	50.3	49.1	49.4	12.9	11.0	12.7	12.2
<b>BZ 512-319</b>	3780	3570	2540	3290	45.6	46.9	47.5	46.7	13.0	10.3	11.5	11.6
<b>13WA-149.2</b>	4000	3360	2520	3290	49.0	50.6	49.3	49.6	12.4	11.8	12.7	12.3
<b>C.V. %</b>	9	10	8	9	2.2	1.4	2.0	1.9	5.0	8.8	3.8	6.0
<b>LSD (0.05)</b>	520	500	310	260	1.5	1.0	1.4	0.7	0.8	1.3	0.6	0.6
<b>Average</b>	4000	3710	2770	3490	49.2	50.9	50.4	50.2	12.3	11.0	12.2	11.8
<b>Highest</b>	4490	4490	3190	4020	53.3	56.4	55.3	54.9	13.7	13.0	14.6	13.8
<b>Lowest</b>	3440	2750	2050	2780	44.2	46.9	47.5	46.7	11.4	9.8	10.6	10.7

Table 141. **WSU Variety Testing Barley Trial Multi-Year Summary**  
 Precipitation Zone > 20"

(Fairfield, Farmington, Palouse, Pullman)

Variety Name <i>Hulless Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 8 loc/yr			2016-2018, 11 loc/yr			2014-2018, 15 loc/yr		
	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
<b>Altorado</b>	5130	51.9	10.0	5280	52.4	10.7			
<b>Lenetah</b>	4930	53.2	10.0	5230	53.2	10.6	5100	52.8	11.1
<b>Muir</b>	4900	52.1	10.2	5090	52.2	10.9	4930	51.9	11.5
<b>Lyon</b>	4760	51.6	10.2	5000	51.7	10.8	4900	51.6	11.2
<b>LCS Odyssey</b>	4710	50.8	10.0	4960	51.0	10.5	4910	50.8	10.8
<b>Oreana</b>	4710	51.7	10.0	5090	52.0	10.5			
<b>Claymore</b>	4710	51.3	9.9	5130	51.5	10.4			
<b>LCS Genie</b>	4690	52.2	10.2	5050	52.2	10.6	4960	51.9	10.9
<b>LCS Vespa</b>	4640	51.3	10.4	4990	51.6	10.9	4880	51.3	11.4
<b>Champion</b>	4580	53.5	9.8	4970	53.6	10.5	4950	53.4	11.0
<b>Survivor</b>	4450	52.7	10.6	4690	52.9	11.3			
<i>Havener</i>	4110	59.2	11.0	4310	59.3	11.7	4140	58.8	12.3
<b>CDC Copeland</b>	4000	49.9	10.4	4490	50.3	10.8	4450	50.2	11.2
<b>Experimental Lines</b>									
<b>11WA-107.58</b>	4970	53.9	10.5	5160	53.8	11.1			
<b>11WA-107.36</b>	4970	52.3	10.1						
<b>11WA-107.43</b>	4860	53.4	10.5	5090	53.4	11.1			
<b>12WA-120.14</b>	4700	51.2	10.8	4850	51.3	11.4			
<b>12WA-120.23</b>	4630	51.4	10.5						
<b>C.V. %</b>	11	2.0	5.6	10	1.8	5.5	10	2.1	5.8
<b>LSD (.05)</b>	250	0.5	0.3	210	0.4	0.2	170	0.4	0.2
<b>Average</b>	4690	52.4	10.3	4960	52.7	10.9	4800	52.5	11.3
<b>Highest</b>	5130	59.2	11.0	5280	59.3	11.7	5100	58.8	12.3
<b>Lowest</b>	4000	49.9	9.8	4310	50.3	10.4	4140	50.2	10.8

Table 142. **WSU Variety Testing Barley Trial Multi-Year Summary**

Precipitation Zone = 16-20"

(Dayton, Mayview, St. John, Walla Walla)

Variety Name <i>Hulless Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 6 loc/yr			2016-2018, 10 loc/yr			2014-2018, 17 loc/yr		
	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %
<b>Released Varieties</b>									
<b>Lenetah</b>	4360	53.2	10.9	4690	53.5	11.3	4180	53.0	12.0
<b>LCS Vespa</b>	4350	51.4	11.2	4570	52.1	11.6	4180	51.6	12.3
<b>Lyon</b>	4300	51.4	11.4	4440	51.9	11.9	4060	51.9	12.6
<b>Champion</b>	4290	53.7	10.8	4330	53.8	11.4	3960	53.3	12.0
<b>Altorado</b>	4270	50.3	11.2	4480	51.8	11.7			
<b>Claymore</b>	4200	50.6	11.3	4420	51.4	11.7			
<b>Muir</b>	4150	51.0	11.4	4270	51.7	11.9	3920	51.4	12.7
<b>LCS Genie</b>	4120	51.8	10.9	4430	52.3	11.2	3960	51.9	12.0
<b>Oreana</b>	4100	51.8	11.2	4450	52.4	11.4			
<b>LCS Odyssey</b>	3970	50.3	11.1	4410	51.3	11.4	4040	50.8	12.1
<b>Survivor</b>	3690	51.8	11.9	3990	52.5	12.4			
<i>Havener</i>	3600	58.1	11.9	3680	59.3	12.4	3220	58.7	13.2
<b>CDC Copeland</b>	3590	48.9	11.3	3880	50.0	11.7	3500	49.3	12.6
<b>Experimental Lines</b>									
<b>12WA-120.23</b>	4250	51.4	12.0						
<b>11WA-107.43</b>	4220	53.3	11.8	4300	53.4	12.3			
<b>11WA-107.58</b>	4170	54.0	11.5	4310	54.1	12.0			
<b>11WA-107.36</b>	4100	51.8	11.4						
<b>12WA-120.14</b>	4060	50.8	12.1	4000	51.3	12.5			
<b>C.V. %</b>	8	1.4	5.2	8	1.2	5.5	8	1.4	5.3
<b>LSD (.05)</b>	170	0.4	0.3	140	0.3	0.3	110	0.2	0.2
<b>Average</b>	4100	52.0	11.4	4290	52.7	11.8	3890	52.4	12.4
<b>Highest</b>	4360	58.1	12.1	4690	59.3	12.5	4180	58.7	13.2
<b>Lowest</b>	3590	48.9	10.8	3680	50.0	11.2	3220	49.3	12.0

