

WSU Extension Variety Testing Program

Cereal Variety Performance Trials

2022

C. Neely, B. Gerrish, A. Horton, J. Conner¹

Dept. of Crop & Soil Sciences · December 2022



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

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December 2022

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Brit Ausman	Anatone	Asotin	Randy & Wyatt Koller	Mayview	Garfield
Ron & Andy Juris	Bickleton	Klickitat	Dennis Treat	Moses Lake	Grant
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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 wheat, spring wheat, and spring barley 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 2022 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 2022. The total number of varieties and locations planted were:

soft white winter wheat: 97 entries at 24 locations;
hard red winter wheat: 40 entries at 16 locations;
fall planted hard red spring wheat: 18 entries at 3 locations;
soft white spring wheat: 32 entries at 18 locations;
hard red spring wheat: 35 entries at 18 locations;
hard white spring wheat: 1 entry at 18 locations;
spring barley: 24 entries at 12 locations;

Pages 5-10 list all entries for the 2022 winter and spring cereal variety trials. An alpha lattice design with three replications was used for all 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 (Pages 11-14). All cereal entries were treated with CruiserMaxx Vibrance 0.66 Cereal Custom Blend (3.55 oz/cwt) plus Teraxxa F4 (10 oz/cwt). Entries were planted in small plots using one of six planter drill opener configurations based on the trial location (Pages 15-16). All trials were maintained under grower management conditions specific to each trial location. Due to substantial spring moisture, most trial sites received a second application of fungicide to control the 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 3.7 pounds of nitrogen X expected bushel yield. The calculation for hard spring wheat was 3.7 pounds of nitrogen X expected bushel yield. All additional fertilizer for winter trials was applied in late fall and shortly after planting for spring trials using liquid urea (20-0-0). A starter blend of 16N-4P-10K-10S+Zn+Cu was applied as indicated.

Weed management included spring applications of commercial herbicides and are noted in the results from each location. Clearfield® varieties were not treated with Beyond®. 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. Prior to each plot tour, experiments were trimmed to final harvest dimensions by applying Roundup herbicide with a hooded alley sprayer to cut alleyways between ranges.

Seed samples of all winter wheat, spring wheat and spring barley entries 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 along with other ratings for all wheat and barley entries can be found on pages 66, 90, 119, 146, and 167.

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 sizes were 60 (12x5ft), 80 (16x5ft), and 96 (16x6ft) square feet for conventional, no-till, and deep furrow winter wheat plots, respectively. All spring plots were 80 (16x5ft) square feet. 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 mid-November 2022. 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 clark.neely@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. The following are experiments and locations for which data is not presented in the final report:

Almira Spring Barley Trial- Trial harvested but data not shown due to high CV;
Lamont Spring Barley Trial- Trial abandoned due to herbicide drift damage;
Pasco Soft White Spring Wheat Trial- Trial abandoned due to root disease pressure;
Pasco Hard Red Spring Wheat Trial- Trial abandoned due to root disease pressure;
Reardan Soft White Spring Wheat Trial- Trial harvested but data not shown due to high CV;
Reardan Hard Red Spring Wheat Trial- Trial harvested but data not shown due to high CV;

Reardan Spring Barley Trial- Trial harvested but data not shown due to high CV;
Ritzville Soft White Winter Wheat Trial- Trial harvested but data not shown due to high CV;
Ritzville Hard Red Winter Wheat Trial- Trial harvested but data not shown due to high CV;
St. Andrews Soft White Winter Wheat Trial- Trial harvested but data not shown due to high CV;
St. Andrews Hard Red Winter Wheat Trial- Trial harvested but data not shown due to high CV;
Walla Walla Soft White Winter Wheat Trial- Trial harvested but data not shown due to high CV;

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.

2022 Soft White Winter Wheat Entries

Name	Originator	Class	Old Name	Sites
09PN118-02 CL2	Agipro	SWW ¹		a,b,c
AP Dynamic	Agipro	SWW	08PN030-3	a,b,c,e
AP Exceed	Agipro	SWW	11PN039#20	a,b,c,d,e
AP Iliad	Agipro	SWW	11PN044#84	b,c,d,e
Appleby CL+	OSU	SWW	ORI2161250 CL+	a,b,c
ARS Crescent	USDA-ARS/WSU	WC	ARS970163-4C	a,b,c,e
ARS12097-12C	USDA-ARS/WSU	WC		a,b,e
ARS13659-4C	USDA-ARS/WSU	WC		a,b,e
ARS141114-64C	USDA-ARS/WSU	WC		a,b,e
ARS14DH1014-21C	USDA-ARS/WSU	WC		c,e
ARS-Selbu 2.0	USDA-ARS/WSU	SWW		c,d,e
AR SX09500-17CBW	USDA-ARS/WSU	WC		c,e
Bobtail	OSU	SWW	OR08047P94	e
Cameo	USDA-ARS/WSU	WC	ARSX09492-6C	c,e
Castella	USDA-ARS/WSU	WC ²	ARS20060123-31C	a,b,c,e
Curiosity CL+	WSU	SWW	WA 8143	a,b
Devote	WSU	SWW	WA 8271	a,b,e
GS2	Geneshifters	SWW		a
GS3	Geneshifters	SWW		a,b,c,d,e
IDO2008	University of Idaho	SWW		e
LCS Artdeco	Limagrain	SWW	NSA06-2153A	d,e
LCS Blackjack	Limagrain	SWW	LWW15-71945	b,c,d,e
LCS Drive	Limagrain	SWW	LWW12-7105	e
LCS Hulk	Limagrain	SWW		a,b,c,d,e
LCS Shine	Limagrain	SWW		a,b,c,d,e
LCS Sonic	Limagrain	SWW		a,b,e
LWW17-5877	Limagrain	SWW		a,b,c,d,e
LWW17-8185	Limagrain	SWW		a,b,c,d,e
LWW19-1576	Limagrain	SWW		e
LWW19-2232	Limagrain	SWW		a,b,e
LWW19-5862	Limagrain	SWW		a,e
LWW19-6219	Limagrain	SWW		a,b,c,d,e
LWW19-6591	Limagrain	SWW		a,b,c,d,e
Mela CL+	WSU	SWW	WA 8155	a,b
Nixon	OSU	SWW	OR2121086	e
Norwest Duet	Limagrain/OSU	SWW	ORLD113092	a,b,c,e
Norwest Tandem	Limagrain/OSU	SWW	ORLD112334	a,b,c,d,e
OR2130755	OSU	SWW		a,b,c,e
OR2160243	OSU	SWW		d,e
OR2160264	OSU	SWW		d,e
OR2170559	OSU	SWW		a,d,e
OR2180149	OSU	SWW		e
OR2180377	OSU	SWW		e
OR2190025 CL+	OSU	SWW		a,b,c,d
OR2190027 CL+	OSU	SWW		a,b,c,d
OR5180071	OSU	SWW		b,c,e
Otto	WSU	SWW	WA 8092	a,b,e
Piranha CL+	WSU	SWW	WA 8305 CL+	a,b,c
Pritchett	USDA-ARS/WSU	WC	4J071366C	a,b,c,e
Purl	WSU	SWW	WA 8234	c,d,e
Resilience CL+	WSU	SWW	WA 8187	c
Rosaly	OSU	SWW	OR2071071	e
Sockeye CL+	WSU	SWW	WA 8306 CL+	a,b,c,d
Stephens	OSU	SWW	65-116-70-MBW-2	e
Stingray CL+	WSU	SWW	WA 8275 CL+	a,b,c

2022 Soft White Winter Wheat Entries

Name	Originator	Class	Old Name	Sites
SY Assure	Agripro	SWW		c,e
SY Dayton	Agripro	SWW	09PN062#18	c,d,e
TMC M-Pire	Agripro	SWW	TMC2021SWW	a,b,c,d,e
TMC M-Press	McGregor Company	SWW		a,b,c,d,e
UI Magic CL+	Uni. Of Idaho	SWW	UI-09-DH11	b,c
UIL 14-085001A	Uofl / Limagrain	SWW		a,b,c,d,e
UIL 15-028024	Uofl / Limagrain	SWW		a,b,c,e
UIL 15-423062A	Uofl / Limagrain	SWW		e
UIL 16-072025	Uofl / Limagrain	SWW		d,e
UIL 16-478001	Uofl / Limagrain	SWW		a
UIL 17-7706 CL+	Uofl / Limagrain	SWW		a,b,c
VI Frost	Uofl / Limagrain	SWW		a,b
VI Presto CL+	Uofl / Limagrain	SWW	UIL 17-6451 CL+	a,b,c
VI Voodoo CL+	Uofl / Limagrain	SWW	UIL 17-6268 CL+	b,c
WA8307	WSU	SWW		c,d,e
WA8334	WSU	SWW		a,b,e
WA8335	WSU	SWW		d
WA8336	WSU	SWW		c,d,e
WA8345 AX	WSU	SWW		a,b,c,d,e
WA8346 AX	WSU	SWW		a,b,c,d,e
WA8347 AX	WSU	SWW		a,b,c,d,e
WA8348 AX	WSU	SWW		a,b,e
WA8349 AX	WSU	SWW		c,d,e
WA8362	WSU	SWW		a
WA8363	WSU	SWW		a,b,e
WA8364	WSU	SWW		a,b,e
WA8365	WSU	SWW		a,b,e
WA8366	WSU	SWW		c,d,e
WA8370	WSU	SWW		c,e
WA8371	WSU	SWW		e
WB1529	Westbred	SWW	BZ6W07-436	a,b,c,e
WB1621	Westbred	SWW		c,e
WB1720	Westbred	SWW		c,e
YSC-215	Yield Star	SWW		a,b,c,d,e
YSC-217	Yield Star	SWW		d
YSC-93	Yield Star	SWW		a,b,c,d,e

¹ - Soft White Winter

² - Winter Club

Sites:

- a- <12" precipitation zone
- b- 12-16" precipitation zone
- c- >16" precipitation zone
- d- irrigated sites
- e- Eureka, Walla Walla

2022 Hard Winter Wheat Entries

Name	Originator	Class	Old Name	Sites
Battle AX	MonTech Seed	HRW ¹		a,b,c,d,e
Canvas	PlainsGold	HRW	CO12D1770	a,b,c,d,e
GHR10	Geneshifters	HRW		a,b,c,d,e
Guardian	PlainsGold	HRW	CO13D0787	a,b,e
Irv	OSU	HWW ²	OR2110679	e
Kairos	Highland Specialty Grains	HRW		c,d,e
Keldin	Westbred	HRW	ACS 55017	a,b,c,d,e
LCS Evina	Limagrain	HRW	NIC04-3377-A	e
LCS Helix AX	Limagrain	HRW		a,b,c,e
LCS Jet	Limagrain	HRW	NSA10-7208	a,b,c,d,e
LCS Rocket	Limagrain	HRW	NSA10-2196	b,c,d,e
LWH18-0122	Limagrain	HRW		a,b,c,d,e
LWH19-0192	Limagrain	HRW		a,b,c,d,e
LWH19-1103	Limagrain	HRW		a,b,c,d,e
LWH19-5663	Limagrain	HRW		a,b,c,d,e
LWH19-5691	Limagrain	HRW		a,b,c,d,e
Millie	OSU	HWW	OR2130118H	e
OR2160065H	OSU	HRW		e
OR2170052H	OSU	HWW		e
OR2170199R	OSU	HRW		a,b,c,e
OR2190064R	OSU	HRW		e
PN13001002-04	AgriPro	HRW		a,b,c,e
Scorpio	WSU	HRW	WA 8268	a,b,c,e
Sequoia	WSU	HRW	WA8180	a
Snowmass 2.0	PlainsGold	HWW		e
WA8309	WSU	HRW		c,d,e
WA8310	WSU	HRW		a,b,e
WA8318 CL+	WSU	HRW		a,b
WA8338	WSU	HRW		a,b,e
WA8340	WSU	HRW		c,d,e
WA8367	WSU	HRW		a,b,e
WA8368	WSU	HRW		c,d,e
WA8369	WSU	HRW		c,d,e
WB4303	Westbred	HRW	HV9W10-1002	a,b,c,d,e
WB4311	Westbred	HRW	XA4104	a,b,c,e
WB4394	Westbred	HRW		a,b,c,d,e
WB4510CLP	Westbred	HRW		a,b,c,d,e
Whistler	PlainsGold	HRW		a,b,e
YSC-1001	Yield Star Cereals	HRW		a,b,c,d,e
YSC-1002	Yield Star Cereals	HRW		a,b,c,d,e

¹ - Hard Red Winter

² - Hard White Winter

Sites:

- a- <12" precipitation zone
- b- 12-16" precipitation zone
- c- >16" precipitation zone
- d- irrigated sites
- e- Eureka, Walla Walla

2022 Soft White Spring Wheat Entries

Name	Originator	Class	Old Name	Sites
AP Coachman	Agripro	SWS ¹	08PN2001-7	a
AP Mondovi CL2	Agripro	SWS	11PN2532-507CL2	a
Hedge CL+	WSU	SC ²	WA 8295 CL+	a
IDO1404S	University Of Idaho	SWS		a,b
IDO1702S	University Of Idaho	SWS		a,b
IDO1902S	University Of Idaho	SWS		a,b
JD	WSU	SC	WA 8047	a
Louise	WSU	SWS	WA 7921	a
Melba	WSU	SC	WA 8193	a
Roger	WSU	SC	WA8325	a,b
Ryan	WSU	SWS	WA 8214	a
Seahawk	WSU	SWS	WA 8162	a
Tekoa	WSU	SWS	WA 8189	a,b
TMC Lochaven	McGregor Company	SWS	TMC 2021	a,b
UI Cookie	University Of Idaho	SWS		a,b
WA8321	WSU	SWS		a,b
WA8327	WSU	SWS		a,b
WA8351	WSU	SWS		a,b
WA8354 CL+	WSU	SWS		a,b
WA8377	WSU	SWS		a,b
WA8378	WSU	SWS		a,b
WA8379 CL+	WSU	SWS		b
WA8380 CL+	WSU	SWS		b
WA8381 CL+	WSU	SWS		b
WA8382	WSU	SWS		b
WA8383	WSU	SWS		b
WA8384	WSU	SWS		b
WA8385	WSU	SWS		b
WB6121	Westbred	SWS	BZ608-121	a,b
WB6211CLP	Westbred	SWS		a,b
YSC-603	Yield Star Cereals	SWS		b
YSC-605	Yield Star Cereals	SWS		a,b

¹ - Soft White Spring

² - Spring Club

Sites:

a - Dryland

b - Irrigated

2022 Hard Spring Wheat Entries

Name	Originator	Class	Old Name	Sites
Alum	WSU	HRS ¹	WA 8166	a,b
AP Renegade	Agripro	HRS	06PN3017-09	a,b,c
AP Venom	Agripro	HRS	USW11200083-1-3	b,c
Buck Pronto	Westbred	HRS		b
Chet	WSU	HRS	WA 8165	a
CP3055	Croplan	HRS		a,b
CP3099A	Croplan	HRS		a,b
CP3530	Croplan	HRS		a,b
CPX39120	Croplan	HRS		a,b
Dayn	WSU	HWS ²		c
Glee	WSU	HRS	WA 8074	a,b
Hale	WSU	HRS	WA8315	a
IDO2105S	UofI	HRS		c
Jefferson	UofI	HRS		a,b
Jefferson HF	UofI	HRS		a,b,c
Kelse	WSU	HRS	WA 7954	a,b,c
Net CL+	WSU	HRS	WA 8280 CL+	a
SY Gunsight	Agripro	HRS		b,c
WA8330	WSU	HWS		a
WA8342	WSU	HRS		b,c
WA8355	WSU	HRS		a
WA8356	WSU	HRS		a,b,c
WA8357	WSU	HRS		a
WA8358 CL+	WSU	HRS		a
WA8359	WSU	HRS		b,c
WA8372	WSU	HWS		b,c
WA8373	WSU	HWS		b,c
WA8374	WSU	HWS		b,c
WA8375	WSU	HRS		b,c
WA8376	WSU	HWS		b,c
WA8387 CL+	WSU	HRS		a
WA8388 CL+	WSU	HRS		a
WA8389 CL+	WSU	HRS		a
WB9303	Westbred	HRS		a
WB9623	Westbred	HRS		a,b
WB9662	Westbred	HRS		b,c
WB9668	Westbred	HRS	BZ908-552	a,b,c

¹ - Hard Red Spring

² - Hard White Spring

Sites:

a - Dryland

b - Irrigated

c - Fall Planted

2022 Spring Barley Entries

Name	Originator	Class	Old Name
14WAIF-3613.2	WSU	2-Row, M	
14WAIM-3604.29	WSU	2-Row, M	
14WAIM-3620.68	WSU	2-Row, M	
ACC Connect	Meridian Seeds	2-Row, M	
ACC Synergy	Meridian Seeds	2-Row, M	
Altorado	Highland Specialty Grains	2-Row	BZ509-601
BC Ellinor	Limagrain	2-Row, M	
BC Leandra	Limagrain	2-Row, M	
BC Lexy	Limagrain	2-Row, M	
CDC Copeland	AAFC	2-Row, M	
Claymore	Highland Specialty Grains	2-Row	BZ509-216
HO516-429	Highland Specialty Grains	2-Row	
HO516-579	Highland Specialty Grains	2-Row	
KWS Amadora	KWS	2-Row, M	
KWS Jessie	KWS	2-Row, M	
KWS Willis	KWS	2-Row, M	
LCS Odyssey	Limagrain	2-Row, M	
LCS Opera	Limagrain	2-Row, M	
Lenetah	Uni. Of Idaho	2-Row	01Ab11107
Lyon	WSU	2-Row	
Oreana	Highland Specialty Grains	2-Row	
Palmer	WSU	2-Row, M	11WA-107.43
Survivor	WSU	2-Row, I	07MWA-203

¹ - "M" - Malting

² - 2-row Feed

³ - "N" - Hulless

⁴ - "Wx" - Waxy

⁵ - "F" - Food

⁶ - "Bg" - High B-glucan

⁷ - I - IMI tolerant

2022 WSU Winter Wheat Variety Trial Seed Weight

Name	1000 KW (grams)	Seeds per Pound	Name	1000 KW (grams)	Seeds per Pound
Soft White Common					
09PN118-02 CL2	45.5	9969	Purl	48.8	9295
AP Dynamic	46.3	9797	Resilience CL+	43.9	10332
AP Exceed	48.5	9352	Rosalyn	32.0	14175
AP Iliad	49.1	9238	Sockeye CL+	45.0	10080
Appleby CL+	31.0	14632	Stephens	32.0	14175
ARS-Selbu 2.0	29.8	15221	Stingray CL+	42.5	10673
Bobtail	27.2	16676	SY Assure	45.2	10035
Curiosity CL+	45.2	10035	SY Dayton	43.3	10476
Devote	50.6	8964	TMC M-Pire	53.6	8463
GS2	38.3	11843	TMC M-Press	47.7	9509
GS3	39.0	11631	UI Magic CL+	29.6	15324
IDO2008	47.1	9630	UIL 14-085001A	26.1	17379
Inspire (WA8307)	31.6	14354	UIL 15-028024	28.3	16028
LCS Artdeco	33.3	13621	UIL 15-423062A	33.4	13581
LCS Blackjack	30.0	15120	UIL 16-072025	29.6	15324
LCS Drive	36.2	12530	UIL 16-478001	28.8	15750
LCS Hulk	31.1	14585	UIL 17-7706 CL+	30.6	14823
LCS Shine	33.2	13662	VI Frost	27.4	16554
LCS Sonic	31.7	14309	VI Presto CL+	29.6	15324
LWW17-5877	32.8	13829	VI Voodoo CL+	27.0	16800
LWW17-8185	26.3	17247	WA8334	26.8	16925
LWW19-1576	33.5	13540	WA8335	29.5	15376
LWW19-2232	34.7	13072	WA8336	29.7	15272
LWW19-5862	29.9	15170	WA8345 AX	27.8	16316
LWW19-6219	36.7	12359	WA8346 AX	31.9	14219
LWW19-6591	33.0	13745	WA8347 AX	24.5	18514
Mela CL+	43.1	10524	WA8348 AX	26.7	16988
Nixon	31.9	14219	WA8349 AX	26.9	16862
Norwest Duet	45.6	9947	WA8362	49.5	9163
Norwest Tandem	49.3	9201	WA8363	27.8	16316
OR2130755	29.4	15428	WA8364	25.4	17858
OR2160243	29.0	15641	WA8365	28.4	15971
OR2160264	24.2	18743	WA8366	28.4	15971
OR2170559	34.3	13224	WA8370	26.8	16925
OR2180149	27.9	16258	WA8371	29.1	15587
OR2180377	35.2	12886	WB1529	43.2	10500
OR2190025 CL+	28.9	15695	WB1621	40.1	11311
OR2190027 CL+	31.4	14446	WB1720	41.1	11036
OR5180071	29.5	15376	YSC-215	36.9	12292
Otto	43.1	10524	YSC-217	32.6	13914
Piranha CL+	38.5	11782	YSC-93	36.2	12530

2022 WSU Winter Wheat Variety Trial Seed Weight Continued

Name	1000 KW (grams)	Seeds per Pound
Soft White Club		
ARS Crescent	38.1	11905
ARS12097-12C	29.1	15587
ARS13659-4C	32.3	14043
ARS141114-64C	30.6	14823
ARS14DH1014-21C	28.8	15750
ARSX09500-17CBW	28.9	15695
Cameo	29.3	15481
Castella	43.2	10500
Pritchett	44.1	10285

Name	1000 KW (grams)	Seeds per Pound
Hard White Winter		
Irv	30.2	15020
Millie	25.9	17513
OR2170052H	30.7	14775
Snowmass 2.0	36.2	12530

Name	1000 KW (grams)	Seeds per Pound
Hard Red Winter		
Battle AX	33.9	13380
Canvas	35.8	12670
GHR10	33.6	13500
Guardian	31.8	14264
Kairos	41.3	10983
Keldin	52.9	8574
LCS Evina	41.3	10983
LCS Helix AX	38.8	11690
LCS Jet	36.8	12326
LCS Rocket	35.4	12813
LWH18-0122	34.1	13302
LWH19-0192	30.7	14775
LWH19-1103	34	13341
LWH19-5663	32.5	13957
LWH19-5691	36.5	12427
OR2160065H	33.3	13621
OR2170199R	29.1	15587
OR2190064R	42.2	10749

Name	1000 KW (grams)	Seeds per Pound
Hard Red Winter		
PN13001002-04	42.7	10623
Scorpio	52.1	8706
Sequoia	44.7	10147
WA8309	31.6	14354
WA8310	30.2	15020
WA8318 CL+	27.0	16800
WA8338	33.6	13500
WA8340	26.2	17313
WA8367	35.7	12706
WA8368	30.0	15120
WA8369	33.4	13581
WB4303	40.1	11311
WB4311	42.9	10573
WB4394	48.7	9314
WB4510CLP	41.5	10930
Whistler	34.4	13186
YSC-1001	37.1	12226
YSC-1002	35.5	12777

2022 WSU Spring Wheat Variety Trial Seed Weight

Name	1000 KW Seeds per (grams)	1000 KW Seeds per Pound	Name	1000 KW Seeds per (grams)	1000 KW Seeds per Pound			
Soft White Common								
AP Coachman	49.1	9248	Alum	46.2	9829			
AP Mondovi CL2	51.9	8740	AP Renegade	47.1	9630			
IDO1404S	39.2	11571	AP Venom	34.6	13129			
IDO1702S	39.6	11469	Buck Pronto	31.1	14585			
IDO1902S	39.8	11411	Chet	49.4	9182			
Louise	55.3	8210	CP3055	37.2	12210			
Ryan	49.3	9210	CP3099A	39.4	11512			
Seahawk	48.0	9460	CP3530	33.4	13581			
Tekoa	43.0	10549	CPX39120	33.2	13683			
TMC Lochaven	28.6	15888	Glee	48.0	9450			
UI Cookie	41.6	10904	Hale (WA8315)	44.4	10216			
WA8321	40.2	11297	Jefferson	41.0	11063			
WA8327	39.2	11586	Jefferson HF	41.9	10838			
WA8351	36.3	12496	Kelse	46.4	9786			
WA8354 CL+	39.6	11469	Net CL+	42.6	10648			
WA8377	41.0	11077	SY Gunsight	41.9	10838			
WA8378	37.8	12016	WA8342	34.7	13091			
WA8379 CL+	36.5	12427	WA8355	37.4	12128			
WA8380 CL+	38.2	11890	WA8356	36.8	12326			
WA8381 CL+	41.2	11023	WA8357	41.6	10917			
WA8382	29.7	15272	WA8358 CL+	36.2	12547			
WA8383	30.4	14921	WA8359	35.0	12960			
WA8384	34.6	13110	WA8375	38.0	11937			
WA8385	30.2	15020	WA8387 CL+	34.6	13110			
WB6121	42.3	10736	WA8388 CL+	38.4	11828			
WB6211CLP	45.4	10002	WA8389 CL+	34.3	13244			
YSC-603	42.4	10711	WB9303	45.9	9893			
YSC-605	42.8	10610	WB9623	40.4	11241			
Soft White Club								
Hedge CL+	44.6	10182	WB9662	44.1	10285			
JD	39.1	11601	WB9668	36.6	12393			
Melba	37.8	12000	Hard White Spring					
Roger	36.9	12292	WA8330	38.8	11706			
			WA8372	31.5	14400			
			WA8373	43.3	10488			
			WA8374	36.3	12513			
			WA8376	44.5	10193			

2022 WSU Spring Barley Variety Trial Seed Weight

Name	1000 KW Seeds per (grams)	Pound	Name	1000 KW Seeds per (grams)	Pound
2-row			2-row		
14WAI-3613.2	43.6	10403	HO516-579	46.7	9723
14WAIM-3604.29	41.7	10877	KWS Amadora	46.2	9829
14WAIM-3620.68	41.4	10970	KWS Jessie	49.1	9238
ACC Connect	49.9	9090	KWS Willis	49.0	9266
ACC Synergy	42.9	10586	LCS Odyssey	42.9	10573
Altorado	53.0	8558	LCS Opera	45.2	10035
BC Ellinor	50.8	8929	Lenetah	47.8	9499
BC Leandra	53.7	8447	Lyon	45.3	10013
BC Lexy	51.9	8740	Oreana	53.7	8455
CDC Copeland	43.9	10332	Palmer	53.8	8439
Claymore	50.4	9009	Survivor	47.4	9580
HO516-429	51.6	8791			

Cultural Data for 2022 WSU Winter Wheat Trial Locations

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Site Information													Soil Type	
			Fertilizer			Latitude	Longitude	Planting Date	Rate	Harvest Date	Season Precip	Drill Type ¹	Opener Spacing	Harvest Area	Soil PH Sample Depth		
			Base	Hard	Trial Additional										seeds/acre	in.	in.
< 12	Bickleton	Spring Wheat	17N 34P 9K 9S 7Cu	67N	46.02633	-120.273038	28-Oct	500,00	11-Aug	10.90	NT-H	10	80	5.23	6.15	Broadax Silt Loam	
	Connell	Fallow	65N, 10S	37N	46.618903	-118.714427	14-Oct	625,000	27-Jul	8.10	DD	7.5	80	5.87	6.12	Ritzville Silt Loam	
	Harrington	Fallow	60N, 10S	N/A	47.400767	-118.400253	20-Sep	500,000	3-Aug	9.23	DD	7.5	80	4.92	5.92	Renslow Silt Loam	
	Horse Heaven	Fallow	11N 27P 7K 7S 5Cu	51N	46.198407	-119.578904	16-Sep	500,000	25-Jul	9.84	NT-H	10	80	6.64	6.94	Ritzville Silt Loam	
	Lind	Fallow	50N, 10S	68N	47.0022892	-118.571657	19-Oct	1,000,000	3-Aug	6.91	DD	7.5	40	5.74	6.32	Ritzville Silt Loam	
	Ritzville	Fallow	50N, 10S	186N	47.136808	-118.472107	21-Oct	625,000	3-Aug	5.98	DD	7.5	80	5.76	6.22	Ritzville Silt Loam	
	St. Andrews	Fallow	50N	102N	47.632103	-119.404575	23-Sep	625,000	9-Aug	8.12	DD	7.5	80	5.65	5.84	Siweeka Complex	
12 to 16	Almira	Fallow	40N	42N	47.872277	-118.914958	9-Sep	900,000	13-Aug	9.96	NT-H	10	80	4.90	5.57	Bagdad Silt Loam	
	Anatone	Fallow	15N 36P 9K 9S 7Cu	97N	46.208208	-117.082124	16-Sep	900,000	8-Aug	14.87	NT-H	10	80	6.33	6.93	Pataha-Neisemberg Silt Loam	
	Creston	Fallow	80N, 10S	None	47.831799	-118.5347	9-Sep	900,000	13-Aug	10.50	NT-H	10	80	4.74	5.68	Bagdad Silt Loam	
	Dusty	Fallow	12N 31P 8K 8S 6Cu	N/A	46.806077	-117.822968	17-Sep	900,000	28-Jul	12.96	NT-H	10	80	5.36	6.13	Onyx Silt Loam	
	Eureka	Fallow	80N, 15S, 15P, 1qt Zn	None	46.324311	-118.600736	5-Oct	900,000	11-Aug	9.23	OSU	12	80	5.15	6.24	Ritzville Silt Loam	
	Lamont	Fallow	85N 10P 10K	100N	47.116037	-117.824207	20-Sep	900,000	5-Aug	11.05	DD	7.5	60	5.48	6.31	Chard Silt Loam	
	Reardan	Fallow	170N	None	47.657434	-117.960768	14-Sep	900,000	19-Aug	11.90	NT-H	10	60	5.02	6.13	Hanning Silt Loam	
16 to 20	Dayton	Billy Beans	120N 12P 21K 15S 16Cl .25B .25Zn	42N	46.417577	-118.056688	30-Sep	900,000	13-Sep	25.38	DD	7.5	60	5.02	5.72	Walla Walla Silt Loam	
	Mayview	Fallow	11N 27P 7K 7S 5Cu	N/A	46.618062	-117.411032	16-Sep	900,000	3-Sep	18.73	NT-H	10	80	4.72	5.36	Athena Silt Loam	
	St.John	Fallow	95N 15P 15K	45N	47.083964	-117.517102	20-Sep	900,000	29-Aug	15.79	DD	7.5	60	5.04	5.68	Athena Silt Loam	
	Walla Walla	Garbonzos	--	140N	46.115405	-118.220786	30-Sep	900,000	16-Aug	18.58	DD	7.5	60	6.16	6.23	Athena Silt Loam	
>20	Colton	Garbonzos	11N 27P 7K 7S 5Cu	N/A	46.560388	-117.123462	29-Sep	1,050,000	26-Aug	27.84	NT-H	10	80	4.93	5.95	Covello Silt Loam	
	Fairfield	Canola	118N 20P 5K 5S 4Cu	N/A	47.412094	-117.041731	17-Sep	1,050,000	17-Aug	19.24	NT-H	10	80	5.12	5.78	Caldwell-Cald Complex	
	Farmington	Peas	--	N/A	47.029137	-117.060259	4-Oct	1,050,000	20-Aug	17.33	NT-H	10	80	5.19	5.64	Thatuna Silt Loam	
	Pullman	Canola	110N 30K 25S .25B	45N	46.688636	-117.116519	24-Sep	1,050,000	27-Aug	19.03	DD	7.5	60	4.38	4.92	Gwin-Tucannon Complex	
Irrigated	Moses Lake Irrig.	Potatoes	--	--	47.091683	-119.036759	21-Oct	1,050,000	18-Aug	5.54	DD	7.5	60	5.87	6.45	Sagemoor Silt Loam	
	Mattawa Irrig.	Potatoes	75N, 50P, 100K, 40S	105N	46.714388	-119.721022	12-Oct	1,050,000	2-Aug	5.69	DD	7.5	60	6.72	6.4	Quincy Loamy Fine Sand	

1-DF = Deep Furrow; DD = Double Disc; H = Hoe openers; NT-H = No-till Hoe, OSU - OSU No-till drill

500,000 Seeds/acre ~ 50 lb/ac

900,000 Seeds/acre ~ 85 lb/ac

1,050,000 Seeds/acre ~ 95 lb/ac

Cultural Data for 2022 WSU Spring Wheat and Barley Variety Trial Locations

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Site Information														Soil Type	
			Fertilizer		Latitude	Longitude	Planting Date	Rate (seeds/acre)		Harvest Date	Season Precip	Soil Moisture	Drill Type ¹	Opener Spacing	Harvest Area	Soil pH (Sample Depth)		
			Base	Additional				Wheat	Barley							1 ft.	6 in	
<12	Bickleton	Spring Wheat	N/A	None	46.045039	-120.246044	30-Mar	650,000	-	13-Sep	5.43	9.67	NT-H	10	80	6.84	6.00	Bickleton Silt Loam
	Horse Heaven	Winter Wheat	16N, 4P, 10K, 10S	None	46.20207	-119.579327	16-Mar	650,000	-	11-Aug	4.67	4.76	NT-H	10	80	7.46	6.69	Ritzville Silt Loam
	Lind	Fallow	50N, 10S	None	47.00711	-118.570054	29-Mar	650,000	-	4-Aug	4.40	4.34	DD	7.5	80	6.36	5.70	Ritzville Silt Loam
12 to 16	Almira	Spring Wheat	14N, 3P, 9K, 9S	None	47.813936	-118.915602	12-Apr	870,000	1,045,000	28-Aug	4.58	6.95	NT-H	10	80	6.31	5.25	Bagdad Silt Loam
	Endicott	Winter Wheat	75N	38N	46.902606	-117.754609	29-Mar	870,000	1,045,000	5-Sep	7.28	8.41	DD	7.5	80	6.11	6.30	Pedigo Silt Loam
	Lamont	Spring Barley	75N, 10P, 10K	None	47.117811	-117.825518	1-Apr	870,000	1,045,000	28-Aug	4.65	7.25	DD	7.5	80	5.88	5.45	Chard Silt Loam
	Reardan	Winter Wheat	8N, 2P, 5K, 5S	None	47.6656014	-118.0333211	7-Apr	870,000	1,045,000	9-Sep	4.15	5.75	NT-H	10	80	6.58	6.32	Hanning Silt Loam
16-20	Dayton	Winter Wheat	90N, 14S	101N	46.359709	-117.945402	29-Apr	870,000	1,175,000	15-Sep	9.27	9.84	DD	7.5	80	5.11	6.26	Athena Silt Loam
	Mayview	Winter Wheat	70N, 10S	50N	46.613834	-117.40721	28-Apr	870,000	1,175,000	3-Sep	6.63	11.08	NT-H	10	80	5.73	4.82	Athena Silt Loam
	Plaza	Winter Wheat	80N, 30P, 20S	None	47.275366	-117.305173	1-Apr	870,000	-	8-Sep	8.16	10.69	DD	7.5	80	5.73	4.83	Tilma-Latah Complex
	St. John	Winter Wheat	75N, 10P, 10K	None	47.081884	-117.514861	7-Apr	870,000	1,175,000	5-Sep	5.88	11.21	DD	7.5	80	5.77	5.52	Palouse-Thatuna Silt Loam
	Walla Walla	Winter Wheat	100N, 10P, 20S	None	46.099102	-118.242516	29-Mar	870,000	1,175,000	1-Sep	8.45	10.34	DD	7.5	80	5.44	5.17	Walla Walla Silt Loam
>20	Fairfield	Spring Wheat	24N, 6P, 15K, 15S	None	47.391431	-117.052686	25-Apr	980,000	1,175,000	8-Sep	6.79	11.14	NT-H	10	80	5.34	4.90	Larkin-Driscoll Complex
	Farmington	Winter Wheat	32N, 8P, 20K, 20S	68N	47.032726	-117.058303	22-Apr	980,000	1,175,000	12-Sep	7.22	10.05	NT-H	10	80	5.62	5.14	Palouse Silt Loam
	Palouse	Winter Wheat	100N, 12P, 15S	202N	46.933033	-117.21923	8-Apr	980,000	1,175,000	5-Sep	8.53	12.86	DD	7.5	80	5.15	5.66	Palouse Silt Loam
	Pullman	Spring Barley	105N, 15P, 20S, 20Cl	136N	46.697333	-117.147967	25-Apr	980,000	1,175,000	27-Aug	6.12	12.12	DD	6	80	5.72	5.48	Palouse Silt Loam
Irrigated	Moses Lake	Potatoes	125N	100N	47.093667	-119.092350	11-Mar	1,090,000	-	5-Aug	2.79	9.35	DD	6	60	5.30	5.40	Shano Silt Loam
	Pasco	Buckwheat	150N, 60P, 60K, 30S	60N	46.542567	-119.134044	11-Mar	1,090,000	-	27-Jul	3.29	5.86	DD	7.5	60	7.03	7.06	Sagehill Very Fine Sandy Loam

¹ - DD = double disc drill; NT-H = No-till Hoe

650,000 Seeds/acre (wheat); 784,000 Seeds/acre (barley) ~ 60 lb/ac

870,000 Seeds/acre (wheat); 1,045,000 Seeds/acre (barley) ~ 80 lb/ac

980,000 Seeds/acres (wheat); 1,175,000 Seeds/acre (barley) ~ 90 lb/ac

1,090,000 Seeds/acre (wheat); 1,300,000 Seeds/acre (barley) ~ 100 lbs/ac

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2022 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 (%)				
Released Varieties															
LCS Blackjack	149	100	149	139	136	61.9	57.7	60.6	60.4	60.0	11.2	11.6	11.1	11.9	11.5
Piranha CL+	148	122	138	127	135	60.9	60.5	60.3	59.9	60.3	10.7	11.1	10.5	11.5	11.0
Norwest Duet	136	125	137	136	134	61.6	61.1	61.5	60.8	61.2	10.4	11.1	10.8	11.6	10.8
LCS Shine	128	126	135	138	133	61.0	59.8	62.2	61.4	61.1	10.8	10.9	11.8	11.4	11.1
Stingray CL+	145	120	141	122	133	61.2	60.0	60.6	59.7	60.3	10.9	11.4	10.9	11.8	11.3
Sockeye CL+	155	116	143	116	133	61.0	59.8	59.4	59.3	59.9	10.5	11.3	10.1	11.2	10.9
AP Exceed	151	106	139	133	132	61.7	60.4	61.6	62.0	61.4	10.7	11.4	10.8	11.6	11.0
YSC-215	158	119	142	108	131	61.3	60.3	61.2	59.0	60.5	10.3	11.2	10.3	11.2	10.6
LCS Jefe (LWW17-8185)	137	123	136	116	130	61.5	61.0	60.5	60.6	60.8	10.2	9.7	10.0	10.7	10.2
VI Voodoo CL+	140	111	134	117	129	60.9	60.1	59.5	59.1	60.0	10.3	10.8	10.8	11.3	10.9
WB1621	138	104	140	127	128	61.9	62.0	63.8	63.5	62.9	10.6	12.1	10.8	11.7	11.2
Resilience CL+	136	110	135	128	128	61.2	61.0	61.1	60.7	61.0	11.0	11.3	10.9	11.4	11.3
SY Dayton	127	113	135	128	127	60.9	59.9	60.8	60.9	60.6	10.8	11.2	10.9	11.5	11.2
SY Assure	138	107	135	126	127	61.6	60.0	60.9	60.6	60.8	11.0	12.1	11.3	12.0	11.6
LCS Hulk	134	108	138	136	127	61.3	60.9	62.2	62.4	61.7	10.9	11.5	10.7	11.8	11.3
Cameo (ARSX09492-6C)	135	125	133	112	127	60.9	60.3	60.1	59.4	60.2	10.8	11.8	11.5	13.0	11.7
AP Dynamic	135	98	136	128	126	62.1	58.9	60.8	60.4	60.5	11.0	11.1	10.6	11.7	11.1
ARS-Selbu 2.0	144	102	136	128	126	60.9	61.8	61.9	61.5	61.5	10.3	12.4	11.1	11.8	11.3
Pritchett	141	131	123	114	125	61.4	59.4	58.3	58.6	59.5	11.2	10.6	10.5	12.0	11.0
Purl	137	108	131	119	125	61.6	61.2	61.1	60.2	61.0	11.2	11.5	10.8	11.7	11.2
Norwest Tandem	126	127	135	114	125	60.4	60.5	60.8	58.9	60.1	10.9	11.1	10.7	11.4	10.9
AP Iliad	129	108	130	123	124	62.2	60.2	59.8	60.2	60.6	11.3	11.8	11.5	11.8	11.7
TMC M-Press	137	101	127	122	121	61.8	59.3	61.2	60.9	60.9	10.7	11.1	10.8	11.6	11.0
UI Magic CL+	129	104	131	100	121	61.1	60.7	60.9	59.4	60.7	10.9	11.6	11.2	11.2	11.1
WB1720	132	104	128	122	120	60.8	60.9	63.4	62.7	62.1	10.8	12.6	11.6	12.3	11.7
TMC M-Pire (TMC2021SWW)	135	100	124	111	118	62.2	60.4	62.3	61.4	61.6	10.4	11.0	11.2	12.2	11.0
ARS-Crescent	141	117	129	100	118	62.0	60.9	60.7	60.3	60.9	10.5	10.9	10.1	11.9	10.9
Appleby CL+	127	105	127	116	118	61.2	61.2	61.9	62.3	61.7	10.8	11.8	11.1	11.6	11.3
WB1529	106	107	116	115	113	61.4	62.4	62.9	62.9	62.6	10.4	11.9	12.4	11.6	11.5
VI Presto CL+	118	92	116	119	111	61.7	60.4	62.4	62.2	61.8	11.0	12.0	11.7	11.6	11.7
Castella	129	127	111	90	110	61.9	62.4	62.5	61.5	62.1	11.2	11.5	11.0	13.5	11.9
Experimental Lines															
WA8307	144	126	145	137	136	62.1	60.0	61.1	60.3	60.9	11.1	11.9	11.1	12.8	11.7
GS3	154	115	139	126	134	61.2	59.4	59.7	59.6	59.9	10.8	10.6	10.8	11.7	10.8
WA8336	159	124	140	114	134	61.2	58.3	59.1	58.6	59.3	10.5	10.2	9.8	11.1	10.5
LWW17-5877	140	108	145	130	132	61.9	59.0	61.1	60.4	60.5	10.7	11.9	10.8	11.9	11.3
LWW19-6219	146	103	145	128	131	61.9	60.6	61.8	60.9	61.2	10.7	11.6	11.2	11.9	11.2
LWW19-6591	144	110	142	134	131	61.6	60.0	61.5	60.9	60.9	11.2	11.2	10.4	11.8	11.2
YSC-93	150	114	134	120	131	62.1	60.7	60.4	60.1	60.8	11.2	10.8	10.2	11.5	10.8
UIL15-028024	136	119	136	130	130	62.2	62.0	62.9	63.2	62.5	11.0	11.7	10.4	11.0	11.0
UIL14-085001A	148	110	140	133	130	60.8	59.6	60.0	59.7	59.9	10.7	11.4	10.8	12.0	11.1
WA8346 AX	149	118	133	113	127	61.7	61.7	60.3	60.1	60.9	10.8	10.9	10.7	12.0	11.3
OR2130755	130	115	137	131	127	61.4	60.5	60.7	60.9	61.0	10.4	11.6	10.6	11.8	11.3
ARSX09500-17CBW	137	112	135	114	126	61.0	61.9	61.8	61.7	61.6	10.6	11.5	10.7	12.3	11.3
WA8345 AX	141	127	135	118	125	61.2	61.6	61.4	61.3	61.3	10.6	11.1	10.6	12.3	11.4
UIL17-7706 CL+	125	115	134	119	122	62.0	60.1	61.6	60.8	61.1	11.3	11.2	10.7	11.6	11.3
ARS14DH1014-C	129	131	128	99	121	61.2	60.1	60.5	60.4	60.7	10.3	10.9	10.0	11.8	10.7
09PN118-02 CL2	132	86	138	123	120	60.9	59.6	61.9	61.0	60.7	11.1	11.9	11.1	11.7	11.5
WA8349 AX	134	100	135	109	120	61.2	60.6	61.9	61.9	61.4	10.9	11.6	11.1	12.3	11.7
OR5180071	128	108	126	117	119	61.7	61.0	60.9	62.0	61.3	11.0	10.9	10.8	12.1	11.2
WA8366	142	94	128	108	115	60.7	59.4	60.4	59.6	60.0	11.0	11.7	10.6	12.0	11.3
WA8370	131	104	129	107	115	62.9	61.5	61.5	61.1	61.8	11.7	11.0	10.8	11.5	11.3
WA8347 AX	124	106	126	104	115	61.3	62.1	62.6	62.1	62.0	11.2	11.8	11.4	12.5	11.8
OR2190025CL+	127	91	119	107	113	61.8	58.7	60.6	59.0	60.0	11.2	11.9	11.5	12.7	11.9
OR2190027 CL+	121	84	116	102	110	61.4	58.5	61.0	61.0	60.6	10.6	12.5	11.8	12.5	11.7
C.V.	4	7	5	8	7	1.4	1.2	0.9	1.0	1.2	5.3	3.7	2.7	2.2	4.6
LSD (0.05)	11	16	15	20	7	1.9	1.6	1.1	1.3	0.6	1.2	0.9	0.6	0.6	0.4
Average	137	111	133	120	125	61.5	60.4	61.1	60.7	60.9	10.8	11.4	10.9	11.8	11.2
Highest	159	131	149	139	136	62.9	62.4	63.8	63.5	62.9	11.7	12.6	12.4	13.5	11.9
Lowest	106	84	111	90	110	60.4	57.7	58.3	58.6	59.3	10.2	9.7	9.8	10.7	10.3