Table 143. **WSU Variety Testing Barley Trial Multi-Year Summary**

Precipitation Zone = 12-16"

(Almira, Endicott, Lamont, Reardan)

Variety Name <i>Hulless Italicized</i>	2 Years			3 Years			5 Years		
	2017-2018, 6 loc/yrs			2016-2018, 8 loc/yrs			2014-2018, 10 loc/yrs		
	Yield	TW	Protein	Yield	TW	Protein	Yield	TW	Protein
	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%
<b>Released Varieties</b>									
<b>Altorado</b>	3680	50.7	11.0	3760	51.4	11.7			
<b>Muir</b>	3490	50.2	11.2	3640	50.9	11.9	3340	50.8	12.5
<b>Lyon</b>	3380	50.7	11.8	3520	51.2	12.3	3210	51.1	12.8
<b>Lenetah</b>	3370	52.3	10.6	3600	52.5	11.2	3280	52.2	11.9
<b>Champion</b>	3340	52.7	11.0	3500	52.9	11.6	3140	52.9	12.3
<b>Oreana</b>	3330	50.5	11.8	3630	51.3	12.0			
<b>Claymore</b>	3270	49.4	11.4	3540	50.3	11.7			
<b>LCS Odyssey</b>	3260	50.0	11.5	3640	50.7	11.7	3350	50.6	12.3
<b>Survivor</b>	3240	51.8	11.5	3400	52.1	12.1			
<b>LCS Vespa</b>	3180	50.0	11.5	3490	50.6	11.9	3120	50.4	12.6
<i>Havener</i>	3030	58.6	11.7	3050	59.2	12.4	2690	59.5	13.2
<b>LCS Genie</b>	3020	50.9	10.9	3370	51.4	11.3	3030	51.6	12.1
<b>CDC Copeland</b>	3010	48.1	11.9	3170	49.1	12.1	2850	49.4	12.7
<b>Experimental Lines</b>									
<b>11WA-107.58</b>	3390	53.1	11.7	3500	53.3	12.2			
<b>11WA-107.43</b>	3380	52.6	11.3	3510	52.8	11.9			
<b>12WA-120.23</b>	3270	50.2	11.7						
<b>11WA-107.36</b>	3220	50.6	10.9						
<b>12WA-120.14</b>	3200	49.9	12.2	3190	50.5	12.8			
<b>C.V. %</b>	9	2.3	8.7	9	2.0	7.5	9	2.1	6.8
<b>LSD (.05)</b>	180	0.7	0.6	150	0.5	0.4	130	0.5	0.4
<b>Average</b>	3280	51.2	11.4	3470	51.9	11.9	3110	52.1	12.5
<b>Highest</b>	3680	58.6	12.2	3760	59.2	12.8	3350	59.5	13.2
<b>Lowest</b>	3010	48.1	10.6	3050	49.1	11.2	2690	49.4	11.9

Table 144. 2018 WSU Variety Testing Spring Barley Trial, Almira

Variety Name	2018					2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Hulless Italicized</i>								
<b>Released Varieties</b>								
Oreana	4490	49.4	12.1	26	75	3280	3620	--
Altorado	4440	47.6	12.1	29	62	3890	3970	--
LCS Opera	4380	44.2	11.4	26	67			--
LCS Sienna	4350	49.6	11.4	25	86			--
LCS Vespa	4230	49.2	11.6	26	82	3260	3550	--
Lenetah	4220	51.0	11.7	31	83	3350	3600	--
LCS Odyssey	4190	48.7	11.8	24	88	3420	3770	--
Muir	4060	46.6	12.5	28	68	3510	3800	--
LCS Genie	4000	49.3	12.0	26	77	3070	3550	--
Claymore	3880	47.5	12.3	33	63	2940	3430	--
Survivor	3880	50.3	13.0	30	85	3460	3600	--
Lyon	3870	49.6	12.8	27	77	3210	3440	--
Champion	3830	<b>52.3</b>	11.5	29	80	3230	3470	--
Havener	3590	<b>53.0</b>	13.4	31	44	3280	3220	--
Meg's Song (X05013-T1)	3530	51.2	13.7	30	63			--
CDC Copeland	3440	44.9	13.0	34	60	2470	2880	--
<b>Experimental Lines</b>								
11WA-107.58	4480	<b>53.3</b>	12.2	29	93	3510	3660	--
11WA-107.43	4040	<b>52.5</b>	11.5	31	94	3430	3480	--
13WA-149.2	4000	49.0	12.4	29	83			--
13WA-101.2	3940	48.6	12.3	30	81			--
11WA-107.36	3900	49.9	12.2	31	72	3120		--
12WA-120.23	3820	48.6	12.6	34	77	3190		--
BZ 512-319	3780	45.6	13.0	35	63			--
12WA-120.14	3720	48.8	12.9	32	79	3120	3180	--
<b>C.V. %</b>	9	2.2	5.0	8	9	10	9	--
<b>LSD (0.05)</b>	520	1.5	0.8	3	9	380	270	--
<b>Average</b>	4000	49.2	12.3	29	75	3260	3510	--
<b>Highest</b>	4490	53.3	13.7	35	94	3890	3970	--
<b>Lowest</b>	3440	44.2	11.4	24	44	2470	2880	--

**Agronomic Information**

Planting Date:	4/27/2018
Harvest Date:	9/4/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	127
P (ppm-bicarb) 2-ft sample	52
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.1

**Trial Notes:**

1. The Almira nursery was located about 10 miles North of Almira, WA.
2. The nursery was fertilizer prior to seeding with 70N.
3. Overall yield was 58% more than 2017, and grain test weight was 0.3 lb/bu less than last year

**Cooperator: D. McKay**

Herbicide:

Huskie, Axial XL, Tilt on 06/07/18

Table 145. 2018 WSU Variety Testing Spring Barley Trial, Dayton

Variety Name	2018						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Hulless Italicized</i>									
<b>Released Varieties</b>									
LCS Opera	4320	50.2	9.5	23	172	93			
Altorado	4200	46.3	10.3	27	170	73	3340	3630	
LCS Sienna	4200	51.0	9.6	26	170	95			
Claymore	4060	48.6	10.3	26	172	79	3220	3480	
Champion	4000	52.5	9.5	26	168	85	3410	3650	3360
Lyon	4000	47.9	10.3	25	169	93	3350	3650	3290
Muir	4000	49.1	9.7	27	171	86	3280	3490	3270
Lenetah	3910	51.8	9.6	26	170	92	3520	3880	3470
LCS Vespa	3870	48.6	10.3	24	171	94	3430	3670	3400
Oreana	3740	48.5	10.2	23	172	87	3090	3510	
LCS Odyssey	3720	48.0	9.9	24	174	94	3110	3390	3110
LCS Genie	3700	49.3	10.1	23	172	94	3060	3430	3150
Survivor	3500	48.0	10.9	27	172	93	3080	3250	
CDC Copeland	3480	45.2	10.2	27	173	81	2670	2900	2660
Havener	3310	50.0	10.3	26	172	45	2820	2970	2700
Meg's Song (X05013-T1)	2800	46.9	12.0	28	171	71			
<b>Experimental Lines</b>									
11WA-107.58	3830	52.3	10.5	26	170	94	3390	3560	
12WA-120.23	3830	48.9	9.8	27	170	88	3330		
13WA-101.2	3830	47.3	10.6	27	170	89			
12WA-120.14	3770	47.4	10.3	27	171	91	3310	3450	
11WA-107.36	3620	47.7	9.8	25	170	87	3190		
11WA-107.43	3610	50.9	10.5	26	169	88	3230	3460	
BZ 512-319	3430	45.1	11.1	26	172	81			
13WA-149.2	3320	47.5	10.9	26	171	92			
C.V. %	7	2.0	4.3	5	1	2	7	7	8
LSD (0.05)	350	1.4	0.6	2	0	3	210	190	150
Average	3750	48.7	10.3	26	171	86	3210	3460	3160
Highest	4320	52.5	12.0	28	174	95	3520	3880	3470
Lowest	2800	45.1	9.5	23	168	45	2670	2900	2660

**Agronomic Information**

Planting Date:	4/23/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	63
P (ppm-bicarb) 2-ft sample	57
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	5.5

**Trial Notes:**

1. The Dayton nursery was located about 10 miles northwest of Dayton, WA.
2. The cooperator fertilized the trial prior to seeding.
3. Overall yield was 42% more than 2017, and grain test weight was 1.2 lb/bu less than last year.

**Cooperator: J. Penner**

Herbicide:

Huskie, Axial XL, Tilt on 06/05/18

Table 146. 2018 WSU Variety Testing Spring Barley Trial, Endicott

Variety Name <i>Hulless Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Opera	4490	51.5	10.0	22	161	94		--	--
Claymore	4180	50.7	10.8	29	160	92	3300	--	--
Lyon	4160	50.3	11.1	25	159	96	3500	--	--
Altorado	4090	50.0	11.1	28	160	91	3490	--	--
Muir	3900	50.7	10.6	27	159	95	3400	--	--
Lenetah	3880	52.5	9.8	27	161	95	3280	--	--
CDC Copeland	3790	48.3	11.0	31	163	94	3060	--	--
LCS Sienna	3740	52.2	10.5	26	161	97		--	--
Oreana	3740	49.8	11.6	22	161	95	3210	--	--
Champion	3610	52.6	10.4	27	159	89	3290	--	--
Survivor	3520	50.8	11.3	26	162	94	3040	--	--
LCS Vespa	3480	49.6	10.7	24	161	96	2980	--	--
LCS Odyssey	3220	48.6	10.8	24	162	96	2970	--	--
Havener	3210	56.4	11.5	27	162	70	2790	--	--
LCS Genie	3100	50.3	10.1	23	163	96	2690	--	--
Meg's Song (X05013-T1)	2750	54.4	13.0	26	160	83		--	--
<b>Experimental Lines</b>									
12WA-120.14	4060	50.3	11.0	30	159	96	3290	--	--
11WA-107.43	4030	52.3	11.5	27	160	96	3480	--	--
12WA-120.23	3950	49.3	12.5	29	159	95	3220	--	--
11WA-107.36	3830	50.4	9.8	26	160	91	3320	--	--
13WA-101.2	3760	50.1	11.7	27	161	95		--	--
11WA-107.58	3660	52.9	11.3	27	159	97	3230	--	--
BZ 512-319	3570	46.9	10.3	28	162	91		--	--
13WA-149.2	3360	50.6	11.8	26	161	96		--	--
C.V. %	10	1.4	8.8	5	1	2	10	--	--
LSD (0.05)	500	1.0	1.3	2	1	2	320	--	--
Average	3710	50.9	11.0	26	161	93	3200	--	--
Highest	4490	56.4	13.0	31	163	97	3500	--	--
Lowest	2750	46.9	9.8	22	159	70	2690	--	--

**Agronomic Information**

Planting Date:	4/3/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	45
P (ppm-bicarb) 2-ft sample	70
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	5.6

**Trial Notes:**

1. The Endicott nursery was located about 4 miles southwest of Endicott, WA.
2. The cooperator fertilized the trial prior to seeding, 75N.
3. Overall yield was 42% more than 2017, and grain test weight was 1.0 lb/bu less than last year.