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

2022 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone = 16-20"

Variety Name <i>Club Italicized</i>	Dayton	Mayview	St. John	Average	Dayton	Mayview	St. John	Average	Dayton	Mayview	St. John	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
Released Varieties												
LCS Jefe (LWW17-8185)	107	136	121	125	58.2	61.6	61.7	60.6	10.7	7.6	10.0	9.2
LCS Shine	100	135	142	125	58.0	59.8	61.5	59.8	11.3	7.7	10.7	10.0
LCS Blackjack	105	134	134	125	57.6	58.0	60.7	58.7	11.1	8.3	10.6	10.1
Norwest Tandem	109	133	110	120	59.5	61.0	60.8	60.5	10.8	8.9	10.6	10.0
AP Exceed	111	121	127	119	60.4	61.8	62.1	61.2	10.2	8.4	10.9	9.8
TMC M-Press	112	130	118	119	59.7	60.1	61.4	60.5	10.5	8.9	10.7	9.9
Purl	100	125	129	118	59.0	60.4	62.1	60.7	11.4	8.5	11.1	10.3
Norwest Duet	98	133	119	118	57.4	61.5	61.3	60.0	11.6	8.7	10.1	10.1
TMC M-Pire (TMC2021SWW)	116	127	114	118	60.3	60.8	62.6	61.3	11.5	8.3	10.9	10.2
VI Voodoo CL+	108	122	123	117	59.1	60.6	61.2	60.0	11.3	8.3	10.6	10.3
AP Dynamic	109	120	126	117	58.2	60.2	61.5	59.9	11.2	9.0	11.0	10.3
WB1529	112	123	111	117	61.9	62.2	62.6	62.3	10.8	9.2	11.3	10.3
SY Assure	115	118	114	116	61.4	61.2	61.6	61.5	11.0	9.4	11.3	10.4
Sockeye CL+	111	139	105	116	58.7	59.1	59.7	59.3	11.0	8.2	10.0	9.9
SY Dayton	110	115	125	116	59.3	60.2	62.3	60.4	10.8	8.2	10.8	10.0
Resilience CL+	100	127	124	115	59.6	60.7	61.8	60.8	12.5	9.1	11.0	10.7
Cameo (ARSX09492-6C)	97	123	120	115	57.6	59.2	61.6	59.6	11.9	8.8	10.9	10.5
LCS Hulk	97	123	131	115	58.6	60.8	62.3	60.7	12.3	8.8	11.1	10.9
Piranha CL+	98	129	114	113	59.4	60.2	60.5	59.9	11.1	8.1	10.3	9.9
Stingray CL+	97	128	123	113	57.7	61.0	61.1	59.9	12.7	8.5	10.8	10.7
ARS-Selbu 2.0	102	118	122	113	59.8	61.5	62.8	61.5	12.0	9.0	11.2	10.8
UI Magic CL+	96	124	96	112	60.3	61.1	61.4	61.0	11.2	9.3	11.0	10.4
WB1621	110	116	116	111	62.3	61.8	64.2	62.8	10.6	8.4	10.6	10.0
WB1720	97	128	119	109	59.1	61.5	63.5	61.3	12.6	9.1	10.9	11.1
AP Illiad	110	110	108	109	60.2	60.3	60.9	60.5	10.7	9.2	11.7	10.5
YSC-215	103	128	86	106	60.1	61.1	57.4	59.2	10.2	7.9	10.4	9.5
VI Presto CL+	92	112	127	106	61.0	61.6	63.0	61.6	11.5	9.3	10.9	10.7
Pritchett	92	118	101	106	57.2	57.9	59.4	58.2	11.3	8.2	10.5	10.1
Appleby CL+	96	107	119	104	59.5	60.2	62.5	60.6	11.8	9.0	10.7	10.6
ARS-Crescent	85	115	106	101	57.3	60.3	61.9	59.7	11.0	8.1	10.4	9.7
Castella ¹	--	--	91	--	59.8	60.1	62.7	60.9	11.3	8.2	12.4	10.5
Experimental Lines												
GS3	107	141	121	126	58.7	60.4	60.8	59.9	11.0	8.5	10.7	10.0
YSC-93	107	138	109	121	58.2	60.9	61.2	60.0	10.6	8.2	10.1	9.4
UIL14-085001A	89	130	134	119	56.4	60.2	61.0	59.3	12.1	8.5	10.3	10.5
LWW17-5877	111	124	120	119	59.5	61.0	61.9	61.0	11.6	9.0	11.3	10.5
LWW19-6219	111	119	122	119	60.1	60.6	62.0	61.0	11.0	9.1	11.3	10.4
WA8336	96	134	126	118	55.5	59.0	60.5	58.3	10.3	7.6	10.4	9.5
LWW19-6591	107	129	123	118	60.1	61.4	61.2	60.8	11.4	8.8	10.5	10.5
ARSX09500-17CBW	105	124	117	115	60.9	61.1	63.0	61.5	11.1	8.6	10.8	10.1
OR2130755	100	119	117	115	58.6	60.2	61.9	60.6	11.9	8.9	11.2	10.6
UIL17-7706 CL+	96	120	124	112	59.1	61.2	62.3	60.9	12.0	8.8	10.6	10.4
UIL15-028024	93	122	120	112	60.3	61.1	63.1	61.6	11.2	7.8	9.9	9.5
WA8346 AX	92	120	111	111	57.7	60.9	61.2	60.1	11.3	8.3	10.7	10.1
09PN118-02 CL2	98	113	120	111	57.9	60.4	61.2	59.8	12.6	9.0	10.7	10.8
OR2190025CL+	99	119	117	111	58.4	59.4	61.5	59.7	12.0	8.7	11.4	10.6
OR2190027 CL+	114	107	104	110	62.4	60.9	61.9	61.6	11.0	9.3	11.8	10.6
WA8370	104	119	108	110	60.0	61.4	62.3	61.1	11.0	8.6	10.7	10.1
WA8345 AX	98	123	103	106	58.8	61.6	61.5	60.3	11.4	8.7	11.0	10.6
WA8307	97	100	126	105	56.1	59.8	61.5	59.3	12.3	8.6	11.3	10.6
OR5180071	83	117	105	105	58.3	59.4	62.0	60.1	11.9	8.5	10.9	10.2
WA8349 AX	82	109	106	102	59.0	60.7	62.4	60.7	12.6	8.7	11.4	10.9
WA8366	93	117	107	101	57.3	59.8	60.4	59.0	12.0	8.2	10.6	10.6
WA8347 AX	79	107	100	98	59.6	60.8	63.4	61.2	12.7	8.9	11.3	11.0
ARS14DH1014-C ¹	--	115	91	--	57.9	58	60.5	59.0	11.4	8	10.8	10.0
C.V. %	7	4	6	8	1.7	1.1	0.9	1.5	7.3	4.2	3.3	6.9
LSD (0.05)	13	8	13	9	2.2	1.5	1.3	0.8	1.8	0.8	0.7	0.7
Average	100	122	116	113	59.1	60.5	61.6	60.4	11.4	8.6	10.8	10.3
Highest	116	141	142	126	62.4	62.2	64.2	62.8	12.7	9.4	12.4	11.1
Lowest	72	100	86	86	55.5	57.9	57.4	58.2	10.2	7.6	9.9	9.2

¹ Varieties eaten by deer.

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

2022 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone = 12-16"

Variety Name <i>Club Italicized</i>	Almira	Anatone	Creston	Eureka	Lamont	Reardan	Average	Almira	Anatone	Creston	Eureka	Lamont	Reardan	Average	Almira	Anatone	Creston	Eureka	Lamont	Reardan	Average
	Yield (Bu/A)							Test Wt (Lbs/Bu)							Protein (%)						
Released Varieties																					
TMC M-Press	115	80	89	127	115	97	108	62.7	59.3	62.2	63.9	61.8	62.6	61.3	9.1	6.7	11.8	9.2	9.6	10.5	8.6
Piranha CL+	111	78	81	122	110	105	108	62.3	60.3	62.2	61.6	61.0	62.1	61.4	9.0	6.7	11.6	8.9	9.8	11.1	8.2
Sockeye CL+	106	78	92	123	109	118	104	61.8	59.9	61.7	60.9	60.1	61.9	61.2	10.0	6.8	11.1	9.2	9.7	11.5	8.6
Devote	106	73	73	113	108	106	102	64.3	62.1	62.6	64.5	63.2	63.3	63.2	9.6	7.2	12.0	10.6	9.6	10.2	8.9
Norwest Duet	120	72	88	123	113	115	101	62.7	60.8	61.4	63.4	61.6	62.2	61.7	9.1	6.7	11.6	9.5	9.4	10.0	9.1
AP Iliad	102	66	59	119	111	69	100	63.0	59.5	61.2	63.6	61.7	61.7	62.1	9.8	7.5	12.5	9.7	10.8	12.4	9.4
AP Dynamic	105	63	73	111	118	97	100	62.1	60.4	60.3	62.7	61.3	61.4	61.6	9.5	7.3	12.2	9.3	10.5	10.8	9.5
LCS Jefe (LWW17-8185)	124	78	81	121	122	95	98	63.6	60.6	62.4	63.3	61.9	62.5	62.9	8.4	6.5	10.2	8.6	9.5	10.2	9.0
LCS Shine	107	85	60	121	132	103	98	61.7	58.7	60.2	63.2	61.0	62.3	60.7	9.5	6.7	11.0	8.9	10.0	10.5	9.2
Castella	112	74	91	121	111	106	97	63.7	61.1	62.3	64.7	63.2	63.6	63.2	9.4	7.1	11.3	9.4	10.5	10.3	8.9
Norwest Tandem	103	80	77	105	116	115	97	62.7	60.7	61.4	64.1	61.7	62.3	62.1	9.7	7.0	11.4	9.1	10.1	10.2	9.1
Pritchett	105	78	74	123	121	120	96	61.4	59.4	60.6	61.6	60.0	62.0	60.7	9.5	6.4	11.6	9.0	10.3	10.8	9.3
YSC-215	106	80	55	90	102	91	95	63.0	60.9	61.9	63.2	61.1	62.3	62.5	8.6	6.9	11.9	8.0	9.6	11.0	8.1
AP Exceed	108	75	87	132	112	95	95	63.4	60.7	63.2	65.1	62.2	63.3	62.9	9.6	6.6	10.8	9.2	10.3	10.8	9.1
TMC M-Pire (TMC2021SWW)	102	71	84	115	117	86	95	63.6	60.7	62.8	65.6	63.0	63.1	63.1	10.8	7.4	11.4	9.4	9.8	11.2	10.0
Curiosity CL+	101	72	66	104	97	104	92	63.1	61.0	62.2	61.1	59.9	62.7	62.0	9.5	6.8	12.0	9.0	9.9	10.9	9.4
LCS Sonic	107	68	80	116	117	107	92	62.5	58.9	61.0	63.6	61.3	62.2	61.4	9.5	7.0	11.9	8.8	10.1	11.1	9.1
Stingray CL+	95	68	73	105	110	105	92	62.1	60.3	60.9	61.2	61.0	62.0	61.5	11.2	6.7	12.9	9.5	10.4	11.3	10.4
ARS-Crescent	96	80	56	106	118	104	91	61.9	60.4	61.0	63.1	61.5	61.8	61.0	10.2	6.5	12.8	9.1	10.1	10.7	9.7
WB1529	98	70	78	104	113	78	86	64.5	62.2	63.5	65.7	64.0	64.4	63.8	9.9	7.7	12.4	9.5	10.4	12.6	9.4
UI Magic CL+	88	70	66	89	102	73	85	63.5	60.8	62.8	60.8	61.6	62.6	62.6	10.6	7.4	12.7	9.4	11.0	12.5	9.5
VI Voodoo CL+	86	65	64	103	119	71	84	63.1	59.2	61.6	60.9	61.2	61.2	62.2	10.7	7.2	12.9	9.4	10.0	11.9	9.8
Otto	90	75	61	107	102	103	83	62.3	60.4	61.3	62.7	60.4	61.7	61.4	10.2	7.0	12.4	10.2	10.1	10.6	9.1
VI Frost	96	68	63	110	110	83	82	63.7	60.3	61.5	64.3	62.1	62.5	62.9	10.4	7.4	12.7	9.7	10.4	11.1	10.3
LCS Blackjack	101	70	71	119	116	96	80	61.2	57.2	60.0	61.6	60.4	61.2	60.1	9.9	7.1	11.7	9.4	10.3	10.3	10.3
LCS Hulk	89	78	66	112	117	103	79	63.1	60.7	62.0	64.3	62.5	63.2	62.0	10.6	7.2	12.4	9.4	10.1	11.2	9.7
VI Presto CL+	83	67	60	101	109	87	74	63.8	61.1	62.8	63.0	63.3	63.3	62.8	10.8	7.3	12.4	9.7	10.8	11.4	10.8
Mela CL+	83	76	60	90	95	99	72	63.4	61.4	62.6	60.9	59.7	62.0	62.5	10.6	6.8	12.4	9.5	10.3	11.1	10.3
Appleby CL+	80	63	54	106	101	77	67	62.7	61.0	61.3	61.8	62.8	62.7	62.0	11.6	7.8	12.9	9.5	10.7	12.0	11.7
Experimental Lines																					
LWW19-2232	112	73	72	127	120	104	104	62.0	61	61.1	63.3	61.7	61.5	60.7	10.7	7	11.7	9.0	9.2	10.6	9.0
LWW17-5877	113	75	72	116	124	82	99	63.2	60.4	61.2	64.7	62.1	62.3	61.9	10.5	7.6	12.4	10.0	10.5	12.2	10.8
LWW19-6219	104	77	73	117	121	102	98	63.4	61.0	61.4	64.0	62.2	62.6	62.1	9.1	7.5	13.0	10.0	10.4	11.7	9.9
UIL 17-7706 CL+	99	73	60	105	110	93	97	62.8	60.8	61.7	62.0	61.7	62.1	62.1	9.9	7.4	12.9	10.1	10.5	11.7	9.9
GS3	102	74	75	114	124	110	97	62.6	59.7	60.7	63.0	61.2	62.0	61.7	10.0	6.6	12.3	9.1	10.1	10.4	9.2
WA8334	116	74	85	118	115	95	96	63.6	61.5	62.9	64.2	62.2	63.0	63.1	10.9	6.8	11.1	9.0	9.8	10.1	9.2
UIL 15-028024	102	69	68	104	119	95	96	63.8	61.4	63.1	64.3	63.4	62.8	63.6	10.0	7.4	11.3	9.0	9.3	11.2	8.3
WA8345 AX	106	71	74	111	110	112	95	62.7	60.2	61.7	64.1	62.4	62.8	62.3	9.3	6.8	12.4	9.2	10.4	11.0	9.6
YSC-93	103	76	74	111	111	97	95	62.8	60.0	61.1	62.7	61.0	61.7	62.2	10.1	6.8	11.9	8.9	9.6	11.1	9.0
WA8346 AX	101	73	75	123	113	109	95	63.2	59.8	61.1	63.8	61.8	62.4	62.1	10.3	6.7	12.4	9.1	10.4	10.6	9.0
09PN118-02 CL2	104	64	83	99	112	93	94	62.5	59.9	60.7	61.3	61.7	62.3	61.5	10.3	7.4	12.2	9.9	10.4	11.0	10.4
LWW19-6591	102	73	72	127	117	105	94	63.5	60.0	62.2	64.3	62.6	63.1	62.2	10.6	7.1	12.2	9.7	9.7	10.9	9.8
WA8365	102	69	64	102	106	89	94	63.3	60.9	61.4	63.6	62.3	63.1	62.3	9.3	6.6	11.6	8.9	9.9	10.5	8.7
ARS141114-64C	97	71	68	111	80	100	94	64.1	61.7	62.3	64.8	62.9	62.9	63.1	10.8	6.9	12.4	9.2	11.0	11.3	9.5
WA8348 AX	101	78	69	110	103	97	91	63.5	60.4	62.4	64.2	63.0	63.3	62.7	9.6	6.5	12.2	9.3	10.0	11.3	8.8
OR2130755	96	72	66	111	114	92	89	62.9	60.3	61.8	63.7	62.4	62.3	62.4	10.1	6.8	12.1	9.6	10.2	11.3	10.5
WA8347 AX	92	76	61	104	106	93	88	63.9	60.9	62.4	64.8	63.0	63.5	63.5	10.6	7.1	12.3	9.3	10.5	12.2	9.9
ARS13659-4C	94	67	77	100	88	103	88	62.7	59.9	61.7	63.7	61.9	61.9	61.8	10.6	7.3	12.6	9.6	10.8	11.7	10.7
ARS12097-12C	99	79	69	114	114	109	86	61.7	60.4	60.7	63.3	61.3	61.7	61.3	11.3	6.3	12.7	9.0	9.6	10.3	10.6
OR2190027 CL+	97	71	67	104	108	75	85	63.3	59.6	61.4	62.1	62.4	60.6	62.3	10.8	7.4	12.5	10.2	10.6	12.4	9.7
OR5180071	93	68	53	99	114	92	85	63.1	60.8	62.4	63.6	63.2	62.0	62.2	10.8	7.1	12.3	8.6	10.3	11.0	10.2
OR2190025 CL+	94	62	61	101	110	75	82	62.7	58.1	60.3	60.8	61.8	61.4	62.0	10.6	7.5	12.5	9.2	10.2	11.2	10.4
UIL 14-085001A	95	67	70	106	123	93	80	61.5	60.1	59.8	62.3	60.9									

2022 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone <12"

Variety Name (Club <i>Italicized</i>)	Connell	Harrington	Horse Heaven	Lind	Average	Connell	Harrington	Horse Heaven	Lind	Average	Connell	Harrington	Horse Heaven	Lind	Average
							Test Wt (Lbs/Bu)				Protein (%)				
Released Varieties															
Sockeye CL+	65	77	62	52	63	62.3	62.0	60.9	63.2	62.1	10.0	8.3	8.6	10.8	9.4
LCS Jefe (LWW17-8185)	63	73	61	54	62	63.0	62.8	61.5	63.3	62.7	9.4	8.1	7.8	10.1	9.0
LCS Shine	56	64	64	49	61	62.6	60.0	60.6	62.7	61.4	9.9	8.4	8.1	10.2	9.1
<i>Pritchett</i>	60	64	61	48	60	62.3	61.2	60.5	63.1	61.8	10.2	7.9	8.9	10.7	9.4
Piranha CL+	64	70	59	51	60	63.1	62.6	61.6	63.5	62.6	10.3	8.2	8.3	10.9	9.5
Curiosity CL+	55	63	58	47	58	63.3	63.1	61.5	63.5	62.9	10.9	8.0	8.3	11.2	9.7
TMC M-Press	59	68	60	50	58	63.5	61.6	62.0	63.4	62.6	10.1	8.2	8.6	11.0	9.5
Norwest Tandem	57	54	64	49	58	63.2	61.7	61.6	63.2	62.5	10.9	8.4	9.0	11.8	10.0
Devote	57	63	57	48	58	64.1	64.4	62.4	64.2	63.7	10.9	8.3	9.3	11.5	10.0
LCS Sonic	57	60	58	50	57	61.7	61.1	61.0	62.2	61.4	11.1	8.3	8.6	11.4	9.8
<i>Castella</i>	59	67	58	51	57	63.8	62.3	61.9	64.1	63.1	10.1	8.2	8.4	10.9	9.4
Norwest Duet	58	62	57	47	57	61.9	62.5	61.1	62.0	61.9	10.6	8.7	8.6	11.6	9.8
TMC M-Pire (TMC2021SWW)	60	62	65	45	57	63.7	63.0	63.0	64.1	63.5	10.5	9.2	8.8	11.7	10.1
AP Exceed	60	63	57	44	55	64.0	63.3	63.0	64.2	63.6	10.0	8.7	8.4	10.7	9.5
YSC-215	55	65	59	45	55	63.1	62.5	61.8	63.8	62.8	10.7	8.1	8.6	11.5	9.8
AP Dynamic	56	64	60	44	55	61.7	61.2	60.9	61.3	61.3	10.8	8.5	9.3	11.6	10.1
<i>Otto</i>	56	63	52	44	54	62.4	63.2	61.1	62.9	62.4	10.9	8.6	9.2	11.8	10.1
Mela CL+	53	64	50	42	54	63.0	63.2	61.1	63.2	62.7	10.7	8.1	8.6	11.7	9.8
Stingray CL+	55	64	51	45	54	62.8	61.8	61.7	62.5	62.1	11.9	8.8	9.9	12.5	10.8
<i>ARS-Crescent</i>	53	64	50	47	54	62.5	61.5	60.0	62.5	61.6	10.9	8.0	8.9	11.4	9.8
LCS Hulk	52	60	56	47	54	63.1	62.6	62.2	62.9	62.7	11.5	8.9	8.8	11.9	10.3
WB1529	50	60	58	47	53	64.7	63.5	63.3	64.9	64.0	11.4	9.1	9.1	12.4	10.5
VI Frost	52	59	54	41	52	63.1	62.2	61.7	62.7	62.4	11.8	9.9	9.2	12.4	10.8
Appleby CL+	52	51	53	42	52	63.6	63.2	62.4	62.5	62.9	11.6	9.6	9.1	12.3	10.7
VI Presto CL+	50	59	46	43	50	64.1	63.6	63.1	63.7	63.6	12.0	9.1	9.6	12.7	10.9
Experimental Lines															
09PN118-02 CL2	61	64	62	46	60	62.1	61.3	61.3	61.6	61.5	11.2	8.9	8.8	11.8	10.2
LWW19-2232	63	65	59	51	59	62.6	62.1	60.4	62.4	61.8	10.2	8.6	8.2	11.1	9.5
LWW19-5862	62	65	54	46	59	61.2	60.2	59.9	61.4	60.7	10.9	8.8	8.8	11.7	10.0
WA8334	59	68	54	46	57	63.1	63.4	62.5	63.8	63.1	10.4	8.0	8.7	10.7	9.4
LWW19-6219	60	61	52	50	57	63.1	62.4	62.3	63.0	62.7	11.3	8.5	8.9	12.4	10.2
WA8364	58	64	57	50	57	63.7	62.9	62.3	63.9	63.1	11.2	8.6	8.7	12.3	10.2
GS2	59	64	60	47	57	63.5	63.6	63.1	63.2	63.3	11.5	8.3	9.1	11.9	10.2
GS3	59	65	61	47	57	61.9	62.3	61.2	62.6	62.0	11.0	8.8	8.6	11.9	10.1
UIL14-085001A	59	63	55	46	56	61.3	61.7	60.0	61.1	61.0	11.2	9.5	9.1	11.9	10.5
ARS12097-12C	54	68	63	47	56	62.9	61.6	61.2	63.0	62.2	10.9	8.1	8.2	11.4	9.7
WA8365	55	65	57	47	56	63.4	62.8	61.8	62.9	62.7	10.7	9.3	8.2	10.9	9.7
WA8346 AX	56	65	55	49	55	62.5	61.4	60.8	62.3	61.6	11.0	8.2	7.9	11.3	9.6
LWW19-6591	58	70	57	47	55	63.4	62.6	62.3	63.4	63.0	11.1	8.4	8.6	11.7	9.9
UIL16-478001	58	61	54	48	55	61.3	62.6	61.5	62.2	62.0	11.4	8.7	8.4	11.5	10.0
WA8348 AX	54	65	55	47	55	64.3	63.7	63.0	63.4	63.7	11.2	9.2	8.5	12.4	10.3
YSC-93	55	62	58	48	55	63.2	62.1	61.6	63.6	62.7	11.0	8.6	8.9	11.7	10.1
WA8362	51	65	63	45	55	61.6	61.4	61.7	62.2	61.7	11.4	8.5	9.2	11.8	10.2
WA8347 AX	59	63	54	44	55	63.9	63.9	62.1	64.6	63.6	11.1	9.3	9.2	12.1	10.4
LWW17-5877	54	67	57	44	55	62.5	63.4	62.6	63.3	63.0	12.2	9.9	9.6	12.1	11.0
WA8345 AX	56	67	59	46	54	62.3	61.8	61.7	62.4	62.1	11.3	9.0	8.6	11.7	10.2
OR2130755	54	59	54	45	54	62.2	61.4	61.6	62.0	61.8	11.0	8.5	9.5	11.5	10.0
WA8363	55	61	58	44	53	63.6	62.4	62.3	63.1	62.9	10.5	8.6	8.9	11.7	10.1
UIL15-028024	55	57	50	47	52	63.6	63.8	62.5	63.9	63.4	11.0	8.8	8.9	11.0	9.9
ARS13659-4C	52	59	55	47	52	63.4	62.8	60.9	63.2	62.6	12.0	8.8	8.5	11.8	10.2
ARS141114-64C	55	63	52	46	52	63.8	63.7	62.5	63.4	63.4	10.8	8.1	8.5	11.9	9.8
UIL17-7706 CL+	56	53	51	40	51	63.4	62.4	62.2	63.1	62.8	11.6	9.1	8.8	12.3	10.6
OR2190027 CL+	53	58	53	40	51	63.5	63.0	62.0	63.4	63.0	11.5	10.0	8.4	12.2	10.5
OR2190025 CL+	51	57	51	47	51	61.9	61.8	60.5	62.6	61.8	11.2	8.8	8.7	12.1	10.3
OR2170559	47	58	50	37	49	61.9	61.5	61.5	62.3	61.9	12.5	8.9	9.4	13.7	11.1
C.V.	6	5	8	5	9	0.7	0.8	0.7	0.6	0.8	3.4	5.7	5.0	3.7	5.0
LSD	7	6	8	5	4	1.0	1.0	1.0	0.8	0.4	0.8	1.1	1.0	0.9	0.4
Average	56	63	57	46	56	62.9	62.4	61.7	63.0	62.5	11.0	8.7	8.8	11.7	10.0
Highest	65	77	65	54	63	64.7	64.4	63.3	64.9	64.0	12.5	10.0	9.9	13.7	11.1
Lowest	47	51	46	37	49	61.2	60.0	59.9	61.1	60.7	9.4	7.9	7.8	10.1	9.0

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

2022 WSU Variety Testing Soft White Winter Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name	Mattawa	Moses Lake	Average	Mattawa	Moses Lake	Average	Mattawa	Moses Lake	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
LCS Blackjack	166	153	160	62.3	56.6	59.6	12.8	11.9	12.4
LCS Shine	153	149	159	63.2	54.7	59.2	12.3	11.6	11.8
AP Exceed	136	157	157	63.8	57.0	60.7	12.3	11.6	11.7
LCS Jefe (LWW17-8185)	152	139	153	62.9	56.5	59.8	11.8	11.3	11.5
LCS Hulk	152	147	151	62.7	59.1	60.9	13.0	12.6	12.7
LCS Artdeco	150	155	150	62.7	53.1	57.9	11.5	10.9	11.3
SY Dayton	127	139	144	62.6	57.2	59.9	12.1	12.2	12.0
AP Iliad	140	142	142	61.7	57.5	59.6	12.5	12.9	12.7
Norwest Tandem	132	140	134	60.4	54.8	57.7	12.1	11.7	11.9
TMC M-Pire (TMC2021SWW)	154	118	134	63.2	53.9	58.4	11.9	12.5	12.4
ARS-Selbu 2.0	124	147	132	62.4	56.7	59.4	13.0	12.6	12.9
YSC-215	132	137	127	63.5	55.2	59.3	13.1	11.5	12.5
TMC M-Press	135	130	127	61.9	55.8	58.8	12.1	12.2	12.3
Purl	108	126	119	62.2	58.7	60.5	12.7	12.2	12.6
Sockeye CL+	103	121	115	60.9	57.0	59.1	12.7	11.6	12.1
<i>Experimental Lines</i>									
LWW19-6219	136	158	148	62.3	58.4	60.3	12.8	12.8	12.5
LWW19-6591	131	152	146	62.8	56.9	59.7	12.6	12.2	12.5
GS3	138	158	146	60.8	56.5	58.5	13.1	12.5	12.7
OR2160264	142	140	145	62.2	56.1	59.3	12.7	12.4	12.4
OR2170559	147	137	143	60.9	55.0	58.2	13.4	13.0	13.1
UIL16-072025	123	145	141	62.0	59.3	60.6	12.8	12.3	12.5
OR2160243	129	147	140	62.3	55.8	59.1	12.5	12.4	12.6
LWW17-5877	129	146	135	61.7	55.9	58.9	12.4	12.0	12.2
WA8307	119	153	133	61.3	57.6	59.2	13.3	13.0	13.0
WA8366	123	149	133	59.9	57.9	58.7	12.8	12.2	12.7
WA8335	135	133	131	59.4	52.5	55.9	12.8	12.9	12.6
OR2190027 CL+	135	131	130	62.9	58.1	60.6	12.5	12.6	12.6
UIL14-085001A	123	129	127	60.0	57.1	58.8	12.8	12.4	12.5
WA8345 AX	113	138	126	61.3	57.1	59.2	12.8	12.4	12.7
OR2190025 CL+	130	118	122	61.7	55.2	58.3	13.4	12.6	12.9
WA8347 AX	115	142	121	62.0	59.3	60.5	12.6	12.6	12.8
WA8336	127	114	120	57.7	52.6	55.4	11.9	11.6	11.7
WA8349 AX	103	138	116	62.6	58.5	60.6	13.4	12.6	13.2
YSC-217	110	119	116	61.7	57.0	59.1	12.6	12.2	12.5
WA8346 AX	109	129	113	60.5	58.3	59.4	12.9	12.4	12.7
YSC-93	117	118	112	61.5	56.3	58.9	11.8	11.2	11.5
C.V. %	9	5	9	1.5	1.5	1.7	3.4	2.8	4.0
LSD (0.05)	22	14	14	2.1	1.9	1.2	1.0	0.8	0.6
Average	131	139	135	61.8	56.5	59.3	12.6	12.2	12.4
Highest	166	158	161	63.8	59.3	60.9	13.4	13.0	13.2
Lowest	103	114	112	57.7	52.5	55.4	11.5	10.9	11.3

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



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 2021-2022, 8 loc/yr			3 Years 2020-2022, 12 loc/yr			5 Years 2018-2022, 20 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Piranha CL+	102	58.8	11.0	118	60.0	10.7			
LWW17-5877	102	59.3	11.4						
LCS Blackjack	101	56.8	11.6	116	57.9	11.1	120	58.0	10.4
WA8307	101	57.5	11.8	112	58.4	11.2			
Sockeye CL+	100	58.9	10.9	115	59.8	10.5			
WA8336	100	56.1	10.8						
LCS Shine	99	58.6	11.2	114	59.8	10.7			
Stingray CL+	99	58.2	11.8	111	59.2	11.4	111	59.7	10.9
VI Voodoo CL+	99	58.2	11.4						
Norwest Duet	99	59.0	11.2	112	59.9	10.7	114	59.9	10.3
YSC-93	98	59.3	11.2						
AP Exceed	97	59.7	10.9						
LCS Jefe (LWW17-8185)	97	58.6	10.6						
SY Dayton	97	59.2	11.4	110	60.1	10.8	112	60.2	10.3
AP Iliad	96	58.6	11.7	108	59.9	11.3			
Norwest Tandem	96	58.2	11.2	109	59.4	10.9	111	59.7	10.4
AP Dynamic	96	57.0	11.5	107	58.4	11.0			
Cameo (ARSX09492-6C)	96	57.5	12.3	110	59.2	11.8			
Resilience CL+	94	59.2	11.6	106	60.3	11.2	106	60.5	10.8
YSC-215	94	59.3	11.3	107	60.5	10.7			
ARSX09500-17CBW	93	59.7	12.1						
LCS Hulk	93	59.1	11.8	109	60.6	11.2	113	61.0	10.7
Pritchett	93	58.1	11.8	107	58.4	11.1			
Purl	92	59.0	11.5	108	60.2	10.9	110	60.5	10.4
ARS-Selbu 2.0	91	58.7	11.8						
TMC M-Press	91	59.0	11.3	108	60.0	10.9	110	60.1	10.3
09PN118-02 CL2	91	58.6	11.7						
UI Magic CL+	90	59.4	11.5	102	60.3	11.2	104	60.8	10.7
ARS-Crescent	87	56.8	11.7	101	58.2	11.0	107	58.7	10.2
VI Presto CL+	87	60.8	11.6						
Castella	86	58.2	12.0	101	59.6	11.3	107	59.8	10.6
C.V. %	6	1.2	3.3	6	1.1	3.5	6	1.0	3.3
LSD	4	0.4	0.2	4	0.3	0.2	3	0.2	0.1
Average	95	58.6	11.5	109	59.5	11.0	110	59.9	10.5
Highest	102	60.8	12.3	118	60.6	11.8	120	61.0	10.9
Lowest	86	56.1	10.6	101	57.9	10.5	104	58.0	10.2

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 2021-2022, 6 loc/yr			3 Years 2020-2022, 10 loc/yr			5 Years 2018-2022, 17 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
LCS Shine	116	59.9	10.1	117	61.0	9.7			
LCS Blackjack	113	57.8	10.9	116	58.6	10.3	117	58.9	10.1
Sockeye CL+	111	59.4	10.5	116	60.5	10.1			
LWW17-5877	110	60.8	11.4						
LCS Jefe (LWW17-8185)	109	59.7	10.1						
VI Voodoo CL+	109	59.7	10.8						
Purl	109	60.2	11.2	110	61.0	10.6	107	61.3	10.5
SY Dayton	108	60.5	11.0	111	60.9	10.5	111	61.3	10.2
Piranha CL+	108	59.8	10.8	115	60.8	10.3			
AP Exceed	108	61.2	10.4						
ARSX09500-17CBW	107	61.0	10.9						
Norwest Tandem	107	59.8	10.9	110	61.0	10.5	110	61.3	10.4
LCS Hulk	106	60.7	11.3	112	62.1	10.6	109	62.4	10.4
Resilience CL+	105	60.5	11.1	108	61.5	10.7	103	61.7	10.7
Stingray CL+	105	59.3	11.1	107	60.5	10.7	107	61.1	10.7
TMC M-Press	105	59.3	11.0	111	60.3	10.4	109	60.7	10.0
WA8336	104	57.8	10.5						
Cameo (ARSX09492-6C)	104	58.1	12.2	109	59.7	11.4			
09PN118-02 CL2	104	59.7	11.3						
YSC-93	104	59.8	10.2						
Norwest Duet	103	59.6	10.6	109	60.8	10.0	108	61.2	10.0
AP Dynamic	103	58.2	11.4	109	59.6	10.8			
ARS-Selbu 2.0	102	60.9	11.6						
UI Magic CL+	101	60.8	11.0	103	61.6	10.6	104	61.9	10.7
AP Iliad	101	59.6	11.1	107	61.1	10.6			
WA8307	98	58.4	11.1	106	59.3	10.8			
VI Presto CL+	98	61.7	11.6						
Pritchett	97	58.6	11.0	105	59.3	10.5			
YSC-215	95	58.4	11.1	99	60.2	10.4			
ARS-Crescent	93	59.0	10.9	101	59.4	10.4	105	60.2	9.9
Castella	89	60.2	11.2	95	60.5	10.7	98	60.7	10.3
C.V. %	9	1.6	5.8	10	1.8	6.3	10	1.6	5.7
LSD	6	0.8	0.7	6	0.7	0.4	5	0.4	0.3
Average	104	59.7	11.0	109	60.5	10.5	107	61.1	10.3
Highest	116	61.7	12.2	117	62.1	11.4	117	62.4	10.7
Lowest	89	57.8	10.1	95	58.6	9.7	98	58.9	9.9

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

Precipitation Zone 12-16" (Almira, Anatone, Eureka, Creston, Lamont, Reardan)

Variety Name <i>Club Italicized</i>	2 Years 2021-2022, 9 loc/yr			3 Years 2020-2022, 13 loc/yr			5 Years 2018-2022, 21 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
TMC M-Press	86	60.3	10.5	88	60.6	10.2	98	60.4	10.0
LCS Jefe (LWW17-8185)	85	60.8	10.0						
Norwest Tandem	85	60.1	10.6	84	60.4	10.5	93	60.2	10.3
WA8334	84	61.4	10.3						
Piranha CL+	84	60.0	10.7	87	60.4	10.3			
Norwest Duet	83	59.9	10.8	85	60.0	10.6	95	60.1	10.3
LCS Shine	83	59.5	10.4	86	59.9	10.1	97	59.9	9.7
LCS Sonic	82	59.5	11.1	86	59.9	10.6	95	59.9	10.3
Stingray CL+	81	59.5	11.6	83	59.8	11.2			
<i>Pritchett</i>	81	59.6	11.0	85	59.5	10.6	94	59.3	10.3
AP Dynamic	81	59.0	11.0	84	59.4	10.7			
Devote	80	61.7	10.8	82	61.6	10.6	89	61.7	10.4
LWW17-5877	80	60.7	11.6						
<i>Castella</i>	80	60.1	10.8	81	60.5	10.6	92	60.3	10.2
LCS Hulk	79	60.6	11.2	82	61.0	10.9	92	61.2	10.6
YSC-93	79	60.1	10.8						
09PN118-02 CL2	79	59.7	11.5						
UIL 17-7706 CL+	77	60.4	11.3						
<i>ARS-Crescent</i>	77	59.4	11.1	82	59.7	10.6	93	59.5	10.1
OR2130755	77	60.1	11.3	81	60.5	11.0			
VI Frost	76	60.2	11.6	77	60.3	11.3	88	60.2	11.0
VI Presto CL+	75	61.2	11.5						
Otto	74	59.7	11.3	78	59.8	10.9	87	60.0	10.6
WB1529	73	62.6	11.6	75	62.7	11.4	85	62.3	11.0
YSC-215	72	60.7	10.8	75	61.0	10.5			
VI Voodoo CL+	71	59.8	11.3						
Curiosity CL+	71	60.3	11.2	75	60.3	10.7	86	60.5	10.3
UI Magic CL+	70	60.6	11.7	73	60.8	11.3	82	60.8	11.0
Mela CL+	69	60.4	11.5	73	60.3	10.9	84	60.5	10.5
Appleby CL+	68	60.3	11.7	74	60.8	11.4			
C.V. %	9	1.3	4.2	9	1.3	4.6	9	1.2	4.4
LSD	4	0.6	0.2	3	0.5	0.2	3	0.4	0.2
Average	78	60.3	11.1	81	60.4	10.8	91	60.4	10.4
Highest	86	62.6	11.7	88	62.7	11.4	98	62.3	11.0
Lowest	68	59.0	10.0	73	59.4	10.1	82	59.3	9.7



WSU Variety Testing Soft White Winter Wheat Trial Multi-Year Summary
 Precipitation Zone <12" (Bickleton, Connell, Harrington, Horse Heaven, Lind, Ritzville, St. Andrews)

Variety Name <i>Club Italicized</i>	2 Years 2021-2022, 11 loc/yr			3 Years 2020-2022, 15 loc/yr			5 Years 2018-2022, 28 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
LCS Shine	48	59.2	10.2	51	59.3	10.1	55	59.6	10.0
Piranha CL+	47	60.0	10.8	52	60.1	10.6			
Norwest Tandem	47	59.7	10.9	48	59.1	10.8	54	59.6	10.6
09PN118-02 CL2	47	58.9	11.5						
Pritchett	46	60.2	10.9	50	59.6	10.7	56	59.4	10.5
GS2	45	60.9	11.4						
LCS Jefe (LWW17-8185)	45	59.8	10.5						
Castella	45	60.0	10.8	47	59.0	10.7	53	59.2	10.4
Norwest Duet	45	58.9	11.1	51	58.8	10.8	56	59.4	10.8
TMC M-Press	45	59.5	10.9	49	59.6	10.8	55	59.8	10.5
Devote	44	61.1	11.2	50	60.8	11.1	55	61.0	10.9
LCS Sonic	44	58.8	11.2	50	59.3	11.1	54	59.1	10.9
WA8334	44	60.1	10.5						
Stingray CL+	44	59.9	12.0	46	59.1	12.0			
Mela CL+	43	60.2	11.0	49	60.3	10.8	53	60.4	10.6
AP Dynamic	43	58.3	11.3	48	58.3	11.0			
Curiosity CL+	43	60.1	11.0	48	59.6	10.9	53	60.0	10.5
LWW17-5877	43	59.8	11.6						
OR2130755	43	59.0	11.3	49	59.5	11.1			
YSC-93	43	59.8	11.2						
LCS Hulk	43	59.7	11.6	48	60.2	11.5	54	60.7	11.2
WB1529	43	61.6	11.6	43	60.3	11.4	49	60.9	11.2
Otto	42	59.7	11.4	47	59.6	11.4	52	60.0	11.2
ARS-Crescent	42	58.7	11.0	50	59.2	10.7	55	59.3	10.5
YSC-215	42	59.8	11.3	46	59.8	11.0			
VI Frost	41	60.3	12.0	45	59.4	11.8	52	59.8	11.5
Appleby CL+	41	59.7	11.9	43	58.8	11.7			
VI Presto CL+	40	61.3	11.9						
C.V. %	10	0.9	4.7	12	2.5	6.9	10	2.7	6.3
LSD	2	0.3	0.4	2	0.6	0.3	2	0.7	0.3
Average	44	59.8	11.2	48	59.5	11.0	54	59.9	10.7
Highest	48	61.6	12.0	52	60.8	12.0	56	61.0	11.5
Lowest	40	58.3	10.2	43	58.3	10.1	49	59.1	10.0



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

Precipitation Zone - Irrigated
(Mattawa, Moses Lake, Pasco)

Variety Name <i>Club Italicized</i>	2 Years 2021-2022, 3 loc/yr			3 Years 2019-2022, 4 loc/yr			5 Years 2018-2022, 7 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
LCS Shine	152	59.9	11.6						
AP Exceed	151	60.7	11.8						
LCS Artdeco	148	58.4	11.2	145	59.2	11.2	135	59.6	11.0
LCS Jefe	145	59.2	11.5						
LCS Hulk	144	60.5	12.7	145	61.0	12.5	137	60.5	12.1
SY Dayton	141	59.5	12.0	144	59.9	11.8	134	59.6	11.6
LWW17-5877	140	59.7	12.4						
OR2160264	139	58.9	12.6						
OR2160243	137	58.5	12.5						
WA8307	136	58.3	13.2	140	58.7	12.6			
WA8335	133	56.0	12.6						
Norwest Tandem	132	58.2	11.9	133	59.0	11.7	127	59.7	11.5
YSC-215	132	59.5	12.5						
WA8336	131	55.7	11.7						
TMC M-Press	131	58.9	12.3	132	59.4	12.1			
Purl	129	59.7	12.6	130	60.0	12.5	126	60.2	12.1
YSC-93	126	59.3	12.0						
ARS-Selbu 2.0	125	58.7	13.2						
Sockeye CL+	124	57.8	12.3	128	58.6	12.0			
C.V. %	6	1.4	2.5	5	1.4	3.0	5	1.4	2.9
LSD	7	0.7	0.3	6	0.6	0.3	4	0.5	0.2
Average	137	58.8	12.2	137	59.5	12.1	132	59.9	11.6
Highest	152	60.7	13.2	145	61.0	12.6	137	60.5	12.1
Lowest	124	55.7	11.2	128	58.6	11.2	126	59.6	11.0

*Moses Lake 2017-2020 data not included due to limited irrigation those years.