**Cooperator: M. Miller**

Herbicide:

Huskie, Axial XL, Tilt on 05/23/18

Table 147. 2018 WSU Variety Testing Spring Barley Trial, Fairfield

Variety Name <i>Hulless Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Opera	4600	48.1	10.7	29	181	94		--	--
Altorado	4410	45.6	10.8	29	178	79	3530	--	--
Muir	4330	50.3	10.7	32	178	95	3470	--	--
LCS Genie	4290	50.2	11.2	29	179	96	3340	--	--
LCS Sienna	4260	49.1	10.6	31	181	97		--	--
Oreana	4250	48.0	10.8	29	180	94	3350	--	--
Champion	4160	51.1	10.4	31	176	90	3360	--	--
LCS Odyssey	4070	47.8	10.8	29	180	96	3290	--	--
Lyon	4060	48.6	10.5	31	177	95	3270	--	--
Lenetah	3860	49.7	10.1	31	178	95	3030	--	--
LCS Vespa	3850	47.3	11.2	28	179	93	3120	--	--
CDC Copeland	3770	47.9	10.7	35	179	90	3040	--	--
Claymore	3640	49.0	10.7	33	179	92	3160	--	--
Havener	3540	52.1	12.3	34	180	61	2800	--	--
Meg's Song (X05013-T1)	3360	51.4	13.0	34	181	76		--	--
Survivor	3160	49.7	12.5	32	181	96	2830	--	--
<b>Experimental Lines</b>									
11WA-107.43	4130	51.6	11.1	33	178	95	3400	--	--
13WA-101.2	4050	49.0	10.8	33	178	96		--	--
11WA-107.58	3960	52.0	11.4	32	178	98	3250	--	--
12WA-120.23	3950	47.2	10.8	33	178	96	3310	--	--
13WA-149.2	3940	49.4	10.8	32	179	96		--	--
12WA-120.14	3820	47.9	11.6	34	178	94	3150	--	--
BZ 512-319	3760	46.0	11.0	33	178	93		--	--
11WA-107.36	3600	46.7	11.5	30	177	94	3110	--	--
C.V. %	7	2.6	4.2	6	0	4	6	--	--
LSD (0.05)	380	1.7	0.6	3	1	5	210	--	--
Average	3950	49.0	11.1	32	179	92	3210	--	--
Highest	4600	52.1	13.0	35	181	98	3530	--	--
Lowest	3160	45.6	10.1	28	176	61	2800	--	--

**Agronomic Information**

Planting Date:	5/4/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	56
P (ppm-bicarb) 2-ft sample	82
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	5.3

**Trial Notes:**

1. The Fairfield nursery was located about 8 miles northwest of Fairfield, WA.
2. The nursery was planted with the no-till Cross-Slot drill and fertilized at 100N 17P 17S.
3. Overall yield was 60% greater than 2017, and grain test weight was 5.3 lb/bu less than last year

**Cooperator: C. Denny**

Herbicide:

Huskie, Axial XL, Tilt on 06/06/18

Table 148. 2018 WSU Variety Testing Spring Barley Trial, Farmington

Variety Name	2018						2 Year	3 Year	5 Year
	Yield	Test WT	Protein	Plant HT	Head	Plump	Average	Average	Average
<i>Hulless Italicized</i>	(Lbs/A)	(Lbs/Bu)	(%)	(In)	Date	(%)	(Bu/A)	(Bu/A)	(Bu/A)
<b>Released Varieties</b>									
LCS Opera	7110	49.9	9.5	29	179	96			
Lyon	6850	51.6	10.6	34	175	94	5400	5510	5470
LCS Genie	6590	52.1	10.6	32	179	96	5040	5280	5100
Oreana	6580	51.7	9.9	29	179	93	5040	5160	
Muir	6570	51.6	10.4	36	177	94	5140	5250	5250
Lenetah	6540	52.5	10.6	36	176	97	4970	5160	5310
LCS Sienna	6530	50.9	10.0	33	182	96			
Altorado	6510	51.1	10.3	34	178	89	5130	5260	
LCS Odyssey	6460	50.2	10.0	30	180	97	4990	5410	5320
Claymore	6320	50.3	9.6	37	178	86	5140	5470	
Champion	5910	53.0	9.7	36	176	91	4910	5200	5220
CDC Copeland	5860	50.4	10.5	40	181	95	4400	4870	4840
Havener	5820	57.7	11.2	37	178	72	4590	4650	4350
Survivor	5650	52.7	11.1	37	176	97	4780	4990	
LCS Vespa	5610	50.4	11.1	29	181	94	4580	5000	5040
Meg's Song (X05013-T1)	5450	56.3	12.9	38	178	87			
<b>Experimental Lines</b>									
12WA-120.14	6560	50.8	11.8	38	176	96	5030	5140	
13WA-149.2	6290	52.0	10.6	37	178	98			
12WA-120.23	6210	50.8	11.3	36	178	97	4960		
11WA-107.58	6160	53.3	11.0	36	177	97	5040	5200	
BZ 512-319	6130	48.3	10.2	38	178	89			
13WA-101.2	6130	51.3	11.0	37	177	97			
11WA-107.43	5980	52.3	10.8	35	177	96	4970	5150	
11WA-107.36	5870	51.8	10.0	34	176	94	5020		
C.V. %	6.1	1.1	5.3	5	1	3	7	7	7
LSD (0.05)	530	0.8	0.8	3	2	4	320	290	230
Average	6240	51.8	10.6	35	178	93	4950	5170	5100
Highest	7110	57.7	12.9	40	182	98	5400	5510	5470
Lowest	5450	48.3	9.5	29	175	72	4400	4650	4350

**Agronomic Information**

Planting Date:	4/30/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	53
P (ppm-bicarb) 2-ft sample	86
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.4

**Trial Notes:**

1. The Farmington nursery was located about 5 miles south of Farmington, WA.
2. The nursery was fertilized at 100N 20S.
3. Overall yield was 70% more than 2017, and grain test weight was 0.4 lb/bu less than last year.

**Cooperator: B. Nelson**

Herbicide:  
Huskie, Tilt on 05/31/18

Table 149. 2018 WSU Variety Testing Spring Barley Trial, Mayview

Variety Name <i>Hulless Italicized</i>	2018					2 Year	3 Year	5 Year*
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
LCS Opera	5360	51.1	11	26	86			
LCS Vespa	5040	52.6	11	28	94	4320	4310	4230
LCS Sienna	5030	54.6	9	27	96			
Lyon	4880	53.2	11	29	94	4120	4140	4000
LCS Genie	4820	53.9	10	26	95	4150	4230	4040
Altorado	4780	52.4	11	30	84	4010	3940	
Lenetah	4730	53.9	11	31	94	4100	4240	4080
Oreana	4700	53.1	11	26	91	3950	4130	
LCS Odyssey	4670	51.8	11	26	93	3830	3940	3940
Claymore	4620	52.5	11	31	89	3790	3810	
Champion	4500	55.4	10	32	92	4100	3970	3910
Muir	4340	52.9	11	30	93	3650	3560	3580
CDC Copeland	4020	48.8	11	33	84	3210	3290	3280
Havener	3690	57.6	12	31	80	3330	3260	3060
Survivor	3650	53.2	13	31	96	3250	3490	
Meg's Song (X05013-T1)	3560	54.3	14	30	85			
<b>Experimental Lines</b>								
11WA-107.58	4760	55.2	11	30	96	4020	3910	
11WA-107.43	4720	54.4	12	30	93	4030	3840	
13WA-149.2	4370	54.0	11	30	94			
12WA-120.14	4340	52.2	12	32	93	3900	3350	
13WA-101.2	4340	52.0	12	32	91			
12WA-120.23	4250	51.6	13	31	89	3830		
11WA-107.36	4130	53.4	13	31	93	3800		
BZ 512-319	3890	49.5	11	32	88			
C.V. %	6	1.2	7	5	3	8	8	7
LSD (0.05)	390	0.9	1	2	4	300	250	160
Average	4470	53.1	11	30	91	3860	3840	3790
Highest	5360	57.6	14	33	96	4320	4310	4230
Lowest	3560	48.8	9	26	80	3210	3260	3060

**Agronomic Information**

Planting Date:	4/24/2018
Harvest Date:	8/22/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	63
P (ppm-bicarb) 2-ft sample	74
S (lb/ac) 2-ft sample	24
pH (top 6 inches)	5.1

**Trial Notes:**

1. The Mayview nursery was located about 20 miles northeast of Pomeroy, WA.
2. The nursery was fertilized at 93N 17P 24S.
3. Overall yield was 40% more than 2017, and grain test weight was 0.3 lb/bu more than last year.

**Cooperator: R. & R. Koller**

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Herbicide:  
Huskie, Tilt on 06/01/18

Table 150. 2018 WSU Variety Testing Spring Barley Trial, Palouse

Variety Name <i>Hulless Italicized</i>	2018					2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>								
Lenetah	7290	53.7	10.2	34	97	6050	6260	--
Claymore	7060	52.2	10.6	34	97	5910	6280	--
LCS Odyssey	6910	50.5	10.4	28	98	6010	5630	--
LCS Sienna	6900	51.9	10.3	30	98			--
Muir	6800	52.7	10.3	35	96	5900	5880	--
LCS Opera	6770	50.7	10.4	27	97			--
Altorado	6550	52.4	10.7	31	95	6020	5960	--
LCS Genie	6390	51.7	10.4	28	98	5560	6070	--
LCS Vespa	6360	51.0	10.5	28	96	5800	6090	--
Oreana	6260	51.4	10.3	27	95	5480	6120	--
Champion	6200	53.2	9.8	33	95	5900	6070	--
Lyon	6120	51.6	9.9	28	95	5520	5610	--
<i>Havener</i>	6000	59.0	11.3	34	88	5100	5120	--
CDC Copeland	5850	50.8	10.5	37	94	5090	5480	--
Survivor	5660	52.5	11.4	34	98	5270	5180	--
<i>Meg's Song (X05013-T1)</i>	5590	56.8	13.4	35	94			--
<b>Experimental Lines</b>								
13WA-101.2	7320	52.1	11.1	36	97			--
12WA-120.23	7020	51.9	11.2	35	98	6020		--
12WA-120.14	6890	51.6	11.5	34	97	5880	5680	--
11WA-107.43	6840	52.8	11.4	33	98	5880	6110	--
11WA-107.36	6780	53.0	10.5	32	96	6190		--
11WA-107.58	6780	53.8	11.1	35	98	6100	6020	--
BZ 512-319	6410	50.1	10.8	32	95			--
13WA-149.2	6190	52.9	11.4	35	97			--
C.V. %	11	1.0	4.6	5	1	11	11	--
LSD (0.05)	990	0.8	0.7	2	2	620	490	--
Average	6540	52.5	10.8	32	96	5760	5850	--
Highest	7320	59.0	13.4	37	98	6190	6280	--
Lowest	5590	50.1	9.8	27	88	5090	5120	--

**Agronomic Information**

Planting Date:	4/25/2018
Harvest Date:	8/31/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	169
P (ppm-bicarb) 2-ft sample	103
S (lb/ac) 2-ft sample	29
pH (top 6 inches)	5.2

**Trial Notes:**

1. The Palouse nursery was located about 13 miles west of Palouse, WA.
2. Base fertilizer was 180N 20P 20S applied prior to seeding.
3. Overall yield was 33% greater than 2017, and grain test weight was 2.6 lb/bu less than last year.