2022 WSU Variety Testing Soft White Winter Wheat Trial, Almira

Variety Name <i>Club Italicized</i>	2022					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 Jefe (LWW17-8185)	124	63.6	8.4	36	168	75		
Norwest Duet	120	62.7	9.1	45	171	69	71	85
TMC M-Press	115	62.7	9.1	37	167	83	80	90
<i>Castella</i>	112	63.7	9.4	41	169	74	72	85
Piranha CL+	111	62.3	9.0	41	168	76	76	
AP Exceed	108	63.4	9.6	38	164			
LCS Shine	107	61.7	9.5	33	169	69	70	85
LCS Sonic	107	62.5	9.5	36	168	72	74	86
Devote	106	64.3	9.6	37	169	78	73	82
YSC-215	106	63.0	8.6	34	169	58	59	
Sockeye CL+	106	61.8	10.0	40	168			
AP Dynamic	105	62.1	9.5	37	171	80	79	
<i>Pritchett</i>	105	61.4	9.5	37	171	65	68	82
Norwest Tandem	103	62.7	9.7	34	165	76	72	84
AP Iliad	102	63.0	9.8	37	164			
TMC M-Pire (TMC2021SWW)	102	63.6	10.8	33	166			
Curiosity CL+	101	63.1	9.5	40	172	66	67	82
LCS Blackjack	101	61.2	9.9	35	169			
WB1529	98	64.5	9.9	36	166	62	63	79
ARS-Crescent	96	61.9	10.2	36	173	67	68	84
VI Frost	96	63.7	10.4	36	167	71	70	84
Stingray CL+	95	62.1	11.2	35	169	71	72	
Otto	90	62.3	10.2	37	173	65	65	79
LCS Hulk	89	63.1	10.6	34	170	67	71	83
UI Magic CL+	88	63.5	10.6	34	167	61	63	77
VI Voodoo CL+	86	63.1	10.7	29	167	61		
Mela CL+	83	63.4	10.6	33	172	51	57	74
VI Presto CL+	83	63.8	10.8	39	170	66	68	
Appleby CL+	80	62.7	11.6	37	166	57	64	
<i>Experimental Lines</i>								
WA8334	116	63.6	9.3	38	171	75		
LWW17-5877	113	63.2	10.7	36	162	68		
LWW19-2232	112	62.0	9.1	43	169			
WA8345 AX	106	62.7	10.3	40	166			
LWW19-6219	104	63.4	10.6	36	168			
09PN118-02 CL2	104	62.5	11.3	36	169	71		
YSC-93	103	62.8	10.1	36	168	70		
GS3	102	62.6	10.5	39	169			
LWW19-6591	102	63.5	10.1	36	168			
WA8365	102	63.3	9.3	33	171			
UIL 15-028024	102	63.8	9.9	44	169			
WA8346 AX	101	63.2	10.34	37	168			
WA8348 AX	101	63.5	9.6	38	169			
UIL 17-7706 CL+	99	62.8	10.9	35	168	62		
ARS12097-12C	99	61.7	10.6	36	173			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Almira

Variety Name <i>Club Italicized</i>	2022					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>ARS141114-64C</i>	97	64.1	10.0	48	171			
OR2190027 CL+	97	63.3	10.8	35	165			
OR2130755	96	62.9	10.6	39	168	67		
UIL 14-085001A	95	61.5	10.0	36	170			
<i>ARS13659-4C</i>	94	62.7	10.8	44	171			
OR2190025 CL+	94	62.7	10.8	34	167	65		
OR5180071	93	63.1	10.6	32	171			
WA8347 AX	92	63.9	10.6	40	168			
WA8364	90	63.1	10.6	35	171			
WA8363	89	62.9	10.6	38	169			
C.V.	9	0.7	6.0	5	1	16	14	12
LSD	18	1.0	1.2	4	2	13	9	7
Average	101	62.9	10.1	37	169	68	69	83
Highest	124	64.5	11.6	48	173	83	80	90
Lowest	80	61.2	8.4	29	162	51	57	74

Agronomic Information

Planting Date:	9/9/2021
Harvest Date:	8/13/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	256
P ₂ O ₅ (lb/ac) 1-ft sample	167
S (lb/ac) 2-ft sample	27
pH (top 6 inches)	4.9

Herbicides: Zidua (4oz) was applied on September 17.

Nexicor (13oz) was applied on June 17.

Trial Notes:

1. The nursery was located approximately 6.5 miles southeast of Grand Coulee, WA.
2. The nursery was fertilized at a rate of 40N after seeding by the cooperator. No additional fertilizer was applied after fall soil sampling.
3. Overall yield was 159% greater than 2021.

Cooperator: Dan & Mike McKay



2022 WSU Variety Testing Soft White Winter Wheat Trial, Anatone

Variety Name <i>Club Italicized</i>	2022					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 Shine	85	58.7	6.7	33	165			
TMC M-Press	80	59.3	6.7	34	164	57	62	67
<i>ARS-Crescent</i>	80	60.4	6.5	41	170	59	65	73
YSC-215	80	60.9	6.9	35	166	50	58	
Norwest Tandem	80	60.7	7.0	32	163	57	60	66
Sockeye CL+	78	59.9	6.8	39	166			
LCS Jefe (LWW17-8185)	78	60.6	6.5	35	167	57		
LCS Hulk	78	60.7	7.2	33	166	55	64	72
<i>Pritchett</i>	78	59.4	6.4	36	166	55	61	68
Piranha CL+	78	60.3	6.7	37	164	61	66	
Mela CL+	76	61.4	6.8	41	171	55	56	62
AP Exceed	75	60.7	6.6	34	162			
Otto	75	60.4	7.0	40	171	49	53	59
Castella	74	61.1	7.1	42	164			
Devote	73	62.1	7.2	35	169	53	57	62
Curiosity CL+	72	61.0	6.8	38	171	51	54	61
Norwest Duet	72	60.8	6.7	42	168	52	58	68
TMC M-Pire (TMC2021SWW)	71	60.7	7.4	33	161			
LCS Blackjack	70	57.2	7.1	34	166			
UI Magic CL+	70	60.8	7.4	33	162	52	57	64
WB1529	70	62.2	7.7	35	163	47	52	62
LCS Sonic	68	58.9	7.0	36	164	55	62	70
Stingray CL+	68	60.3	6.7	33	164	55	59	
VI Frost	68	60.3	7.4	36	166	50	57	65
VI Presto CL+	67	61.1	7.3	37	166	52	59	
AP Iliad	66	59.5	7.5	35	163			
VI Voodoo CL+	65	59.2	7.2	31	163	55		
Appleby CL+	63	61.0	7.8	33	162	47	55	
AP Dynamic	63	60.4	7.3	37	168	52	60	
<i>Experimental Lines</i>								
ARS12097-12C	79	60.4	6.3	42	171			
WA8348 AX	78	60.4	6.5	40	165			
LWW19-6219	77	61.0	7.5	35	166			
YSC-93	76	60.0	6.8	37	164	56		
WA8347 AX	76	60.9	7.1	41	165			
WA8363	76	60.9	6.9	38	166			
LWW17-5877	75	60.4	7.6	31	159	56		
WA8334	74	61.5	6.8	39	171	54		
GS3	74	59.7	6.6	38	166			
WA8346 AX	73	59.8	6.7	39	165			
LWW19-6591	73	60.0	7.1	35	165			
LWW19-2232	73	60.8	6.6	42	166			
UIL 17-7706 CL+	73	60.8	7.4	36	165	59		
OR2130755	72	60.3	6.8	40	165	57		
WA8345 AX	71	60.2	6.8	39	166			

2022 WSU Variety Testing Soft White Winter Wheat Trial, Anatone

Variety Name <i>Club Italicized</i>	2022					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)
OR2190027 CL+	71	59.6	7.4	35	162			
ARS141114-64C	71	61.7	6.9	50	166			
WA8364	70	61.2	6.4	35	167			
UIL 15-028024	69	61.4	7.4	37	169			
WA8365	69	60.9	6.6	32	168			
OR5180071	68	60.8	7.1	32	168			
ARS13659-4C	67	59.9	7.3	48	171			
UIL 14-085001A	67	60.1	7.1	39	167			
09PN118-02 CL2	64	59.9	7.4	34	167	52		
OR2190025 CL+	62	58.1	7.5	33	161	44		
C.V.	8	0.6	4.0	4	1	13	12	10
LSD	11	0.8	0.5	3	3	8	6	5
Average	73	60.4	7.0	37	166	54	59	65
Highest	85	62.2	7.8	50	171	61	66	73
Lowest	62	57.2	6.3	31	159	44	52	59

Agronomic Information

Planting Date:	9/16/2021
Harvest Date:	8/8/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 2-ft sample	158
P ₂ O ₅ (lb/ac) 1-ft sample	117
S (lb/ac) 2-ft sample	16
pH (top 6 inches)	6.3

Herbicides: Zidua (4oz) was applied on September 17.

Metribuzin (3oz) was applied on November 2.

Osprey Xtra (4.75oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Thiosulfate (0.5 gal/ac) were applied on March 24.

Metribuzin (3oz) was applied on April 20.

Nexicor (13oz) was applied on June 9.

Trial Notes:

1. The nursery was located approximately 5.5 miles northeast of Anatone, WA.
2. The nursery was fertilized at planting at a rate of 15N, 36P, 9K, 9S, 7Cu. An additional 37N was applied on November 5.
3. Overall yield was 97% greater than 2021 and test weight was 4.1 lb/bu more.
4. Heavy cheatgrass pressure may have reduced yield and/or grain protein.

Cooperator: Brit Ausman



2022 WSU Variety Testing Soft White Winter Wheat Trial, Colton

Variety Name <i>Club Italicized</i>	2022					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>								
YS-215	158	61.3	10.3	41	173	109	112	
Sockeye CL+	155	61.0	10.5	44	171	109	116	
AP Exceed	151	61.7	10.7	38	169	108		
LCS Blackjack	149	61.9	11.2	39	171	117	129	140
Piranha CL+	148	60.9	10.7	44	171	109	120	
Stingray CL+	145	61.2	10.9	39	172	105	113	119
ARS-Selbu 2.0	144	60.9	10.3	42	172	100		
<i>Pritchett</i>	141	61.4	11.2	46	173	104	111	
ARS-Crescent	141	62.0	10.5	43	176	101	107	119
VI Voodoo CL+	140	60.9	10.3	36	172	106	119	
SY Assure	138	61.6	11.0	37	166			
WB1621	138	61.9	10.6	40	171			
Purl	137	61.6	11.2	42	171	101	115	123
LCS Jefe (LWW17-8185)	137	61.5	10.2	39	172	102		
TMC M-Press	137	61.8	10.7	41	171	102	112	121
Norwest Duet	136	61.6	10.4	48	174	103	112	120
Resilience CL+	136	61.2	11.0	39	173	97	108	114
Cameo (ARSX09492-6C)	135	60.9	10.8	41	173	102	112	
AP Dynamic	135	62.1	11.0	41	173	103	110	
TMC M-Pire (TMC2021SWW)	135	62.2	10.4	35	169			
LCS Hulk	134	61.3	10.9	38	171	97	112	120
WB1720	132	60.8	10.8	43	174			
AP Iliad	129	62.2	11.3	40	169	104	106	
<i>Castella</i>	129	61.9	11.2	47	172	95	101	113
UI Magic CL+	129	61.1	10.9	38	170	94	106	115
LCS Shine	128	61.0	10.8	35	170	100	115	
SY Dayton	127	60.9	10.8	39	170	103	112	121
Appleby CL+	127	61.2	10.8	42	171			
Norwest Tandem	126	60.4	10.9	37	169	105	112	121
VI Presto CL+	118	61.7	11.0	42	172	93		
WB1529	106	61.4	10.4	40	169			
<i>Experimental Lines</i>								
WA8336	159	61.2	10.5	40	172	114		
GS3	154	61.2	10.8	43	172			
YS-93	150	62.1	11.2	43	170	113		
WA8346 AX	149	61.7	10.8	46	172			
UIL14-085001A	148	60.8	10.7	43	173			
LWW19-6219	146	61.9	10.7	40	171			
LWW19-6591	144	61.6	11.2	39	170			
WA8307	144	62.1	11.1	43	173	114	116	
WA8366	142	60.7	11.0	42	173			
WA8345 AX	141	61.2	10.6	46	172			
LWW17-5877	140	61.9	10.7	39	168	106		
ARSX09500-17CBW	137	61.0	10.6	40	171	99		
UIL15-028024	136	62.2	11.0	42	173			
WA8349 AX	134	61.2	10.9	44	168			
09PN118-02 CL2	132	60.9	11.1	42	173	99		
WA8370	131	62.9	11.7	42	171			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Colton

Variety Name <i>Club Italicized</i>	2022					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)
OR2130755	130	61.4	10.4	45	170			
ARS14DH1014-C	129	61.2	10.3	44	173			
OR5180071	128	61.7	11.0	38	174			
OR2190025CL+	127	61.8	11.2	39	169	99		
UIL17-7706 CL+	125	62.0	11.3	38	171	98		
WA8347 AX	124	61.3	11.2	46	171			
OR2190027 CL+	121	61.4	10.6	40	170			
C.V.	4	1.4	5.3	3	0	5	8	8
LSD	11	1.9	1.2	3	2	7	8	7
Average	137	61.5	10.8	41	171	103	112	120
Highest	159	62.9	11.7	48	176	117	129	140
Lowest	106	60.4	10.2	35	166	93	101	113

Agronomic Information

Planting Date:	9/29/2021
Harvest Date:	8/26/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Garbonzos
Spring soil test:	
N (lb/ac) 4-ft sample	92
P ₂ O ₅ (lb/ac) 1-ft sample	167
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	4.9

Herbicides: Anthem Flex was applied on September 30.

Rapport BS (0.4oz), Stinger HL (5oz), Comet (9oz), PropiStar EC (4oz), Induce (5oz), Convey (7oz), and Urea (7gal) were applied April 27.

Propistar (4oz), AzoxyStar (8oz), R-Agent DL (1qt/100gal), and Urea (5gal) were applied on June 1.

Nexicor (13oz) was applied on June 22.

Trial Notes:

1. The nursery was located approximately 0.5 mile south of Colton, WA.
2. The nursery was fertilized at planting at a rate of 11N, 28P, 7K, 7S, 5Cu. An additional 207N was applied on November 8. Another 25N, 2.5Ca was applied by the cooperator on March 27.
3. Overall yield was 105% greater and test weight was 5.7 lb/bu more than 2021.

Cooperator: Art Schultheis



2022 WSU Variety Testing Soft White Winter Wheat Trial, Connell

Variety Name Club <i>Italicized</i>	2022						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	Emerg- ence			
Released Varieties									
Sockeye CL+	65	62.3	10.0	32	152	6			
Piranha CL+	64	63.1	10.3	31	151	7	53	60	
LCS Jefe (LWW17-8185)	63	63.0	9.4	27	153	8			
TMC M-Pire (TMC2021SWW)	60	63.7	10.5	28	148	7	56		
Pritchett	60	62.3	10.2	28	152	7	54	57	63
AP Exceed	60	64.0	10.0	29	148	8			
Castella	59	63.8	10.1	26	152	8	47	53	60
TMC M-Press	59	63.5	10.1	29	152	7	55	59	
Norwest Duet	58	61.9	10.6	32	155	8	58	60	64
Norwest Tandem	57	63.2	10.9	24	148	7	53	58	58
Devote	57	64.1	10.9	27	156	5	55	61	62
LCS Sonic	57	61.7	11.1	29	154	8	54	57	60
LCS Shine	56	62.6	9.9	23	150	8	59	62	
AP Dynamic	56	61.7	10.8	27	154	8	54	60	
Otto	56	62.4	10.9	29	156	6	52	55	58
Stingray CL+	55	62.8	11.9	28	152	8	50		
Curiosity CL+	55	63.3	10.9	30	155	6	49	55	60
YSC-215	55	63.1	10.7	30	154	8			
Mela CL+	53	63.0	10.7	30	155	7	51	56	61
ARS-Crescent	53	62.5	10.9	27	157	9	56	58	59
LCS Hulk	52	63.1	11.5	28	154	8	57	61	62
VI Frost	52	63.1	11.8	30	153	8	50	55	58
Appleby CL+	52	63.6	11.6	28	149	8	51	56	
VI Presto CL+	50	64.1	12.0	30	153	8	53	56	
WB1529	50	64.7	11.4	26	151	6	51	55	58
Experimental Lines									
LWW19-2232	63	62.6	10.2	31	153	9			
LWW19-5862	62	61.2	10.9	30	156	9			
09PN118-02 CL2	61	62.1	11.2	29	152	9			
LWW19-6219	60	63.1	11.3	27	151	8			
GS2	59	63.5	11.5	32	154	8			
GS3	59	61.9	11.0	33	153	8			
UIL14-085001A	59	61.3	11.2	29	155	8			
WA8347 AX	59	63.9	11.1	30	152	9			
WA8334	59	63.1	10.4	29	156	8			
WA8364	58	63.7	11.2	28	156	9			
UIL16-478001	58	61.3	11.4	30	155	8			
LWW19-6591	58	63.4	11.1	28	152	7			
WA8346 AX	56	62.5	11.0	28	151	8			
UIL17-7706 CL+	56	63.4	11.6	28	154	8			
WA8345 AX	56	62.3	11.3	31	151	8			
WA8363	55	63.6	10.5	27	154	8			
ARS141114-64C	55	63.8	10.8	32	154	9			
UIL15-028024	55	63.6	11.0	29	157	9			
WA8365	55	63.4	10.7	27	154	9			
YSC-93	55	63.2	11.0	28	150	8			
OR2130755	54	62.2	11.0	29	152	9	51		
LWW17-5877	54	62.5	12.2	28	147	9			
ARS12097-12C	54	62.9	10.9	27	157	9			
WA8348 AX	54	64.3	11.2	30	151	9			
OR2190027 CL+	53	63.5	11.5	27	150	9			
ARS13659-4C	52	63.4	12.0	30	156	8			
OR2190025 CL+	51	61.9	11.2	27	150	8			
WA8362	51	61.6	11.4	34	154	6			
OR2170559	47	61.9	12.5	26	152	9			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Connell

Variety Name <i>Club Italicized</i>	2022						2 Year*	3 Year*	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Emerg- ence	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
C.V.	6	0.7	3.4	5	1	14	13	11	10
LSD	7	1.0	0.8	3	2	2	7	5	4
Average	56	62.9	11.0	29	153	8	52	58	60
Highest	65	64.7	12.5	34	157	9	59	62	64
Lowest	47	61.2	9.4	23	147	5	43	51	52

*Multi-year yield averages do not include 2022 data due to very late planting.

Agronomic Information

Planting Date:	10/12/2021
Harvest Date:	7/27/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	214
P ₂ O ₅ (lb/ac) 1-ft sample	79
S (lb/ac) 2-ft sample	12
pH (top 6 inches)	5.9

Trial Notes:

1. The nursery was located approximately 7.5 miles southeast of Connell, WA. Site was replanted with double disk drill due to poor soil moisture and poor emergence from 09/02 planting.
2. The nursery was fertilized prior to seeding at a rate of 65N, 10S by the cooperator. No additional fertilizer was applied after fall soil sampling.
3. Emergence ratings averaged across two ratings taken 2 and 6 weeks after first planting on 09/02 at 8" depth (1=best; 9=worst).
4. Overall yield was 30% greater and test weight was 4.5 lb/bu more than 2021.

Cooperator: Luke Van Hollebeke

Herbicides: Zidua (4oz) was applied on September 16.

Approach Prima (5oz), Powerflex (2oz), Embed (10oz), Wider Match (10oz), and Urea (2gal) were applied by the cooperator.



2022 WSU Variety Testing Soft White Winter Wheat Trial, Creston

Variety Name <i>Club Italicized</i>	2022						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	Final Stnd (Rating)			
<i>Released Varieties</i>									
Sockeye CL+	92	61.7	11.1	38	166	7			
<i>Castella</i>	91	62.3	11.3	35	167	8	77	77	82
TMC M-Press	89	62.2	11.8	35	165	9	76	82	90
Norwest Duet	88	61.4	11.6	40	170	7	77	73	83
AP Exceed	87	63.2	10.8	36	162	8			
TMC M-Pire (TMC2021SWW)	84	62.8	11.4	33	163	8			
LCS Jefe (LWW17-8185)	81	62.4	10.2	33	168	7	72		
Piranha CL+	81	62.2	11.6	37	166	8	70	75	
LCS Sonic	80	61.0	11.9	33	166	7	74	81	87
WB1529	78	63.5	12.4	32	164	6	65	73	75
Norwest Tandem	77	61.4	11.4	30	163	7	72	76	83
<i>Pritchett</i>	74	60.6	11.6	32	168	7	66	72	79
Devote	73	62.6	12.0	32	169	7	66	71	75
AP Dynamic	73	60.3	12.2	35	171	6	65	73	
Stingray CL+	73	60.9	12.9	33	167	7	66	73	
LCS Blackjack	71	60.0	11.7	33	168	7			
LCS Hulk	66	62.0	12.4	32	168	6	67	70	81
Curiosity CL+	66	62.2	12.0	33	171	8	57	68	74
UI Magic CL+	66	62.8	12.7	31	166	6	57	59	68
VI Voodoo CL+	64	61.6	12.9	28	167	6	59		
VI Frost	63	61.5	12.7	34	165	6	64	64	73
Otto	61	61.3	12.4	32	172	6	59	66	73
VI Presto CL+	60	62.8	12.4	37	169	6	63	72	
Mela CL+	60	62.6	12.4	36	172	7	57	63	72
LCS Shine	60	60.2	11.0	30	164	6	60	72	81
AP Iliad	59	61.2	12.5	32	167	5			
<i>ARS-Crescent</i>	56	61.0	12.8	34	172	6	54	62	75
YSC-215	55	61.9	11.9	33	168	5	55	63	
Appleby CL+	54	61.3	12.9	34	163	6	51	59	
<i>Experimental Lines</i>									
WA8334	85	62.9	11.1	35	170	8	76		
09PN118-02 CL2	83	60.7	12.2	35	167	7	71		
ARS13659-4C	77	61.7	12.6	40	171	8			
GS3	75	60.7	12.3	36	168	7			
WA8346 AX	75	61.1	12.4	36	166	6			
WA8345 AX	74	61.7	12.4	35	165	7			
YSC-93	74	61.1	11.9	33	166	7	63		
LWW19-6219	73	61.4	13.0	31	166	7			
LWW19-6591	72	62.2	12.2	31	167	6			
LWW17-5877	72	61.2	12.4	33	161	6	67		
LWW19-2232	72	61.1	11.7	38	169	8			
UIL 14-085001A	70	59.8	12.5	33	169	6			
WA8348 AX	69	62.4	12.2	37	168	6			
<i>ARS12097-12C</i>	69	60.7	12.7	34	171	7			
WA8363	68	61.8	11.7	33	169	7			
UIL 15-028024	68	63.1	11.3	32	169	7			
<i>ARS141114-64C</i>	68	62.3	12.4	42	170	7			
OR2190027 CL+	67	61.4	12.5	32	166	5			
OR2130755	66	61.8	12.1	40	167	5	59		
WA8364	65	62.6	12.4	30	170	7			
WA8365	64	61.4	11.6	30	170	7			
WA8347 AX	61	62.4	12.3	38	168	5			
OR2190025 CL+	61	60.3	12.5	32	163	5	59		



2022 WSU Variety Testing Soft White Winter Wheat Trial, Creston

Variety Name <i>Club Italicized</i>	2022						2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Final Stnd (Rating)	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
UIL 17-7706 CL+	60	61.7	12.9	30	167	6	60		
OR5180071	53	62.4	12.3	31	170	5			
C.V.	12	0.8	2.6	5	1	12	12	14	13
LSD	19	1.1	0.7	4	2	1	9	9	7
Average	71	61.7	12.1	34	167	7	65	70	78
Highest	92	63.5	13.0	42	172	9	77	82	90
Lowest	53	59.8	10.2	28	161	5	51	59	68

Agronomic Information

Planting Date:	9/9/2021
Harvest Date:	8/13/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	196
P ₂ O ₅ (lb/ac) 1-ft sample	171
S (lb/ac) 2-ft sample	28
pH (top 6 inches)	4.7

Herbicides: Zidua (4oz) was applied on September 16.

Nexicor (13oz) was applied on June 17.

Trial Notes:

1. The nursery was located approximately 5 miles north of Creston, WA.
2. The nursery was fertilized prior to seeding by the cooperators. An additional 75N was applied on November 10.
3. Dry fall planting conditions led to significant differences in emergence among varieties which affected yield rankings. Final stand ratings where 9=best, 1=worst.
4. Overall yield was 22% greater and test weight was 4.7 lb/bu more than 2021.

Cooperator: Dan Krause



2022 WSU Variety Testing Soft White Winter Wheat Trial, Dayton

Variety Name <i>Club Italicized</i>	2022					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>								
TMC M-Pire (TMC2021SWW)	116	60.3	11.5	34	156			
SY Assure	115	61.4	11.0	34	153			
WB1529	112	61.9	10.8	34	155	111	105	110
TMC M-Press	112	59.7	10.5	37	159	117	114	
Sockeye CL+	111	58.7	11.0	42	158	118		
AP Exceed	111	60.4	10.2	37	154			
SY Dayton	110	59.3	10.8	36	160	118	114	120
WB1621	110	62.3	10.6	37	156			
AP Iliad	110	60.2	10.7	36	154	116		
AP Dynamic	109	58.2	11.2	39	163	117		
Norwest Tandem	109	59.5	10.8	31	154	116	112	123
VI Voodoo CL+	108	59.1	11.3	33	157	116		
LCS Jefe (LWW17-8185)	107	58.2	10.7	36	158			
LCS Blackjack	105	57.6	11.1	35	159	113	113	
YSC-215	103	60.1	10.2	39	160	102		
ARS-Selbu 2.0	102	59.8	12.0	38	160			
LCS Shine	100	58.0	11.3	31	155	111	106	
Resilience CL+	100	59.6	12.5	37	159	106	102	111
Purl	100	59.0	11.4	37	156	113	107	113
Norwest Duet	98	57.4	11.6	41	160	108	106	112
Piranha CL+	98	59.4	11.1	41	158	110		
LCS Hulk	97	58.6	12.3	38	161	107	105	109
Stingray CL+	97	57.7	12.7	38	159	108	106	
Cameo (ARSX09492-6C)	97	57.6	11.9	40	161	109		
WB1720	97	59.1	12.6	39	162			
UI Magic CL+	96	60.3	11.2	36	159	106	104	110
Appleby CL+	96	59.5	11.8	37	156	100	97	
VI Presto CL+	92	61.0	11.5	39	159			
Pritchett	92	57.2	11.3	41	162	111		
ARS-Crescent	85	57.3	11.0	40	164	104	100	103
Castella ¹	--	59.8	11.3	40	156	105		
<i>Experimental Lines</i>								
OR2190027 CL+	114	62.4	11.0	36	155			
LWW17-5877	111	59.5	11.6	34	155			
LWW19-6219	111	60.1	11.0	38	161			
GS3	107	58.7	11.0	40	160			
LWW19-6591	107	60.1	11.4	35	159			
YSC-93	107	58.2	10.6	36	156			
ARSX09500-17CBW	105	60.9	11.1	38	156			
WA8370	104	60.0	11.0	37	158			
OR2130755	100	58.6	11.9	39	156			
OR2190025CL+	99	58.4	12.0	34	154			
WA8345 AX	98	58.8	11.4	37	158			
09PN118-02 CL2	98	57.9	12.6	38	160			
WA8307	97	56.1	12.3	40	161	107		
UIL17-7706 CL+	96	59.1	12.0	36	158			
WA8336	96	55.5	10.3	36	159			
WA8366	93	57.3	12.0	38	163			
UIL15-028024	93	60.3	11.2	38	162			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Dayton

Variety Name <i>Club Italicized</i>	2022					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)
WA8346 AX	92	57.7	11.3	39	158			
UIL14-085001A	89	56.4	12.1	38	161			
OR5180071	83	58.3	11.9	33	164			
WA8349 AX	82	59.0	12.6	39	157			
WA8347 AX	79	59.6	12.7	41	161			
ARS14DH1014-C ¹	--	57.9	11.4	40	163			
C.V.	7	1.7	7.3	4	1	7	7	6
LSD	13	2.2	1.8	3	3	9	7	5
Average	100	59.1	11.4	37	158	110	106	112
Highest	116	62.4	12.7	42	164	118	114	123
Lowest	72	55.5	10.2	31	153	100	97	103

¹ Data not shown due to deer grazing

*2019 data not included in 5 year average.

Agronomic Information

Planting Date:	9/30/2021
Harvest Date:	9/13/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Billy Beans
Spring soil test:	
N (lb/ac) 4-ft sample	373
P ₂ O ₅ (lb/ac) 1-ft sample	213
S (lb/ac) 2-ft sample	31
pH (top 6 inches)	5.0

Herbicides: Zidua (4oz) was applied on November 8.

Rally, Osprey Xtra, Huskie, Rapport, and Nemicor Xemium were applied by the cooperator.

Trial Notes:

1. The nursery was located approximately 7.5 miles northwest of Dayton, WA.
2. The nursery was fertilized prior to seeding at a rate of 120N, 12P, 21K, 15S, 16Cl, .25Zn, .25B. No additional fertilizer applied after fall soil sampling.
3. Overall yield was 19% lower and test weight was 3.6 lb/bu less than 2020 (data not published from 2021).

Cooperator: Kirk & Deb Fortner



2022 WSU Variety Testing Soft White Winter Wheat Trial, Dusty

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
LCS Shine	151	60.2	10.3	35	158	0	100	98	
YS-215	142	62.1	10.4	42	160	0	89	90	
AP Exceed	139	62.9	10.7	39	157	0	92		
Norwest Duet	138	60.3	10.3	46	162	0	90	97	86
WB1621	137	64.4	10.4	39	160	23			
Cameo (ARSX09492-6C)	137	61.0	10.9	42	159	0	93	95	
LCS Blackjack	134	59.8	11.1	36	160	0	91	90	87
ARS-Selbu 2.0	133	62.4	11.3	40	161	3	85		
AP Dynamic	133	60.1	11.3	41	161	0	91	98	
WB1529	131	63.8	11.1	39	158	3			
SY Dayton	130	61.3	10.6	38	159	3	89	91	84
TMC M-Press	129	61.3	10.8	41	160	0	86	90	85
Piranha CL+	129	62.6	10.1	41	159	23	89	94	
ARS-Crescent	127	61.6	10.5	42	163	0	86	92	90
LCS Hulk	127	62.6	10.8	39	159	0	82	87	82
Norwest Tandem	126	60.9	10.7	34	159	0	88	86	87
Castella	126	62.7	11.0	41	160	63	87	89	85
LCS Jefe (LWW17-8185)	126	61.5	9.8	38	160	0	86		
TMC M-Pire (TMC2021SWW)	126	62.9	10.4	36	159	3			
<i>Pritchett</i>	125	59.0	11.0	40	161	0	88	90	
AP Iliad	125	61.3	11.4	38	158	0	87	91	
Purl	124	61.8	10.6	41	158	0	83	87	82
Sockeye CL+	124	60.7	10.3	39	160	37	85	91	
Resilience CL+	123	61.8	10.8	38	161	0	82	85	79
SY Assure	122	62.2	11.1	34	157	0			
Stingray CL+	122	60.7	11.4	39	160	3	84	89	85
WB1720	120	63.4	11.0	44	163	0			
VI Voodoo CL+	119	60.7	10.4	32	161	0	83	93	
VI Presto CL+	117	63.5	10.6	44	161	0	81		
Appleby CL+	115	62.6	11.3	39	159	0			
UI Magic CL+	111	62.0	10.9	35	160	0	76	79	77
Experimental Lines									
WA8307	141	59.9	10.6	43	161	7	95	97	
LWW19-6219	140	61.1	11.6	40	160	3			
LWW19-6591	135	62.1	10.9	38	161	0			
GS3	135	59.5	11.5	44	161	10			
ARS14DH1014-C	133	60.3	10.2	41	161	50			
WA8336	131	59.0	9.7	36	160	0	88		
LWW17-5877	130	61.9	10.7	36	158	0	95		
ARSX09500-17CBW	130	62.9	11.1	41	160	7	88		
UIL15-028024	128	63.3	10.4	40	163	0	88		
UIL14-085001A	128	60.2	11.1	40	162	0			
WA8370	126	62.7	10.6	38	161	0			
09PN118-02 CL2	125	62.2	11.2	39	160	0	85		
WA8346 AX	124	60.7	11.7	42	161	13			
UIL17-7706 CL+	124	61.6	10.8	37	161	0	85		
WA8345 AX	124	61.6	11.8	43	160	0			
WA8347 AX	123	62.5	12.0	44	159	33			
YSC-93	122	60.7	10.7	39	160	17	80		
OR5180071	122	61.9	10.5	38	163	13			
WA8366	122	60.8	10.9	42	161	7			
OR2130755	120	61.8	10.9	43	160	0			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Dusty

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
WA8349 AX	119	62.5	11.4	40	157	37			
OR2190025CL+	109	60.8	11.1	37	159	3	73		
OR2190027 CL+	102	62.0	11.6	38	159	7			
C.V.	5	0.8	3.3	4	1	201	6	10	10
LSD	14	1.0	0.8	3	2	30	6	8	6
Average	127	61.6	10.9	40	160	7	87	91	84
Highest	151	64.4	12.0	46	163	63	100	98	87
Lowest	102	59.0	9.7	32	157	0	73	79	77

Agronomic Information

Planting Date:	9/17/2021
Harvest Date:	7/28/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	172
P ₂ O ₅ (lb/ac) 1-ft sample	179
S (lb/ac) 2-ft sample	20
pH (top 6 inches)	5.4

Trial Notes:

1. The nursery was located approximately 3 miles southeast of LaCrosse, WA.
2. The nursery was fertilized at planting at a rate of 12N, 31P, 8K, 8S, 6Cu. An additional 70N was applied on November 16.
4. Overall yield was 186% greater and test weight was 3.4 lb/bu more than 2021.

Cooperator: Tyler Startin

Herbicides: Zidua (4oz) was applied on October 18.

Tarzac, Widematch, Nericor, N-demand (1 gal/ac), and Rally (5 gal/ac) were applied by the cooperator.

Nericor was flown on May 26.



2022 OSU/WSU Variety Testing Soft White Winter Wheat Trial, Eureka

Variety Name <i>Club Italicized</i>	2022					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>								
AP Exceed	132	65.1	9.2	38	--	85		
TMC M-Press	127	63.9	9.2	36	--	80	76	78
SY Dayton	125	64.0	8.9	37	--	83	78	78
SY Assure	124	64.0	9.6	36	--	79	72	73
Norwest Duet	123	63.4	9.5	42	--	82	80	80
<i>Pritchett</i>	123	61.6	9.0	41	--	82	78	
<i>Castella</i>	121	64.7	9.4	40	--	81	80	80
LCS Jefe (LWW17-8185)	121	63.3	8.6	35	--	85	83	
LCS Shine	121	63.2	8.9	33	--	84	80	81
AP Iliad	119	63.6	9.7	39	--	83	78	
LCS Blackjack	119	61.6	9.4	36	--	83	79	80
LCS Artdeco	119	62.4	8.7	35	--	82	76	79
LCS Sonic	116	63.6	8.8	40	--			
TMC M-Pire (TMC2021SWW)	115	65.6	9.4	35	--			
LCS Drive	114	62.4	9.2	32	--	75	71	72
Devote	113	64.5	10.6	38	--			
Rosalyn	113	61.4	8.7	36	--	77	76	78
LCS Hulk	112	64.3	9.4	37	--	77	75	77
AP Dynamic	111	62.7	9.3	38	--	76	73	
Bobtail	111	60.5	9.6	36	--	78	75	77
VI Frost	110	64.3	9.7	38	--			
Otto	107	62.7	10.2	41	--			
<i>ARS-Crescent</i>	106	63.1	9.1	39	--	78	79	81
Norwest Tandem	105	64.1	9.1	34	--	76	72	76
WB1529	104	65.7	9.5	37	--	71	69	70
Nixon	102	63.5	9.3	37	--	71	69	71
Stephens	99	63.5	9.7	36	--	69	67	68
YSC-215	90	63.2	8.0	38	--	62	62	
<i>Experimental Lines</i>								
LWW19-2232	127	63.3	9.0	42	--			
LWW19-6591	127	64.3	9.7	37	--			
WA8346 AX	123	63.8	9.1	41	--			
LWW19-5862	120	61.9	9.1	37	--			
WA8334	118	64.2	9.0	40	--			
UIL 16-072025	117	64.3	9.3	39	--			
UIL 15-423062A	117	62.5	9.2	39	--			
WA8307	117	63.1	9.1	39	--	82	81	
LWW19-6219	117	64.0	10.0	37	--			
LWW17-5877	116	64.7	10.0	36	--	78		
GS3	114	63.0	9.1	41	--			
ARS12097-12C	114	63.3	9.0	40	--			
OR2160264	112	63.5	9.5	36	--	76		
OR2130755	111	63.7	9.6	39	--	72	70	
WA8345 AX	111	64.1	9.2	39	--			
YSC-93	111	62.7	8.9	37	--	74		
ARS141114-64C	111	64.8	9.2	46	--			
WA8363	110	64.6	9.7	40	--			
LWW19-1576	110	62.7	9.3	34	--			
WA8348 AX	110	64.2	9.3	40	--			
OR2180149	109	61.5	8.5	38	--			



2022 OSU/WSU Variety Testing Soft White Winter Wheat Trial, Eureka

Variety Name <i>Club Italicized</i>	2022					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)
WA8371	108	65.4	9.3	39	--			
WA8364	107	64.4	9.3	36	--			
OR2170559	107	62.8	9.9	35	--	75		
UIL 14-085001A	106	62.3	9.6	37	--			
WA8347 AX	104	64.8	9.3	41	--			
UIL 15-028024	104	64.3	9.0	37	--	74		
WA8365	102	63.6	8.9	35	--			
OR2180377	101	60.7	9.0	34	--			
OR2160243	101	63.3	9.5	37	--	67		
ARS13659-4C	100	63.7	9.6	49	--			
OR5180071	99	63.6	8.6	34	--	73		
C.V.	5	0.6	5.0	3	--	7	6	6
LSD	10	0.8	1.0	2	--	6	4	3
Average	113	63.5	9.3	38	--	77	75	76
Highest	132	65.7	10.6	49	--	85	83	81
Lowest	90	60.5	8.0	32	--	62	62	68

Agronomic Information

Planting Date:	10/5/2021
Harvest Date:	8/11/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	212
P ₂ O ₅ (lb/ac) 1-ft sample	163
S (lb/ac) 2-ft sample	35
pH (top 6 inches)	5.2

Herbicides: Anthem Flex (3oz) was applied by the cooperator in the fall.

Propicon (4oz), Wildcard, and Huskie were applied by the cooperator in the spring.

Trial Notes:

1. The nursery was located approximately 1.5 miles northeast of Eureka, WA.
2. The nursery was fertilized prior to seeding at a rate of 80N, 15S, 15P, 1qt Zn by the cooperator. Tracite Stand (3gal) was applied by the cooperator in the spring.
3. Overall yield was 157% greater and test weight was 1.4 lb/bu more than 2021.

Cooperator: George Struthers



2022 WSU Variety Testing Soft White Winter Wheat Trial, Fairfield

Variety Name <i>Club Italicized</i>	2022					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>								
Pritchett	131	59.4	10.6	45	175	80	96	
Castella	127	62.4	11.5	43	174	80	95	89
Norwest Tandem	127	60.5	11.1	36	171	80	98	92
LCS Shine	126	59.8	10.9	37	173	83	99	
Norwest Duet	125	61.1	11.1	45	177	76	97	92
Cameo (ARSX09492-6C)	125	60.3	11.8	42	175	83	98	
LCS Jefe (LWW17-8185)	123	61.0	9.7	38	173	83		
Piranha CL+	122	60.5	11.1	42	173	82	102	
Stingray CL+	120	60.0	11.4	39	173	79	97	89
YS-C215	119	60.3	11.2	41	174	70	85	
ARS-Crescent	117	60.9	10.9	43	177	77	93	91
Sockeye CL+	116	59.8	11.3	41	174	82	100	
SY Dayton	113	59.9	11.2	38	172	75	95	88
VI Voodoo CL+	111	60.1	10.8	36	173	74	93	
Resilience CL+	110	61.0	11.3	40	174	74	90	83
Purl	108	61.2	11.5	40	173	70	91	85
AP Iliad	108	60.2	11.8	39	171	73	94	
LCS Hulk	108	60.9	11.5	40	174	71	90	88
WB1529	107	62.4	11.9	38	172			
SY Assure	107	60.0	12.1	38	169			
AP Exceed	106	60.4	11.4	35	171	64		
Appleby CL+	105	61.2	11.8	39	173			
UI Magic CL+	104	60.7	11.6	36	173	72	84	
WB1621	104	62.0	12.1	37	174			
WB1720	104	60.9	12.6	40	176			
ARS-Selbu 2.0	102	61.8	12.4	40	175	69		
TMC M-Press	101	59.3	11.1	40	173	68	91	87
TMC M-Pire (TMC2021SWW)	100	60.4	11.0	36	171			
LCS Blackjack	100	57.7	11.6	37	173	72	96	93
AP Dynamic	98	58.9	11.1	40	174	68	89	
VI Presto CL+	92	60.4	12.0	42	175	66		
<i>Experimental Lines</i>								
ARS14DH1014-C	131	60.1	10.9	42	176			
WA8345 AX	127	61.6	11.1	43	173			
WA8307	126	60.0	11.9	42	177	82	99	
WA8336	124	58.3	10.2	37	173	83		
UIL15-028024	119	62.0	11.7	38	176	76		
WA8346 AX	118	61.7	10.9	43	174			
OR2130755	115	60.5	11.6	45	172			
UIL17-7706 CL+	115	60.1	11.2	39	173	76		
GS3	115	59.4	10.6	43	174			
YSC-93	114	60.7	10.8	40	173	77		
ARSX09500-17CBW	112	61.9	11.5	40	174	75		
UIL14-085001A	110	59.6	11.4	41	176			
LWW19-6591	110	60.0	11.2	38	173			
LWW17-5877	108	59.0	11.9	36	171	66		
OR5180071	108	61.0	10.9	37	176			
WA8347 AX	106	62.1	11.8	43	171			
WA8370	104	61.5	11.0	39	173			
LWW19-6219	103	60.6	11.6	39	174			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Fairfield

Variety Name <i>Club Italicized</i>	2022					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)
WA8349 AX	100	60.6	11.6	41	170			
WA8366	94	59.4	11.7	39	176			
OR2190025CL+	91	58.7	11.9	37	171	68		
09PN118-02 CL2	86	59.6	11.9	39	173	60		
OR2190027 CL+	84	58.5	12.5	38	172			
C.V.	7	1.2	3.7	4	1	9	7	10
LSD	16	1.6	0.9	3	2	8	6	6
Average	111	60.4	11.4	40	173	75	94	88
Highest	131	62.4	12.6	45	177	83	102	93
Lowest	84	57.7	9.7	35	169	60	84	79

Agronomic Information

Planting Date:	9/17/2021
Harvest Date:	8/17/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Canola
Spring soil test:	
N (lb/ac) 4-ft sample	147
P ₂ O ₅ (lb/ac) 1-ft sample	171
S (lb/ac) 2-ft sample	21
pH (top 6 inches)	5.1

Herbicides: Anthem Flex (3.75oz) was applied on October 18.

Talinor (13.8oz), Axial Bold (15oz), and Aquila XL (6oz) were applied on May 11.

Nexicor (13oz) was applied on June 22.

Trial Notes:

1. The nursery was located approximately 5 miles southeast of Rockford, WA.
2. The nursery was fertilized at planting at a rate of 118N, 20P, 5K, 25S, 4Cu. An additional 81N was applied on November 8.
3. Overall yield was 200% greater and test weight was 1.3 lb/bu more than 2021.

Cooperator: Mike Roecks



2022 WSU Variety Testing Soft White Winter Wheat Trial, Farmington

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
LCS Blackjack	149	60.6	11.1	39	173	0	118	120	116
Sockeye CL+	143	59.4	10.1	46	174	17	115	123	
YSC-215	142	61.2	10.3	42	174	0	108	113	
Stingray CL+	141	60.6	10.9	42	174	0	114	116	111
WB1621	140	63.8	10.8	43	173	0			
AP Exceed	139	61.6	10.8	40	170	0	108		
LCS Hulk	138	62.2	10.7	42	173	0	105	113	111
Piranha CL+	138	60.3	10.5	46	173	17	115	123	
Norwest Duet	137	61.5	10.8	49	175	0	111	115	114
AP Dynamic	136	60.8	10.6	44	174	0	111	111	
LCS Jefe (LWW17-8185)	136	60.5	10.0	41	173	0	110		
ARS-Selbu 2.0	136	61.9	11.1	43	174	0	102		
SY Dayton	135	60.8	10.9	41	172	0	109	112	111
SY Assure	135	60.9	11.3	40	166	0			
LCS Shine	135	62.2	11.8	35	172	0	110	116	
Norwest Tandem	135	60.8	10.7	35	170	0	110	116	110
Resilience CL+	135	61.1	10.9	40	174	0	108	109	105
VI Voodoo CL+	134	59.5	10.8	37	174	0	114	121	
Cameo (ARSX09492-6C)	133	60.1	11.5	42	174	0	108	116	
Purl	131	61.1	10.8	44	171	0	104	111	108
UI Magic CL+	131	60.9	11.2	38	172	0	110	112	107
AP Iliad	130	59.8	11.5	41	169	0	107	110	
ARS-Crescent	129	60.7	10.1	45	177	17	99	108	106
WB1720	128	63.4	11.6	43	175	0			
TMC M-Press	127	61.2	10.8	41	173	0	101	111	107
Appleby CL+	127	61.9	11.1	43	172	0			
TMC M-Pire (TMC2021SWW)	124	62.3	11.2	36	170	0			
Pritchett	123	58.3	10.5	43	175	27	97	109	
VI Presto CL+	116	62.4	11.7	44	174	0	98		
WB1529	116	62.9	12.4	40	170	0			
Castella	111	62.5	11.0	44	174	57	93	103	105
Experimental Lines									
WA8307	145	61.1	11.1	44	175	0	113	114	
LWW19-6219	145	61.8	11.2	42	174	0			
LWW17-5877	145	61.1	10.8	40	169	0	122		
LWW19-6591	142	61.5	10.4	39	173	0			
UIL14-085001A	140	60.0	10.8	45	174	0			
WA8336	140	59.1	9.8	41	173	27	111		
GS3	139	59.7	10.8	43	175	0			
09PN118-02 CL2	138	61.9	11.1	42	174	0	109		
OR2130755	137	60.7	10.6	45	172	0			
UIL15-028024	136	62.9	10.4	41	175	0	113		
ARSX09500-17CBW	135	61.8	10.7	42	173	0	112		
WA8349 AX	135	61.9	11.1	43	170	20			
WA8345 AX	135	61.4	10.6	45	173	3			
YSC-93	134	60.4	10.2	41	172	30	110		
UIL17-7706 CL+	134	61.6	10.7	40	173	0	115		
WA8346 AX	133	60.3	10.7	44	174	20			
WA8370	129	61.5	10.8	42	173	10			
ARS14DH1014-C	128	60.5	10.0	43	176	33			
WA8366	128	60.4	10.6	42	175	0			
OR5180071	126	60.9	10.8	39	176	0			
WA8347 AX	126	62.6	11.4	45	173	27			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Farmington

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
OR2190025CL+	119	60.6	11.5	40	170	0	104		
OR2190027 CL+	116	61.0	11.8	40	172	0			
C.V.	5	0.9	2.7	4	1	162	7	7	8
LSD	15	1.1	0.6	3	2	16	8	8	6
Average	133	61.1	10.9	42	173	6	109	114	109
Highest	149	63.8	12.4	49	177	57	122	123	116
Lowest	111	58.3	9.8	35	166	0	93	103	105

Agronomic Information

Planting Date:	10/4/2021
Harvest Date:	8/20/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Peas
Spring soil test:	
N (lb/ac) 4-ft sample	212
P ₂ O ₅ (lb/ac) 1-ft sample	204
S (lb/ac) 2-ft sample	23
pH (top 6 inches)	5.2

Herbicides: Anthem Flex was applied by the cooperator in the fall.

Nexicor (13oz) was applied on June 22.

Trial Notes:

- 1. The nursery was located approximately 4 miles northeast of Garfield, WA.
- 2. The nursery was fertilized prior to seeding by the cooperators. An additional 81N was applied on November 8.
- 3. Overall yield was 58% greater and test weight was 4.0 lb/bu more than 2021.

Cooperator: Andrew Nelson



2022 WSU Variety Testing Soft White Winter Wheat Trial, Harrington

Variety Name Club <i>Italicized</i>	2022					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>								
Sockeye CL+	77	62.0	8.3	36	158			
LCS Jefe (LWW17-8185)	73	62.8	8.1	32	157			
Piranha CL+	70	62.6	8.2	36	158	60		
TMC M-Press	68	61.6	8.2	33	154	57	60	
<i>Castella</i>	67	62.3	8.2	32	157	54	59	67
YSC-215	65	62.5	8.1	33	158			
LCS Shine	64	60.0	8.4	27	154	51	58	
ARS-Crescent	64	61.5	8.0	33	162	60	64	68
Pritchett	64	61.2	7.9	33	159	53	60	63
Mela CL+	64	63.2	8.1	34	163	53	57	65
Stingray CL+	64	61.8	8.8	31	155	54		
AP Dynamic	64	61.2	8.5	32	160	56		
Otto	63	63.2	8.6	33	164	46	50	61
AP Exceed	63	63.3	8.7	32	154			
Curiosity CL+	63	63.1	8.0	34	161	52	57	63
Devote	63	64.4	8.3	31	161	54	59	
Norwest Duet	62	62.5	8.7	35	162	60	63	70
TMC M-Pire (TMC2021SWW)	62	63.0	9.2	30	153			
LCS Hulk	60	62.6	8.9	31	157	59	63	72
LCS Sonic	60	61.1	8.3	32	155	58	64	70
WB1529	60	63.5	9.1	29	152	40	49	60
VI Presto CL+	59	63.6	9.1	34	157	58		
VI Frost	59	62.2	9.9	32	155	50	58	
Norwest Tandem	54	61.7	8.4	29	153	53	57	
Appleby CL+	51	63.2	9.6	33	153	48		
<i>Experimental Lines</i>								
LWW19-6591	70	62.6	8.4	30	156			
ARS12097-12C	68	61.6	8.1	32	160			
WA8334	68	63.4	8.0	33	161			
WA8345 AX	67	61.8	9.0	34	155			
LWW17-5877	67	63.4	9.9	29	155			
WA8362	65	61.4	8.5	40	159			
LWW19-2232	65	62.1	8.6	35	160			
WA8348 AX	65	63.7	9.2	34	158			
WA8346 AX	65	61.4	8.2	35	156			
GS3	65	62.3	8.8	33	157			
WA8365	65	62.8	9.3	30	161			
LWW19-5862	65	60.2	8.8	33	161			
GS2	64	63.6	8.3	33	160			
WA8364	64	62.9	8.6	30	160			
09PN118-02 CL2	64	61.3	8.9	31	157			
ARS141114-64C	63	63.7	8.1	39	159			
UIL14-085001A	63	61.7	9.5	33	159			
WA8347 AX	63	63.9	9.3	36	156			
YSC-93	62	62.1	8.6	32	157			
WA8363	61	62.4	8.6	31	154			
UIL16-478001	61	62.6	8.7	31	159			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Harrington

Variety Name <i>Club Italicized</i>	2022					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)
LWW19-6219	61	62.4	8.5	32	155			
OR2130755	59	61.4	8.5	33	154	60		
ARS13659-4C	59	62.8	8.8	38	161			
OR2190027 CL+	58	63.0	10.0	30	154			
OR2170559	58	61.5	8.9	29	154			
OR2190025 CL+	57	61.8	8.8	29	154			
UIL15-028024	57	63.8	8.8	30	160			
UIL17-7706 CL+	53	62.4	9.1	31	157			
C.V.	5	0.8	5.66	4	1	9	9	10
LSD	6	1.0	1.1	3	3	6	5	5
Average	63	62.4	8.7	32	157	54	59	66
Highest	77	64.4	10.0	40	164	62	65	72
Lowest	51	60.0	7.9	27	152	40	49	60

*Multi-year yield averages do not include 2022 data due to very late planting.

Agronomic Information

Planting Date:	9/20/2021
Harvest Date:	8/3/2022
Seeding Rate (seeds/ft ²):	12.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	516
P ₂ O ₅ (lb/ac) 1-ft sample	275
S (lb/ac) 2-ft sample	28
pH (top 6 inches)	4.9

Herbicides: Salvo (12oz) was applied by the cooperator on April 28.

Trial Notes:

1. The nursery was located approximately 8.5 miles southwest of Harrington, WA.
2. The nursery was fertilized prior to seeding at a rate of 60N, 10S by the cooperators. No additional fertilizer was applied after fall soil sampling.
3. Overall yield was 26% greater and test weight was 3.0 lb/bu more than 2021.

Cooperator: Jordan Wagner



2022 WSU Variety Testing Soft White Winter Wheat Trial, Horse Heaven

Variety Name Club <i>Italicized</i>	2022					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>								
TMC M-Pire (TMC2021SWW)	65	63.0	8.8	29	149			
LCS Shine	64	60.6	8.1	26	148	45	46	
Norwest Tandem	64	61.6	9.0	27	148	44	41	43
Sockeye CL+	62	60.9	8.6	34	153			
<i>Pritchett</i>	61	60.5	8.9	32	153	45	43	45
LCS Jefe (LWW17-8185)	61	61.5	7.8	30	152	42		
TMC M-Press	60	62.0	8.6	30	152	40	40	
AP Dynamic	60	60.9	9.3	31	154	39	41	
Piranha CL+	59	61.6	8.3	35	153	43	43	
YSC-215	59	61.8	8.6	32	154	37	38	
WB1529	58	63.3	9.1	29	152	36	34	38
LCS Sonic	58	61.0	8.6	33	153	41	40	42
Curiosity CL+	58	61.5	8.3	35	155	46	43	46
<i>Castella</i>	58	61.9	8.4	31	152	38	38	43
AP Exceed	57	63.0	8.4	31	148			
Devote	57	62.4	9.3	30	156	40	43	43
Norwest Duet	57	61.1	8.6	34	154	41	39	42
LCS Hulk	56	62.2	8.8	31	152	37	40	44
VI Frost	54	61.7	9.2	31	153	35	34	38
Appleby CL+	53	62.4	9.1	33	150	41	37	
Otto	52	61.1	9.2	32	157	37	40	41
Stingray CL+	51	61.7	9.9	30	153	38	38	
ARS-Crescent	50	60.0	8.9	31	156	37	40	43
Mela CL+	50	61.1	8.6	33	157	41	42	44
VI Presto CL+	46	63.1	9.6	32	153	34	36	
<i>Experimental Lines</i>								
ARS12097-12C	63	61.2	8.2	30	155			
WA8362	63	61.7	9.2	38	155			
09PN118-02 CL2	62	61.3	8.8	32	153	46		
GS3	61	61.2	8.6	33	154	40		
GS2	60	63.1	9.1	33	154			
WA8345 AX	59	61.7	8.6	31	150			
LWW19-2232	59	60.4	8.2	32	153			
WA8363	58	62.3	8.9	30	153			
YSC-93	58	61.6	8.9	30	150	36		
WA8364	57	62.3	8.7	29	155			
LWW17-5877	57	62.6	9.6	29	147	42		
LWW19-6591	57	62.3	8.6	30	152			
WA8365	57	61.8	8.2	29	155			
ARS13659-4C	55	60.9	8.5	37	155			
WA8346 AX	55	60.8	7.9	32	153			
WA8348 AX	55	63.0	8.5	35	153			
UIL14-085001A	55	60.0	9.1	32	155			
LWW19-5862	54	59.9	8.8	32	155			
WA8347 AX	54	62.1	9.2	33	152			
UIL16-478001	54	61.5	8.4	31	153			
OR2130755	54	61.6	9.5	30	153	38		

2022 WSU Variety Testing Soft White Winter Wheat Trial, Horse Heaven

Variety Name <i>Club Italicized</i>	2022					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)
WA8334	54	62.5	8.7	31	157	41		
OR2190027 CL+	53	62.0	8.4	29	151			
LWW19-6219	52	62.3	8.9	30	152			
ARS141114-64C	52	62.5	8.5	35	154			
OR2190025 CL+	51	60.5	8.7	30	150	37		
UIL17-7706 CL+	51	62.2	8.8	29	153	38		
OR2170559	50	61.5	9.4	29	153			
UIL15-028024	50	62.5	8.9	31	156			
C.V.	8	0.7	5.0	5	1	14	17	14
LSD	8	1.0	1.0	3	2	7	NS	4
Average	57	61.7	8.8	31	153	40	40	42
Highest	65	63.3	9.9	38	157	46	46	46
Lowest	46	59.9	7.8	26	147	34	34	38

*2019 data not included in 5 year average.

Agronomic Information

Planting Date:	9/16/2021
Harvest Date:	7/25/2022
Seeding Rate (seeds/ft ²):	12.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	82
P ₂ O ₅ (lb/ac) 1-ft sample	100
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.6

Herbicides: Zidua (4oz) was applied on November 10.

Trial Notes:

1. The nursery was located approximately 6 miles southwest of Benton City, WA.
2. The nursery was fertilized at planting at a rate of 11N, 27P, 7K, 7S, 5Cu. An additional 39N was applied on November 22.
3. Overall yield was 148% greater and test weight was 3.7 lb/bu more than 2021.
4. Heavy cheatgrass pressure may have reduced yield and/or grain protein.

Cooperator: Chad Smith



2022 WSU Variety Testing Soft White Winter Wheat Trial, Lamont

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
LCS Shine	132	61.0	10.0	37	160	12	118	108	
LCS Jefe (LWW17-8185)	122	61.9	9.5	41	163	9	117		
<i>Pritchett</i>	121	60.0	10.3	44	164	31	109	104	125
VI Voodoo CL+	119	61.2	10.0	37	161	0	102		
<i>ARS-Crescent</i>	118	61.5	10.1	44	162	0	105	101	115
AP Dynamic	118	61.3	10.5	43	165	0	107	102	
LCS Sonic	117	61.3	10.1	43	160	11	103	97	114
LCS Hulk	117	62.5	10.1	42	162	1	105	96	111
TMC M-Pire (TMC2021SWW)	117	63.0	9.8	38	159	0			
Norwest Tandem	116	61.7	10.1	38	160	0	110	99	
LCS Blackjack	116	60.4	10.3	38	160	3			
TMC M-Press	115	61.8	9.6	40	162	0	107	100	
Norwest Duet	113	61.6	9.4	46	163	3	106	101	118
WB1529	113	64.0	10.4	41	160	0	98	91	107
AP Exceed	112	62.2	10.3	42	159	5			
AP Iliad	111	61.7	10.8	42	160	2			
<i>Castella</i>	111	63.2	10.5	43	162	68	86	87	98
Piranha CL+	110	61.0	9.8	43	161	43	105	101	
Stingray CL+	110	61.0	10.4	40	160	7	108		
VI Frost	110	62.1	10.4	43	161	5	107	99	
Sockeye CL+	109	60.1	9.7	41	161	64			
VI Presto CL+	109	63.3	10.8	44	163	6	98	91	
Devote	108	63.2	9.6	41	166	0	98	92	
UI Magic CL+	102	61.6	11.0	39	161	3	97	90	100
Otto	102	60.4	10.1	45	158	16	91	91	111
YSC-215	102	61.1	9.6	44	162	6	98	93	
Appleby CL+	101	62.8	10.7	43	159	8	97	90	
Curiosity CL+	97	59.9	9.9	44	161	45	86	81	105
Mela CL+	95	59.7	10.3	44	165	59	82	82	100
Experimental Lines									
GS3	124	61.2	10.1	44	161	2			
LWW17-5877	124	62.1	10.5	39	159	2	117		
UIL 14-085001A	123	60.9	10.8	42	164	0			
LWW19-6219	121	62.2	10.4	41	161	0			
LWW19-2232	120	61.7	9.2	48	161	4			
UIL 15-028024	119	63.4	9.3	41	164	30			
LWW19-6591	117	62.6	9.7	40	161	0			
WA8334	115	62.2	9.8	42	162	14	108		
OR5180071	114	63.2	10.3	40	163	2			
OR2130755	114	62.4	10.2	44	160	0	107		
ARS12097-12C	114	61.3	9.6	44	165	27			
WA8346 AX	113	61.8	10.4	44	162	16			
09PN118-02 CL2	112	61.7	10.4	41	161	0	97		
YSC-93	111	61.0	9.6	40	160	53	104		
OR2190025 CL+	110	61.8	10.2	38	158	13	104		
WA8345 AX	110	62.4	10.4	43	161	8			
UIL 17-7706 CL+	110	61.7	10.5	39	162	23	104		
WA8363	109	63.7	11.0	43	162	21			
OR2190027 CL+	108	62.4	10.6	40	160	0			
WA8347 AX	106	63.0	10.5	45	161	30			
WA8365	106	62.3	9.9	38	165	5			
WA8364	103	62.9	10.1	39	164	6			
WA8348 AX	103	63.0	10.0	42	163	51			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Lamont

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
<i>ARS13659-4C</i>	88	61.9	10.8	48	165	77			
<i>ARS141114-64C</i>	80	62.9	11.0	48	163	74			
C.V.	7	1.0	5.1	3	1	94	8	8	11
LSD	16	1.3	1.1	3	4	32	6	7	9
Average	111	61.9	10.2	42	162	16	103	95	110
Highest	132	64.0	11.0	48	166	77	118	108	125
Lowest	80	59.7	9.2	37	158	0	82	81	98

*2018 and 2019 data not included in 5 year average.

Agronomic Information

Planting Date:	9/20/2021
Harvest Date:	8/5/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	277
P ₂ O ₅ (lb/ac) 1-ft sample	150
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	5.5

Trial Notes:

1. The nursery was located approximately 4 miles west of Ewan, Wa.
2. The nursery was fertilized prior to seeding at a rate of 85N, 10P, 10K. An additional 41N was applied on November 8.
3. Overall yield was 13% greater and test weight was 2.5 lb/bu more than 2021.

Cooperator: Rod Mills

Herbicides: Zidua (4oz) was applied on October 18.

Powerflex (2oz), Huskie (13oz), Slant (4oz), and M90 (1qt/100gal) were applied by the cooperator.



2022 WSU Variety Testing Soft White Winter Wheat Trial, Lind

Variety Name <i>Club Italicized</i>	2022					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 Jefe (LWW17-8185)	54	63.3	10.1	29	158			
Sockeye CL+	52	63.2	10.8	33	156			
Castella	51	64.1	10.9	29	158	51	53	63
Piranha CL+	51	63.5	10.9	33	157	54	54	
TMC M-Press	50	63.4	11.0	29	154	49	53	
LCS Sonic	50	62.2	11.4	31	157	45	49	59
LCS Shine	49	62.7	10.2	26	156	61	63	
Norwest Tandem	49	63.2	11.8	27	154	50	55	59
Devote	48	64.2	11.5	29	160	55	56	65
Pritchett	48	63.1	10.7	30	158	53	55	61
Curiosity CL+	47	63.5	11.2	33	161	49	51	58
Norwest Duet	47	62.0	11.6	34	160	53	54	63
ARS-Crescent	47	62.5	11.4	29	163	54	60	64
LCS Hulk	47	62.9	11.9	29	158	52	53	60
WB1529	47	64.9	12.4	28	154	45	46	53
Stingray CL+	45	62.5	12.5	29	156	51		
YSC-215	45	63.8	11.5	32	157			
TMC M-Pire (TMC2021SWW)	45	64.1	11.7	29	155			
AP Exceed	44	64.2	10.7	30	154			
Otto	44	62.9	11.8	32	162	51	55	60
AP Dynamic	44	61.3	11.6	29	160	51	53	
VI Presto CL+	43	63.7	12.7	31	157	50	53	
Mela CL+	42	63.2	11.7	33	161	48	49	58
Appleby CL+	42	62.5	12.3	30	154	45	45	
VI Frost	41	62.7	12.4	30	157	43	48	57
<i>Experimental Varieties</i>								
LWW19-2232	51	62.4	11.1	32	157			
WA8364	50	63.9	12.3	29	160			
LWW19-6219	50	63.0	12.4	29	157			
WA8346 AX	49	62.3	11.3	32	155			
UIL16-478001	48	62.2	11.5	31	158			
YSC-93	48	63.6	11.7	30	155			
ARS12097-12C	47	63.0	11.4	28	162			
WA8365	47	62.9	10.9	28	159			
UIL15-028024	47	63.9	11.0	31	160			
OR2190025 CL+	47	62.6	12.1	29	156			
ARS13659-4C	47	63.2	11.8	33	161			
WA8348 AX	47	63.4	12.4	32	157			
GS2	47	63.2	11.9	33	158			
GS3	47	62.6	11.9	33	157			
LWW19-6591	47	63.4	11.7	29	155			
LWW19-5862	46	61.4	11.7	32	160			
ARS141114-64C	46	63.4	11.9	32	160			
UIL4-085001A	46	61.1	11.9	29	160			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Lind

Variety Name Club Italicized	2022					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)
WA8345 AX	46	62.4	11.7	32	155			
09PN118-02 CL2	46	61.6	11.8	30	157			
WA8334	46	63.8	10.7	31	161			
WA8362	45	62.2	11.8	34	159			
OR2130755	45	62.0	11.5	30	156	49		
LWW17-5877	44	63.3	12.1	29	155			
WA8363	44	63.1	11.7	28	158			
WA8347 AX	44	64.6	12.1	31	156			
OR2190027 CL+	40	63.4	12.2	28	157			
UIL17-7706 CL+	40	63.1	12.3	30	157			
OR2170559	37	62.3	13.7	28	157			
C.V. %	5	0.6	3.7	3	1	10	10	10
LSD (0.05)	5	0.8	0.9	2	2	6	5	4
Average	46	63.0	11.7	30	158	50	52	59
Highest	54	64.9	13.7	34	163	61	63	65
Lowest	37	61.1	10.1	26	154	43	45	49

*Multi-year yield averages do not include 2022 data due to very late planting.

Agronomic Information

Planting Date:	10/19/2021
Harvest Date:	8/3/2022
Seeding Rate (seeds/ft ²):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	163
P ₂ O ₅ (lb/ac) 1-ft sample	108
S (lb/ac) 2-ft sample	23
pH (top 6 inches)	5.7

Herbicides: Barage (12oz) was applied on April 13 by the cooperator.

Trial Notes:

1. The nursery was located approximately 2.5 miles northeast of Lind, Wa.
2. The nursery was fertilized prior to seeding at a rate of 50N, 10S. No additional fertilizer was applied after fall soil sampling.
3. Overall yield was 12% greater and test weight was 3.1 lb/bu more than 2021.

Cooperator: Bruce Sauer

2022 WSU Variety Testing Soft White Winter Wheat Trial, Mattawa

Variety Name	2022						2 Year*	3 Year*	5 Year*
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodging (%)			
Released Varieties									
LCS Blackjack	166	62.3	12.8	41	145	0			
TMC M-Pire (TMC2021SWW)	154	63.2	11.9	37	144	0			
LCS Shine	153	63.2	12.3	38	141	10			
LCS Hulk	152	62.7	13.0	42	147	13			
LCS Jefe (LWW17-8185)	152	62.9	11.8	39	145	14			
LCS Artdeco	150	62.7	11.5	36	141	0			
AP Iliad	140	61.7	12.5	37	144	50			
AP Exceed	136	63.8	12.3	38	141	13			
TMC M-Press	135	61.9	12.1	38	146	0			
YSC-215	132	63.5	13.1	39	147	24			
Norwest Tandem	132	60.4	12.1	34	143	8			
SY Dayton	127	62.6	12.1	41	146	13			
ARS-Selbu 2.0	124	62.4	13.0	38	147	38			
Purl	108	62.2	12.7	37	145	80			
Sockeye CL+	103	60.9	12.7	39	147	80			
Experimental Lines									
OR2170559	147	60.9	13.4	38	146	0			
OR2160264	142	62.2	12.7	41	145	15			
GS3	138	60.8	13.1	46	148	41			
LWW19-6219	136	62.3	12.8	42	146	24			
WA8335	135	59.4	12.8	36	148	57			
OR2190027 CL+	135	62.9	12.5	38	143	40			
LWW19-6591	131	62.8	12.6	37	144	62			
OR2190025 CL+	130	61.7	13.4	38	143	54			
OR2160243	129	62.3	12.5	40	145	5			
LWW17-5877	129	61.7	12.4	33	141	81			
WA8336	127	57.7	11.9	37	147	72			
UIL14-085001A	123	60.0	12.8	40	147	58			
UIL16-072025	123	62.0	12.8	40	145	47			
WA8366	123	59.9	12.8	40	148	76			
WA8307	119	61.3	13.3	40	148	44			
YSC-93	117	61.5	11.8	36	144	82			
WA8347 AX	115	62.0	12.6	41	145	82			
WA8345 AX	113	61.3	12.8	40	145	64			
YSC-217	110	61.7	12.6	38	147	77			
WA8346 AX	109	60.5	12.9	38	146	80			
WA8349 AX	103	62.6	13.4	35	143	86			
C.V. %	9	1.5	3.4	5	1	44			
LSD (0.05)	22	2.1	1.0	4	2	40			
Average	131	61.8	12.6	39	145	41			
Highest	166	63.8	13.4	46	148	86			
Lowest	103	57.7	11.5	33	141	0			

*Multi-year yield averages not shown due to first year at this location.

Agronomic Information

Planting Date:	10/12/2021
Harvest Date:	8/2/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	619
P (ppm-bicarb) 2-ft sample	309
S (lb/ac) 2-ft sample	254
pH (top 6 inches)	6.7

Herbicides: Weedar (1.5pt), Clarity (6.5oz), Tilt (4oz), Inplace (4oz) and Rainer-EA were applied by the cooperator on March 28.

Trial Notes:

- The nursery was located approximately 9 miles southeast of Mattawa, Wa.
- The nursery was fertilized prior to seeding at a rate of 75N, 50P, 100K, and 40S by the cooperator. An additional 105N was applied via fertigation.
- Overall yield was 4% lower and test weight was 3.3 lb/bu more than 2021.

Cooperator: Mike Anderson



2022 WSU Variety Testing Soft White Winter Wheat Trial, Mayview

Variety Name <i>Club Italicized</i>	2022					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>								
Sockeye CL+	139	59.1	8.2	44	167	101	95	
LCS Jefe (LWW17-8185)	136	61.6	7.6	39	163	97		
LCS Shine	135	59.8	7.7	35	163			
LCS Blackjack	134	58.0	8.3	40	166	91	95	96
Norwest Tandem	133	61.0	8.9	35	162	96	94	95
Norwest Duet	133	61.5	8.7	47	168	95	97	97
TMC M-Press	130	60.1	8.9	39	167	94	98	97
Piranha CL+	129	60.2	8.1	42	165	93	93	
YSC-215	128	61.1	7.9	41	166	88	88	
Stingray CL+	128	61.0	8.5	39	166	95	92	93
WB1720	128	61.5	9.1	42	168			
TMC M-Pire (TMC2021SWW)	127	60.8	8.3	36	161			
Resilience CL+	127	60.7	9.1	39	168	94	93	92
Purl	125	60.4	8.5	40	164	91	89	89
UI Magic CL+	124	61.1	9.3	37	163	86	84	89
LCS Hulk	123	60.8	8.8	40	167	90	91	94
WB1529	123	62.2	9.2	39	164			
Cameo (ARSX09492-6C)	123	59.2	8.8	41	166	90	91	
VI Voodoo CL+	122	60.6	8.3	34	164	94	94	
AP Exceed	121	61.8	8.4	38	160	91		
AP Dynamic	120	60.2	9.0	39	168	93	93	
SY Assure	118	61.2	9.4	37	160			
ARS-Selbu 2.0	118	61.5	9.0	39	169	85		
Pritchett	118	57.9	8.2	43	168	89	89	
WB1621	116	61.8	8.4	39	165			
ARS-Crescent	115	60.3	8.1	42	171	85	87	92
SY Dayton	115	60.2	8.2	36	163	87	91	91
VI Presto CL+	112	61.6	9.3	40	166	84		
AP Iliad	110	60.3	9.2	38	162	88	87	
Appleby CL+	107	60.2	9.0	39	161			
Castella ¹	--	60.1	8.2	41	164			
<i>Experimental Lines</i>								
GS3	141	60.4	8.5	41	167			
YSC-93	138	60.9	8.2	40	163	98		
WA8336	134	59.0	7.6	38	167	102		
UIL14-085001A	130	60.2	8.5	42	168			
LWW19-6591	129	61.4	8.8	39	164			
LWW17-5877	124	61.0	9.0	37	159	88		
ARSX09500-17CBW	124	61.1	8.6	39	165	90		
WA8345 AX	123	61.6	8.7	43	165			
UIL15-028024	122	61.1	7.8	38	168	92		
WA8346 AX	120	60.9	8.3	43	165			
UIL17-7706 CL+	120	61.2	8.8	39	166	93		
OR2130755	119	60.2	8.9	43	164			
OR2190025CL+	119	59.4	8.7	36	160	87		
WA8370	119	61.4	8.6	39	165			
LWW19-6219	119	60.6	9.1	39	166			
OR5180071	117	59.4	8.5	38	169			
WA8366	117	59.8	8.2	40	167			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Mayview

Variety Name <i>Club Italicized</i>	2022					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)
ARS14DH1014-C	115	58.5	8.1	42	169			
09PN118-02 CL2	113	60.4	9.0	39	167	83		
WA8349 AX	109	60.7	8.7	42	161			
WA8347 AX	107	60.8	8.9	44	164			
OR2190027 CL+	107	60.9	9.3	35	161			
WA8307	100	59.8	9	41	168			
C.V.	4	1.1	4.2	3	1	8	7	7
LSD	8	1.5	0.8	3	2	8	6	5
Average	122	60.5	8.6	40	165	91	92	93
Highest	141	62.2	9.4	47	171	102	98	97
Lowest	100	57.9	7.6	34	159	83	84	89

¹ - Varieties eaten by deer.

Agronomic Information

Planting Date:	9/16/2021
Harvest Date:	9/3/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	165
P ₂ O ₅ (lb/ac) 1-ft sample	200
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	4.7

Herbicides: Zidua (4oz) and Huskie (15oz) were applied on November 3.

Trial Notes:

1. The nursery was located approximately 6.5 miles southeast of Almota, Wa.
2. The nursery was fertilized at planting at a rate of 11N, 27P, 7K, 7S, 5Cu. An additional 101N was applied on November 5.
3. Overall yield was 110% greater and test weight was 1.8 lb/bu more than 2021.

Cooperator: Randy & Wyatt Koller



2022 WSU Variety Testing Soft White Winter Wheat Trial, Moses Lake

Variety Name <i>Club Italicized</i>	2022						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>									
AP Exceed	157	57.0	11.6	40	153	0	149		
LCS Artdeco	155	53.1	10.9	37	152	0	147	137	143
LCS Blackjack	153	56.6	11.9	39	155	0			
LCS Shine	149	54.7	11.6	36	152	0	148	140	
LCS Hulk	147	59.1	12.6	45	155	0	146	139	144
ARS-Selbu 2.0	147	56.7	12.6	44	155	0	131		
AP Iliad	142	57.5	12.9	40	153	0			
Norwest Tandem	140	54.8	11.7	37	152	0	136	131	
LCS Jefe (LWW17-8185)	139	56.5	11.3	42	154	0	144		
SY Dayton	139	57.2	12.2	41	154	0	141	133	138
YSC-215	137	55.2	11.5	41	157	0	136		
TMC M-Press	130	55.8	12.2	41	155	0	135		
Purl	126	58.7	12.2	42	153	32	137	133	
Sockeye CL+	121	57.0	11.6	43	156	70	137		
TMC M-Pire (TMC2021SWW)	118	53.9	12.5	34	154	0			
<i>Experimental Lines</i>									
LWW19-6219	158	58.4	12.8	41	156	0			
GS3	158	56.5	12.5	45	158	0			
WA8307	153	57.6	13.0	44	158	0	145		
LWW19-6591	152	56.9	12.2	41	155	0			
WA8366	149	57.9	12.2	43	157	10			
OR2160243	147	55.8	12.4	41	154	0	143		
LWW17-5877	146	55.9	12.0	41	153	0	150		
UIL16-072025	145	59.3	12.3	45	155	10			
WA8347 AX	142	59.3	12.6	46	153	13			
OR2160264	140	56.1	12.4	39	153	0	141		
WA8349 AX	138	58.5	12.6	44	152	60			
WA8345 AX	138	57.1	12.4	45	153	14			
OR2170559	137	55.0	13.0	38	155	0			
WA8335	133	52.5	12.9	38	155	0	133		
OR2190027 CL+	131	58.1	12.6	40	153	0			
WA8346 AX	129	58.3	12.4	44	154	44			
UIL14-085001A	129	57.1	12.4	45	159	0			
YSC-217	119	57.0	12.2	39	157	0			
OR2190025 CL+	118	55.2	12.6	39	152	0	124		
YSC-93	118	56.3	11.2	41	153	67	125		
WA8336	114	52.6	11.6	39	154	18	131		
C.V.	5	1.5	2.8	3	1	102	6	6	5
LSD	14	1.9	0.8	3	2	21	11	NS	NS
Average	139	56.5	12.2	41	154	9	139	135	142
Highest	158	59.3	13.0	46	159	70	150	140	144
Lowest	114	52.5	10.9	34	152	0	124	131	138

*Data from 2018-2020 not used in multi-year averages due to limited irrigation practices.

Agronomic Information

Planting Date:	10/21/2021
Harvest Date:	8/18/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	656
P ₂ O ₅ (lb/ac) 1-ft sample	192
S (lb/ac) 2-ft sample	202
pH (top 6 inches)	5.9

Trial Notes:
1. The nursery was located approximately 11.5 miles southeast of Moses Lake, Wa.
2. The nursery was fertilized prior to seeding by the cooperater. All topdressed N was applied via fertigation.
3. Overall yield was the same and test weight was 1.8 lb/bu less than 2021.

Cooperator: Dennis Treat

Herbicides: Huskie (15oz), Miravis Ace (7oz), and Tilt (2oz) were applied on May 1.



2022 WSU Variety Testing Soft White Winter Wheat Trial, Pullman

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
LCS Blackjack	139	60.4	11.9	41	171	0	109	118	130
LCS Shine	138	61.4	11.4	37	169	0	107	117	
Norwest Duet	136	60.8	11.6	48	172	0	102	113	115
LCS Hulk	136	62.4	11.8	41	170	0	103	110	121
AP Exceed	133	62.0	11.6	41	167	0	106		
AP Dynamic	128	60.4	11.7	42	171	0	105	109	
SY Dayton	128	60.9	11.5	40	168	3	104	116	121
Resilience CL+	128	60.7	11.4	40	172	0	101	109	112
ARS-Selbu 2.0	128	61.5	11.8	42	172	0	97		
WB1621	127	63.5	11.7	43	170	10			
Piranha CL+	127	59.9	11.5	45	170	47	105	119	
SY Assure	126	60.6	12.0	40	165	0			
AP Iliad	123	60.2	11.8	42	168	3	103	112	
TMC M-Press	122	60.9	11.6	41	170	0	97	111	115
Stingray CL+	122	59.7	11.8	42	171	0	100	110	115
WB1720	122	62.7	12.3	44	173	0			
Purl	119	60.2	11.7	44	169	10	95	108	115
VI Presto CL+	119	62.2	11.6	46	171	0	93		
VI Voodoo CL+	117	59.1	11.3	36	169	0	105	115	
Appleby CL+	116	62.3	11.6	43	169	0			
LCS Jefe (LWW17-8185)	116	60.6	10.7	42	170	0	95		
Sockeye CL+	116	59.3	11.2	44	171	57	99	113	
WB1529	115	62.9	11.6	41	167	0			
Norwest Tandem	114	58.9	11.4	37	169	0	98	108	113
Pritchett	114	58.6	12.0	45	173	43	95	105	
Cameo (ARSX09492-6C)	112	59.4	13.0	43	172	30	92	108	
TMC M-Pire (TMC2021SWW)	111	61.4	12.2	35	168	0			
YSC-215	108	59.0	11.2	43	171	3	91	108	
UI Magic CL+	100	59.4	11.2	39	169	0	85	97	108
ARS-Crescent	100	60.3	11.9	43	174	63	77	86	100
Castella	90	61.5	13.5	44	171	80	77	96	111
Experimental Lines									
WA8307	137	60.3	12.8	45	172	20	104	114	
LWW19-6591	134	60.9	11.8	41	170	0			
UIL14-085001A	133	59.7	12.0	43	173	23			
OR2130755	131	60.9	11.8	46	170	0			
LWW17-5877	130	60.4	11.9	40	167	3	109		
UIL15-028024	130	63.2	11.0	42	173	0	105		
LWW19-6219	128	60.9	11.9	42	170	0			
GS3	126	59.6	11.7	43	171	0			
09PN118-02 CL2	123	61.0	11.7	41	172	0	100		
YSC-93	120	60.1	11.5	42	169	53	95		
UIL17-7706 CL+	119	60.8	11.6	39	170	0	98		
WA8345 AX	118	61.3	12.3	44	171	43			
OR5180071	117	62.0	12.1	41	173	0			
WA8336	114	58.6	11.1	39	170	83	93		
ARSX09500-17CBW	114	61.7	12.3	42	169	30	91		
WA8346 AX	113	60.1	12.0	41	172	57			
WA8349 AX	109	61.9	12.3	43	166	70			
WA8366	108	59.6	12.0	42	173	30			
WA8370	107	61.1	11.5	41	170	27			
OR2190025CL+	107	59.0	12.7	40	167	0	90		
WA8347 AX	104	62.1	12.5	44	169	53			
OR2190027 CL+	102	61.0	12.5	42	168	3			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Pullman

Variety Name <i>Club Italicized</i>	2022						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)
ARS14DH1014-C	99	60.4	11.8	43	173	77			
C.V.	8	1.0	2.2	3	0	33	8	8	8
LSD	20	1.3	0.6	3	2	10	9	8	7
Average	120	60.7	11.8	42	170	17	98	109	115
Highest	139	63.5	13.5	48	174	83	109	119	130
Lowest	90	58.6	10.7	35	165	0	77	86	100

Agronomic Information

Planting Date:	9/24/2021
Harvest Date:	8/27/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Canola
Spring soil test:	
N (lb/ac) 4-ft sample	406
P ₂ O ₅ (lb/ac) 1-ft sample	421
S (lb/ac) 2-ft sample	116
pH (top 6 inches)	4.4

Trial Notes:

1. The nursery was located approximately 4 miles southeast of Pullman, Wa.
2. The nursery was fertilized prior to seeding at a rate of 110N, 30K, 25S, .25B. No additional fertilizer was applied after fall soil sampling.
3. Overall yield was 62% greater and test weight was 5.3 lb/bu more than 2021.

Cooperator: Kurt Druffel

Herbicides: Anthem Flex (4.25oz) and Amber (0.56oz) were applied by the cooperator on October 13.

Widematch (16oz), Tarsec (1oz), Huskie (12.5oz), Nericor (5oz), Induce (1qt/100gal) and Standxtra/Coron/Urea (8gal) were applied by the cooperator.

Standxtra/Coron/Urea (4gal) and Nericor (7oz) were applied by the cooperator at flagleaf.



2022 WSU Variety Testing Soft White Winter Wheat Trial, Reardan

Variety Name <i>Club Italicized</i>	2022					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>								
Pritchett	120	62.0	10.8	38	-	88	95	99
Sockeye CL+	118	61.9	11.5	40	-			
Norwest Duet	115	62.2	10.0	42	-	88	97	100
Norwest Tandem	115	62.3	10.2	33	-	88	93	100
LCS Sonic	107	62.2	11.1	35	-	82	94	101
Devote	106	63.3	10.2	37	-	87	92	96
Castella	106	63.6	10.3	41	-	83	93	97
Stingray CL+	105	62.0	11.3	35	-	85	89	
Piranha CL+	105	62.1	11.1	42	-	87	94	
ARS-Crescent	104	61.8	10.7	38	-	81	95	100
Curiosity CL+	104	62.7	10.9	39	-	75	82	89
LCS Shine	103	62.3	10.5	31	-	82	92	101
Otto	103	61.7	10.6	38	-	82	88	91
LCS Hulk	103	63.2	11.2	34	-	81	88	94
Mela CL+	99	62.0	11.1	40	-	71	82	91
AP Dynamic	97	61.4	10.8	35	-	78	85	
TMC M-Press	97	62.6	10.5	36	-	84	96	100
LCS Blackjack	96	61.2	10.3	34	-			
AP Exceed	95	63.3	10.8	36	-			
LCS Jefe (LWW17-8185)	95	62.5	10.2	34	-	81		
YSC-215	91	62.3	11.0	35	-	70	80	
VI Presto CL+	87	63.3	11.4	37	-	74	84	
TMC M-Pire (TMC2021SWW)	86	63.1	11.2	33	-			
VI Frost	83	62.5	11.1	36	-	71	80	87
WB1529	78	64.4	12.6	35	-	69	75	84
Appleby CL+	77	62.7	12.0	36	-	68	76	
UI Magic CL+	73	62.6	12.5	32	-	63	77	85
VI Voodoo CL+	71	61.2	11.9	28	-	64		
AP Iliad	69	61.7	12.4	33	-			
<i>Experimental Lines</i>								
WA8345 AX	112	62.8	11.0	40	-			
GS3	110	62	10.4	40	-			
ARS12097-12C	109	61.7	10.3	38	-			
WA8346 AX	109	62.4	10.6	41	-			
LWW19-6591	105	63.1	10.9	34	-			
LWW19-2232	104	61.5	10.6	43	-			
ARS13659-4C	103	61.9	11.7	48	-			
WA8363	102	62.8	10.7	37	-			
LWW19-6219	102	62.6	11.7	36	-			
WA8364	102	63.7	10.3	36	-			
ARS141114-64C	100	62.9	11.3	44	-			
WA8348 AX	97	63.3	11.3	40	-			
YSC-93	97	61.7	11.1	38	-	79		
WA8334	95	63.0	10.1	36	-	84		
UIL 15-028024	95	62.8	11.2	36	-			
UIL 14-085001A	93	61.1	11.3	38	-			
WA8347 AX	93	63.5	12.2	38	-			



2022 WSU Variety Testing Soft White Winter Wheat Trial, Reardan

Variety Name Club <i>Italicized</i>	2022					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)
UIL 17-7706 CL+	93	62.1	11.7	35	-	76		
09PN118-02 CL2	93	62.3	11.0	34	-	79		
OR5180071	92	62.0	11.0	33	-			
OR2130755	92	62.3	11.3	39	-	75		
WA8365	89	63.1	10.5	33	-			
LWW17-5877	82	62.3	12.2	32	-	71		
OR2190025 CL+	75	61.4	11.2	33	-	69		
OR2190027 CL+	75	60.6	12.4	33	-			
C.V.	8	0.8	5.2	5	-	11	9	8
LSD	15	1.1	1.3	4	-	10	8	6
Average	97	62.4	11.1	37	-	78	88	95
Highest	120	64.4	12.6	48	-	88	97	101
Lowest	69	60.6	10.0	28	-	63	75	84

Agronomic Information

Planting Date:	9/14/2021
Harvest Date:	8/19/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	163
P ₂ O ₅ (lb/ac) 1-ft sample	138
S (lb/ac) 2-ft sample	15
pH (top 6 inches)	5.0

Herbicides: Zidua (4oz) was applied on September 16.