**Cooperator: D. Lange**

Herbicide:

Brox M, Axial XL on 05/30/18

Table 151. 2018 WSU Variety Testing Spring Barley Trial, Pullman

Variety Name <i>Hulless Italicized</i>	2018						2 Year	3 Year	5 Year*
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
<b>Altorado</b>	<b>4820</b>	51.2	8.9	24	177	75	5860	5790	
<b>LCS Odyssey</b>	<b>4560</b>	50.0	8.8	22	178	89	4550	4930	4880
<b>LCS Opera</b>	<b>4530</b>	50.4	8.5	21	177	83			
<b>Muir</b>	<b>4430</b>	51.9	8.6	26	176	84	5100	5240	5000
<b>Claymore</b>	<b>4380</b>	50.7	9.0	27	177	75	4640	4970	
<b>LCS Sienna</b>	<b>4350</b>	52.1	8.6	24	178	92			
<b>Lenetah</b>	<b>4170</b>	<b>53.7</b>	8.6	22	177	81	5670	5730	5180
<b>Champion</b>	<b>4120</b>	53.2	8.9	28	176	70	4170	4710	4790
<b>LCS Vespa</b>	<b>4120</b>	49.0	9.3	23	177	75	5040	5140	5090
<b>Lyon</b>	<b>4090</b>	50.6	9.2	23	177	84	4850	5040	4810
<b>Oreana</b>	3940	49.0	9.3	19	177	77	4980	5140	
<b>Survivor</b>	3840	50.9	9.0	24	177	87	4930	5160	
<b>LCS Genie</b>	3780	50.4	8.4	23	177	86	4800	4960	4880
<b>CDC Copeland</b>	3500	47.9	9.8	26	178	73	3490	4100	4120
<i>Meg's Song (X05013-T1)</i>	3340	<b>54.1</b>	10.9	23	178	59			
<i>Havener</i>	3240	<b>55.5</b>	9.4	23	176	41	3970	4180	4030
<b>Experimental Lines</b>									
<b>11WA-107.36</b>	<b>4550</b>	52.3	8.4	25	176	87	5570		
<b>11WA-107.58</b>	<b>4130</b>	53.4	8.6	27	176	96	5490	5530	
<b>12WA-120.23</b>	<b>4110</b>	51.4	9.0	27	177	87	4250		
<b>11WA-107.43</b>	4030	53.4	8.8	26	177	86	5210	5130	
<b>12WA-120.14</b>	3990	50.9	8.9	28	177	88	4720	4870	
<b>13WA-101.2</b>	3840	49.7	9.3	23	177	77			
<b>BZ 512-319</b>	3690	48.2	8.5	27	177	83			
<b>13WA-149.2</b>	3570	51.1	8.8	24	177	88			
<b>C.V. %</b>	14	2.7	6.2	9	0	13	16	13	11
<b>LSD (0.05)</b>	780	1.9	0.8	3	1	14	700	500	330
<b>Average</b>	4050	51.3	9.0	24	177	80	4850	5040	4750
<b>Highest</b>	4820	55.5	10.9	28	178	96	5860	5790	5180
<b>Lowest</b>	3240	47.9	8.4	19	176	41	3490	4100	4030

**Agronomic Information**

Planting Date:	4/27/2018
Harvest Date:	8/23/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	23
Previous Crop:	Winter Wheat
Spring soil test: (NOTE: PULLED AFTER APPLICATION)	
N (lb/ac) 4-ft sample	200
P (ppm-bicarb) 2-ft sample	101
S (lb/ac) 2-ft sample	72
pH (top 6 inches)	5.5

**Trial Notes:**

1. The Pullman nursery was located about 3 miles east of Pullman, WA.
2. The nursery was seeded with a double disk drill. Base fertilizer was 180N 20P 20S applied prior to seeding
3. Overall yield was 26% less than 2017, and grain test weight was 1.6 lb/bu more than last year.

**Cooperator: Spillman Agronomy Farm**

\* 5-year average from 2018, 2017, 2016, 2015, 2013

Table 152. 2018 WSU Variety Testing Spring Barley Trial, Reardan

Variety Name <i>Hulless Italicized</i>	2018						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Opera	3190	51.5	10.6	27	172	95			--
Muir	3080	50.5	11.6	34	172	94	3560	3640	--
Oreana	3010	50.1	12.4	27	173	96	3500	3930	--
Champion	3000	52.8	11.7	34	171	93	3500	3670	--
LCS Sienna	2990	52.9	11.7	31	171	97			--
Altorado	2980	49.2	11.8	33	173	86	3650	3730	--
Lenetah	2960	51.9	11.2	35	173	95	3480	3800	--
LCS Genie	2950	50.7	11.7	30	172	96	3300	3650	--
Claymore	2920	50.2	10.9	35	172	91	3560	3820	--
CDC Copeland	2880	48.3	11.6	38	175	93	3510	3550	--
Lyon	2830	49.4	12.5	32	171	95	3440	3620	--
LCS Vespa	2820	49.0	12.1	28	172	95	3310	3770	--
Survivor	2600	50.9	12.5	36	172	98	3220	3450	--
Havener	2430	55.3	13.5	35	173	72	3010	3060	--
LCS Odyssey	2320	48.6	12.6	28	175	96	3380	3950	--
Meg's Song (X05013-T1)	2050	51.4	14.6	36	174	80			--
<b>Experimental Lines</b>									
11WA-107.58	2900	52.6	12.5	34	174	96	3430	3520	--
13WA-101.2	2860	49.6	13.0	36	171	96			--
12WA-120.23	2770	49.4	12.1	34	172	95	3410		--
11WA-107.36	2690	49.2	12.3	32	170	92	3230		--
12WA-120.14	2590	49.1	12.7	36	171	95	3180	3120	--
BZ 512-319	2540	47.5	11.5	36	175	90			--
13WA-149.2	2520	49.3	12.7	36	173	96			--
11WA-107.43	2500	50.3	12.6	33	171	95	3250	3570	--
C.V. %	8	2.0	3.8	6	1	2	8	8	--
LSD (0.05)	310	1.4	0.6	3	0	3	240	230	--
Average	2770	50.4	12.2	33	172	93	3380	3620	--
Highest	3190	55.3	14.6	38	175	98	3650	3950	--
Lowest	2050	47.5	10.6	27	170	72	3010	3060	--

**Agronomic Information**

Planting Date:	4/26/2018
Harvest Date:	9/4/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	71
P (ppm-bicarb) 2-ft sample	56
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	5.1

**Trial Notes:**

1. The Reardan nursery was located about 7 miles west of Reardan, WA.
2. The nursery was fertilized at seeding with 100N.
3. Overall yield was 28% less than 2017, and grain test weight was 2.5 lb/bu less than last year.