Olympus (0.9oz), Bronate (22oz), LIXP (0.1oz), Tilt (4oz), Azoxystrobin (4oz), and Urea (2gal) applied by the cooperator.

Nexicor (13oz) was applied on June 17.

Trial Notes:

1. The nursery was located approximately 4 miles west of Reardan, Wa.
2. The nursery was not fertilized prior to seeding. A rate of 142N, 2P was applied on November 16 after fall soil sampling.
3. Overall yield was 62% greater and test weight was 3.8 lb/bu more than 2021.
4. Late winter freeze damage occurred on entries that broke dormancy early and affected rankings.

Cooperator: Jim Baye



2022 WSU Variety Testing Soft White Winter Wheat Trial, St. John

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
LCS Shine	142	61.5	10.7	37	162	27	120	121	
LCS Blackjack	134	60.7	10.6	41	165	0	121	125	128
LCS Hulk	131	62.3	11.1	43	165	23	110	117	112
Purl	129	62.1	11.1	42	162	40	111	113	108
AP Exceed	127	62.1	10.9	42	160	20	108		
VI Presto CL+	127	63.0	10.9	46	166	20	97		
AP Dynamic	126	61.5	11.0	44	166	0	103	107	
SY Dayton	125	62.3	10.8	43	163	3	110	112	115
Resilience CL+	124	61.8	11.0	41	165	0	102	103	98
VI Voodoo CL+	123	61.2	10.6	36	164	0	107	115	
Stingray CL+	123	61.1	10.8	40	165	10	102	104	105
ARS-Selbu 2.0	122	62.8	11.2	44	167	13	100		
LCS Jefe (LWW17-8185)	121	61.7	10.0	42	164	3	110		
<i>Cameo (ARSX09492-6C)</i>	120	61.6	10.9	46	165	10	106	111	
Norwest Duet	119	61.3	10.1	48	167	30	105	106	107
Appleby CL+	119	62.5	10.7	43	163	0			
WB1720	119	63.5	10.9	44	168	17			
TMC M-Press	118	61.4	10.7	42	165	3	104	109	105
WB1621	116	64.2	10.6	44	164	42			
TMC M-Pire (TMC2021SWW)	114	62.6	10.9	38	163	0			
Piranha CL+	114	60.5	10.3	44	165	58	107	117	
SY Assure	114	61.6	11.3	41	161	17			
WB1529	111	62.6	11.3	42	163	28			
Norwest Tandem	110	60.8	10.6	38	163	0	98	102	107
AP Iliad	108	60.9	11.7	42	162	33	102	107	
<i>ARS-Crescent</i>	106	61.9	10.4	43	169	60	93	105	107
Sockeye CL+	105	59.7	10.0	44	165	68	97	110	
<i>Pritchett</i>	101	59.4	10.5	44	167	63	98	107	
UI Magic CL+	96	61.4	11.0	38	163	0	90	95	103
<i>Castella</i>	91	62.7	12.4	45	164	60	93	99	103
YSC-215	86	57.4	10.4	44	165	17	87	98	
Experimental Lines									
UIL14-085001A	134	61.0	10.3	43	166	7			
WA8336	126	60.5	10.4	41	166	33	112		
WA8307	126	61.5	11.3	45	167	17	111	115	
UIL17-7706 CL+	124	62.3	10.6	41	165	23	105		
LWW19-6591	123	61.2	10.5	44	164	27			
LWW19-6219	122	62.0	11.3	42	165	7			
GS3	121	60.8	10.7	46	166	23			
09PN118-02 CL2	120	61.2	10.7	42	166	17	105		
UIL15-028024	120	63.1	9.9	43	167	13	100		
LWW17-5877	120	61.9	11.3	40	161	27	115		
OR2190025CL+	117	61.5	11.4	40	162	7	99		
OR2130755	117	61.9	11.2	47	164	0			
ARSX09500-17CBW	117	63.0	10.8	44	164	30	109		
WA8346 AX	111	61.2	10.7	46	165	40			
YSC-93	109	61.2	10.1	43	163	50	98		
WA8370	108	62.3	10.7	43	164	17			
WA8366	107	60.4	10.6	43	167	47			
WA8349 AX	106	62.4	11.4	46	161	50			
OR5180071	105	62.0	10.9	39	168	3			
OR2190027 CL+	104	61.9	11.8	39	163	13			



2022 WSU Variety Testing Soft White Winter Wheat Trial, St. John

Variety Name <i>Club Italicized</i>	2022						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	Lodging (%)			
WA8345 AX	103	61.5	11.0	45	166	45			
WA8347 AX	100	63.4	11.3	47	164	33			
ARS14DH1014-C	91	60.5	10.8	42	168	73			
C.V.	6	0.9	3.3	4	1	91	10	11	14
LSD	13	1.3	0.7	4	2	36	12	11	11
Average	116	61.6	10.8	43	165	23	104	109	108
Highest	142	64.2	12.4	48	169	73	121	125	128
Lowest	86	57.4	9.9	36	160	0	87	95	98

Agronomic Information

Planting Date:	9/20/2021
Harvest Date:	8/29/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	292
P ₂ O ₅ (lb/ac) 1-ft sample	108
S (lb/ac) 2-ft sample	33
pH (top 6 inches)	5.0

Herbicides: Zidua (4oz) was applied on October 18.

Powerflex (2oz), Huskie (13oz), Slant (4oz), and M90 (1qt/100gal) were applied by the cooperator.

Trial Notes:

1. The nursery was located approximately 3 miles southeast of St. John, Wa.
2. The nursery was fertilized prior to seeding at a rate of 95N, 15P, 15K. No additional fertilizer was applied after fall soil sampling.
3. Overall yield was 25% greater and test weight was 3.7 lb/bu more than 2021.

Cooperator: Rod Mills

Soft White Winter Wheat Variety Characteristics

Variety	Class ^a	Year Released	Plant Height	Maturity	Emergence Rating ^b	Winter Survival Index ^c	Aluminum Tolerance ^d	Lodging Rating ^e	Hessian Fly Rating ^f	Stripe Rust		Snow Mold Rating ^g ^h	Straw Breaker Rating ^h	Ceph. Stripe Rating ^h	Falling Number Rating ^h	End Use Quality ⁱ
										Possible HTAP ^g Resistance Rating ^f	Resistance Rating ^f					
AP Dynamic	SWW	2021	Medium	Med.-Late	5	7	--	1	S	R	Moderate	--	4	5	8	A
AP Exceed	SWW	2020	Short-Med.	Early-Med.	5	5	--	1	S	R	High	--	--	--	4	MD
AP Iliad	SWW	2020	Medium	Early-Med.	--	7	MTS	1	S	R	High	--	6	6	3	A
Appleby CL+	SWW	2019	Medium	Early-Med.	5	5	--	1	S	R	Moderate	--	6	5	6	D
ARS-Crescent	WC	2011	Med.-Tall	Med.-Late	7	4	--	4	S	MR	Low	7	6	6	2	MD
ARS-Selbu 2.0	SWW	2021	Medium	Med.-Late	--	3	S	1	R	R	High	--	--	--	--	--
Bobtail	SWW	2015	Medium	Medium	--	3	S	--	--	R	High	--	--	--	7	MD
Cameo	WC	2022	Med.-Tall	Med.-Late	--	4	MT	2	R	R	High	--	4	6	5	MD
Castella	WC	2021	Med.-Tall	Medium	6	3	--	7	MR	R	Moderate	6	5	5	4	MD
Curiosity CL+	SWW	2016	Med.-Tall	Med.-Late	3	2	S	5	S	MS	Low	3	7	5	7	A
Devote	SWW	2019	Medium	Medium	2	4	S	1	S	MS	Moderate	3	4	6	6	D
GS Bounty	SWW	2022	Med.-Tall	Medium	4	6	MT	1	S	MS	Low	--	--	--	--	--
Inspire	SWW	2022	Med.-Tall	Med.-Late	--	2	S	2	--	R	High	--	--	--	--	D
Jameson	SWW	2022	Med.-Tall	Med.-Late	2	6	--	1	--	R	High	--	--	--	--	MD
LCS Artdeco	SWW	2011	Med.-Short	Early-Med.	--	6	S	--	S	MR	Moderate	--	9	4	6	A
LCS Blackjack	SWW	2019	Short-Med.	Medium	--	4	MTS	1	S	R	High	7	1	5	6	D
LCS Dagger AX	SWW	--	--	7	--	--	--	--	S	--	--	--	--	--	--	--
LCS Drive	SWW	2015	Short	Early	--	6	--	--	S	R	High	--	3	4	4	D
LCS Hydra AX	SWW	--	--	6	--	--	--	--	S	--	--	--	--	--	--	--
LCS Hulk	SWW	2017	Medium	Medium	6	4	MTS	1	S	R	High	5	9	7	3	A
LCS Jefe	SWW	2022	Medium	Medium	8	2	T	1	S	R	High	--	--	--	8	D
LCS Kraken AX	SWW	--	--	4	--	--	--	--	S	--	--	--	--	--	--	--
LCS Shine	SWW	2018	Short	Early-Med.	8	6	MT	1	S	R	High	5	--	4	5	MD
LCS Sonic	SWW	2017	Med.-Tall	Early-Med.	7	7	MTS	2	S	R	High	6	--	--	5	D
Mela CL+	SWW	2016	Med.-Tall	Med.-Late	2	4	S	6	S	MS	Low	2	7	5	7	A
Nimbus	SWW	2022	Med.-Tall	Medium	5	2	MT	1	S	R	High	--	--	--	--	MD
Nixon	SWW	2019	Medium	Medium	--	2	S	--	S	R	High	6	3	6	--	MD
Norwest Duet	SWW	2015	Tall	Med.-Late	6	4	MT	1	S	R	High	5	8	3	2	D
Norwest Tandem	SWW	2016	Short	Early-Med.	5	4	S	1	S	R	High	6	3	4	3	A
OR2x2 CL+	SWW	2019	Medium	Med.-Late	--	3	MT	--	S	R	High	7	3	3	5	D
Otto	SWW	2011	Med.-Tall	Med.-Late	2	4	S	2	S	MR	Moderate	3	4	5	4	D
Piranha CL+	SWW	2020	Med.-Tall	Medium	6	3	MTS	4	S	R	Moderate	--	6	4	6	D
Pritchett	WC	2020	Med.-Tall	Med.-Late	5	5	S	4	S	R	Moderate	5	4	4	8	D
Purl	SWW	2018	Medium	Medium	--	4	MTS	2	S	R	Moderate	--	6	8	7	A
Resilience CL+	SWW	2020	Medium	Medium	--	5	S	1	S	R	High	--	3	5	3	D
Rosalyn	SWW	2013	Early-Med.	Med.-Late	8	6	S	--	S	R	High	--	2	4	--	A
Sockeye CL+	SWW	2020	Med.-Tall	Medium	4	2	MT	5	S	R	High	--	5	5	7	MD
Stephens	SWW	1977	Short-Med.	Early-Med.	--	5	MT	--	S	MR	Low	--	--	--	--	D
Stingray CL+	SWW	2019	Medium	Medium	7	7	T	1	S	R	High	--	5	4	1	D
SY Assure	SWW	2016	Short-Med.	Early	5	7	MT	1	S	R	High	--	9	5	6	D
SY Dayton	SWW	2019	Short-Med.	Medium	5	6	MT	1	S	R	High	--	7	5	7	A
TMC M-Pire	SWW	2022	Short	Early-Med.	6	--	MTS	1	S	R	Moderate	--	--	--	--	--
TMC M-Press	SWW	2019	Medium	Medium	6	6	MT	1	S	R	Moderate	7	4	8	7	D
UI Magic CL+	SWW	2015	Short-Med.	Medium	5	7	MTS	1	S	S	Low	6	4	2	5	D
VI Frost	SWW	2021	Medium	Medium	6	4	MTS	1	S	R	High	5	4	4	3	MD
VI Presto CL+	SWW	2020	Med.-Tall	Medium	6	3	S	1	S	R	Moderate	--	7	7	5	D
VI Voodoo CL+	SWW	2020	Short	Medium	--	9	MT	1	S	MR	Moderate	--	6	6	7	D
WB1529	SWW	2013	Medium	Early-Med.	4	7	S	1	S	R	High	7	8	6	5	LD
WB1621	SWW	2022	Medium	Medium	3	--	MT	2	S	MR	Moderate	--	--	--	--	--
WB1720	SWW	2022	Med.-Tall	Med.-Late	6	--	MT	1	S	R	Moderate	--	--	--	--	--
WB1922	SWW	2022	--	--	5	--	--	--	S	--	--	--	--	--	--	--
YSC-215	SWW	2020	Medium	Medium	6	--	MTS	1	S	S	Low	--	--	--	--	MD
YSC-93	SWW	--	Medium	Medium	8	--	MT	4	S	MR	Low	--	--	--	--	--

^a SWW = Soft White Winter Wheat, WC = Winter Club.

^b Rating reflects the likelihood of good emergence under adverse planting conditions using deep furrow planting from 1 to 9, where 1 = highly likely and 9 = very unlikely.

^c Rankings from 1-9, 1 = highest survival, 9 = lowest survival.

^d T = Tolerant, TMT = Tolerant- Moderately Tolerant, MT = Moderately Tolerant, MTS = Moderately Tolerant-Susceptible, S = Susceptible

^e Rating from 1 to 9, 1 = least likely to lodge, 9=most likely to lodge.

^f R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

^g The high-temperature adult-plant (HTAP) resistance data were based on greenhouse tests. Unknown= Wheat 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.

^h Rating reflects the degree of resistance and ranges from 1 to 9, where 1 = highly resistant and 9= highly susceptible.

ⁱ MD= Most Desirable, D= Desirable, A= Acceptable, LD= Least Desirable

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2022 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone >16"

Variety Name <i>Hard White Italicized</i>	Dayton	Pullman	Walla Walla	Average	Dayton	Pullman	Walla Walla	Average	Dayton	Pullman	Walla Walla	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
Released Varieties												
Kairos	111	130	121	132	60.9	61.3	61.3	61.7	12.5	12.7	11.2	12.2
Scorpio	119	133	132	131	59.5	60.7	60.5	60.9	11.5	12.6	11.3	11.2
LCS Rocket	108	140	126	130	58.1	59.2	60.4	59.3	11.9	12.1	11.1	11.7
LCS Jet	103	136	128	128	59.1	61.6	60.3	61.1	12.3	12.3	10.9	11.8
Keldin (900,000)	104	143	105	127	62.0	63.7	61.4	62.3	12.0	11.6	12.3	11.5
Keldin (1,200,000)	101	136	114	121	61.6	63.0	61.7	63.1	12.3	11.9	11.0	11.6
WB4303	110	121	129	119	59.8	59.1	61.8	60.0	12.0	12.0	10.9	11.9
Keldin (1,050,000)	99	139	127	118	61.4	63.5	60.8	62.7	12.6	11.9	11.3	11.9
WB4311	105	116	98	113	62.4	62.3	62.1	62.4	12.5	12.6	11.9	12.3
Battle AX	104	117	107	112	62.7	63.2	62.2	62.8	12.4	12.5	12.4	12.4
Canvas	97	111	109	111	62.0	63.2	62.6	63.1	12.5	11.8	12.3	11.6
LCS Helix AX	94	113	119	109	62.1	63.1	60.8	63.0	12.2	11.5	11.2	11.6
WB4394	99	142	116	102	59.9	63.8	62.8	59.7	12.7	11.9	11.1	12.5
WB4510CLP	96	126	104	97	63.1	64.7	64.0	63.1	11.8	11.6	10.5	11.7
Keldin (500,000)	91	144	--	--	60.9	63.4	--	--	13.2	12.1	--	--
Keldin (750,000)	100	139	--	--	61.6	63.6	--	--	12.4	11.8	--	--
Experimental Lines												
LWH19-0192	110	134	120	125	59.0	61.6	61.6	61.0	12.1	11.9	11.0	11.6
LWH19-1103	107	150	116	120	60.6	63.2	61.8	61.6	11.2	11.6	10.9	10.8
OR2170199R	95	129	104	115	57.4	59.7	59.9	58.8	12.3	11.8	11.6	11.9
WA8368	105	138	122	114	58.8	61.7	60.0	59.1	12.2	12.4	11.3	12.3
LWH18-0122	107	134	126	114	58.9	61.1	60.0	60.1	12.7	12.0	11.4	12.2
YSC-1002	96	90	97	112	61.0	61.1	61.4	61.8	12.6	13.2	12.8	12.0
WA8309	97	127	121	110	58.4	58.3	57.5	59.5	12.3	12.6	11.1	12.2
LWH19-5691	101	143	116	109	58.9	61.8	60.8	59.6	11.2	11.3	11.0	11.0
LWH19-5663	94	135	108	108	58.6	61.8	60.8	60.0	12.8	12.6	11.9	12.2
WA8369	84	136	128	102	57.3	61.5	60.4	57.9	13.2	12.2	10.8	13.0
PN13001002-04	92	117	126	100	59.8	61.1	61.2	59.8	11.6	12.1	10.8	11.7
WA8340	89	128	104	93	56.4	60.2	58.4	56.5	12.2	12.6	11.0	12.4
YSC-1001	82	108	104	91	57.8	61.2	61.9	58.2	13.2	12.9	11.1	13.1
GHR10	67	104	104	87	61.1	62.4	61.1	62.1	13.8	13.4	12.4	13.5
C.V. %	5	5	10	9	1.6	0.9	1.7	1.7	5.0	2.7	6.4	6.9
LSD (0.05)	10	15	22	10	2.1	1.2	2.1	1.0	1.4	0.7	1.4	0.8
Average	99	129	116	115	60.0	61.9	61.1	61.0	12.3	12.2	11.4	11.9
Highest	119	150	135	132	63.1	64.7	64.0	63.1	13.8	13.4	12.9	13.5
Lowest	67	90	97	87	56.4	58.3	57.5	56.5	11.2	11.3	10.5	10.8

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

2022 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone = 12-16"

Variety Name <i>Hard White Italicized</i>	Almira	Anatone	Eureka	Lamont	Reardan	Average	Almira	Anatone	Eureka	Lamont	Reardan	Average	Almira	Anatone	Eureka	Lamont	Reardan	Average
						Yield (Bu/A)						Test Wt (Lbs/Bu)						Protein (%)
Released Varieties																		
Scorpio	119	93	118	129	90	108	62.5	60.2	63.5	62.0	61.9	62.0	10.3	7.9	9.5	11.4	12.5	10.4
LCS Jet	105	100	107	123	91	105	62.8	60.9	63.5	62.4	62.2	62.4	11.8	7.5	10.0	11.8	12.7	10.8
LCS Rocket	110	95	108	120	83	104	62.0	59.9	62.1	60.6	60.7	61.1	10.7	7.4	9.5	11.0	12.3	10.3
WB4394	100	81	110	116	98	101	64.7	63.7	66.4	64.1	64.5	64.6	11.6	7.9	9.7	11.0	11.1	10.3
WB4303	99	89	104	118	93	100	63.7	61.2	63.6	60.6	63.0	62.4	11.8	8.4	9.0	11.9	12.9	10.7
Keldin (1,050,000)	104	85	110	110	93	99	64.9	62.7	65.9	63.8	64.2	64.2	12.4	7.6	9.3	11.0	12.8	10.4
Keldin (900,000)	98	87	111	103	93	99	64.8	62.5	66.1	63.5	64.5	64.4	11.8	7.9	9.5	11.4	12.3	10.6
Whistler	109	93	108	95	94	97	65.3	62.6	65.4	61.8	65.0	64.0	10.8	7.4	8.8	11.6	12.6	10.1
Canvas	97	85	109	104	90	96	65.8	62.7	65.8	64.0	64.8	64.7	11.8	8.4	9.8	11.7	12.3	10.8
Keldin (750,000)	85	81	111	114	91	95	64.7	62.6	66.0	63.4	64.0	64.2	12.7	7.7	9.2	11.5	12.3	10.5
WB4311	95	78	96	111	87	93	64.9	63.9	66.0	64.4	63.8	64.5	12.2	8.9	10.0	11.7	12.7	11.2
LCS Helix AX	101	78	103	86	92	92	65.4	62.9	65.8	62.9	64.7	64.5	11.4	8.4	9.2	11.9	12.6	10.8
WB4510CLP	102	77	115	92	71	91	66.4	63.9	66.9	64.0	65.6	65.3	11.4	7.0	9.7	10.9	13.1	10.6
Battle AX	115	86	97	91	84	91	64.4	61.5	64.3	62.4	64.5	63.4	12.2	8.2	9.4	12.4	13.5	11.1
Guardian	96	71	99	83	84	86	65.5	62.7	65.8	62.8	65.0	64.3	11.4	8.1	9.7	11.8	13.2	10.8
Keldin (500,000)	70	87	--	109	80	--	64.3	63.1	--	63.7	63.6	--	12.9	7.8	--	11.5	12.9	--
Experimental Lines																		
LWH19-1103	113	96	115	133	95	112	64.2	62.4	65.1	63.8	63.5	63.9	10.6	7.5	9.4	10.9	11.7	9.9
LWH19-5691	114	95	110	122	98	108	63.3	60.3	63.8	62.0	62.8	62.4	10.3	7.7	9.0	10.5	11.4	9.7
PN13001002-04	113	94	115	109	103	107	63.5	61.2	64.4	61.9	63.7	62.9	10.6	7.6	9.3	11.3	12.0	10.2
LWH19-0192	106	92	111	126	90	104	63.4	60.2	64.2	63.1	62.8	62.7	10.9	7.5	9.3	11.5	11.9	10.2
LWH19-5663	102	99	103	130	81	103	63.1	60.9	63.8	63.3	62.0	62.7	10.9	8.0	9.8	11.4	12.4	10.6
WA8310	104	92	109	110	99	102	63.7	61.8	64.9	63.1	63.5	63.4	10.4	7.6	8.9	10.6	11.1	9.6
WA8338	107	94	110	106	88	100	62.4	60.6	63.1	62.0	62.2	62.1	11.3	8.0	9.1	12.1	12.4	10.4
WA8367	98	88	105	107	101	98	65.0	64.3	66.2	65.1	64.3	64.9	11.4	8.3	10.0	12.7	11.5	10.9
LWH18-0122	97	85	110	120	67	95	62.8	60.6	63.9	61.9	60.9	62.0	11.9	8.7	9.8	12.1	13.9	11.2
YSC-1001	102	70	104	91	93	92	62.6	61.4	64.2	61.7	62.5	62.4	11.1	8.8	10.3	11.8	12.1	11.0
OR2170199R	90	88	94	110	72	89	62.0	58.6	62.6	60.6	60.3	60.9	11.5	8.1	9.8	11.6	12.7	10.5
YSC-1002	94	68	88	72	80	81	64.2	61.6	64.3	61.1	62.5	62.7	11.6	8.7	9.4	12.4	12.7	11.0
GHR10	84	82	96	81	66	81	64.4	62.7	66.2	62.7	63.5	63.8	13.5	8.8	11.1	13.5	15.6	12.5
WA8318 CL+	87	65	93	67	77	73	63.5	61.7	62.7	62.2	62.7	62.5	10.5	7.8	9.7	11.7	12.0	10.5
C.V.	8	7	5	6	8	8	0.5	0.7	0.3	0.7	0.7	0.7	4.5	4.5	3.9	2.5	5.1	6.0
LSD	18	14	9	15	14	5	0.7	1.0	0.5	0.9	1.0	0.3	1.0	0.7	0.8	0.6	1.4	0.5
Average	101	86	106	106	87	97	64.0	61.8	64.7	62.7	63.3	63.3	11.5	8.0	9.6	11.6	12.5	10.6
Highest	119	100	118	133	103	112	66.4	64.3	66.9	65.1	65.6	65.3	13.5	8.9	11.1	13.5	15.6	12.6
Lowest	70	65	88	67	66	73	62.0	58.6	60.9	60.6	60.3	60.9	10.3	7.0	8.8	10.5	11.1	9.6

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



2022 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone <12"

Variety Name <i>Hard White Italicized</i>	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average
	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
Released Varieties															
Scorpio	41	58	79	48	56	58.8	63.7	62.1	63.9	62.1	8.5	12.1	9.9	12.7	10.8
Keldin (900,000)	41	53	59	47	51	61.4	65.0	64.0	64.4	63.7	7.4	11.8	9.4	13.3	10.4
Keldin (1,050,000)	41	53	62	45	50	61.6	65.1	64.3	64.5	63.8	7.6	12.2	9.7	13.3	10.8
Keldin (750,000)	41	52	56	47	50	61.7	64.1	64.6	64.2	63.7	8.0	12.4	9.6	13.3	10.8
Whistler	31	53	65	46	49	61.3	65.3	64.7	65.0	64.1	7.7	11.8	9.4	12.5	10.5
Battle AX	31	48	60	48	49	60.3	65.0	63.2	65.4	63.5	7.8	12.2	9.1	12.6	10.4
LCS Jet	31	49	62	45	48	57.5	62.2	61.1	61.3	60.5	7.7	12.5	9.1	13.1	10.6
WB4303	34	50	56	47	47	59.9	64.2	63.5	64.3	63.0	8.3	12.3	9.4	12.7	10.7
Guardian	30	48	62	43	46	61.7	65.4	65.2	65.6	64.5	7.9	12.8	9.6	13.3	10.9
WB4510CLP	33	46	59	43	45	62.9	66.3	65.0	65.7	65.0	8.0	12.9	9.3	13.8	11.1
WB4394	30	52	51	42	44	61.2	64.2	64.1	64.6	63.5	7.5	12.2	9.6	13.3	10.7
Keldin (350,000)	29	47	55	43	44	61.7	64.6	63.9	64.1	63.5	8.2	12.8	10.4	13.7	11.2
Keldin (500,000)	32	47	53	44	44	61.3	65.0	64.5	64.2	63.8	7.7	12.8	10.1	14.0	11.2
LCS Helix AX	30	40	52	43	43	61.3	65.6	64.6	65.0	64.1	9.5	12.7	9.1	13.1	11.2
WB4311	30	51	47	39	42	61.0	64.9	64.0	64.0	63.5	7.5	13.2	10.9	14.3	11.5
Sequoia	28	46	53	38	42	60.3	63.6	62	63.7	62.4	7.3	11.9	9	13.2	10.4
Experimental Lines															
PN13001002-04	33	57	60	49	50	59.7	62.5	62.6	64.3	62.2	8.5	11.6	9.2	13.2	10.6
LWH19-5691	40	52	61	46	49	58.5	63.2	62.7	63.5	62.0	8.8	11.0	8.9	11.8	10.0
LWH19-1103	32	52	62	47	48	60.0	63.5	63.1	63.2	62.5	8.1	12.1	10.2	12.8	10.8
WA8338	39	54	57	41	47	58.5	62.1	62.0	62.1	61.2	7.7	12.0	9.6	13.0	10.7
LWH19-5663	34	52	58	41	46	58.9	62.4	61.7	62.2	61.3	7.7	12.0	9.7	12.8	10.5
LWH18-0122	30	47	55	42	43	58.4	62.8	61.7	62.6	61.3	8.3	12.6	10.1	13.5	11.0
WA8367	28	51	57	41	43	61.2	64.3	63.0	64.0	63.1	8.2	12.2	9.8	13.4	11.0
WA8310	29	55	54	41	43	60.2	64.7	63.0	64.3	63.0	7.7	11.8	9.8	13.6	10.8
LWH19-0192	26	47	56	44	43	58.8	63.1	61.8	62.8	61.6	7.5	12.3	9.2	12.7	10.3
OR2170199R	28	50	52	38	43	59.3	62.9	61.6	63.2	61.7	8.6	12.2	9.3	13.0	10.9
WA8318 CL+	23	48	57	39	42	60.1	63.6	62.4	63.0	62.3	7.6	11.3	8.8	12.3	9.9
YSC-1001	26	52	52	37	41	59.6	62.6	61.5	62.3	61.5	8.2	12.8	9.9	14.4	11.2
YSC-1002	29	40	49	41	38	60.4	63.6	63.5	63.7	62.9	9.0	13.7	10.2	13.6	11.6
GHR10	24	38	43	33	34	61.9	64.0	64.1	63.7	63.4	8.9	15.2	10.8	15.0	12.5
C.V. %	13	8	8	7	11	0.6	1.0	0.8	0.5	0.8	5.1	3.1	4.9	3.7	4.5
LSD (0.05)	8	9	8	7	4	0.8	1.3	1.1	0.7	0.4	0.8	0.9	1.0	1.1	0.4
Average	32	50	57	43	46	60.3	64.0	63.2	63.8	62.8	8.0	12.4	9.7	13.2	10.8
Highest	41	58	79	49	56	62.9	66.3	65.2	65.7	65.0	9.5	15.2	10.9	15.0	12.5
Lowest	23	38	43	33	34	57.5	62.2	61.1	61.3	60.5	7.3	11.8	8.8	11.8	9.9

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

2022 WSU Variety Testing Hard Red Winter Wheat Trial Summary

Precipitation Zone - Irrigated

Variety Name <i>(Hard White Italicized)</i>	Mattawa	Moses Lake	Average	Mattawa	Moses Lake	Average	Mattawa	Moses Lake	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
LCS Rocket	168	145	158	61.2	52.9	57.2	12.3	12.8	12.5
LCS Jet	165	153	158	63.1	57.9	60.5	12.9	12.3	12.7
Kairos	155	146	152	63.9	56.7	60.3	13.2	12.6	13.0
WB4303	140	160	150	63.6	57.9	60.8	13.7	12.4	13.1
WB4394	134	155	145	64.4	60.3	62.3	12.6	11.8	12.2
Keldin (750,000)	131	157	142	63.9	59.7	61.8	13.5	12.2	12.9
Canvas	145	135	142	65.5	60.4	62.9	13.6	12.4	13.0
Keldin (1,200,000)	124	156	136	63.6	59.6	61.6	13.5	12.5	13.0
Keldin (1,050,000)	123	153	135	63.7	59.4	61.6	13.5	12.3	12.8
WB4510CLP	122	144	134	64.9	60.2	62.8	13.2	12.5	12.8
Keldin (900,000)	120	140	128	63.6	59.2	61.5	13.6	12.4	13.0
Battle AX	127	129	127	64.2	57.5	60.8	14.3	13.0	13.7
<i>Experimental Lines</i>									
LWH18-0122	178	141	160	62.6	56.9	59.7	13.4	13.2	13.3
LWH19-5663	167	142	151	62.9	57.4	60.1	13.4	13.0	13.3
LWH19-0192	161	130	150	62.2	57.3	59.8	13.3	12.9	13.0
LWH19-1103	141	157	147	63.9	58.3	61.0	13.5	12.5	13.0
WA8369	149	128	142	63.1	55.9	59.7	12.9	12.0	12.3
WA8368	151	125	142	61.4	55.4	58.5	13.2	12.6	12.8
WA8309	162	115	141	59.4	52.7	56.2	13.0	12.9	12.9
GHR10	126	139	131	64.3	59.4	61.7	14.3	13.9	14.0
YSC-1001	119	130	127	62.3	58.6	60.4	13.8	12.9	13.2
LWH19-5691	113	139	126	63.0	57.3	60.1	12.3	11.5	11.9
WA8340	124	117	118	59.4	55.4	57.3	13.3	13.4	13.3
YSC-1002	94	103	98	62.1	57.5	59.6	14.2	13.3	13.7
C.V. %	10	7	9	0.6	1.5	1.2	2.5	2.3	2.7
LSD (0.05)	30	20	15	0.9	1.9	0.8	0.7	0.7	0.4
Average	139	139	139	63.0	57.7	60.3	13.3	12.6	13.0
Highest	178	160	160	65.5	60.4	62.9	14.3	13.9	14.0
Lowest	94	103	99	59.4	52.7	56.2	12.3	11.5	11.9

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



WSU Variety Testing Hard Red Winter Wheat Trial Multi-Year Summary
 Precipitation Zone >16" (Dayton, Pullman, Walla Walla)

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 5 loc/yr			3 Years 2020-2022, 8 loc/yr			5 Years 2018-2022, 14 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
	97	57.9	11.7	109	59.6	11.3	113	60.1	10.9
LCS Rocket	94	60.0	12.4						
LWH19-0192	94	59.7	12.3	105	60.8	11.7	109	61.3	11.4
LCS Jet	93	59.1	13.1	105	60.4	12.4	108	60.5	11.9
Scorpio	92	58.9	12.4	90	60.5	12.4	97	61.0	11.9
WB4303	92	58.8	12.9						
LWH18-0122	92	59.4	12.9	98	61.0	12.6			
Kairos	90	58.1	12.9	102	58.9	12.2			
WA8309	89	61.4	12.6	95	62.4	12.2	100	62.5	11.7
Keldin	88	58.6	12.1						
OR2170199R	88	60.9	12.5						
Battle AX	87	60.9	12.6	97	62.1	12.2			
WB4394	87	58.7	12.3						
WA8340	84	60.9	12.8	91	61.9	12.6	94	62.2	12.3
WB4311	83	62.1	12.2						
Canvas	79	59.8	13.2						
YSC-1001	73	60.4	13.2						
YSC-1002									
C.V. %	8	1.4	4.4	7	1.2	4.1	7	1.0	3.4
LSD	5	0.6	0.5	4	0.4	0.3	3	0.3	0.2
Average	88	59.7	12.6	99	60.8	12.2	104	61.3	11.7
Highest	97	62.1	13.2	109	62.4	12.6	113	62.5	12.3
Lowest	73	57.9	11.7	90	58.9	11.3	94	60.1	10.9



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

Precipitation Zone 12-16" (Almira, Anatone, Eureka, Lamont, Reardan)

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 10 loc/yr			3 Years 2020-2022, 15 loc/yr			5 Years 2018-2022, 25 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
LWH19-0192	87	61.3	11.1						
Scorpio	87	60.8	11.4	86	61.1	11.3			
WA8310	86	62.3	10.7	88	62.7	10.6			
LCS Jet	85	60.5	11.4	87	61.0	11.2	91	61.1	11.0
Keldin	83	63.2	11.4	83	63.5	11.4	89	63.1	11.0
WB4394	83	62.9	11.3	84	63.2	11.2			
WA8338	83	60.6	11.3						
WB4303	81	61.6	11.5	77	62.1	12.2	84	61.9	11.7
Whistler	80	62.6	10.7						
Canvas	79	63.6	11.4						
LWH18-0122	79	60.5	12.1						
Battle AX	78	62.5	11.4						
WB4311	77	63.1	11.9	77	63.4	12.0			
OR2170199R	74	59.9	11.4						
YSC-1001	73	60.5	12.0						
Guardian	73	63.3	11.6						
YSC-1002	67	61.6	12.2						
C.V. %	7	0.9	4.5	10	1.1	5.4	7	0.8	3.4
LSD	3	0.6	0.3	4	0.3	0.3	2	0.3	0.1
Average	80	61.8	11.4	83	62.4	11.4	88	62.0	11.2
Highest	87	63.6	12.2	88	63.5	12.2	91	63.1	11.7
Lowest	67	59.9	10.7	77	61.0	10.6	84	61.1	11.0



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

Precipitation Zone <12" (Bickleton, Connell, Horse Heaven, Lind, Ritzville, St. Andrews)

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 8 loc/yr			3 Years 2020-2022, 13 loc/yr			5 Years 2018-2022, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Scorpio	50	58.8	11.8	51	58.7	12.5			
LWH18-0122	46	57.8	12.2						
LWH19-0192	45	58.8	11.5						
LCS Jet	45	58.3	11.9	46	57.9	12.7	54	59.0	11.7
Whistler	45	60.6	11.3						
Battle AX	44	60.5	11.4						
WA8338	44	58.1	11.8						
OR2170199R	44	58.4	11.9						
WB4303	43	60.1	12.0	44	59.1	12.9	48	59.9	12.0
WB4394	43	60.0	11.8	44	58.8	12.7			
Keldin	43	61.0	12.0	46	60.8	12.5	51	61.3	11.6
WB4311	43	60.8	12.4	43	59.7	13.2			
WA8310	42	59.6	11.8	44	59.3	12.4			
Guardian	42	61.8	11.8						
YSC-1001	41	57.9	12.4						
WA8318 CL+	38	58.5	11.4	42	58.8	11.7			
YSC-1002	37	59.2	12.6						
C.V. %	11	1.9	3.2	13	2.7	5.0	12	2.2	4.8
LSD	3	0.6	0.4	2	0.8	0.3	2	0.6	0.2
Average	43	59.4	11.9	45	59.2	12.6	51	60.0	11.7
Highest	50	61.8	12.6	51	60.8	13.2	54	61.3	12.0
Lowest	37	57.8	11.3	42	57.9	11.7	48	59.0	11.6



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

Variety Name <i>Hard White</i>	2 Years 2021-2022, 3 loc/yr			3 Years 2019-2022, 4 loc/yr			5 Years 2017-2022, 7 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
LCS Rocket	153	57.9	12.4	137	57.8	12.6	132	58.6	12.4
LCS Jet	148	60.2	12.9	135	59.9	12.9	131	60.3	12.8
LWH18-0122	148	59.5	13.3						
WB4303	147	60.8	13.0	131	59.8	13.1			
WB4394	145	62.4	12.4						
LWH19-0192	142	59.5	13.4						
Canvas	141	63.1	12.8						
Keldin	140	61.8	13.0	128	61.4	13.0	123	61.5	13.0
Kairos	140	60.9	13.1						
WA8309	137	55.9	13.1	124	55.8	13.1			
Battle AX	133	61.8	13.6						
WA8340	128	57.0	13.3						
YSC-1001	126	59.9	13.6						
YSC-1002	110	60.6	13.9						
C.V. %	6	0.9	1.7	5	1.3	1.8	6	1.5	2.2
LSD	6	0.4	0.2	5	0.5	0.2	4	0.4	0.2
Average	138	60.1	13.1	131	58.9	13.0	129	60.1	12.7
Highest	153	63.1	13.9	137	61.4	13.1	132	61.5	13.0
Lowest	110	55.9	12.4	124	55.8	12.6	123	58.6	12.4

*Moses Lake 2017-2020 data not included due to limited irrigation those years.



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Almira

Variety Name	2022					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)
Released Varieties								
Scorpio	119	62.5	10.3	37	166	79	79	
Battle AX	115	64.4	12.2	39	163	77		
LCS Rocket	110	62.0	10.7	34	167			
Whistler	109	65.3	10.8	41	164	76		
LCS Jet	105	62.8	11.8	34	167	76	76	88
Keldin (1,050,000)	104	64.9	12.4	36	166			
WB4510CLP	102	66.4	11.4	40	166			
LCS Helix AX	101	65.4	11.4	38	163			
WB4394	100	64.7	11.6	42	166	71	72	
WB4303	99	63.7	11.8	36	161	68	67	82
Keldin (900,000)	98	64.8	11.8	36	167	76	76	87
Canvas	97	65.8	11.8	38	163	75		
Guardian	96	65.5	11.4	40	165	68		
WB4311	95	64.9	12.2	36	165	68	71	
Keldin (750,000)	85	64.7	12.7	37	166			
Keldin (500,000)	70	64.3	12.9	35	167			
Experimental Lines								
LWH19-5691	114	63.3	10.3	34	166			
LWH19-1103	113	64.2	10.6	37	167			
PN13001002-04	113	63.5	10.6	42	168			
WA8338	107	62.4	11.3	44	169	71		
LWH19-0192	106	63.4	10.9	34	167	76		
WA8310	104	63.7	10.4	40	167	76	80	
LWH19-5663	102	63.1	10.9	35	168			
YSC-1001	102	62.6	11.1	44	169	71		
WA8367	98	65.0	11.4	41	170			
LWH18-0122	97	62.8	11.9	32	164	68		
YSC-1002	94	64.2	11.6	39	162	66		
OR2170199R	90	62.0	11.5	32	169	69		
WA8318 CL+	87	63.5	10.5	47	171	66	68	
GHR10	84	64.4	13.5	41	161			
C.V.	8	0.5	4.5	4	1	13	13	10
LSD	18	0.7	1.0	3	2	NS	9	NS
Average	101	64.0	11.5	38	166	72	74	86
Highest	119	66.4	13.5	47	171	79	80	88
Lowest	70	62.0	10.3	32	161	66	67	82

Agronomic Information

Planting Date:	9/9/2021
Harvest Date:	8/13/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	256
P ₂ O ₅ (lb/ac) 1-ft sample	167
S (lb/ac) 2-ft sample	27
pH (top 6 inches)	4.9

Herbicides: Zidua (4oz) was applied on September 17.

Nexicor (13oz) was applied on June 17.

Trial Notes:

1. The nursery was located approximately 6.5 miles southeast of Grand Coulee, Wa.
2. The nursery was fertilized at a rate of 40N after seeding by the cooperator. An additional 42N was applied on November 10.
3. Overall yield was 135% greater than 2021.

Cooperator: Dan & Mike McKay



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Anatone

Variety Name	2022						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	Lodge (%)			
Released Varieties									
LCS Jet	100	60.9	7.5	37	163	0	76	79	85
LCS Rocket	95	59.9	7.4	36	163	0			
Scorpio	93	60.2	7.9	35	163	0	69	69	
Whistler	93	62.6	7.4	39	162	0	66		
WB4303	89	61.2	8.4	35	161	0	64	59	66
Keldin (900,000)	87	62.5	7.9	37	164	0	65	69	71
Keldin (500,000)	87	63.1	7.8	39	164	0			
Battle AX	86	61.5	8.2	35	160	0	61		
Keldin (1,050,000)	85	62.7	7.6	38	164	0			
Canvas	85	62.7	8.4	34	160	0	67		
WB4394	81	63.7	7.9	41	163	0	56	66	
Keldin (750,000)	81	62.6	7.7	38	163	0			
LCS Helix AX	78	62.9	8.4	39	163	0			
WB4311	78	63.9	8.9	35	163	0	59	65	71
WB4510CLP	77	63.9	7.0	39	161	0			
Guardian	71	62.7	8.1	36	163	0	51		
Experimental Lines									
LWH19-5663	99	60.9	8.0	37	163	0			
LWH19-1103	96	62.4	7.5	38	162	0			
LWH19-5691	95	60.3	7.7	37	163	0			
WA8338	94	60.6	8.0	45	167	0	63		
PN13001002-04	94	61.2	7.6	43	167	0			
LWH19-0192	92	60.2	7.5	37	163	0	70		
WA8310	92	61.8	7.6	42	164	0	66	70	
WA8367	88	64.3	8.3	45	169	0			
OR2170199R	88	58.6	8.1	34	166	0	60		
LWH18-0122	85	60.6	8.7	30	162	0	63		
GHR10	82	62.7	8.8	38	157	0			
YSC-1001	70	61.4	8.8	42	169	0	49		
YSC-1002	68	61.6	8.7	38	159	10	52		
WA8318 CL+	65	61.7	7.8	49	172	10	50	51	
C.V. %	7	0.7	4.5	4	1	677	10	11	9
LSD (0.05)	14	1.0	0.7	3	2	10	7	7	5
Average	86	61.8	8.0	38	163	1	61	66	73
Highest	100	64.3	8.9	49	172	10	76	79	85
Lowest	65	58.6	7.0	30	157	0	49	51	66

Agronomic Information

Planting Date:	9/16/2021
Harvest Date:	8/8/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 2-ft sample	158
P ₂ O ₅ (lb/ac) 1-ft sample	117
S (lb/ac) 2-ft sample	16
pH (top 6 inches)	6.3

Herbicides: Zidua (4oz) was applied on September 17.

Metribuzin (3oz) was applied on November 2.

Osprey Xtra (4.75oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Thiosulfate (0.5 gal/ac) were applied on March 24.

Metribuzin (3oz) was applied on April 20.

Nexicor (13oz) was applied on June 9.

Trial Notes:

1. The nursery was located approximately 5.5 miles northeast of Anatone, Wa.
2. The nursery was fertilized at planting at a rate of 15N, 36P, 9K, 9S, 7Cu. An additional 97N was applied on November 5.
3. Overall yield was 124% greater and test weight was 4.2 lb/bu more than 2021.
4. There was significant cheatgrass pressure which likely suppressed yield and/or grain protein.

Cooperator: Brit Ausman



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Bickleton

Variety Name	2022					Head Date	Average (Bu/A)	2 Year Average (Bu/A)	3 Year Average (Bu/A)	4 Year* Average (Bu/A)
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)						
Released Varieties										
Keldin (1,050,000)	41	61.6	7.6	32	-					
Keldin (750,000)	41	61.7	8.0	34	-					
Keldin (900,000)	41	61.4	7.4	31	-					
Scorpio	41	58.8	8.5	30	-		29	29		
WB4303	34	59.9	8.3	30	-		25	26	29	
WB4510CLP	33	62.9	8.0	32	-					
Keldin (500,000)	32	61.3	7.7	33	-		26	27	33	
Whistler	31	61.3	7.7	33	-		26			
LCS Jet	31	57.5	7.7	28	-		24	26	34	
Battle AX	31	60.3	7.8	31	-		25			
Guardian	30	61.7	7.9	33	-		26			
LCS Helix AX	30	61.3	9.5	30	-					
WB4394	30	61.2	7.5	33	-		25	25		
WB4311	30	61.0	7.5	29	-		26	26	32	
Keldin (350,000)	29	61.7	8.2	33	-					
Sequoia	28	60.3	7.3	37	-					
Experimental Lines										
LWH19-5691	40	58.5	8.8	30	-					
WA8338	39	58.5	7.7	34	-		28			
LWH19-5663	34	58.9	7.7	32	-					
PN13001002-04	33	59.7	8.5	32	-					
LWH19-1103	32	60.0	8.1	30	-					
LWH18-0122	30	58.4	8.3	27	-		26			
YSC-1002	29	60.4	9.0	29	-		24			
WA8310	29	60.2	7.7	33	-		23	25		
WA8367	28	61.2	8.2	32	-					
OR2170199R	28	59.3	8.6	31	-		23			
YSC-1001	26	59.6	8.2	33	-		22			
LWH19-0192	26	58.8	7.5	30	-		23			
GHR10	24	61.9	8.9	31	-					
WA8318 CL+	23	60.1	7.6	34	-		19	21		
C.V. %	13	0.6	5.1	5	-		15	16	13	
LSD (0.05)	8	0.8	0.8	3	-		4	4	3	
Average	32	60.3	8.0	32	-		25	26	32	
Highest	41	62.9	9.5	37	-		29	29	34	
Lowest	23	57.5	7.3	27	-		19	21	29	

* 4 year average uses data from 2018, 2020, 2021, and 2022.

Agronomic Information

Planting Date:	10/28/2021
Harvest Date:	8/11/2022
Seeding Rate (seeds/ft ²):	12.5
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 3-ft sample	47
P ₂ O ₅ (lb/ac) 1-ft sample	217
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	5.2

Herbicides: Zidua (4oz) was applied on November 10.

Trial Notes:

1. The nursery was located approximately 2.5 miles northeast of Bickleton, Wa.
2. The nursery was fertilized at planting at a rate of 17N, 34P, 9K, 9S, 7Cu. An additional 67N was applied on November 22.
3. Overall yield was 77% greater and test weight was 7.1 lb/bu more than 2021.
4. Significant weed pressure likely reduced yield and/or grain protein.

Cooperator: Andy & Ron Juris



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Connell

Variety Name	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Emerg- ence	2 Year*	3 Year*	5 Year*
							Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Released Varieties									
Scorpio	58	63.7	12.1	27	150	7			
Keldin (1,050,000)	53	65.1	12.2	29	148	5			
Whistler	53	65.3	11.8	29	148	8			
Keldin (900,000)	53	65.0	11.8	28	150	5			
WB4394	52	64.2	12.2	31	147	6	63		
Keldin (750,000)	52	64.1	12.4	29	149	5			
WB4311	51	64.9	13.2	25	147	8	63		
WB4303	50	64.2	12.3	25	146	5	65	66	
LCS Jet	49	62.2	12.5	22	149	5	69	71	70
Battle AX	48	65.0	12.2	25	147	6			
Guardian	48	65.4	12.8	26	148	7			
Keldin (350,000)	47	64.6	12.8	28	151	7			
Keldin (500,000)	47	65.0	12.8	28	150	6	67	67	66
WB4510CLP	46	66.3	12.9	29	148	7			
Sequoia	46	63.6	11.9	35	156	6	65	65	61
LCS Helix AX	40	65.6	12.7	25	145	8			
Experimental									
PN13001002-04	57	62.5	11.6	30	151	8			
WA8310	55	64.7	11.8	30	152	8	56		
WA8338	54	62.1	12.0	30	153	7			
LWH19-5691	52	63.2	11.0	25	152	8			
YSC-1001	52	62.6	12.8	31	151	8			
LWH19-5663	52	62.4	12.0	28	154	8			
LWH19-1103	52	63.5	12.1	26	153	8			
WA8367	51	64.3	12.2	27	154	8			
OR2170199R	50	62.9	12.2	25	152	9			
WA8318 CL+	48	63.6	11.3	32	155	9			
LWH18-0122	47	62.8	12.6	22	150	8			
LWH19-0192	47	63.1	12.3	24	152	8			
YSC-1002	40	63.6	13.7	24	144	7			
GHR10	38	64.0	15.2	28	145	9			
C.V. %	8	1.0	3.1	4	1	16	9	9	9
LSD (0.05)	9	1.3	0.9	2	2	2	6	5	4
Average	50	64.0	12.4	27	150	7	61	61	60
Highest	58	66.3	15.2	35	156	9	69	71	70
Lowest	38	62.2	11.8	22	144	5	54	51	50

*Multi-year yield averages do not include 2022 data due to very late planting.

Agronomic Information

Planting Date:	10/14/2021
Harvest Date:	7/28/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	214
P ₂ O ₅ (lb/ac) 1-ft sample	79
S (lb/ac) 2-ft sample	12
pH (top 6 inches)	5.9

Trial Notes:

- The nursery was located approximately 7.5 miles southeast of Connell, WA. Site was replanted with double disk drill due to poor soil moisture and poor emergence from 09/02 planting.
- The nursery was fertilized prior to seeding at a rate of 65N, 10S by the cooperator. An additional 37N was applied on November 22.
- Emergence ratings averaged across two ratings taken 2 and 6 weeks after first planting on 09/02 at 8" depth (1=best; 9=worst).
- Overall yield was 11% less and test weight was 4.4 lb/bu more than 2020. No data from 2021.

Cooperator: Luke Van Hollebeke

Herbicides: Zidua (4oz) was applied on September 16.

Approach Prima (5oz), Powerflex (2oz), Embed (10oz), Wider Match (10oz), and Urea (2gal) were applied by the cooperator.



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Dayton

Variety Name <i>Hard White Italicized</i>	2022					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>								
Scorpio	119	59.5	11.5	34	156	117	109	113
Kairos	111	60.9	12.5	30	153	111		
WB4303	110	59.8	12.0	34	153	92	87	92
LCS Rocket	108	58.1	11.9	31	154	120	108	114
WB4311	105	62.4	12.5	33	154	100	94	95
Keldin (900,000)	104	62.0	12.0	35	155	107	100	103
Battle AX	104	62.7	12.4	35	153			
LCS Jet	103	59.1	12.3	32	156	109	102	110
Keldin (1,200,000)	101	61.6	12.3	35	156			
Keldin (750,000)	100	61.6	12.4	35	156			
Keldin (1,050,000)	99	61.4	12.6	35	157			
WB4394	99	59.9	12.7	39	155	101	91	
Canvas	97	62.0	12.5	33	153			
WB4510CLP	96	63.1	11.8	37	156			
LCS Helix AX	94	62.1	12.2	35	152			
Keldin (500,000)	91	60.9	13.2	35	158			
<i>Experimental</i>								
LWH19-0192	110	59.0	12.1	36	158			
LWH18-0122	107	58.9	12.7	30	154			
LWH19-1103	107	60.6	11.2	35	158			
WA8368	105	58.8	12.2	32	157			
LWH19-5691	101	58.9	11.2	33	157			
WA8309	97	58.4	12.3	27	158			
YSC-1002	96	61.0	12.6	32	151			
OR2170199R	95	57.4	12.3	32	157			
LWH19-5663	94	58.6	12.8	37	159			
PN13001002-04	92	59.8	11.6	42	158			
WA8340	89	56.4	12.2	36	162			
WA8369	84	57.3	13.2	31	160			
YSC-1001	82	57.8	13.2	41	160			
GHR10	67	61.1	13.8	36	152			
C.V. %	5	1.6	5.0	4	1	6	5	7
LSD (0.05)	10	2.1	1.4	3	3	7	5	5
Average	99	60.0	12.3	34	156	105	97	104
Highest	119	63.1	13.8	42	162	117	109	114
Lowest	67	56.4	11.2	27	151	92	87	92

*Five year average does not include data from 2019 and 2021.

Agronomic Information

Planting Date:	9/30/2021
Harvest Date:	9/13/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Billy Beans
Spring soil test:	
N (lb/ac) 4-ft sample	373
P ₂ O ₅ (lb/ac) 1-ft sample	213
S (lb/ac) 2-ft sample	31
pH (top 6 inches)	5.0

Trial Notes:

- The nursery was located approximately 7.5 miles northwest of Dayton, Wa.
- The trial was fertilized prior to seeding at a rate of 120N, 12P, 21K, 15S, 16Cl, .25Zn, .25B. An additional 42N was applied on November 5.
- Overall yield was 12% less and test weight was 2.2 lb/bu less than 2020. No data from 2021.

Cooperator: Kirk & Deb Fortner

Herbicides: Zidua (4oz) was applied on November 8.

Rally, Osprey Xtra, Huskie, Rapport, and Nericor Xemium were applied by the cooperator.

WASHINGTON STATE UNIVERSITY  **EXTENSION**

2022 OSU/WSU Variety Testing Hard Red Winter Wheat Trial, Eureka

Variety Name <i>Hard White Italicized</i>	2022					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>								
Scorpio	118	63.5	9.5	36	--	82	80	77
WB4510CLP	115	66.9	9.7	39	--			
Keldin (900,000)	111	66.1	9.5	39	--	76	72	74
Keldin (750,000)	111	66.0	9.2	39	--			
Keldin (1,050,000)	110	65.9	9.3	39	--			
WB4394	110	66.4	9.7	41	--	75	71	
Canvas	109	65.8	9.8	36	--	72	67	
Whistler	108	65.4	8.8	39	--			
LCS Rocket	108	62.1	9.5	34	--	75	73	76
LCS Evina	108	64.6	10.6	39	--	72	70	71
LCS Jet	107	63.5	10.0	36	--	76	72	74
Snowmass 2.0	107	65.6	9.3	38	--			
WB4303	104	63.6	9.0	37	--	69	64	70
<i>Irv</i>	103	64.3	10.1	37	--	72	72	69
LCS Helix AX	103	65.8	9.2	38	--			
<i>Millie</i>	100	66.5	10.1	36	--	71	65	64
Guardian	99	65.8	9.7	37	--	73	70	
Battle AX	97	64.3	9.4	37	--	70		
WB4311	96	66.0	10.0	35	--	65	62	66
<i>Experimental Lines</i>								
LWH19-1103	115	65.1	9.4	36	--			
PN13001002-04	115	64.4	9.3	42	--			
OR2190064R	112	65.0	10.0	34	--			
LWH19-0192	111	64.2	9.3	36	--	78		
WA8338	110	63.1	9.1	41	--			
LWH18-0122	110	63.9	9.8	34	--	77		
LWH19-5691	110	63.8	9.0	36	--			
WA8310	109	64.9	8.9	42	--			
WA8367	105	66.2	10.0	41	--			
YSC-1001	104	64.2	10.3	41	--	69		
LWH19-5663	103	63.8	9.8	37	--			
WA8309	100	60.9	10.0	31	--	69	67	
OR2170052H	98	63.8	9.0	39	--	70	68	
GHR10	96	66.2	11.1	38	--			
OR2160065H	96	64.1	10.3	37	--	68		
OR2170199R	94	62.6	9.8	35	--	62		
YSC-1002	88	64.3	9.4	36	--	58		
C.V. %	5	0.3	3.9	3	--	5	6	6
LSD (0.05)	9	0.5	0.8	2	--	4	4	3
Average	106	64.7	9.6	37	--	71	69	71
Highest	118	66.9	11.1	42	--	82	80	77
Lowest	88	60.9	8.8	31	--	58	62	64

Agronomic Information

Planting Date:	10/5/2021
Harvest Date:	8/11/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	212
P ₂ O ₅ (lb/ac) 1-ft sample	163
S (lb/ac) 2-ft sample	35
pH (top 6 inches)	5.2

Trial Notes:

1. The nursery was located approximately 1.5 miles northeast of Eureka, Wa.
2. The nursery was fertilized prior to seeding at a rate of 80N, 15S, 15P, 1qt Zn by the cooperator. Tracite Stand (3gal) was applied by the cooperator in the spring.
3. Overall yield was 152% greater and test weight was 1.2 lb/bu more than in 2021.

Cooperator: George Struthers

Herbicides: Anthem Flex (3oz) was applied by the cooperator in the fall.

Propicon (4oz), Wildcard, and Huskie were applied by the cooperator in the spring



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Horse Heaven

Variety Name	2022					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)
Released Varieties								
Scorpio	79	62.1	9.9	31	150	50	48	
Whistler	65	64.7	9.4	30	148	41		
LCS Jet	62	61.1	9.1	29	150	44	41	41
Keldin (1,050,000)	62	64.3	9.7	33	147			
Guardian	62	65.2	9.6	32	148	41		
Battle AX	60	63.2	9.1	30	146	45		
WB4510CLP	59	65.0	9.3	32	148			
Keldin (900,000)	59	64.0	9.4	33	148			
Keldin (750,000)	56	64.6	9.6	33	149			
WB4303	56	63.5	9.4	32	145	37	36	
Keldin (350,000)	55	63.9	10.4	33	152			
Keldin (500,000)	53	64.5	10.1	33	149	38	42	43
Sequoia	53	62.4	9.3	40	156			
LCS Helix AX	52	64.6	9.1	31	146			
WB4394	51	64.1	9.6	35	150	37	36	
WB4311	47	64.0	10.9	29	149	35	34	35
Experimental Lines								
LWH19-1103	62	63.1	10.2	31	151			
LWH19-5691	61	62.7	8.9	29	151			
PN13001002-04	60	62.6	9.2	34	151			
LWH19-5663	58	61.7	9.7	33	154			
WA8338	57	62.0	9.6	32	152	37		
WA8367	57	63.0	9.8	30	154			
WA8318 CL+	57	62.4	8.8	35	156	37	40	
LWH19-0192	56	61.8	9.2	28	152	37		
LWH18-0122	55	61.7	10.1	27	148	36		
WA8310	54	63.0	9.8	32	152	35	35	
YSC-1001	52	61.5	9.9	35	153	34		
OR2170199R	52	61.6	9.3	29	153	35		
YSC-1002	49	63.5	10.2	29	145	29		
GHR10	43	64.1	10.8	32	146			
C.V. %	8	0.8	4.9	4	1	15	13	13
LSD (0.05)	8	1.1	1.0	3	2	6	5	4
Average	57	63.2	9.7	32	150	38	39	40
Highest	79	65.2	10.9	40	156	50	48	43
Lowest	43	61.1	8.8	27	145	29	34	35

*5 year average does not include 2019 data.

Agronomic Information

Planting Date:	9/16/2021
Harvest Date:	7/25/2022
Seeding Rate (seeds/ft ²):	12.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	82
P ₂ O ₅ (lb/ac) 1-ft sample	100
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.6

Herbicides: Zidua (4oz) was applied on November 10.

Trial Notes:

1. The nursery was located approximately 6 miles southwest of Benton City, Wa.
2. The nursery was fertilized at planting at a rate of 11N, 27P, 7K, 7S, 5 Cu. An additional 51N was applied on November 22.
3. Overall yield was 185% greater and test weight was 3.9 lb/bu more than in 2021.
4. Significant cheatgrass pressure likely reduced yield and/or grain protein.

Cooperator: Chad Smith



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Lamont

Variety Name	2022						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)
Released Varieties									
Scorpio	129	62.0	11.4	40	160	0	115	105	
LCS Jet	123	62.4	11.8	40	160	0	112	105	117
LCS Rocket	120	60.6	11.0	39	159	11			
WB4303	118	60.6	11.9	41	157	5	113	102	110
WB4394	116	64.1	11.0	47	160	27	110	105	
Keldin (750,000)	114	63.4	11.5	41	159	54			
WB4311	111	64.4	11.7	40	159	10	103	94	97
Keldin (1,050,000)	110	63.8	11.0	42	159	47			
Keldin (500,000)	109	63.7	11.5	42	159	10			
Canvas	104	64.0	11.7	40	158	0	100		
Keldin (900,000)	103	63.5	11.4	42	160	59	104	97	111
Whistler	95	61.8	11.6	42	159	63	93		
WB4510CLP	92	64.0	10.9	41	160	41			
Battle AX	91	62.4	12.4	40	156	44	96		
LCS Helix AX	86	62.9	11.9	40	158	64			
Guardian	83	62.8	11.8	43	158	81	91		
Experimental Lines									
LWH19-1103	133	63.8	10.9	42	160	19			
LWH19-5663	130	63.3	11.4	41	160	5			
LWH19-0192	126	63.1	11.5	41	160	0	117		
LWH19-5691	122	62.0	10.5	39	160	6			
LWH18-0122	120	61.9	12.1	38	158	0	112		
OR2170199R	110	60.6	11.6	37	160	0	97		
WA8310	110	63.1	10.6	45	161	33	112	106	
PN13001002-04	109	61.9	11.3	46	162	24			
WA8367	107	65.1	12.7	45	165	57			
WA8338	106	62.0	12.1	45	161	45	106		
YSC-1001	91	61.7	11.8	43	165	29	87		
GHR10	81	62.7	13.5	41	156	88			
YSC-1002	72	61.1	12.4	39	157	84	76		
WA8318 CL+	67	62.2	11.7	46	166	86	72	74	
C.V. %	6	0.7	2.5	4	0	56	7	7	9
LSD (0.05)	15	0.9	0.6	4	1	41	9	6	7
Average	106	62.7	11.6	42	160	33	101	98	109
Highest	133	65.1	13.5	47	166	88	117	106	117
Lowest	67	60.6	10.5	37	156	0	72	74	97

Agronomic Information

Planting Date:	920/21
Harvest Date:	8/5/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	277
P ₂ O ₅ (lb/ac) 1-ft sample	150
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	5.5

Herbicides: Zidua (4oz) was applied on October 18.

Powerflex (2oz), Huskie (13oz), Slant (4oz), and M90 (1qt/100gal) were applied by the cooperator.

Trial Notes:

1. The nursery was located approximately 4 miles west of Ewan, Wa.
2. The nursery was fertilized prior to seeding at a rate of 85N, 10P, 10K. An additional 100N was applied on November 8.
3. Overall yield was 5% greater and test weight was 0.8 lb/bu more than in 2021.

Cooperator: Rod Mills



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Lind

Variety Name	2022					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)
Released Varieties								
Battle AX	48	65.4	12.6	29	151			
Scorpio	48	63.9	12.7	29	156	56		
Keldin (900,000)	47	64.4	13.3	31	155			
WB4303	47	64.3	12.7	30	151			
Keldin (750,000)	47	64.2	13.3	30	155			
Whistler	46	65.0	12.5	31	153			
Keldin (1,050,000)	45	64.5	13.3	30	155			
LCS Jet	45	61.3	13.1	26	156	51	55	63
Keldin (500,000)	44	64.2	14.0	31	155	47	48	50
WB4510CLP	43	65.7	13.8	30	154			
Guardian	43	65.6	13.3	29	154			
Keldin (350,000)	43	64.1	13.7	30	155			
LCS Helix AX	43	65.0	13.1	29	150			
WB4394	42	64.6	13.3	34	155	45		
WB4311	39	64.0	14.3	29	154	40	41	
Sequoia	38	63.7	13.2	34	161			
Experimental Lines								
PN13001002-04	49	64.3	13.2	33	156			
LWH19-1103	47	63.2	12.8	28	157			
LWH19-5691	46	63.5	11.8	28	157			
LWH19-0192	44	62.8	12.7	27	157			
LWH18-0122	42	62.6	13.5	27	157			
LWH19-5663	41	62.2	12.8	29	159			
YSC-1002	41	63.7	13.6	27	152			
WA8367	41	64.0	13.4	28	159			
WA8338	41	62.1	13.0	29	158			
WA8310	41	64.3	13.6	32	157	49	52	
WA8318 CL+	39	63.0	12.3	33	161	49		
OR2170199R	38	63.2	13.0	27	158			
YSC-1001	37	62.3	14.4	32	158			
GHR10	33	63.7	15.0	30	150			
C.V. %	7	0.5	3.7	4	1	8	8	11
LSD (0.05)	7	0.7	1.1	2	2	4	4	4
Average	43	63.8	13.2	30	156	47	47	52
Highest	49	65.7	15.0	34	161	56	55	63
Lowest	33	61.3	11.8	26	150	38	40	46

*Multi-year yield averages do not include 2022 data due to very late planting.

Agronomic Information

Planting Date:	10/19/2021
Harvest Date:	8/3/2022
Seeding Rate (seeds/ft ²):	21
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	163
P ₂ O ₅ (lb/ac) 1-ft sample	108
S (lb/ac) 2-ft sample	23
pH (top 6 inches)	5.7

Herbicides: Barage (12oz) was applied on April 13 by the cooperator.

Trial Notes:

- The nursery was located approximately 2.5 miles northeast of Lind, Wa.
- The nursery was fertilized prior to seeding by the cooperator. An additional 68N was applied on November 16.
- Overall yield was 5% greater and test weight was 4.0 lb/bu more than in 2021.

Cooperator: Bruce Sauer



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Mattawa

Variety Name	2022						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)
Released Varieties									
LCS Rocket	168	61.2	12.3	37	140	18			
LCS Jet	165	63.1	12.9	38	142	0			
Kairos	155	63.9	13.2	36	138	0			
Canvas	145	65.5	13.6	37	139	13			
WB4303	140	63.6	13.7	39	138	56			
WB4394	134	64.4	12.6	42	143	69			
Keldin (750,000)	131	63.9	13.5	34	143	76			
Battle AX	127	64.2	14.3	40	138	73			
Keldin (1,200,000)	124	63.6	13.5	33	143	87			
Keldin (1,050,000)	123	63.7	13.5	32	143	77			
WB4510CLP	122	64.9	13.2	40	142	57			
Keldin (900,000)	120	63.6	13.6	33	143	86			
Experimental Lines									
LWH18-0122	178	62.6	13.4	39	141	0			
LWH19-5663	167	62.9	13.4	42	146	7			
WA8309	162	59.4	13.0	31	146	0			
LWH19-0192	161	62.2	13.3	40	146	0			
WA8368	151	61.4	13.2	37	146	0			
WA8369	149	63.1	12.9	35	145	0			
LWH19-1103	141	63.9	13.5	34	144	63			
GHR10	126	64.3	14.3	37	138	76			
WA8340	124	59.4	13.3	39	148	40			
YSC-1001	119	62.3	13.8	43	147	47			
LWH19-5691	113	63.0	12.3	31	144	73			
YSC-1002	94	62.1	14.2	31	137	86			
C.V. %	10	0.6	2.5	3	1	34			
LSD (0.05)	30	0.9	0.7	3	2	32			
Average	139	63.0	13.3	37	143	42			
Highest	178	65.5	14.3	43	148	87			
Lowest	94	59.4	12.3	31	137	0			

*First year at this location so multi-year averages not available

Agronomic Information

Planting Date:	10/12/2021
Harvest Date:	8/2/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	619
P (ppm-bicarb) 2-ft sample	309
S (lb/ac) 2-ft sample	254
pH (top 6 inches)	6.7

Trial Notes:

- The nursery was located approximately 9 miles southeast of Mattawa, Wa.
- The nursery was fertilized prior to seeding at a rate of 75N, 50P, 100K, and 40S by the cooperator. An additional 105N was applied via fertigation.
- Overall yield was 3% lower and test weight was 3.7 lb/bu more than in 2021.

Cooperator: Mike Anderson

Herbicides: Weedar (1.5pt), Clarity (6.5oz), Tilt (4oz), Inplace (4oz) and Rainer-EA were applied by the cooperator on March 28.



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Moses Lake

Variety Name <i>Hard White Italicized</i>	2022						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>									
WB4303	160	57.9	12.4	40	152	0	146	128	
Keldin (750,000)	157	59.7	12.2	41	153	0			
Keldin (1,200,000)	156	59.6	12.5	40	154	10			
WB4394	155	60.3	11.8	46	152	0	149	126	
LCS Jet	153	57.9	12.3	38	154	0	145	127	150
Keldin (1,050,000)	153	59.4	12.3	41	153	7	144	125	134
Kairos	146	56.7	12.6	35	151	0	133	115	
LCS Rocket	145	52.9	12.8	37	152	0	143	120	143
WB4510CLP	144	60.2	12.5	43	153	20			
Keldin (900,000)	140	59.2	12.4	41	153	3			
Canvas	135	60.4	12.4	41	151	0	136		
Battle AX	129	57.5	13.0	39	151	10	129		
<i>Experimental Lines</i>									
LWH19-1103	157	58.3	12.5	40	153	0			
LWH19-5663	142	57.4	13.0	38	155	0			
LWH18-0122	141	56.9	13.2	36	152	0	138		
LWH19-5691	139	57.3	11.5	39	154	7			
GHR10	139	59.4	13.9	44	151	37			
YSC-1001	130	58.6	12.9	45	156	13	129		
LWH19-0192	130	57.3	12.9	40	155	0	133		
WA8369	128	55.9	12.0	34	155	0			
WA8368	125	55.4	12.6	34	155	0			
WA8340	117	55.4	13.4	38	159	0	127		
WA8309	115	52.7	12.9	30	156	0	125	113	
YSC-1002	103	57.5	13.3	38	151	60	107		
C.V. %	7	1.5	2.3	2	0	197	8	8	8
LSD (0.05)	20	1.9	0.7	2	1	24	13	NS	10
Average	139	57.7	12.6	39	153	7	134	138	142
Highest	160	60.4	13.9	46	159	60	149	128	150
Lowest	103	52.7	11.5	30	151	0	107	113	134

*Multi-year averages do not include 2018-2020 data due to limited irrigation.

Agronomic Information

Planting Date:	10/21/2021
Harvest Date:	8/18/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	656
P ₂ O ₅ (lb/ac) 1-ft sample	192
S (lb/ac) 2-ft sample	202
pH (top 6 inches)	5.9

Trial Notes:
1. The nursery was located approximately 11.5 miles southeast of Moses Lake, Wa.
2. The nursery was fertilized prior to seeding by the cooperator. All additional fertilizer was applied via fertigation.
3. Overall yield was the same and test weight was 1.8 lb/bu less than 2021.

Cooperator: Dennis Treat

Herbicides: Huskie (15oz), Miravis Ace (7oz), and Tilt (2oz) were applied on May 1.



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Pullman

Variety Name	2022						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)
Released Varieties									
Keldin (500,000)	144	63.4	12.1	40	168	0			
Keldin (900,000)	143	63.7	11.6	40	168	10			
WB4394	142	63.8	11.9	46	169	0	103	106	
LCS Rocket	140	59.2	12.1	36	168	0	102	112	122
Keldin (750,000)	139	63.6	11.8	41	168	0			
Keldin (1,050,000)	139	63.5	11.9	40	168	20	105	106	118
LCS Jet	136	61.6	12.3	39	167	0	100	110	121
Keldin (1,200,000)	136	63.0	11.9	41	169	43			
Scorpio	133	60.7	12.6	37	167	0	98	110	117
Kairos	130	61.3	12.7	35	165	0	95	98	
WB4510CLP	126	64.7	11.6	43	167	10			
WB4303	121	59.1	12.0	40	166	0	92	89	104
Battle AX	117	63.2	12.5	39	164	27	93		
WB4311	116	62.3	12.6	40	165	7	89	95	107
LCS Helix AX	113	63.1	11.5	41	165	33			
Canvas	111	63.2	11.8	39	166	3	89		
Experimental Lines									
LWH19-1103	150	63.2	11.6	41	167	0			
LWH19-5691	143	61.8	11.3	39	167	17			
WA8368	138	61.7	12.4	37	168	0			
WA8369	136	61.5	12.2	38	170	0			
LWH19-5663	135	61.8	12.6	38	169	0			
LWH18-0122	134	61.1	12.0	37	167	0	101		
LWH19-0192	134	61.6	11.9	40	169	0	104		
OR2170199R	129	59.7	11.8	37	170	0	101		
WA8340	128	60.2	12.6	40	172	0	99		
WA8309	127	58.3	12.6	32	170	0	98	106	
PN13001002-04	117	61.1	12.1	45	169	23			
YSC-1001	108	61.2	12.9	48	171	10	84		
GHR10	104	62.4	13.4	39	164	57			
YSC-1002	90	61.1	13.2	38	164	70	72		
C.V. %	5	0.9	2.7	3	0	96	8	6	8
LSD (0.05)	15	1.2	0.7	3	1	18	8	6	7
Average	129	61.9	12.2	40	168	11	96	104	115
Highest	150	64.7	13.4	48	172	70	105	112	122
Lowest	90	58.3	11.3	32	164	0	72	89	104

Agronomic Information

Planting Date:	9/24/2021
Harvest Date:	8/27/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Canola
Spring soil test:	
N (lb/ac) 4-ft sample	406
P ₂ O ₅ (lb/ac) 1-ft sample	421
S (lb/ac) 2-ft sample	116
pH (top 6 inches)	4.4

Trial Notes:

- The nursery was located approximately 4 miles southeast of Pullman, Wa.
- The nursery was fertilized prior to seeding at a rate of 110N, 30K, 25S, .25B. An additional 45N was applied on November 8.
- Overall yield was 90% greater and test weight was 4.0 lb/bu more than in 2021.

Cooperator: Kurt Druffel

Herbicides: Anthem Flex (4.25oz) and Amber (0.56oz) were applied by the cooperator on October 13.

Widematch (16oz), Tarsec (1oz), Huskie (12.5oz), Nericor (5oz), Induce (1qt/100gal) and Standxtra/Coron/Urea (8gal) were applied by the cooperator.

Standxtra/Coron/Urea (4gal) and Nericor (7oz) were applied by the cooperator at flagleaf.



2022 WSU Variety Testing Hard Red Winter Wheat Trial, Reardan

Variety Name <i>Hard White Italicized</i>	2022					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>								
WB4394	98	64.5	11.1	39	--	80	85	
Whistler	94	65.0	12.6	38	--	69		
Keldin (1,050,000)	93	64.2	12.8	35	--			
WB4303	93	63.0	12.9	33	--	73	74	77
Keldin (900,000)	93	64.5	12.3	36	--	74	82	87
LCS Helix AX	92	64.7	12.6	36	--			
LCS Jet	91	62.2	12.7	32	--	71	81	84
Keldin (750,000)	91	64.0	12.3	35	--			
Canvas	90	64.8	12.3	35	--	69		
Scorpio	90	61.9	12.5	33	--	71	79	
WB4311	87	63.8	12.7	35	--	67	71	
Battle AX	84	64.5	13.5	34	--	67		
Guardian	84	65.0	13.2	36	--	67		
LCS Rocket	83	60.7	12.3	32	--			
Keldin (500,000)	80	63.6	12.9	33	--			
WB4510CLP	71	65.6	13.1	37	--			
<i>Experimental Lines</i>								
PN13001002-04	103	63.7	12.0	41	--			
WA8367	101	64.3	11.5	40	--			
WA8310	99	63.5	11.1	37	--	81	91	
LWH19-5691	98	62.8	11.4	34	--			
LWH19-1103	95	63.5	11.7	35	--			
YSC-1001	93	62.5	12.1	44	--	69		
LWH19-0192	90	62.8	11.9	33	--	79		
WA8338	88	62.2	12.4	38	--	79		
LWH19-5663	81	62.0	12.4	33	--			
YSC-1002	80	62.5	12.7	36	--	64		
WA8318 CL+	77	62.7	12.0	43	--	63	78	
OR2170199R	72	60.3	12.7	31	--	60		
LWH18-0122	67	60.9	13.9	28	--	60		
GHR10	66	63.5	15.6	36	--			
C.V. %	8	0.7	5.1	6	--	9	9	12
LSD (0.05)	14	1.0	1.4	5	--	8	7	8
Average	87	63.3	12.5	36	--	70	80	83
Highest	103	65.6	15.6	44	--	81	91	87
Lowest	66	60.3	11.1	28	--	60	71	77

Agronomic Information

Planting Date:	9/14/2021
Harvest Date:	8/19/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	163
P ₂ O ₅ (lb/ac) 1-ft sample	138
S (lb/ac) 2-ft sample	15
pH (top 6 inches)	5.0

Herbicides: Zidua (4oz) was applied on September 16.

Olympus (0.9oz), Bronate (22oz), LIXP (0.1oz), Tilt (4oz), Azoxystrobin (4oz), and Urea (2gal) applied by the cooperator. Nxicor (13oz) was applied on June 17.

Trial Notes:

1. The nursery was located approximately 4 miles west of Reardan, Wa.
2. The nursery was not fertilized prior to seeding. A rate of 170N, 2P was applied on November 16 after fall soil sampling.
3. Overall yield was 58% greater and test weight was 2.7 lb/bu more than in 2021.
4. Late winter freeze damage occurred on entries that broke dormancy early and affected rankings.

Cooperator: Jim Baye

WASHINGTON STATE UNIVERSITY  **EXTENSION**

2022 WSU/OSU Variety Testing Hard Red Winter Wheat Trial, Walla Walla

Variety Name <i>Hard White Italicized</i>	2022					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>								
Guardian	135	60.5	10.9	39	146	95		
Scorpio	132	60.5	11.3	36	146	105	110	107
WB4303	129	61.8	10.9	40	144	109	100	103
LCS Jet	128	60.3	10.9	39	146	116	117	115
Keldin (1,050,000)	127	60.8	11.3	43	148			
LCS Rocket	126	60.4	11.1	37	144	118	121	120
Kairos	121	61.3	11.2	35	143	101	102	
LCS Helix AX	119	60.8	11.2	41	148			
WB4394	116	62.8	11.1	44	145	100	104	
Keldin (1,200,000)	114	61.7	11.0	40	148			
<i>Irv</i>	111	61.3	11.1	41	148	95	103	99
LCS Evina	110	60.5	12.9	47	153	99	108	113
Canvas	109	62.6	12.3	38	144	95		
<i>Millie</i>	109	63.5	12.2	37	148	92	98	97
Battle AX	107	62.2	12.4	41	143	94		
Snowmass 2.0	106	61.5	11.7	41	147			
Keldin (900,000)	105	61.4	12.3	39	146	88	86	90
WB4510CLP	104	64.0	10.5	41	148			
WB4311	98	62.1	11.9	39	144	87	90	88
<i>Experimental Lines</i>								
OR2190064R	135	61.7	11.1	40	148			
WA8369	128	60.4	10.8	38	149			
LWH18-0122	126	60.0	11.4	37	147	106		
PN13001002-04	126	61.2	10.8	45	147			
OR2170052H	124	60.3	11.4	38	151	89		
WA8368	122	60.0	11.3	38	149			
WA8309	121	57.5	11.1	32	149	108	115	
LWH19-0192	120	61.6	11.0	41	149	108		
LWH19-1103	116	61.8	10.9	40	146			
LWH19-5691	116	60.8	11.0	38	147			
OR2160065H	111	61.2	12.0	42	149	93		
LWH19-5663	108	60.8	11.9	39	147			
OR2170199R	104	59.9	11.6	37	148	94		
YSC-1001	104	61.9	11.1	43	149	96		
GHR10	104	61.1	12.4	41	143			
WA8340	104	58.4	11.0	40	152	101		
YSC-1002	97	61.4	12.8	39	141	79		
C.V. %	10	1.7	6.4	5	2	12	12	11
LSD (0.05)	22	2.1	1.4	5	5	14	12	8
Average	116	61.1	11.4	40	147	98	102	103
Highest	135	64.0	12.9	47	153	118	117	120
Lowest	97	57.5	10.5	32	141	79	86	88

Agronomic Information

Planting Date:	9/30/2021
Harvest Date:	8/16/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Garbonzos
Spring soil test:	
N (lb/ac) 4-ft sample	295
P ₂ O ₅ (lb/ac) 1-ft sample	138
S (lb/ac) 2-ft sample	15
pH (top 6 inches)	6.2

Herbicides: Zidua (4oz) was applied on November 8.
All other herbicides were applied by the cooperator.

Trial Notes:

1. The nursery was located approximately 6 miles northeast of Walla Walla, Wa.
2. The nursery was fertilized prior to seeding by the cooperator. An additional 140N was applied on November 5.
3. Overall yield was 47% greater and test weight was 0.3 lb/bu less than in 2021.

Cooperator: Jason Lynch & Jay Nowogroski

Hard Red Winter Wheat Variety Characteristics

Variety	Class ^a	Year Released	Plant Height	Maturity	Emergence Rating ^b	Winter Survival Index ^c	Aluminum Tolerance ^d	Lodging Rating ^e	Hessian Fly Rating ^f	Stripe Rust		Snow Mold Rating ^g	Straw Breaker Rating ^h	Ceph. Stripe Rating ^h	Falling Number Rating ^h	End Use Quality ^h
										Rating ^f	Possible HTAP ^g Resistance					
Battle AX	HRW	2021	Medium	Early-Med.	6	7	MTS	4	R	S	Low	--	--	--	--	--
Canvas	HRW	2021	Medium	Early-Med.	--	2	S	2	R	S	Low	--	--	--	--	--
Guardian	HWW	2021	Medium	Early-Med.	7	2	S	8	R	S	Low	--	--	--	--	MD
Irv	HWW	2018	Medium	Medium	--	8	S	1	S	MS	Moderate	--	--	--	--	MD
Kairos	HRW	2020	Short	Early-Med.	--	8	S	2	S	R	Low	--	--	--	--	--
Keldin	HRW	2011	Medium	Early-Med.	5	3	S	4	S	MS	Moderate	6	8	7	--	D
Kivari AX	HRW	2022	--	--	2	--	--	--	S	--	--	--	--	--	--	--
LCS Eclipse AX	HRW	--	--	--	6	--	--	--	S	--	--	--	--	--	--	--
LCS Evina	HRW	2018	Med.-Tall	Med.-Tall	--	8	S	1	S	R	High	--	--	--	--	A
LCS Helix AX	HRW	2021	--	--	7	3	MTS	7	S	MS	Low	--	--	--	--	A
LCS Jet	HRW	2015	Short-Med.	Early-Med.	5	5	S	1	S	MS	Low	6	1	6	4	A
LCS Rocket	HRW	2018	Medium	Medium	--	8	S	2	S	R	High	8	6	6	5	A
Millie	HWW	2021	Medium	Medium	--	6	S	1	R	MR	Moderate	--	--	--	--	MD
Scorpio	HRW	2019	Short-Med.	Medium	6	6	T	1	MR	MR	Low	--	7	4	--	MD
Sequoia	HRW	2015	Tall	Med.-Late	5	5	S	--	--	MR	Low	--	--	--	--	D
Snowmass 2.0	HRW	2021	Medium	Medium	--	5	S	--	S	S	Low	--	--	--	--	--
WB4303	HRW	2018	Medium	Early-Med.	5	4	T	2	S	S	Low	7	6	8	6	A
WB4311	HRW	2017	Medium	Early-Med.	7	6	MTS	2	S	R	Moderate	2	5	7	7	D
WB4394	HRW	2020	Med.-Tall	Medium	5	5	MT	3	S	MR	Low	--	9	--	--	A
WB4510CLP	HRW	2017	Med.-Tall	Medium	5	3	S	4	S	R	High	--	--	--	--	--
Whistler	HRW	2021	Med.-Tall	Early-Med.	8	3	T	7	S	S	Low	--	--	--	--	--

^a HRW = Hard Red Winter Wheat, HWW = Hard White Winter Wheat

^b Rating reflects the likelihood of good emergence under adverse planting conditions using deep furrow planting from 1 to 9, where 1 = highly likely and 9 = very unlikely.

^c Rankings from 1-9, 1 = highest survival, 9 = lowest survival.

^d T = Tolerant, TMT = Tolerant- Moderately Tolerant, MT = Moderately Tolerant, MTS = Moderately Tolerant-Susceptible, S = Susceptible

^e Rating from 1 to 9, 1 = least likely to lodge, 9=most likely to lodge.

^f R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

^g The high-temperature adult-plant (HTAP) resistance data were based on greenhouse tests. Unknown= Wheat 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.

^h Rating reflects the degree of resistance and ranges from 1 to 9, where 1= highly resistant and 9= highly susceptible.

ⁱ MD= Most Desirable, D= Desirable, A= Acceptable, LD= Least Desirable

2022 WSU/OSU Variety Testing Clearfield Winter Wheat Trial, Eureka

Variety Name <i>Hard Red Winter</i>	2022					Head Date	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)					
Released Varieties									
Sockeye CL+	123	60.9	9.2	41	--	81	82		
Piranha CL+	122	61.6	8.9	40	--	80	81		
LCS Blackjack	116	59.6	9.3	35	--				
WB4510CLP	114	64.5	9.7	40	--				
Appleby CL+	106	61.8	9.5	39	--	75	73	71	
Stingray CL+	105	61.2	9.5	37	--	71	69	71	
Curiosity CL+	104	61.1	9.0	41	--				
VI Voodoo CL+	103	60.9	9.4	34	--	76	78		
Brawl CL Plus	102	64.2	11.0	39	--	67	62	60	
VI Presto CL+	101	63.0	9.7	39	--	72	72		
OR2X2 CL+	100	60.8	9.5	38	--	74	76	73	
Mela CL+	90	60.9	9.5	41	--				
UI Magic CL+	89	60.8	9.4	35	--	61	62	65	
Experimental Lines									
UIL 17-7706 CL+	105	62.0	10.1	36	--	75			
OR2190027 CL+	104	62.1	10.2	36	--	75			
OR2190025 CL+	101	60.8	9.2	37	--	72			
09PN118-02 CL2	99	61.3	9.9	37	--	71			
WA8318 CL+	93	62.7	9.7	43	--				
C.V. %	5	0.5	4.1	3	--	6	4	7	
LSD (0.05)	9	0.7	0.9	3	--	5	3	3	
Average	104	61.7	9.6	38	--	73	73	68	
Highest	123	64.5	11.0	43	--	81	82	73	
Lowest	89	59.6	8.9	34	--	61	62	60	

Agronomic Information

Planting Date:	10/5/2021
Harvest Date:	8/11/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	212
P ₂ O ₅ (lb/ac) 1-ft sample	163
S (lb/ac) 2-ft sample	35
pH (top 6 inches)	5.2

Trial Notes:

- The nursery was located approximately 1.5 miles northeast of Eureka, Wa.
- The nursery was fertilized prior to seeding at a rate of 80N, 15S, 15P, 1qt Zn by the cooperator. Tracite Stand (3gal) was applied by the cooperator in the spring.
- Overall yield was 136% greater and test weight was 1.0 lb/bu less than in 2021.

Cooperator: George Struthers

Herbicides: Anthem Flex (3oz) was applied by the cooperator in the fall.

Propicon (4oz), Wildcard, and Huskie were applied by the cooperator in the spring.