**Cooperator: H. Johnson**

Herbicide:

Huskie, Axial XL, Tilt on 06/08/2018

Table 153. 2018 WSU Variety Testing Spring Barley Trial, St. John

Variety Name <i>Hulless Italicized</i>	2018						2 Year*	3 Year**	5 Year***
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<b>Released Varieties</b>									
LCS Opera	6260	52.0	9.3	27.0	171	96			
Claymore	5620	51.9	9.8	34.0	170	94	4860	4130	
Muir	5270	53.0	9.2	29.0	170	95	4870	4280	4530
Lenetah	5180	53.6	9.5	31.0	171	98	4990	4190	4400
Altorado	5120	52.9	9.6	30.0	169	93	4800		
Lyon	4960	52.2	9.3	28.0	169	97	4720	4220	4520
LCS Sienna	4910	52.5	9.5	26.0	172	97			
Oreana	4820	52.5	10.0	27.0	172	95	4670	3970	
LCS Genie	4760	52.0	9.0	27.0	173	98	4540	3750	4280
Champion	4720	53.8	9.1	30.0	169	89	4520	3890	4340
LCS Vespa	4670	51.6	9.6	26.0	171	98	4390	3750	4230
LCS Odyssey	4560	51.4	9.4	25.0	173	92	4650	4050	4400
Survivor	4500	52.7	9.6	31.0	171	98	4300	3850	
CDC Copeland	4490	50.6	9.3	35.0	172	97	4460	3580	4290
Havener	4430	58.5	10.8	32.0	172	79	4040	3210	3540
Meg's Song (X05013-T1)	3710	54.8	11.8	31.0	171	89	3580	3010	3400
<b>Experimental Lines</b>									
12WA-120.23	5650	53.2	11.4	35.0	169	92			
13WA-149.2	5270	53.3	10.5	30.0	170	98			
11WA-107.36	5090	52.9	9.3	32.0	169	97			
11WA-107.43	5060	53.5	10.6	32.0	170	98	4560		
BZ 512-319	5060	50.1	9.8	36.0	170	98			
12WA-120.14	4840	52.0	11.0	33.0	169	97	4590		
13WA-101.2	4830	51.8	10.2	31.0	171	95			
11WA-107.58	4570	53.9	9.9	30.0	170	97	4460		
C.V. %	10	1.5	7.0	7.0	1	4	9	9	9
LSD (0.05)	700	1.1	1.0	3.0	1	5	390	280	220
Average	4930	52.8	9.9	30.0	171	95	4530	3840	4190
Highest	6260	58.5	11.8	36.0	173	98	4990	4280	4530
Lowest	3710	50.1	9.0	25.0	169	79	3580	3010	3400

**Agronomic Information**

Planting Date:	4/23/2018
Harvest Date:	8/30/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	50
P (ppm-bicarb) 2-ft sample	96
S (lb/ac) 2-ft sample	18
pH (top 6 inches)	5.3

**Trial Notes:**

1. The St. John nursery was located about 4 miles northwest of St. John, WA.
2. The nursery was fertilized prior to seeding with 80N 10S.
3. The St. John spring nursery was lost in 2017.

**Cooperator: M. Mills**

\* 2-Year average from 2018, 2016

\*\* 3-Year average from 2018, 2016, 2015

\*\* 5-Year average from 2018, 2016, 2015, 2014, 2013

Herbicide:

Huskie, Axial XL, Tilt on 05/31/18

Table 154. 2018 WSU Variety Testing Spring Barley Trial, Walla Walla

Variety Name	2018							2 Year	3 Year*	5 Year**
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Plump (%)	Lodging (%)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
<i>Hulless Italicized</i>										
<b>Released Varieties</b>										
LCS Opera	6180	53.1	11	28	154	96	0			
LCS Sienna	6050	55.2	13	31	154	97	0			
Champion	5990	55.7	13	33	148	94	5	5670	5290	4820
LCS Vespa	5930	53.3	13	29	152	97	0	6470	6190	5660
Lyon	5900	53.5	13	31	148	95	10	5780	5480	4870
Altorado	5790	52.3	13	31	149	94	0	6260		
Muir	5760	53.4	13	33	149	95	0	5920	5370	4900
Lenetah	5720	55.0	12	30	151	96	0	6260	5870	5160
Oreana	5700	54.5	12	27	153	95	0	6110	5900	
Claymore	5550	53.1	13	32	151	94	0	6320	6050	
LCS Genie	5530	53.9	13	28	154	97	0	6130	5740	5330
LCS Odyssey	5400	52.3	13	27	153	98	0	6410	6030	5440
CDC Copeland	5290	51.1	12	34	154	93	0	5640	5210	4690
Survivor	4990	54.0	14	31	151	98	0	5510	5210	
Havener	4860	60.8	13	33	154	87	0	5010	4640	4130
Meg's Song (X05013-T1)	4790	58.9	15	35	151	94	0	5230	4740	4320
<b>Experimental Lines</b>										
11WA-107.43	5740	55.1	13	32	150	96	0	6010		
11WA-107.58	5630	55.9	13	34	151	97	0	5870		
13WA-149.2	5620	54.2	13	33	152	96	0			
11WA-107.36	5530	53.9	13	31	149	96	0			
13WA-101.2	5520	53.1	14	32	150	95	0			
12WA-120.23	5500	53.2	14	33	151	96	0			
BZ 512-319	5210	50.2	13	32	150	94	0			
12WA-120.14	5140	52.8	15	34	150	95	3	5230		
C.V. %	4	1.0	2	4	1	1	403	6	7	8
LSD (0.05)	320	0.7	0	2	1	2	4	350	300	240
Average	5560	54.1	13	31	151	95	1	5870	5520	4930
Highest	6180	60.8	15	35	154	98	10	6470	6190	5660
Lowest	4790	50.2	11	27	148	87	0	5010	4640	4130

**Agronomic Information**

Planting Date:	3/30/2018
Harvest Date:	7/31/2018
Seeding Rate (seeds/ft <sup>2</sup> ):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	88
P (ppm-bicarb) 2-ft sample	81
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.2

**Trial Notes:**

1. The Walla Walla spring nursery was located about 7 miles east of Walla Walla, WA
2. The nursery was fertilized prior to planting 120N 15P 20S
3. The Walla Walla spring nursery was lost in 2017.