2022 WSU/OSU Variety Testing Clearfield Winter Wheat Trial, Walla Walla

Variety Name Hard Red Winter	2022						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)
Released Varieties									
LCS Shine	141	60.5	9.1	35	146	0	108	109	109
Sockeye CL+	140	59.6	10.0	44	151	33	113	116	
Stingray CL+	131	60.6	9.3	39	149	3	99	103	109
<i>WB4510CLP</i>	127	64.1	9.9	44	146	13			
VI Voodoo CL+	126	60.2	9.4	36	148	0	104	113	
Resilience CL+	126	61.1	10.1	41	151	0	101	105	106
Piranha CL+	126	60.1	9.8	43	150	23	104	109	
UI Magic CL+	122	61.2	9.6	37	147	0	99	103	104
SY Dayton	121	60.8	10.3	39	150	13	106		
LCS Blackjack	119	59.1	9.7	39	148	0	99		
Appleby CL+	115	60.9	10.8	44	146	3	86	91	96
VI Presto CL+	115	61.7	11.1	46	148	13	96	104	
OR2X2 CL+	113	60.3	10.1	43	151	0	98	100	103
Brawl CL Plus	110	63.4	12.9	43	142	3	84	83	83
Experimental Lines									
OR2190027 CL+	127	62.4	9.9	38	145	0	107		
09PN118-02 CL2	126	61.0	10.2	41	151	7	101		
OR2190025 CL+	124	61.2	10.2	38	144	0	107		
UIL 17-7706 CL+	114	60.2	10.3	39	150	30	90		
C.V. %	6	0.5	4.4	3	1	174	7	10	12
LSD (0.05)	17	0.7	1.1	3	2	24	8	10	10
Average	123	61.0	10.2	41	148	8	100	103	101
Highest	141	64.1	12.9	46	151	33	113	116	109
Lowest	110	59.1	9.1	35	142	0	84	83	83

Agronomic Information

Planting Date:	9/30/2021
Harvest Date:	8/16/2022
Seeding Rate (seeds/ft ²):	21.5
Previous Crop:	Garbonzos
Spring soil test:	
N (lb/ac) 4-ft sample	295
P ₂ O ₅ (lb/ac) 1-ft sample	138
S (lb/ac) 2-ft sample	15
pH (top 6 inches)	6.2

Herbicides: Zidua (4oz) was applied on November 8.

Trial Notes:

- The nursery was located approximately 6 miles northeast of Walla Walla, Wa.
- The nursery was fertilized prior to seeding by the cooperator. An additional 140N was applied on November 5.
- Overall yield was 60% greater and test weight was 1.1 lb/bu more than in 2021.

Cooperator: Jason Lynch & Jay Nowogroski

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**2022 WSU Variety Testing Soft White Spring Wheat Trial Summary
Precipitation Zone - 20"**

Variety Name <i>(Club Wheat 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 (%)				
Released															
Tekoa	68	100	93	88	88	60.1	64.1	63.2	62.0	62.2	10.4	11.9	11.2	11.5	11.3
Ryan	71	100	98	91	88	59.4	61.6	61.8	57.8	60.1	9.6	11.2	10.2	11.6	10.6
Seahawk	71	94	97	86	87	60.9	63.0	62.5	60.5	61.7	10.4	13.3	11.3	12.3	12.0
<i>Melba</i>	69	98	90	81	86	60.2	61.3	62.3	61.7	61.4	10.3	11.8	10.6	11.2	11.1
UI Cookie	68	95	88	86	84	59.8	62.3	61.0	59.5	60.7	10.9	11.8	10.7	11.9	11.4
<i>Hedge CL+</i>	68	90	90	77	81	63.1	63.0	63.8	61.9	63.0	10.8	13.2	11.6	12.3	12.0
JD	68	95	90	74	81	62.3	62.9	63.5	61.4	62.7	10.7	12.3	11.3	12.4	11.6
<i>Roger (WA8325)</i>	62	96	89	91	81	62.9	63.0	64.0	63.0	62.8	9.6	11.2	10.1	10.5	10.4
TMC Lochaven	70	88	89	84	80	61.6	62.7	62.7	60.4	61.6	10.4	12.1	11.3	12.2	11.5
WB6211CLP	57	88	89	78	80	60.4	61.0	61.7	57.0	60.1	10.6	12.0	11.9	12.7	11.7
Louise	65	96	81	71	78	61.8	61.5	61.9	57.7	60.8	10.0	11.2	10.5	12.2	11.0
AP Coachman	65	88	80	75	77	58.7	60.3	60.5	58.1	59.3	10.2	12.5	10.6	10.8	11.0
WB6121	61	85	87	79	77	61.2	62.3	62.4	59.8	61.4	10.7	13.2	11.8	12.4	11.9
AP Mondovi CL2	59	92	79	77	77	60.6	61.5	59.9	58.3	60.3	11.5	13.9	11.8	13.2	12.5
Experimental															
WA8351	72	100	100	89	92	62.3	63.5	64.2	62.5	63.2	9.5	10.9	10.5	11.3	10.6
WA8327	70	105	100	86	90	61.5	62.8	62.5	61.3	62.0	9.6	11.0	10.9	11.4	10.7
WA8377	71	96	99	83	88	61.1	62.0	62.6	60.1	61.6	10.3	11.8	11.0	11.4	10.9
WA8321	63	95	97	86	87	61.4	62.6	63.0	61.3	62.1	9.7	11.0	10.3	11.3	10.5
IDO1702S	72	90	92	89	87	62.1	63.0	63.3	61.8	62.6	10.3	11.7	10.7	10.9	11.0
WA8354 CL+	70	87	88	84	86	63.3	62.4	63.5	61.7	62.8	9.8	11.8	11.5	11.6	11.2
WA8378	70	100	94	84	86	62.2	62.4	63.4	60.5	62.1	9.4	11.1	10.1	11.3	10.5
YSC-605	68	99	90	92	85	61.0	62.4	61.8	60.4	61.5	9.8	11.7	11.5	12.3	11.3
IDO1902S	70	92	85	80	83	62.3	63.3	63.2	62.2	62.9	10.5	12.0	11.0	11.4	11.2
IDO1404S	67	96	85	78	80	61.2	62.6	61.6	59.2	61.0	10.5	12.5	10.9	11.9	11.4
C.V. %	5	3	4	5	7	1.4	0.7	0.9	1.7	1.4	4.3	5.9	2.8	3.5	5.0
LSD (0.05)	6	7	8	8	5	1.9	0.9	1.3	2.4	0.7	1.0	1.6	0.7	0.9	0.5
Average	67	94	90	83	84	61.3	62.4	62.5	60.4	61.7	10.2	12.0	11.0	11.7	11.2
Highest	72	105	100	92	92	63.3	64.1	64.2	63.0	63.2	11.5	13.9	11.9	13.2	12.5
Lowest	57	85	79	71	77	58.7	60.3	59.9	57.0	59.3	9.4	10.9	10.1	10.5	10.4

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



**2022 WSU Variety Testing Soft White Spring Wheat Trial Summary
Precipitation Zone - 16-20"**

Variety Name (Club Wheat <i>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 (%)					
Released																		
Ryan	55	55	76	65	110	72	55.8	60.3	61.1	59.8	61.0	59.8	12.2	11.2	11.7	10.9	11.2	11.3
UI Cookie	58	53	78	66	100	71	56.8	61.2	61.0	59.9	60.6	59.7	12.6	12.0	11.9	11.4	11.4	12.0
Seahawk	53	51	71	68	104	70	56.4	61.3	61.1	60.6	62.0	60.3	13.3	11.6	12.1	11.3	11.5	12.0
Roger (WA8325)	58	53	65	65	99	68	59.0	62.7	63.1	62.2	62.0	61.7	11.6	10.6	11.0	10.5	10.8	11.0
Tekoa	50	42	83	62	102	68	55.3	60.3	62.0	60.0	62.3	60.1	13.4	11.9	11.8	11.5	10.7	11.9
AP Coachman	50	45	74	63	91	66	53.3	58.6	59.2	57.7	61.2	58.1	11.5	11.1	10.9	10.5	10.5	10.9
WB6121	52	44	66	63	100	66	57.0	61.0	62.2	61.0	62.3	60.7	13.0	12.6	12.8	12.0	12.0	12.5
Melba	49	51	66	59	94	65	57.3	60.5	61.1	60.1	61.0	60.4	12.6	11.3	11.3	11.0	10.4	11.2
TMC Lochaven	56	48	64	58	95	65	58.1	61.6	61.9	60.7	61.6	60.4	12.8	12.7	12.6	12.2	12.1	12.6
AP Mondovi CL2	47	45	70	59	92	62	54.9	59.0	60.0	58.6	60.9	58.7	13.7	13.1	13.3	12.7	12.9	13.1
Hedge CL+	42	44	72	64	92	62	57.8	61.5	63.2	61.7	61.9	60.9	13.6	11.9	12.0	11.7	11.7	12.2
WB6211CLP	45	42	64	56	91	60	52.9	58.6	59.8	58.1	60.6	58.1	13.5	12.3	12.9	12.5	12.2	12.6
Louise	40	40	67	56	89	60	55.0	59.3	60.4	58.8	61.9	59.0	13.0	11.9	11.5	11.6	11.0	11.7
JD	42	40	66	59	87	58	57.1	61.6	62.7	61.6	62.2	60.9	13.5	12.0	12.1	11.0	11.7	12.2
Experimental																		
WA8351	57	54	78	73	108	74	57.9	62.6	63.5	62.1	63.0	61.8	11.8	11.2	11.1	10.6	10.6	11.0
WA8327	58	53	72	68	109	71	57.2	61.9	62.8	60.7	62.6	61.0	12.3	11.3	11.8	11.1	11.1	11.5
WA8354 CL+	58	48	73	68	102	70	58.4	61.0	62.1	61.2	61.6	61.1	12.8	12.2	12.1	11.9	11.8	12.1
YSC-605	57	54	64	68	109	70	56.4	60.8	61.1	60.5	61.9	59.9	13.0	11.6	12.0	11.3	11.4	12.0
WA8378	53	46	73	68	96	68	58.5	61.1	63.1	61.8	63.3	61.3	11.9	11.2	10.8	10.7	10.6	11.1
IDO1702S	58	52	74	60	96	67	58.8	62.3	62.3	61.0	62.6	61.5	11.7	11.3	11.5	11.4	11.2	11.4
WA8321	51	54	71	59	97	66	56.5	61.5	62.2	61.4	61.8	60.8	12.4	10.9	11.3	10.8	10.9	11.2
WA8377	50	49	74	60	99	66	55.6	60.6	60.7	59.6	62.0	59.8	12.5	11.4	11.6	11.4	11.3	11.6
IDO1404S	50	52	70	57	97	65	55.6	61.2	61.1	60.1	61.4	59.9	12.5	11.6	11.7	11.3	11.2	11.6
IDO1902S	51	52	77	58	92	64	58.2	63.2	63.4	60.7	63.6	62.0	12.9	11.7	11.7	11.5	11.5	11.8
C.V. %	5	6	7	5	4	7	1.6	1.3	1.1	1.1	0.6	1.8	3.6	2.1	2.2	2.6	2.7	3.8
LSD (0.05)	5	6	9	6	6	3	1.8	1.7	1.5	1.3	0.8	0.8	0.9	0.6	0.6	0.6	0.7	0.3
Average	52	49	71	63	98	66	56.7	61.0	61.7	60.4	61.9	60.3	12.7	11.7	11.8	11.4	11.3	11.8
Highest	58	55	83	73	110	74	59.0	63.2	63.5	62.2	63.6	62.0	13.7	13.1	13.3	12.7	12.9	13.1
Lowest	40	40	64	56	87	58	52.9	58.6	59.2	57.7	60.6	58.1	11.5	10.6	10.8	10.5	10.4	10.9

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



2022 WSU Variety Testing Soft White Spring Wheat Trial Summary Precipitation Zone - 12-16"

Variety Name <i>(Club Wheat Italicized)</i>	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
Released Varieties												
Roger (WA8325)	46	59	59	52	59.6	63.0	61.2	61.1	11.2	9.5	11.9	10.7
Ryan	55	55	56	52	58.6	61.1	55.0	57.8	11.0	9.5	13.3	11.2
AP Mondovi CL2	45	52	46	50	57.0	61.6	55.2	58.4	12.4	10.2	14.0	12.2
WB6121	49	52	47	49	58.8	63.1	55.0	59.4	11.9	11.0	14.3	12.2
Seahawk	41	55	49	49	57.9	62.7	57.1	59.3	11.4	9.1	13.3	11.3
Hedge CL+	38	56	47	49	58.8	63.8	58.1	60.5	11.8	9.4	13.5	11.7
UI Cookie	41	49	52	49	54.3	61.3	56.1	57.5	13.0	9.2	13.4	12.0
Tekoa	46	54	48	48	57.6	63.2	57.6	59.1	12.0	9.5	13.9	11.7
AP Coachman	38	60	40	48	53.7	59.7	50.4	55.1	10.6	8.7	12.1	10.3
TMC Lochaven	45	50	47	48	57.0	62.2	56.0	58.5	12.1	10.0	13.8	11.8
Melba	38	56	46	48	54.7	62.6	57.0	58.3	12.2	8.8	12.9	11.2
Louise	41	52	44	47	57.2	61.2	53.5	57.4	11.2	9.2	13.1	11.2
JD	34	55	44	45	57.4	63.9	57.8	60.0	12.4	9.5	13.6	11.9
WB6211CLP	37	51	40	43	54.7	60.0	51.9	55.8	11.8	9.8	14.0	11.8
Experimental Lines												
WA8351	43	68	49	53	58.1	63.9	57.2	59.1	10.8	8.8	12.8	11.0
WA8354 CL+	45	56	53	51	59.3	63.9	60.2	61.2	11.7	9.6	13.2	11.5
WA8327	49	62	49	51	58.8	61.9	56.3	58.4	11.0	9.0	13.5	11.4
IDO1702S	43	54	51	50	59.9	63.0	59.8	61.0	10.8	9.1	11.8	10.6
WA8378	42	58	45	49	58.1	62.8	55.9	59.0	10.5	8.7	12.6	10.6
YSC-605	46	54	54	49	57.2	62.2	57.8	58.8	12.1	9.6	13.7	11.8
WA8321	38	61	47	49	57.9	63.2	57.2	59.6	10.9	8.7	12.9	10.7
WA8377	43	56	48	49	56.9	61.5	55.9	58.2	11.7	9.5	12.4	11.2
IDO1404S	38	56	42	44	56.9	62.4	55.4	57.6	11.5	9.1	13.1	11.4
IDO1902S	38	52	48	44	59.3	63.7	58.9	60.1	12.0	9.4	12.9	11.5
C.V. %	9	8	8	13	1.7	1.0	2.1	2.2	4.8	4.2	4.1	5.5
LSD (0.05)	8	9	7	6	1.9	1.4	2.3	1.2	1.1	0.9	1.2	0.6
Average	42	55	48	49	57.5	62.4	56.5	58.7	11.6	9.4	13.2	11.4
Highest	55	68	59	53	59.9	63.9	61.2	61.2	13.0	11.0	14.3	12.2
Lowest	34	49	40	43	53.7	59.7	50.4	55.1	10.5	8.7	11.8	10.3

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



2022 WSU Variety Testing Soft White Spring Wheat Trial Summary Precipitation Zone - <12"

Variety Name (<i>Club Wheat 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 (%)			
Released Varieties												
AP Coachman	37	33	32	34	58.8	60.6	62.1	60.4	9.6	9.5	12.3	10.4
Tekoa	34	32	31	32	61.3	62.8	64.2	62.7	10.7	10.3	12.6	11.1
Melba	31	32	32	32	60.6	61.6	64.2	62.0	10.5	9.6	12.1	10.6
Louise	34	33	29	32	59.9	61.8	62.9	61.5	10.5	10.1	12.6	11.1
Ryan	35	31	29	32	62.3	62.3	63.6	62.7	10.1	10.3	13.2	11.2
Seahawk	32	30	29	31	61.0	61.8	63.9	62.1	10.1	9.8	12.7	10.9
AP Mondovi CL2	34	31	26	30	60.9	61.8	62.3	61.5	11.1	11.5	15.2	12.6
<i>Hedge CL+</i>	33	30	30	30	62.0	63.3	64.0	63.2	10.8	10.9	13.1	11.7
TMC Lochaven	34	33	25	30	62.1	62.9	62.9	62.8	11.0	11.2	15.1	12.5
<i>Roger (WA8325)</i>	33	26	28	29	62.5	62.7	64.0	63.0	10.1	9.7	12.6	10.9
<i>JD</i>	32	26	28	29	62.7	63.2	64.0	63.2	10.6	10.9	13.0	11.4
<i>UI Cookie</i>	32	29	27	29	61.1	61.4	63.0	61.7	10.6	10.6	14.4	11.8
WB6211CLP	31	28	25	29	59.4	61.3	62.4	61.1	10.7	10.8	14.3	12.0
WB6121	33	28	25	28	62.1	63.0	62.9	62.7	10.8	11.0	14.9	12.3
Experimental Lines												
WA8351	39	33	31	34	62.0	63.3	64.4	63.3	9.9	9.5	12.6	10.6
WA8327	36	35	33	34	61.3	62.2	64.3	62.6	10.2	9.7	12.6	10.8
IDO1404S	35	31	34	33	61.9	62.6	63.8	62.9	10.0	9.8	12.6	11.0
WA8321	35	30	29	32	61.2	62.6	63.7	62.6	9.5	9.6	13.0	10.8
WA8377	36	30	32	32	60.6	61.9	63.6	62.1	10.1	10.2	13.2	11.1
YSC-605	34	28	30	31	61.2	61.8	63.2	62.1	10.2	10.0	12.7	11.0
WA8378	36	31	28	31	62.0	62.8	63.8	63.0	9.7	9.9	12.5	10.7
IDO1902S	33	26	28	30	61.6	63.4	65.1	63.4	10.5	10.9	13.9	11.6
WA8354 CL+	27	29	25	27	62.0	63.1	62.9	62.8	10.9	10.6	13.9	11.7
IDO1702S	31	24	23	26	63.0	63.2	63.5	63.1	10.7	10.6	13.7	11.6
C.V. %	4	10	7	10	1.0	0.4	0.6	0.8	3.7	3.3	2.1	3.5
LSD (0.05)	3	6	4	3	1.4	0.6	0.9	0.5	0.9	0.8	0.6	0.4
Average	34	30	29	31	61.4	62.4	63.5	62.4	10.4	10.3	13.3	11.3
Highest	39	35	34	34	63.0	63.4	65.1	63.4	11.1	11.5	15.2	12.6
Lowest	27	24	23	26	58.8	60.6	62.1	60.4	9.5	9.5	12.1	10.4

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



**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 2021-2022, 8 loc/yr			3 Years 2020-2022, 12 loc/yr			5 Years 2018-2022, 20 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Ryan	66	58.7	10.9	68	59.3	10.3	73	59.0	9.9
WA8321	65	60.6	10.6						
Tekoa	65	61.3	11.5	68	61.7	10.5	73	61.1	10.1
WA8354 CL+	64	61.0	11.3						
Seahawk	64	60.5	11.7	66	60.8	10.9	72	60.3	10.4
YSC-605	62	60.4	11.2						
IDO1902S	61	61.3	11.4						
Roger (WA8325)	60	60.3	10.6	65	61.0	10.0			
UI Cookie	60	59.5	12.0						
JD	60	60.5	11.8	62	61.0	10.9	65	60.5	10.6
Melba	60	59.0	11.8	64	59.5	10.8	68	59.2	10.1
AP Coachman	60	58.3	10.9	63	58.6	10.3	69	58.7	9.9
TMC Lochaven	60	60.3	11.8						
Hedge CL+	60	61.1	11.9	62	61.4	11.1	66	60.8	10.7
WB6211CLP	59	57.5	12.0						
Louise	58	58.9	11.3	61	59.4	10.3	65	59.2	9.9
WB6121	57	59.5	12.1	62	60.5	11.4	65	60.5	11.0
AP Mondovi CL2	57	58.8	12.8	61	59.4	11.8	65	59.4	11.3
C.V.%	6	1.2	3.5	6	1.1	3.5	7	1.0	3.8
LSD	3	0.5	0.3	2	0.4	0.2	2	0.3	0.2
Average	61	59.9	11.6	64	60.3	10.8	68	59.9	10.4
Highest	66	61.3	12.8	68	61.7	11.8	73	61.1	11.3
Lowest	57	57.5	10.6	61	58.6	10.0	65	58.7	9.9

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



WSU Variety Testing Soft White Spring Wheat Trial Multi-Year Summary Precipitation Zone 16-20" (Dayton, Mayview, Plaza, St. John, Walla Walla)

Variety Name <i>Club Italicized</i>	2 Years 2021-2022, 9 loc/yr			3 Years 2020-2022, 14 loc/yr			5 Years 2018-2022, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Ryan	49	59.9	12.0	57	59.8	11.5	66	60.4	10.9
AP Coachman	48	58.3	11.3	55	58.3	10.9	64	59.1	10.3
Seahawk	47	60.4	12.2	57	61.0	11.6	64	61.2	10.9
UI Cookie	47	59.8	13.0						
Tekoa	46	60.3	12.3	56	61.0	11.6	64	61.6	10.8
WA8354 CL+	46	60.7	12.6						
YSC-605	46	60.0	12.3						
WA8321	45	60.7	11.6						
Roger (WA8325)	45	61.6	11.6	55	61.7	11.0			
TMC Lochaven	45	60.6	13.2						
WB6121	44	60.6	13.1	54	61.0	12.5	60	61.5	11.9
IDO1902S	44	62.1	12.5						
Hedge CL+	44	61.0	12.6	49	59.8	12.3	58	60.8	11.7
AP Mondovi CL2	43	58.7	13.8	50	59.0	13.1	58	59.8	12.3
Melba	43	60.2	12.0	49	58.4	11.6	59	59.5	10.8
Louise	43	59.0	12.1	52	59.2	11.4	62	60.0	10.8
WB6211CLP	41	58.2	12.9						
JD	40	60.9	12.6	47	60.6	12.2	55	61.2	11.6
C.V.%	8	1.1	2.8	8	1.4	3.0	7	1.2	3.5
LSD	2	0.5	0.2	2	0.4	0.2	2	0.3	0.2
Average	45	60.2	12.4	53	60.0	11.8	61	60.5	11.2
Highest	49	62.1	13.8	57	61.7	13.1	66	61.6	12.3
Lowest	40	58.2	11.3	47	58.3	10.9	55	59.1	10.3

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



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 2021-2022, 6 loc/yr			3 Years 2020-2022, 10 loc/yr			5 Years 2018-2022, 18 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Ryan	36	58.5	12.1	48	58.8	11.6	50	59.1	11.4
Roger (WA8325)	35	61.1	11.6	47	61.2	11.4			
AP Coachman	34	54.6	11.3	45	55.5	11.2	48	56.6	10.9
WA8321	34	58.7	11.4						
AP Mondovi CL2	34	57.5	13.6	42	57.6	12.9	45	58.6	12.9
TMC Lochaven	34	58.7	12.7						
WA8354 CL+	34	60.3	12.3						
Louise	34	56.8	12.0	46	57.6	11.6	49	58.3	11.3
WB6121	33	58.5	13.3	43	59.0	12.7	45	59.5	12.6
Seahawk	33	59.3	12.3	44	60.0	11.8	47	60.0	11.6
Tekoa	33	58.8	12.6	45	59.9	12.2	48	60.2	11.6
YSC-605	32	58.4	12.6						
Hedge CL+	32	60.5	12.6	43	60.8	12.1	45	60.7	12.0
UI Cookie	32	58.1	13.1						
Melba	32	58.1	12.5	45	58.4	11.9	47	59.1	11.5
IDO1902S	31	60.8	12.5						
WB6211CLP	31	55.5	12.9						
JD	31	60.1	12.6	42	60.3	12.2	45	60.4	11.8
C.V.%	12	1.8	4.1	10	2.0	4.5	12	1.8	4.8
LSD	2	0.7	0.3	2	0.6	0.3	2	0.4	0.2
Average	33	58.6	12.4	45	59.0	12.0	47	59.2	11.8
Highest	36	61.1	13.6	48	61.2	12.9	50	60.7	12.9
Lowest	31	54.6	11.3	42	55.5	11.2	45	56.6	10.9

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



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 2021-2022, 6 loc/yr			3 Years 2020-2022, 9 loc/yr			5 Years 2018-2022, 15 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
AP Coachman	22	59.0	11.1	28	59.5	10.7	31	59.8	10.8
Tekoa	22	61.1	12.4	28	61.5	11.7	30	61.8	11.4
Ryan	21	61.3	12.3	25	61.5	11.7	29	61.3	11.6
WA8321	21	61.6	11.5						
Louise	21	60.0	11.9	26	60.5	11.4	29	60.8	11.3
<i>Melba</i>	21	60.9	11.7	26	61.0	11.2	30	60.9	11.1
AP Mondovi CL2	20	60.0	13.6	24	60.4	13.1	26	60.4	12.9
YSC-605	20	60.9	12.0						
TMC Lochaven	20	61.8	13.0						
Seahawk	20	61.2	11.8	24	61.6	11.3	28	61.7	11.3
<i>Hedge CL+</i>	19	62.0	12.5	24	62.0	11.9	28	62.1	11.8
WB6211CLP	19	59.5	12.7						
<i>Roger (WA8325)</i>	19	61.9	11.5	23	62.2	11.1			
IDO1902S	19	62.5	12.4						
JD	19	62.0	12.3	23	62.1	11.9	27	62.1	11.8
WB6121	18	61.7	13.0	22	62.1	12.6	26	61.7	12.5
UI Cookie	18	60.6	12.9						
WA8354 CL+	18	61.8	12.5						
C.V.%	9	0.8	2.4	7	0.6	2.6	8	0.8	2.8
LSD	1	0.3	0.2	1	0.3	0.2	1	0.2	0.1
Average	20	61.1	12.3	25	61.3	11.7	28	61.3	11.7
Highest	22	62.5	13.6	28	62.2	13.1	31	62.1	12.9
Lowest	18	59.0	11.1	22	59.5	10.7	26	59.8	10.8

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



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 2021-2022, 4 loc/yr			3 Years 2020-2022, 6 loc/yr			5 Years 2018-2022, 10 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
	140	61.8	11.7						
UI Cookie	139	59.2	12.5						
<i>Roger (WA8325)</i>	135	61.1	11.2	127	61.4	11.2			
WA8354 CL+	135	59.8	12.6						
WA8327	135	59.9	12.5						
TMC Lochaven	134	59.5	12.7						
WB6121	134	60.7	12.8	127	61.6	12.9	128	62.2	13.1
Tekoa	133	59.6	12.4	129	60.5	12.4	133	61.4	12.4
IDO1902S	132	61.0	12.0						
WA8351	132	60.8	12.0						
YSC-603	131	58.4	12.9						
YSC-605	128	58.9	12.5						
WB6211CLP	126	56.6	13.1						
IDO1404S	125	58.7	12.0						
WA8321	117	58.6	12.0						
C.V.%	7	1.5	2.4	6	1.6	2.5	6	0.7	1.5
LSD	8	1.1	0.3	NS	NS	0.2	4	0.5	0.2
Average	132	59.6	12.3	128	61.2	12.1	130	61.8	12.8
Highest	140	61.8	13.1	129	61.6	12.9	133	62.2	13.1
Lowest	117	56.6	11.2	127	60.5	11.2	128	61.4	12.4

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Almira

Variety Name Club <i>Italicized</i>	2022					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>								
Ryan	55	58.6	11.0	28	177	53	53	51
WB6121	49	58.8	11.9	28	180	46	47	46
<i>Roger (WA8325)</i>	46	59.6	11.2	25	179	49		
Tekoa	46	57.6	12.0	30	182	46	48	45
TMC Lochaven	45	57.0	12.1	31	183			
AP Mondovi CL2	45	57.0	12.4	32	182	45	46	
Louise	41	57.2	11.2	35	184	47	47	44
Seahawk	41	57.9	11.4	30	183	43	45	44
UI Cookie	41	54.3	13.0	30	181			
Hedge CL+	38	58.8	11.8	30	182	47	46	
Melba	38	54.7	12.2	28	184	46	46	46
AP Coachman	38	53.7	10.6	31	183	45	47	
WB6211CLP	37	54.7	11.8	28	180			
JD	34	57.4	12.4	30	182	41	42	43
<i>Experimental Lines</i>								
WA8327	49	58.8	11.0	29	181			
YSG-605	46	57.2	12.1	28	182			
WA8354 CL+	45	59.3	11.7	27	180			
WA8351	43	58.1	10.8	30	182			
IDO1702S	43	59.9	10.8	26	177			
WA8377	43	56.9	11.7	30	180			
WA8378	42	58.1	10.5	31	181			
IDO1902S	38	59.3	12.0	29	181			
IDO1404S	38	56.9	11.5	29	183			
WA8321	38	57.9	10.9	28	181			
C.V.	9	1.7	4.8	6	1	14	12	14
LSD	8	1.9	1.1	4	3	NS	5	5
Average	42	57.5	11.6	29	181	46	46	46
Highest	55	59.9	13.0	35	184	53	53	51
Lowest	34	53.7	10.5	25	177	41	42	43

* 5 Year data from 2017, 2018, 2019, 2020, and 2022.

Agronomic Information

Planting Date:	4/12/2022
Harvest Date:	8/28/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	217
P ₂ O ₅ (lb/ac) 1-ft sample	142
S (lb/ac) 2-ft sample	45
pH (top 6 inches)	5.3

Trial Notes:

- The nursery was located approximately 7 miles north of Almira, WA.
- The nursery was fertilized at seeding at a rate of 14N, 3P, 9K, 9S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 16% lower and test weight was 1.0 lb/bu less than 2020 (no data in 2021).

Cooperator: Dan McKay

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Bickleton

Variety Name <i>Club Italicized</i>	2022					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>								
AP Coachman	37	58.8	9.6	--	182	25	24	27
Ryan	35	62.3	10.1	--	180	24	22	27
TMC Lochaven	34	62.1	11.0	--	181	24		
Tekoa	34	61.3	10.7	--	182	24	22	26
Louise	34	59.9	10.5	--	182	23	21	26
AP Mondovi CL2	34	60.9	11.1	--	182	23	21	24
WB6121	33	62.1	10.8	--	180	23	20	25
Roger (WA8325)	33	62.5	10.1	--	178	22	19	
Hedge CL+	33	62.0	10.8	--	183	22	19	24
Seahawk	32	61.0	10.1	--	180	22	20	24
JD	32	62.7	10.6	--	181	21	19	23
UI Cookie	32	61.1	10.6	--	179	21		
Melba	31	60.6	10.5	--	180	21	19	24
WB6211CLP	31	59.4	10.7	--	181	21		
<i>Experimental Lines</i>								
WA8351	39	62.0	9.9	--	180			
WA8378	36	62.0	9.7	--	180			
WA8377	36	60.6	10.1	--	182			
WA8327	36	61.3	10.2	--	183			
WA8321	35	61.2	9.5	--	180	24		
IDO1404S	35	61.9	10.0	--	183			
YS-C-605	34	61.2	10.2	--	179	23		
IDO1902S	33	61.6	10.5	--	179	22		
IDO1702S	31	63.0	10.7	--	178			
WA8354 CL+	27	62.0	10.9	--	181	19		
C.V.	4	1.0	3.7	--	1	12	12	11
LSD	3	1.4	0.9	--	4	3	2	2
Average	34	61.4	10.4	--	181	23	21	25
Highest	39	63.0	11.1	--	183	25	24	27
Lowest	27	58.8	9.5	--	178	19	19	23

Agronomic Information

Planting Date:	3/30/2022
Harvest Date:	9/13/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	106
P ₂ O ₅ (lb/ac) 1-ft sample	150
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	6.0

Herbicides: 2,4-D (10oz), Dicamba (2oz), and Ally (0.1oz) were applied by the cooperator.

Trial Notes:

1. The nursery was located approximately 4 miles northeast of Bickleton, WA.
2. No additional fertilizer was applied on this trial.
3. Overall yield was 183% greater and test weight was 2.2 lb/bu more than in 2021.

Cooperator: Andy & Ron Juris



2022 WSU Variety Testing Soft White Spring Wheat Trial, Dayton

Variety Name <i>Club Italicized</i>	2022					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>								
Roger (WA8325)	58	59.0	11.6	34	183	65		
UI Cookie	58	56.8	12.6	34	183			
TMC Lochaven	56	58.1	12.8	32	185			
Ryan	55	55.8	12.2	33	181	63	62	59
Seahawk	53	56.4	13.3	34	187	57	56	53
WB6121	52	57.0	13.0	30	183	60	57	54
AP Coachman	50	53.3	11.5	36	187	58	59	
Tekoa	50	55.3	13.4	35	187	54	55	53
Melba	49	57.3	12.6	32	187	60	60	57
AP Mondovi CL2	47	54.9	13.7	37	186	53	52	
WB6211CLP	45	52.9	13.5	33	183			
Hedge CL+	42	57.8	13.6	39	186	51	53	
JD	42	57.1	13.5	37	187	50	52	51
Louise	40	55.0	13.0	37	186	48	48	50
<i>Experimental Lines</i>								
WA8354 CL+	58	58.4	12.8	31	182			
WA8327	58	57.2	12.3	35	185			
IDO1702S	58	58.8	11.7	32	181			
WA8351	57	57.9	11.8	34	183			
YSC-605	57	56.4	13.0	35	186			
WA8378	53	58.5	11.9	33	183			
WA8321	51	56.5	12.4	33	183			
IDO1902S	51	58.2	12.9	34	185			
WA8377	50	55.6	12.5	36	183			
IDO1404S	50	55.6	12.5	31	186			
C.V.	5	1.6	3.6	4	0	9	9	8
LSD	5	1.8	0.9	3	2	6	5	3
Average	52	56.7	12.7	34	184	56	56	54
Highest	58	59.0	13.7	39	187	65	62	59
Lowest	40	52.9	11.5	30	181	48	48	50

*5 Year data from 2017, 2018, 2019, 2020, and 2022.

Agronomic Information

Planting Date:	4/29/2022
Harvest Date:	9/15/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	94
P ₂ O ₅ (lb/ac) 1-ft sample	158
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	6.3

Trial Notes:

- The nursery was located approximately 3 miles northeast of Dayton, WA.
- The nursery was fertilized prior to seeding at a rate of 90N, 14S by the cooperator. An additional 58N was applied after spring soil sampling.
- Overall yield was 19% less and test weight was 1.4 lb/bu less than in 2020. 2021 data not published.

Cooperator: Justin Ingram

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.

Nexicor (13oz) was applied on July 1.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Endicott

Variety Name <i>Club Italicized</i>	2022					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>								
AP Coachman	60	59.7	8.7	36	171	41	53	60
Roger (WA8325)	59	63.0	9.5	32	167	35	52	
Melba	56	62.6	8.8	33	170	37	55	61
Hedge CL+	56	63.8	9.4	33	169	37	50	55
Ryan	55	61.1	9.5	33	165	40	54	58
JD	55	63.9	9.5	35	171	36	50	55
Seahawk	55	62.7	9.1	34	171	35	48	57
Tekoa	54	63.2	9.5	35	170	39	51	57
WB6121	52	63.1	11.0	32	167	38	48	54
Louise	52	61.2	9.2	38	170	39	57	61
AP Mondovi CL2	52	61.6	10.2	38	168	37	49	54
WB6211CLP	51	60.0	9.8	30	167	34		
TMC Lochaven	50	62.2	10.0	34	170	38		
UI Cookie	49	61.3	9.2	34	166	32		
<i>Experimental Lines</i>								
WA8351	68	63.9	8.8	34	169			
WA8327	62	61.9	9.0	33	170			
WA8321	61	63.2	8.7	32	169	40		
WA8378	58	62.8	8.7	33	168			
IDO1404S	56	62.4	9.1	33	171			
WA8377	56	61.5	9.5	35	168			
WA8354 CL+	56	63.9	9.6	31	167	35		
YSC-605	54	62.2	9.6	34	171	37		
IDO1702S	54	63.0	9.1	33	166			
IDO1902S	52	63.7	9.4	35	168	34		
C.V.	8	1.0	4.2	4	1	13	12	16
LSD	9	1.4	0.9	3	2	NS	6	NS
Average	55	62.4	9.4	34	169	37	52	57
Highest	68	63.9	11.0	38	171	41	57	61
Lowest	49	59.7	8.7	30	165	32	48	54

Agronomic Information

Planting Date:	3/29/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	135
P ₂ O ₅ (lb/ac) 1-ft sample	191
S (lb/ac) 2-ft sample	43
pH (top 6 inches)	6.3

Trial Notes:

- The nursery was located approximately 3.5 miles southwest of Endicott, WA.
- The nursery was fertilized at seeding at a rate of 19N, 5P, 12K, 12S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 190% greater and test weight was 4.7 lb/bu more than in 2021.

Cooperator: Monty Miller

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Fairfield

Variety Name Club <i>Italicized</i>	2022					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)
Released Varieties								
Ryan	71	59.4	9.6	32	185	56	64	62
Seahawk	71	60.9	10.4	32	188	50	58	59
TMC Lochaven	70	61.6	10.4	33	188	50		
Melba	69	60.2	10.3	31	188	48	57	53
Hedge CL+	68	63.1	10.8	36	188	52	56	53
UI Cookie	68	59.8	10.9	33	187	48		
JD	68	62.3	10.7	37	188	49	54	53
Tekoa	68	60.1	10.4	34	188	51	58	61
AP Coachman	65	58.7	10.2	36	188	52	59	63
Louise	65	61.8	10.0	37	188	50	57	58
Roger (WA8325)	62	62.9	9.6	29	187	47	57	
WB6121	61	61.2	10.7	31	185	47	56	58
AP Mondovi CL2	59	60.6	11.5	38	188	47	53	52
WB6211CLP	57	60.4	10.6	33	187	48		
Experimental Lines								
IDO1702S	72	62.1	10.3	31	184			
WA8351	72	62.3	9.5	34	187			
WA8377	71	61.1	10.3	36	186			
WA8378	70	62.2	9.4	34	187			
IDO1902S	70	62.3	10.5	32	187	53		
WA8327	70	61.5	9.6	33	187			
WA8354 CL+	70	63.3	9.8	30	186	56		
YSC-605	68	61.0	9.8	32	188	50		
IDO1404S	67	61.2	10.5	32	188			
WA8321	63	61.4	9.7	34	187	53		
C.V.	5	1.4	4.3	4	0.5	10	9	13
LSD	6	1.9	1.0	3	2	6	5	6
Average	67	61.3	10.2	33	187	50	57	57
Highest	72	63.3	11.5	38	188	56	64	63
Lowest	57	58.7	9.4	29	184	47	53	52

Agronomic Information

Planting Date:	4/25/2022
Harvest Date:	9/8/2022
Seeding Rate (seeds/ft ²):	22.5
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	209
P ₂ O ₅ (lb/ac) 1-ft sample	108
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	4.9

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on June 7.

Nexicor (13oz) was applied on June 30.

Trial Notes:

- The nursery was located approximately 5.5 miles east of Fairfield, WA.
- The nursery was fertilized at seeding at a rate of 24N, 6P, 15K, 15S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 86% greater and test weight was 3.4 lb/bu more than in 2021.

Cooperator: David Degon



2022 WSU Variety Testing Soft White Spring Wheat Trial, Farmington

Variety Name Club <i>Italicized</i>	2022					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)
Released Varieties								
Tekoa	100	64.1	11.9	39	188	70	66	73
Ryan	100	61.6	11.2	37	182	69	63	72
Melba	98	61.3	11.8	34	187	68	64	70
Louise	96	61.5	11.2	40	187	70	61	66
Roger (<i>WA8325</i>)	96	63.0	11.2	36	184	67	64	
JD	95	62.9	12.3	43	188	65	62	66
UI Cookie	95	62.3	11.8	38	185	65		
Seahawk	94	63.0	13.3	37	188	71	65	71
AP Mondovi CL2	92	61.5	13.9	40	186	67	61	67
Hedge CL+	90	63.0	13.2	41	187	66	62	68
AP Coachman	88	60.3	12.5	39	187	68	60	67
TMC Lochaven	88	62.7	12.1	37	188	61		
WB6211CLP	88	61.0	12.0	34	185	64		
WB6121	85	62.3	13.2	34	184	62	60	64
Experimental Lines								
WA8327	105	62.8	11.0	36	187			
WA8378	100	62.4	11.1	38	186			
WA8351	100	63.5	10.9	38	186			
YSC-605	99	62.4	11.7	36	188	70		
IDO1404S	96	62.6	12.5	39	188			
WA8377	96	62.0	11.8	39	185			
WA8321	95	62.6	11.0	37	186	73		
IDO1902S	92	63.3	12.0	37	187	71		
IDO1702S	90	63.0	11.7	34	184			
WA8354 CL+	87	62.4	11.8	33	184	69		
C.V.	3	0.7	5.9	5	0.4	7	9	8
LSD	7	0.9	1.6	4	2	5	NS	4
Average	94	62.4	12.0	37	186	67	62	68
Highest	105	64.1	13.9	43	188	73	66	73
Lowest	85	60.3	10.9	33	182	61	60	64

Agronomic Information

Planting Date:	4/22/2022
Harvest Date:	9/12/2022
Seeding Rate (seeds/ft ²):	22.5
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	165
P ₂ O ₅ (lb/ac) 1-ft sample	183
S (lb/ac) 2-ft sample	34
pH (top 6 inches)	5.1

Herbicides: Anthem Flex (3.5oz) was applied on May 1.

Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Trial Notes:

- The nursery was located approximately 4 miles south of Farmington, WA.
- The nursery was fertilized at seeding at a rate of 32N, 8P, 20K, 20S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 119% greater and test weight was 3.7 lb/bu more than in 2021.

Cooperator: Andrew Nelson



2022 WSU Variety Testing Soft White Spring Wheat Trial, Horse Heaven

Variety Name Club Italicized	2022					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)
Released Varieties								
Louise	33	61.8	10.1	29	165	21	25	27
TMC Lochaven	33	62.9	11.2	24	166	21		
AP Coachman	33	60.6	9.5	26	167	23	27	30
Tekoa	32	62.8	10.3	27	168	22	27	29
Melba	32	61.6	9.6	23	167	22	26	29
Ryan	31	62.3	10.3	25	163	20	24	26
AP Mondovi CL2	31	61.8	11.5	31	166	22	25	25
Seahawk	30	61.8	9.8	24	166	20	23	27
Hedge CL+	30	63.3	10.9	21	167	18	23	26
UI Cookie	29	61.4	10.6	23	163	17		
WB6211CLP	28	61.3	10.8	25	164	20		
WB6121	28	63.0	11.0	24	164	17	20	23
Roger (WA8325)	26	62.7	9.7	20	165	18	21	
JD	26	63.2	10.9	22	166	18	21	25
Experimental Lines								
WA8327	35	62.2	9.7	24	167			
WA8351	33	63.3	9.5	26	165			
IDO1404S	31	62.6	9.8	25	166			
WA8378	31	62.8	9.9	25	165			
WA8321	30	62.6	9.6	24	165	21		
WA8377	30	61.9	10.2	25	166			
WA8354 CL+	29	63.1	10.6	24	165	18		
YSC-605	28	61.8	10.0	23	166	19		
IDO1902S	26	63.4	10.9	24	164	17		
IDO1702S	24	63.2	10.6	23	162			
C.V.	10	0.4	3.3	5	0	12	10	11
LSD	6	0.6	0.8	3	2	3	2	2
Average	30	62.4	10.3	24	165	20	24	27
Highest	35	63.4	11.5	31	168	23	27	30
Lowest	24	60.6	9.5	20	162	17	20	23

Agronomic Information

Planting Date:	3/16/2022
Harvest Date:	8/11/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	95
P ₂ O ₅ (lb/ac) 1-ft sample	41
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.7

Trial Notes:

- The nursery was located approximately 6 miles southwest of Benton City, WA.
- No preplant fertilizer was applied. The nursery was fertilized at a rate of 16N, 4P, 10K, 10S after spring soil sampling.
- Overall yield was 233% greater and test weight was 2.8 lb/bu more than in 2021.