**Cooperator: P McConnell**

\* 3-year average from 2018, 2016, 2015

\*\* 5-year average from 2018, 2016, 2015, 2014, 2013

Herbicide:

Herbicides and Fungicides applied by cooperator

Table 155.

STRIPE RUST INFECTION TYPE (IT<sup>a</sup>) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING BARLEY EXTENSION NURSERY (EXP222) (COORDINATED BY AARON ESSER AND VADIM JITKOV AS SPRING BARLEY VARIETY TRIAL NURSERY) AT SPILLMAN (LOC 01), PLANT PATH (LOC 03), AND PCFS (LOC 04) FARMS NEAR PULLMAN, MT VERNON (LOC 05); WALLA WALLA (LOC 6); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2018.

Note: Barley stripe rust developed to a high level at LOC 04 and a moderate level at LOC 05, but low at the remaining locations.

Name	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Palouce Conservati on Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Field summary <sup>e</sup>	Overall rating <sup>d</sup>
		LOC 01	LOC 03	LOC 04	LOC 05		LOC 06	LOC 07		
		7/6	6/29	7/13	6/6	6/27	6/14	6/14		
		Fks 10.53 <sup>b</sup>	Fks 10.53	Fks 10.53	Fks 5	Fks 10.5	Fks 11.2	Fks 10.51		
IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %			
<b>Morex</b>		<b>8 10</b>	<b>8 5</b>	<b>8 70</b>	<b>8 40</b>	<b>8 30</b>	<b>8 10</b>	<b>8 10</b>	<b>S</b>	<b>9</b>
Altorado	S2	3 5	0 0	2 1	0 0	8 20	0 0	8 5	MS	7
BZ 512-319	S2	3 5	0 0	8 30	0 0	8 20	0 0	8 10	MS	7
Champion	S2	8 5	0 0	8 15	0 0	8 30	8 60	0 0	S	9
Claymore	S2	3 5	0 0	8 5	0 0	5 30	8 20	8 20	MS	7
Oreana	S2	3 5	0 0	8 2	0 0	3 20	0 0	5 5	MR-MS	5
LCS Vespa	S2	3 5	0 0	5 5	0 0	3 20	0 0	8 10	MS	6
Lenetah	S2	3 5	0 0	2 1	0 0	3 10	- -	0 0	MR	2
Lyon	S2	3 5	0 0	8 30	0 0	3 10	0 0	0 0	MS	7
Muir	S2	3 2	0 0	2 2	0 0	3 10	0 0	0 0	MR	2
Survivor	S2l	0 0	0 0	2 1	0 0	2 10	- -	0 0	R	1
Havener	S2NWxF	5 2	0 0	2 1	0 0	5 20	8 10	0 0	MS	6
Meg's Song (X05013-T1)	S2NBgF	0 0	0 0	2 1	0 0	3 10	0 0	0 0	MR	2
CDC Copeland	S2M	0 0	0 0	2 1	0 0	3 10	0 0	5 5	MR	3
LCS Genie	S2M	0 0	0 0	2 1	0 0	2 5	0 0	0 0	R	1
LCS Odyssey	S2M	0 0	0 0	2 1	0 0	2 10	0 0	0 0	R	1
LCS Opera	S2M	0 0	0 0	2 1	0 0	2 10	0 0	0 0	R	1
LCS Sienna	S2M	0 0	0 0	2 1	0 0	2 5	0 0	0 0	R	1
11WA-107.36	S2M	5 2	0 0	2 1	0 0	3 20	0 0	0 0	MR	3
11WA-107.43	S2M	3 2	0 0	2 1	0 0	3 20	0 0	0 0	MR	3
<b>Morex</b>		<b>8 10</b>	<b>8 5</b>	<b>8 70</b>	<b>8 5</b>	<b>8 30</b>	<b>8 10</b>	<b>8 10</b>	<b>S</b>	<b>9</b>
11WA-107.58	S2M	3 2	0 0	3 5	0 0	5 20	0 0	0 0	MR	4
12WA-120.14	S2M	3 2	0 0	3 10	0 0	3 30	0 0	0 0	MR	4
12WA-120.23	S2M	0 0	0 0	2 1	0 0	3 10	0 0	0 0	MR	2
13WA-101.2	S2M	0 0	0 0	5 5	0 0	3 10	0 0	0 0	MR	3
13WA-149.2	S2M	3 2	0 0	3 5	0 0	3 10	0 0	0 0	MR	2
<b>Morex</b>		<b>8 5</b>	<b>8 5</b>	<b>8 60</b>	<b>8 20</b>	<b>8 50</b>	<b>8 10</b>	<b>8 20</b>	<b>S</b>	<b>9</b>

<sup>a</sup> Infection Type (IT) was recorded based on the 0-9 scale with ITs 8 and 9 combined as 8 (the most susceptible reaction) in field data. Generally IT 0-3 are considered resistant, 4-6 intermediate, and 7-9 susceptible. Heterogenous reactions of an entry were indicated by two or more ITs separated by "," for most plants with the first IT and few plants with the second IT or connected with "-" for entries containing plants with continuous ITs.

<sup>b</sup> Entries with a high IT in the first note, but a low IT in the second note at Mt. Vernon (LOC 05) may indicate that they have high-temperature, adult-plant (HTAP) resistance.

<sup>c</sup> Feekes scale for growth stage.

<sup>d</sup> R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

<sup>e</sup> 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity of adult plants to discourage use of race-specific resistance.

Data was collected, analyzed and reported by Dr. X. Chen, USDA-ARS