Cooperator: Chad Smith

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on June 3.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Lamont

Variety Name <i>Club Italicized</i>	2022					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)
Released Varieties								
Roger (WA8325)	59	61.2	11.9	37	174	35	41	
Ryan	56	55.0	13.3	36	170	34	42	42
UI Cookie	52	56.1	13.4	35	173	36		
Seahawk	49	57.1	13.3	35	176	34	41	39
Tekoa	48	57.6	13.9	33	178	29	38	37
TMC Lochaven	47	56.0	13.8	34	176	32		
Hedge CL+	47	58.1	13.5	39	177	31	38	38
WB6121	47	55.0	14.3	33	173	30	37	37
Melba	46	57.0	12.9	34	178	32	39	39
AP Mondovi CL2	46	55.2	14.0	37	175	31	34	36
JD	44	57.8	13.6	39	177	30	36	38
Louise	44	53.5	13.1	38	177	30	37	40
AP Coachman	40	50.4	12.1	36	178	30	36	38
WB6211CLP	40	51.9	14.0	34	174	27		
Experimental Lines								
YSC-605	54	57.8	13.7	34	176	30		
WA8354 CL+	53	60.2	13.2	34	173	36		
IDO1702S	51	59.8	11.8	34	171			
WA8327	49	56.3	13.5	35	176			
WA8351	49	57.2	12.8	35	176			
IDO1902S	48	58.9	12.9	35	175	30		
WA8377	48	55.9	12.4	36	174			
WA8321	47	57.2	12.9	35	173	34		
WA8378	45	55.9	12.6	35	176			
IDO1404S	42	55.4	13.1	34	177			
C.V.	8	2.1	4.1	3	0	16	15	15
LSD	7	2.3	1.2	3	1	NS	NS	NS
Average	48	56.5	13.2	35	175	32	38	38
Highest	59	61.2	14.3	39	178	36	42	42
Lowest	40	50.4	11.8	33	170	27	34	36

Agronomic Information

Planting Date:	4/1/2022
Harvest Date:	8/28/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Spring Barley
Spring soil test:	
N (lb/ac) 4-ft sample	187
P ₂ O ₅ (lb/ac) 1-ft sample	200
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.5

Trial Notes:

- The nursery was located approximately 4 miles west of Ewan, WA.
- The nursery was fertilized prior to seeding at a rate of 75N, 10P, 10K by the cooperator. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 200% greater and test weight was 0.5 lb/bu more than in 2021.

Cooperator: Rod Mills

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Lind

Variety Name <i>Club Italicized</i>	2022					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>								
<i>Melba</i>	32	64.2	12.1	26	168	19	31	36
<i>AP Coachman</i>	32	62.1	12.3	28	169	19	31	34
<i>Tekoa</i>	31	64.2	12.6	30	170	20	32	35
<i>Hedge CL+</i>	30	64.0	13.1	26	167	17	29	33
<i>Seahawk</i>	29	63.9	12.7	25	168	17	30	32
<i>Ryan</i>	29	63.6	13.2	30	162	19	29	32
<i>Louise</i>	29	62.9	12.6	31	167	18	30	34
<i>JD</i>	28	64.0	13.0	26	167	16	28	32
<i>Roger (WA8325)</i>	28	64.0	12.6	28	164	17	27	
<i>UI Cookie</i>	27	63.0	14.4	29	162	16		
<i>AP Mondovi CL2</i>	26	62.3	15.2	34	167	16	27	29
<i>TMC Lochaven</i>	25	62.9	15.1	26	168	15		
<i>WB6121</i>	25	62.9	14.9	27	164	15	25	30
<i>WB6211CLP</i>	25	62.4	14.3	27	164	15		
<i>Experimental Lines</i>								
<i>IDO1404S</i>	34	63.8	12.6	29	168			
<i>WA8327</i>	33	64.3	12.6	29	168			
<i>WA8377</i>	32	63.6	13.2	29	167			
<i>WA8351</i>	31	64.4	12.6	28	167			
<i>YSC-605</i>	30	63.2	12.7	25	167	18		
<i>WA8321</i>	29	63.7	13.0	27	166	17		
<i>IDO1902S</i>	28	65.1	13.9	28	166	17		
<i>WA8378</i>	28	63.8	12.5	29	166			
<i>WA8354 CL+</i>	25	62.9	13.9	25	165	15		
<i>IDO1702S</i>	23	63.5	13.7	25	164			
C.V.	7	0.6	2.1	3	0.3	10	7	8
LSD	4	0.9	0.6	2	1	2	2	2
Average	29	63.5	13.3	28	166	17	29	33
Highest	34	65.1	15.2	34	170	20	32	36
Lowest	23	62.1	12.1	25	162	15	25	29

Agronomic Information

Planting Date:	3/22/2022
Harvest Date:	8/4/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	188
P ₂ O ₅ (lb/ac) 1-ft sample	116
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.7

Herbicides: LV-6 (10oz) was applied on May 11 by the cooperator.

Trial Notes:

- The nursery was located approximately 3 miles northeast of Lind, WA.
- The nursery was fertilized prior to seeding at a rate of 50N, 10S by the cooperator. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 383% greater than in 2021. Samples too small for test weight in 2021.

Cooperator: Bruce Sauer



2022 WSU Variety Testing Soft White Spring Wheat Trial, Mayview

Variety Name Club Italicized	2022					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)
Released Varieties								
Ryan	55	60.3	11.2	31	182	41	45	53
Roger (WA8325)	53	62.7	10.6	31	185	38	42	
UI Cookie	53	61.2	12.0	33	185	40		
Seahawk	51	61.3	11.6	32	189	40	46	54
Melba	51	60.5	11.3	30	189	39	46	56
TMC Lochaven	48	61.6	12.7	31	188	37		
AP Mondovi CL2	45	59.0	13.1	36	187	33	37	45
AP Coachman	45	58.6	11.1	33	190	37	43	54
WB6121	44	61.0	12.6	27	185	34	40	47
Hedge CL+	44	61.5	11.9	35	188	36	43	50
Tekoa	42	60.3	11.9	33	189	35	41	51
WB6211CLP	42	58.6	12.3	30	186	32		
Louise	40	59.3	11.9	35	188	33	38	49
JD	40	61.6	12.0	34	189	31	39	48
Experimental Lines								
WA8351	54	62.6	11.2	31	186			
YSG-605	54	60.8	11.6	32	188	41		
WA8321	54	61.5	10.9	30	185	41		
WA8327	53	61.9	11.3	31	186			
IDO1902S	52	63.2	11.7	32	186	39		
IDO1702S	52	62.3	11.3	28	183			
IDO1404S	52	61.2	11.6	31	187			
WA8377	49	60.6	11.4	32	186			
WA8354 CL+	48	61.0	12.2	29	185	34		
WA8378	46	61.1	11.2	32	185			
C.V.	6	1.3	2.1	4	0	11	10	9
LSD	6	1.7	0.6	2	1	5	4	3
Average	49	61.0	11.7	32	187	37	42	51
Highest	55	63.2	13.1	36	190	41	46	56
Lowest	40	58.6	10.6	27	182	31	37	45

Agronomic Information

Planting Date:	4/28/2022
Harvest Date:	9/3/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	181
P ₂ O ₅ (lb/ac) 1-ft sample	191
S (lb/ac) 2-ft sample	35
pH (top 6 inches)	4.8

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.

Trial Notes:

- The nursery was located approximately 13 miles northeast of Pomeroy, WA.
- The nursery was fertilized prior to seeding at a rate of 70N, 10S by the cooperator. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 89% greater and test weight was 0.9 lb/bu more than in 2021.

Cooperator: Randy & Wyatt Koller



2022 WSU Variety Testing Soft White Spring Wheat Trial, Moses Lake

Variety Name <i>Club Italicized</i>	2022						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)
Released Varieties									
UI Cookie	142	63.0	11.9	39	158	0	131		
Roger (WA8325)	131	64.0	11.0	41	160	13	128	121	
WB6211CLP	130	60.0	12.8	38	159	0	113		
Tekoa	130	62.7	12.3	38	164	13	126	124	136
YSC-603	129	62.5	12.2	38	160	3	129		
WB6121	127	63.5	12.7	36	159	3	126	120	129
TMC Lochaven	127	62.7	12.1	38	162	0	128		
Experimental Lines									
IDO1902S	141	64.5	11.7	40	160	0	134		
WA8381 CL+	136	64.2	12.5	44	159	23			
IDO1702S	134	64.1	11.5	38	161	3	133	125	
WA8379 CL+	130	63.0	11.6	41	160	3			
WA8354 CL+	127	63.2	12.3	36	159	0	137		
WA8327	127	62.9	12.6	39	161	32	131	130	
WA8351	127	63.7	11.9	38	161	58	123		
YSC-605	120	62.5	12.3	40	163	10	123		
WA8383	119	62.3	11.4	41	160	40			
IDO1404S	118	61.6	11.7	39	163	3	119	115	
WA8378	117	62.9	11.0	40	161	43			
WA8377	112	60.9	11.8	40	160	53			
WA8384	111	61.9	12.1	40	160	83			
WA8380 CL+	109	62.8	12.2	43	164	33			
WA8321	102	61.4	11.8	38	162	92	103		
WA8382	99	61.7	11.7	39	164	83			
WA8385	92	62.3	11.8	38	161	87			
C.V.	7	0.7	1.7	3	1	59	7	6	6
LSD	16	0.9	0.5	3	3	29	10	7	7
Average	122	62.7	12.0	39	161	28	126	123	133
Highest	142	64.5	12.8	44	164	92	137	130	136
Lowest	92	60.0	11.0	36	158	0	103	115	129

Agronomic Information

Planting Date:	3/11/2022
Harvest Date:	8/5/2022
Seeding Rate (seeds/ft ²):	25
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	181
P ₂ O ₅ (lb/ac) 1-ft sample	475
S (lb/ac) 2-ft sample	212
pH (top 6 inches)	5.4

Trial Notes:

1. The nursery was located approximately 9 miles southeast of Moses Lake, WA.
2. The nursery was fertilized prior to seeding at a rate of 180N by the cooperator. An additional 100N was applied via fertigation.
3. Overall yield was the same and test weight was 2.2 lb/bu more than in 2021.

Cooperator: James Getzinger

Herbicides: Gold Sky, Affinity, and Wetcit were applied by the cooperator.

Quilt Xcel, Starane, and Dimate were applied at flagleaf by the cooperator.

Dimate was applied again at the end of June by the cooperator.



2022 WSU Variety Testing Soft White Spring Wheat Trial, Palouse

Variety Name <i>Club Italicized</i>	2022					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>								
Ryan	98	61.8	10.2	36	--	74	68	77
Seahawk	97	62.5	11.3	38	--	71	67	79
Tekoa	93	63.2	11.2	40	--	73	73	82
Hedge CL+	90	63.8	11.6	46	--	65	62	72
Melba	90	62.3	10.6	37	--	65	65	75
JD	90	63.5	11.3	46	--	66	65	74
Roger (WA8325)	89	64.0	10.1	38	--	68	66	
WB6211CLP	89	61.7	11.9	38	--	64		
TMC Lochaven	89	62.7	11.3	38	--	68		
UI Cookie	88	61.0	10.7	37	--	67		
WB6121	87	62.4	11.8	34	--	63	60	68
Louise	81	61.9	10.5	43	--	57	58	71
AP Coachman	80	60.5	10.6	41	--	65	65	73
AP Mondovi CL2	79	59.9	11.8	41	--	57	60	70
<i>Experimental Lines</i>								
WA8351	100	64.2	10.5	39	--			
WA8327	100	62.5	10.9	38	--			
WA8377	99	62.6	11.0	37	--			
WA8321	97	63.0	10.3	37	--	75		
WA8378	94	63.4	10.1	37	--			
IDO1702S	92	63.3	10.7	36	--			
YSC-605	90	61.8	11.5	41	--	63		
WA8354 CL+	88	63.5	11.5	34	--	66		
IDO1902S	85	63.2	11.0	39	--	61		
IDO1404S	85	61.6	10.9	37	--			
C.V.	4	0.9	2.8	4	--	8	8	8
LSD	8	1.3	0.7	4	--	6	5	5
Average	90	62.5	11.0	39	--	66	64	74
Highest	100	64.2	11.9	46	--	75	73	82
Lowest	79	59.9	10.1	34	--	57	58	68

Agronomic Information

Planting Date:	4/8/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	118
P ₂ O ₅ (lb/ac) 1-ft sample	216
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.7

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 1.

Trial Notes:

- The nursery was located approximately 7 miles northwest of Palouse, WA.
- The nursery was fertilized prior to seeding at 100N, 12P, 15S by the cooperators. An additional 116N was applied after spring soil sampling.
- Overall yield was 105% greater and test weight was 4.8 lb/bu more than in 2021.

Cooperator: David Lange



2022 WSU Variety Testing Soft White Spring Wheat Trial, Plaza

Variety Name Club Italicized	2022					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)
Released Varieties								
Tekoa	83	62.0	11.8	35	--	54	69	79
UI Cookie	78	61.0	11.9	34	--	49		
Ryan	76	61.1	11.7	33	--	48	62	74
AP Coachman	74	59.2	10.9	35	--	62	64	75
Hedge CL+	72	63.2	12.0	38	--	50	62	74
Seahawk	71	61.1	12.1	34	--	51	64	74
AP Mondovi CL2	70	60.0	13.3	38	--	50	62	70
Louise	67	60.4	11.5	37	--	50	59	74
Melba	66	61.1	11.3	32	--	47	59	70
WB6121	66	62.2	12.8	31	--	47	62	71
JD	66	62.7	12.1	36	--	46	63	70
Roger (WA8325)	65	63.1	11.0	32	--	44	61	
WB6211CLP	64	59.8	12.9	32	--	44		
TMC Lochaven	64	61.9	12.6	33	--	47		
Experimental Lines								
WA8351	78	63.5	11.1	33	--			
IDO1902S	77	63.4	11.7	32	--	49		
WA8377	74	60.7	11.6	34	--			
IDO1702S	74	62.3	11.5	30	--			
WA8378	73	63.1	10.8	33	--			
WA8354 CL+	73	62.1	12.1	31	--	47		
WA8327	72	62.8	11.8	34	--			
WA8321	71	62.2	11.3	33	--	45		
IDO1404S	70	61.1	11.7	34	--			
YSC-605	64	61.1	12.0	33	--	43		
C.V.	7	1.1	2.2	4	--	12	10	9
LSD	9	1.5	0.6	3	--	7	6	5
Average	71	61.7	11.8	34	--	49	62	73
Highest	83	63.5	13.3	38	--	62	69	79
Lowest	64	59.2	10.8	30	--	43	59	70

Agronomic Information

Planting Date:	4/1/2022
Harvest Date:	9/8/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	326
P ₂ O ₅ (lb/ac) 1-ft sample	283
S (lb/ac) 2-ft sample	47
pH (top 6 inches)	4.8

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 1.

Trial Notes:

1. The nursery was located approximately 4 miles northeast of Rosalia, WA.
2. The nursery was fertilized prior to seeding at a rate of 80N, 30P, 20S by the cooperators. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 163% greater and test weight was 0.9 lb/bu more than in 2021.

Cooperator: Joe Schmitz



2022 WSU Variety Testing Soft White Spring Wheat Trial, Pullman

Variety Name <i>Club Italicized</i>	2022					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)
Released Varieties								
Ryan	91	57.8	11.6	39	--	64	77	81
Roger (WA8325)	91	63.0	10.5	37	--	59	72	
Tekoa	88	62.0	11.5	38	--	65	76	76
Seahawk	86	60.5	12.3	39	--	62	73	77
UI Cookie	86	59.5	11.9	39	--	61		
TMC Lochaven	84	60.4	12.2	38	--	60		
Melba	81	61.7	11.2	38	--	59	72	73
WB6121	79	59.8	12.4	35	--	57	70	70
WB6211CLP	78	57.0	12.7	37	--	59		
AP Mondovi CL2	77	58.3	13.2	42	--	56	69	72
Hedge CL+	77	61.9	12.3	45	--	57	68	71
AP Coachman	75	58.1	10.8	39	--	55	69	70
JD	74	61.4	12.4	45	--	58	68	69
Louise	71	57.7	12.2	41	--	55	67	66
Experimental Lines								
YSC-605	92	60.4	12.3	38	--	64		
IDO1702S	89	61.8	10.9	37	--			
WA8351	89	62.5	11.3	38	--			
WA8321	86	61.3	11.3	39	--	61		
WA8327	86	61.3	11.4	37	--			
WA8354 CL+	84	61.7	11.6	36	--	64		
WA8378	84	60.5	11.3	39	--			
WA8377	83	60.1	11.4	38	--			
IDO1902S	80	62.2	11.4	38	--	59		
IDO1404S	78	59.2	11.9	38	--			
C.V.	5	1.7	3.5	4	--	8	7	7
LSD	8	2.4	0.9	3	--	6	5	4
Average	83	60.4	11.7	39	--	60	71	73
Highest	92	63.0	13.2	45	--	65	77	81
Lowest	71	57.0	10.5	35	--	55	67	66

Agronomic Information

Planting Date:	4/25/2022
Harvest Date:	8/27/2022
Seeding Rate (seeds/ft ²):	22.5
Previous Crop:	Spring Barley
Spring soil test:	
N (lb/ac) 4-ft sample	190
P ₂ O ₅ (lb/ac) 1-ft sample	162
S (lb/ac) 2-ft sample	33
pH (top 6 inches)	5.5

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 3.

Tilt was applied on July 8.

Trial Notes:

- The nursery was located approximately 2.5 miles southeast of Pullman, WA.
- The nursery was fertilized prior to seeding at a rate of 105N, 15P, 20S, 20Cl by the cooperator. An additional 136N was applied after spring soil sampling.
- Overall yield was 124% greater and test weight was 1.6 lb/bu more than in 2021.

Cooperator: Frank Ankerson



2022 WSU Variety Testing Soft White Spring Wheat Trial, St. John

Variety Name Club <i>Italicized</i>	2022					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>								
Seahawk	68	60.6	11.3	33	180	48	54	66
UI Cookie	66	59.9	11.4	32	178	49		
Ryan	65	59.8	10.9	32	175	47	53	68
<i>Roger (WA8325)</i>	65	62.2	10.5	31	178	47	54	
<i>Hedge CL+</i>	64	61.7	11.7	38	181	45	51	63
WB6121	63	61.0	12.0	29	177	42	50	60
AP Coachman	63	57.7	10.5	36	182	47	53	68
Tekoa	62	60.0	11.5	35	183	45	52	66
JD	59	61.6	11.0	39	181	42	49	61
AP Mondovi CL2	59	58.6	12.7	37	179	43	48	60
<i>Melba</i>	59	60.1	11.0	34	182	45	52	67
TMC Lochaven	58	60.7	12.2	32	181	43		
WB6211CLP	56	58.1	12.5	31	178	40		
Louise	56	58.8	11.6	36	181	49	55	69
<i>Experimental Lines</i>								
WA8351	73	62.1	10.6	32	179			
WA8354 CL+	68	61.2	11.9	31	177	49		
YSC-605	68	60.5	11.3	32	179	42		
WA8327	68	60.7	11.1	33	180			
WA8378	68	61.8	10.7	32	179			
IDO1702S	60	61.0	11.4	29	177			
WA8377	60	59.6	11.4	34	179			
WA8321	59	61.4	10.8	31	178	47		
IDO1902S	58	60.7	11.5	32	180	44		
IDO1404S	57	60.1	11.3	31	181			
C.V.	5	1.1	2.6	4	0	10	8	10
LSD	6	1.3	0.6	3	2	5	4	5
Average	63	60.4	11.4	33	179	45	52	65
Highest	73	62.2	12.7	39	183	49	55	69
Lowest	56	57.7	10.5	29	175	40	48	60

Agronomic Information

Planting Date:	4/7/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	380
P ₂ O ₅ (lb/ac) 1-ft sample	145
S (lb/ac) 2-ft sample	43
pH (top 6 inches)	5.5

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.

Trial Notes:

1. The nursery was located approximately 3 miles southeast of St. John, WA.
2. The nursery was fertilized prior to seeding at 75N, 10P, 10K by the cooperator. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 117% greater and test weight was 0.5 lb/bu less than in 2021.

Cooperator: Rod Mills



2022 WSU Variety Testing Soft White Spring Wheat Trial, Walla Walla

Variety Name <i>Club Italicized</i>	2022					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)
Released Varieties								
Ryan	110	61.0	11.2	37	165	69	75	80
Seahawk	104	62.0	11.5	38	169	62	74	78
Tekoa	102	62.3	10.7	39	172	63	76	79
UI Cookie	100	60.6	11.4	37	166	61		
WB6121	100	62.3	12.0	34	166	63	69	70
Roger (WA8325)	99	62.0	10.8	37	167	61	67	
TMC Lochaven	95	61.6	12.1	37	170	60		
Melba	94	61.0	10.4	37	171	57	45	52
AP Mondovi CL2	92	60.9	12.9	44	169	58	63	69
Hedge CL+	92	61.9	11.7	45	171	58	47	55
AP Coachman	91	61.2	10.5	40	171	58	67	74
WB6211CLP	91	60.6	12.2	36	166	57		
Louise	89	61.9	11.0	43	170	57	69	74
JD	87	62.2	11.7	44	171	53	46	52
Experimental Lines								
YSC-605	109	61.9	11.4	40	169	66		
WA8327	109	62.6	11.1	39	169			
WA8351	108	63.0	10.6	39	168			
WA8354 CL+	102	61.6	11.8	35	166	61		
WA8377	99	62.0	11.3	40	167			
WA8321	97	61.8	10.9	37	167	60		
IDO1404S	97	61.4	11.2	38	170			
IDO1702S	96	62.6	11.2	35	165			
WA8378	96	63.3	10.6	39	169			
IDO1902S	92	63.6	11.5	37	168	54		
C.V.	4	0.6	2.7	3	0	6	8	9
LSD	6	0.8	0.7	2	1	4	5	5
Average	98	61.9	11.3	39	168	60	64	68
Highest	110	63.6	12.9	45	172	69	76	80
Lowest	87	60.6	10.4	34	165	53	45	52

Agronomic Information

Planting Date:	3/29/2022
Harvest Date:	9/1/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	508
P ₂ O ₅ (lb/ac) 1-ft sample	154
S (lb/ac) 2-ft sample	42
pH (top 6 inches)	5.2

Herbicides: Axial Star (16.4oz), Talinor (13.7oz), and Slant (4oz) were applied by the cooperatoar.

Nexicor (13oz) was applied on June 9.

Trial Notes:

1. The nursery was located approximately 5 miles northeast of Walla Walla, WA.
2. The nursery was fertilized prior to seeding at a rate of 100N, 10P, 20S by the cooperator. No additional fertilizer was applied after spring soil sampling
3. Overall yield was 346% greater and test weight was 2.7 lb/bu more than in 2021.

Cooperator: Pat McConnel

Soft White Spring Wheat Variety Characteristics

Variety	Class ^a	Year Released	Plant Height	Maturity	Winter Survival Index ^b	Aluminum Tolerance ^c	Lodging Rating ^d	Hessian Fly Rating ^e	Stripe Rust Rating ^e	Falling Number Rating ^f	End Use Quality ^g
AP Coachman	SWS	2020	Medium	Med.-Late	5	S	7	R	S	--	--
AP Mondovi CL2	SWS	2020	Med.-Tall	Medium	5	MTS	--	MR	MS	--	MD
Hedge CL+	SC	2020	Med.-Tall	Med.-Late	7	MTS	8	S	R	--	MD
JD	SC	2010	Medium	Med.-Late	7	S	8	S	R	4	MD
Louise	SWS	2004	Med.-Tall	Med.-Late	--	S	8	R	MR	3	MD
Melba	SC	2016	Short-Med.	Med.-Late	7	S	3	S	R	5	MD
Roger	SWS	2022	Short-Med.	Early-Med.	--	S	4	R	MR	--	MD
Ryan	SWS	2016	Medium	Early	4	T	4	R	MR	4	MD
Seahawk	SWS	2015	Medium	Med.-Late	2	T	5	R	R	5	MD
Tekoa	SWS	2016	Medium	Med.-Late	9	T	3	R	R	4	MD
TMC Lochaven	SWS	2022	Medium	Medium	--	S	2	R	R	--	--
UI Cookie	SWS	2019	Medium	Medium	--	T	3	S	S	--	MD
WB6121	SWS	2015	Short-Med.	Early-Med.	--	T	1	R	R	8	D
WB6211CLP	SWS	2021	Short-Med.	Early-Med.	8	S	1	R	R	--	--
YSC-603	SWS	--	Medium	Medium	4	S	1	S	MR	--	--

^a SWS= Soft White Spring, SC= Spring Club

^b Rankings from 1 to 9, 1 = highest survival, 9 = lowest survival.

^c T = Tolerant, TMT = Tolerant- Moderately Tolerant, MT = Moderately Tolerant, MTS = Moderately Tolerant-Susceptible, S = Susceptible

^d Rating from 1 to 9, 1 = least likely to lodge, 9 = most likely to lodge.

^e R = resistant, MR = moderately resistant, MS = moderately susceptible, and S = susceptible.

^f Rating reflects the degree of resistance and ranges from 1 to 9, where 1 = highly resistant and 9 = highly susceptible.

^g MD= Most Desirable, D= Desirable, A= Acceptable, LD= Least Desirable

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**2022 WSU Variety Testing Hard Red Spring Wheat Trial Summary
Precipitation Zone - >20"**

Variety Name <i>(Hard White 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>															
Hale (WA8315)	68	98	88	90	86	62.7	62.6	61.8	61.4	62.0	12.3	13.5	13.5	12.9	13.2
CP3099A	66	94	89	81	84	59.3	59.6	59.2	58.6	59.5	11.5	12.5	13.0	12.5	12.4
WB9303	63	89	87	93	81	62.5	63.1	63.3	62.9	62.8	13.5	13.4	14.5	14.2	13.9
WB9668	62	86	83	88	80	61.8	61.9	61.1	61.1	61.6	14.0	15.9	15.4	14.7	15.0
Glee	70	95	75	78	80	61.9	60.4	59.9	58.9	60.3	11.8	12.5	13.5	13.2	12.8
WB9623	66	91	77	80	79	61.7	60.8	58.2	57.8	59.8	12.7	12.5	14.5	14.2	13.4
AP Renegade	56	81	87	83	78	61.8	62.3	61.6	61.3	61.9	13.7	15.0	14.7	13.8	14.2
Chet	69	89	77	72	76	63.3	63.2	62.8	61.4	62.5	13.0	13.4	14.2	14.0	13.7
Net CL+	62	87	75	75	75	63.3	62.8	62.2	61.1	62.3	12.7	13.6	14.0	13.9	13.5
CP3055	66	91	78	69	75	58.6	59.0	59.1	54.5	57.5	12.0	11.8	13.6	14.6	13.0
Alum	65	87	70	70	74	61.9	60.7	59.8	58.4	60.3	12.5	14.3	13.6	14.0	13.5
Jefferson HF	65	91	63	73	73	61.9	61.1	58.8	59.4	60.1	12.7	13.7	13.3	13.3	13.4
Jefferson	65	90	66	67	71	61.9	61.0	59.1	58.8	60.0	12.7	14.3	13.2	13.4	13.5
Kelse	63	85	70	68	70	62.7	61.4	59.3	58.1	60.3	13.2	13.2	14.7	15.0	14.0
CP3530	57	82	54	63	65	61.5	60.5	58.3	59.6	60.2	13.0	15.2	13.7	14.1	13.9
<i>Experimental Lines</i>															
WA8355	64	94	85	83	83	62.3	61.8	62.2	61.1	61.9	12.3	14.0	13.5	13.1	13.3
WA8358 CL+	67	90	83	87	81	62.7	62.2	62.0	61.8	62.2	13.1	13.4	14.3	13.9	13.7
WA8330	67	94	78	80	79	62.9	61.7	60.2	59.7	61.3	12.5	12.4	13.9	14.0	12.9
CPX39120	65	87	79	72	77	58.9	58.5	57.4	56.3	57.8	12.0	13.3	14.6	14.2	13.5
WA8389 CL+	64	86	83	77	77	63.1	62.6	61.1	60.5	61.7	13.0	13.0	14.2	14.1	13.5
WA8387 CL+	62	91	78	81	77	62.2	61.6	61.4	61.6	61.7	12.8	13.1	13.4	12.9	13.1
WA8388 CL+	66	93	73	79	77	62.3	62.7	59.8	60.0	60.9	12.1	12.9	14.2	13.4	13.2
WA8356	62	87	71	76	74	61.8	61.6	59.7	58.6	60.6	12.7	12.9	14.2	14.2	13.4
WA8357	60	85	79	73	73	63.4	63.3	64.3	62.0	63.2	14.8	13.9	14.8	14.3	14.4
C.V. %	4	3	5	6	6	0.8	1.5	0.9	1.9	1.7	2.7	8.9	1.8	4.4	5.9
LSD (0.05)	5	4	7	10	4	1.1	2.1	1.3	2.6	0.8	0.8	2.7	0.6	1.4	0.6
Average	64	89	77	77	77	61.9	61.5	60.5	59.8	60.9	12.8	13.5	14.0	13.8	13.5
Highest	70	98	89	93	86	63.4	63.3	64.3	62.9	63.2	14.8	15.9	15.4	15.0	15.0
Lowest	56	81	54	63	65	58.6	58.5	57.4	54.5	57.5	11.5	11.8	13.0	12.5	12.4

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



**2022 WSU Variety Testing Hard Red Spring Wheat Trial Summary
Precipitation Zone - 16-20"**

Variety Name <i>(Hard White 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 (%)					
Released Varieties																		
Hale (WA8315)	56	47	61	63	90	64	57.2	61.3	62.8	60.5	62.9	61.2	14.5	13.9	14.2	12.8	13.4	13.6
AP Renegade	55	52	55	67	88	63	58.0	61.0	62.1	60.2	61.8	60.6	15.1	15.1	15.3	14.6	14.9	15.0
Glee	55	51	61	58	89	63	57.1	61.4	62.8	60.5	62.7	60.9	14.5	13.8	13.6	12.8	12.9	13.6
WB9623	50	49	65	59	91	62	55.5	59.6	61.0	58.1	61.9	59.1	15.4	14.3	13.9	13.7	13.5	14.3
Kelse	54	45	63	59	84	61	57.8	61.0	62.4	61.0	62.5	60.9	15.1	14.4	14.2	13.4	13.8	14.3
Jefferson	56	45	60	56	86	61	57.9	60.2	62.6	60.2	62.5	60.6	14.7	14.3	13.9	13.9	13.9	14.1
Jefferson HF	53	46	56	60	82	60	56.8	61.0	62.2	60.2	62.6	60.8	15.0	14.2	13.9	13.6	13.8	13.9
Net CL+	49	47	63	57	86	60	57.5	61.2	63.4	60.8	63.9	61.5	16.0	14.8	14.4	13.5	13.5	14.3
Alum	45	41	66	53	93	59	55.1	59.8	62.0	59.2	63.8	60.0	15.3	14.5	13.7	13.2	12.8	13.9
CP3099A	50	47	48	58	92	59	53.8	57.3	59.2	56.1	61.2	57.5	14.7	13.5	12.3	12.8	12.2	13.0
WB9668	56	45	42	56	80	57	57.9	62.0	61.7	61.3	63.1	61.1	16.1	15.6	16.2	15.1	14.9	15.6
WB9303	60	52	46	50	79	57	59.5	61.8	63.3	62.2	62.2	61.9	15.3	15.2	15.9	15.0	15.3	15.4
CP3055	44	39	56	49	95	57	49.1	55.1	58.6	54.3	59.6	55.1	15.7	14.3	13.1	13.3	12.4	13.9
Chet	47	42	64	53	84	57	57.4	60.9	61.8	60.8	63.4	60.6	16.2	14.9	14.8	13.8	14.2	14.9
CP3530	43	41	59	51	81	55	55.6	60.3	60.9	59.6	62.4	59.6	16.5	15.0	14.0	14.2	12.8	14.5
Experimental Lines																		
WA8330	58	49	63	60	98	66	57.5	61.3	62.6	60.1	63.3	61.0	15.1	14.3	14.2	13.5	13.1	14.1
WA8355	56	49	61	61	88	62	59.0	61.7	63.1	61.5	62.8	61.7	14.4	13.5	13.2	12.6	13.4	13.4
WA8387 CL+	51	48	61	56	88	60	57.4	61.6	62.8	61.5	63.3	61.0	14.5	14.0	13.5	13.1	13.3	13.8
WA8358 CL+	52	43	61	60	82	60	58.4	60.7	62.4	61.1	63.4	61.3	14.9	14.4	14.3	12.9	14.2	14.2
CPX39120	46	42	62	55	91	60	51.2	56.2	58.5	52.6	59.5	55.7	16.6	14.4	13.3	14.9	12.8	14.2
WA8388 CL+	50	48	54	57	84	59	58.3	60.6	62.3	59.2	62.9	60.7	15.4	13.8	13.4	13.7	13.0	13.9
WA8356	53	46	55	55	87	59	56.0	60.1	62.7	60.1	62.3	60.4	16.1	14.4	14.6	13.9	13.8	14.5
WA8389 CL+	48	42	64	55	84	59	57.6	61.6	62.9	60.5	63.6	61.2	15.7	14.7	14.0	13.7	13.0	14.2
WA8357	50	45	62	51	84	57	59.4	62.0	64.0	62.0	63.7	62.2	16.2	15.3	15.3	14.3	14.2	15.1
C.V. %	8	6	8	8	5	8	2.0	1.2	1.2	1.4	0.6	1.7	3.6	2.7	2.0	3.5	2.9	3.7
LSD (0.05)	9	6	10	9	7	3	2.5	1.6	1.7	1.6	0.9	0.7	1.2	0.9	0.7	1.1	0.9	0.4
Average	52	46	59	57	87	60	56.7	60.4	62.0	59.7	62.6	60.3	15.4	14.4	14.1	13.7	13.6	14.2
Highest	60	52	66	67	98	66	59.5	62.0	64.0	62.2	63.9	62.2	16.6	15.6	16.2	15.1	15.3	15.6
Lowest	43	39	42	49	79	55	49.1	55.1	58.5	52.6	59.5	55.1	14.4	13.5	12.3	12.6	12.2	13.0

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

**2022 WSU Variety Testing Hard Red Spring Wheat Trial Summary
Precipitation Zone - 12-16"**

Variety Name <i>(Hard White Italicized)</i>	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average
	Yield (Bu/A)				Test Wt (Lbs/Bu)				Protein (%)			
<i>Released Varieties</i>												
Jefferson HF	48	61	54	56	60.2	61.5	58.2	59.9	13.1	12.9	15.2	14.0
Jefferson	42	64	54	55	59.3	61.3	58.1	59.8	13.2	13.4	15.2	13.9
Kelse	39	57	57	52	56.8	62.0	55.2	59.1	14.7	13.1	16.0	14.5
Hale (WA8315)	46	56	56	51	60.0	62.8	59.0	60.7	12.9	12.9	14.8	13.7
WB9303	41	51	59	50	60.5	61.8	63.3	61.4	14.8	14.2	15.0	15.0
AP Renegade	37	55	54	50	56.6	62.2	59.2	60.0	14.9	13.9	15.3	14.2
Glee	43	56	52	49	57.7	62.9	56.7	59.5	12.5	12.6	15.3	13.3
Alum	37	58	47	49	57.8	63.8	56.3	59.2	13.5	11.7	14.8	13.6
CP3055	35	59	50	48	50.8	59.8	51.7	54.3	13.9	12.8	15.3	13.8
Net CL+	39	57	46	47	60.2	63.7	58.4	60.2	13.6	12.7	15.1	13.9
Chet	36	51	51	47	60.4	63.9	59.2	61.1	13.4	13.8	15.3	14.2
WB9623	38	57	50	47	56.2	63.1	56.0	58.3	14.0	14.1	15.4	14.1
WB9668	42	48	51	45	58.5	62.7	57.4	60.2	14.8	15.1	16.7	15.2
CP3099A	32	52	48	43	51.4	61.9	54.7	55.8	13.9	12.1	13.7	13.1
CP3530	33	48	46	40	55.4	61.6	54.8	57.0	13.9	13.4	15.3	14.3
<i>Experimental Lines</i>												
WA8355	45	53	57	54	59.4	63.3	58.7	60.9	13.0	12.4	14.2	13.2
WA8330	41	63	52	52	58.2	63.5	58.5	59.6	13.9	13.2	14.8	13.9
WA8388 CL+	37	58	55	51	57.9	62.2	57.8	59.9	13.3	12.9	15.0	13.5
WA8358 CL+	46	52	51	50	59.4	62.5	58.6	60.4	13.2	12.7	14.9	13.8
WA8389 CL+	42	56	48	49	60.8	63.5	58.8	60.6	13.1	12.9	14.8	13.9
WA8356	38	56	52	48	57.9	61.6	57.0	58.4	13.7	12.9	15.9	14.5
WA8387 CL+	37	53	52	48	57.6	63.1	60.2	60.4	13.8	13.0	14.3	13.5
WA8357	36	50	50	44	61.8	65.3	60.8	61.6	13.8	14.0	15.5	14.4
CPX39120	35	56	41	41	52.1	57.6	51.4	53.2	14.5	12.4	15.9	14.3
C.V. %	9	10	6	12	2.4	2.0	2.2	3.0	5.8	6.1	3.4	7.2
LSD (0.05)	7	11	6	6	2.7	2.5	2.8	1.6	1.6	1.6	1.2	0.9
Average	39	55	51	49	57.8	62.4	57.5	59.2	13.7	13.1	15.2	14.0
Highest	48	64	59	56	61.8	65.3	63.3	61.6	14.9	15.1	16.7	15.2
Lowest	32	48	41	40	50.8	57.6	51.4	53.2	12.5	11.7	13.7	13.1

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.

**2022 WSU Variety Testing Hard Red Spring Wheat Trial Summary
Precipitation Zone - <12"**

Variety Name <i>(Hard White 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 (%)			
Released Varieties												
CP3055	35	32	31	33	57.0	60.0	58.9	58.6	11.8	10.5	13.8	12.0
CP3099A	34	32	32	32	57.1	60.4	60.3	59.2	11.5	10.8	13.5	11.8
WB9623	32	31	26	30	61.6	62.8	62.6	62.3	12.3	11.8	15.9	13.3
Net CL+	33	27	27	28	63.7	63.8	63.0	63.5	12.2	12.2	16.0	13.5
Chet	28	26	27	27	63.5	63.9	63.7	63.7	12.3	12.9	16.5	14.0
Glee	32	23	23	27	63.6	64.1	63.2	63.6	12.0	11.8	16.4	13.4
Alum	30	24	26	27	61.9	63.8	63.5	63.0	12.2	12.4	15.8	13.5
Hale (WA8315)	31	26	23	27	63.3	63.5	63.2	63.4	12.2	13.1	17.2	14.2
Jefferson HF	29	24	25	26	62.0	62.4	62.1	62.1	12.3	12.1	16.6	13.5
Kelse	30	23	24	26	63.1	63.7	62.4	63.0	12.6	12.4	17.3	14.2
Jefferson	25	26	26	26	62.3	62.8	62.5	62.5	13.0	11.7	16.1	13.6
AP Renegade	31	24	23	25	61.7	62.9	61.7	62.1	13.8	13.9	17.1	15.1
CP3530	28	22	25	24	61.9	62.0	60.3	61.4	12.3	11.8	16.3	13.6
WB9668	27	16	22	21	62.6	63.5	61.8	62.6	14.5	15.5	19.0	16.5
WB9303	21	17	15	18	63.5	63.6	60.8	62.7	14.8	15.0	18.4	15.9
Experimental Lines												
CPX39120	33	31	33	32	57.2	59.2	60.5	58.9	12.2	11.1	14.4	12.7
WA8389 CL+	29	28	25	28	63.9	64.1	63.6	63.9	11.8	11.7	15.8	13.0
WA8355	32	22	27	28	63.2	64.0	62.8	63.3	11.6	11.2	15.6	13.0
WA8358 CL+	29	26	24	27	63.7	63.7	62.7	63.4	12.4	12.5	16.7	13.8
WA8388 CL+	31	26	23	26	63.1	63.8	62.7	63.2	12.0	11.7	16.2	13.1
WA8356	31	22	23	26	63.1	63.5	61.6	62.8	12.1	12.1	17.5	13.8
WA8330	29	23	23	25	63.8	64.1	61.9	63.3	12.2	12.3	16.9	13.8
WA8387 CL+	30	23	23	25	63.3	64.1	62.6	63.3	12.1	12.0	16.5	13.4
WA8357	27	22	21	23	64.2	64.6	63.5	64.1	13.4	14.2	17.9	15.0
C.V. %	8	9	7	10	0.9	0.7	1.2	1.0	4.8	4.0	2.3	4.3
LSD (0.05)	5	5	4	2	1.3	1.0	1.6	0.6	1.3	1.1	0.8	0.6
Average	30	25	25	27	62.3	63.1	62.2	62.5	12.5	12.4	16.4	13.7
Highest	35	32	33	33	64.2	64.6	63.7	64.1	14.8	15.5	19.0	16.5
Lowest	21	16	15	18	57.0	59.2	58.9	58.6	11.5	10.5	13.5	11.8

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary Precipitation Zone >20" (Fairfield, Farmington, Palouse, Pullman)

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 8 loc/yr			3 Years 2020-2022, 11 loc/yr			5 Years 2018-2022, 18 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Hale (WA8315)	64	61.0	13.7	70	61.4	13.3			
WA8355	61	60.4	13.5						
WA8330	60	60.5	13.5	66	60.9	13.1			
Glee	59	59.6	13.3	64	60.2	13.0	67	60.1	12.3
WA8356	58	59.8	13.4						
WB9668	57	59.6	15.4	62	60.1	15.0	62	59.8	14.2
WB9303	57	60.7	14.6	62	61.0	14.3			
Net CL+	57	60.7	14.1	61	60.7	13.8	64	60.6	12.9
AP Renegade	57	59.4	14.3	62	59.7	13.7	67	59.5	12.7
Chet	57	61.2	14.3	60	61.2	14.0	62	61.0	13.1
Alum	56	59.6	13.8	60	59.7	13.5	63	59.5	12.7
WA8357	54	61.4	15.2						
Kelse	53	59.0	14.4	57	59.2	14.1	59	59.3	13.4
C.V.%	6	1.2	3.5	6	1.4	3.8	7	1.3	3.9
LSD	2	0.5	0.3	2	0.4	0.3	2	0.3	0.2
Average	58	60.2	14.1	62	60.4	13.8	64	60.0	13.0
Highest	64	61.4	15.4	70	61.4	15.0	67	61.0	14.2
Lowest	53	59.0	13.3	57	59.2	13.0	59	59.3	12.3



**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary
Precipitation Zone 16-20" (Dayton, Mayview, Plaza, St. John, Walla Walla)**

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 9 loc/yr			3 Years 2019-2022, 14 loc/yr			5 Years 2018-2022, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
	46	60.9	14.8	55	60.9	14.4			
WA8330	46	60.9	14.8	55	60.9	14.4			
Hale (WA8315)	44	60.9	14.8	55	60.8	14.4			
Glee	43	60.8	14.5	54	60.7	14.2	60	61.2	13.3
WA8355	43	61.1	14.1						
AP Renegade	43	59.5	15.2	53	59.7	14.6	61	60.3	13.5
WA8356	43	60.4	14.8						
Kelse	42	60.5	15.2	50	60.2	14.9	57	60.7	14.2
Alum	41	60.2	14.8	50	59.8	14.5	58	60.5	13.7
Net CL+	41	61.1	15.1	51	60.8	14.7	59	61.2	13.8
Chet	40	60.7	15.5	48	60.3	15.3	55	60.9	14.2
WA8357	40	61.8	16.1						
WB9668	38	60.5	16.7	48	60.7	16.3	52	61.0	15.3
WB9303	35	61.2	16.3	44	61.3	16.0			
C.V.%	8	0.8	2.4	9	1.5	2.7	7	1.5	3.2
LSD	2	0.4	0.2	2	0.4	0.2	2	0.3	0.2
Average	42	60.7	15.2	51	60.5	14.9	57	60.8	14.0
Highest	46	61.8	16.7	55	61.3	16.3	61	61.2	15.3
Lowest	35	59.5	14.1	44	59.7	14.2	52	60.3	13.3



**WSU Variety Testing Hard Red Spring Wheat Trial Multi-Year Summary
Precipitation Zone 12-16" (Almira, Endicott, Lamont, Reardan)**

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 7 loc/yr			3 Years 2020-2022, 11 loc/yr			5 Years 2018-2022, 18 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
	34	59.0	15.1	44	59.2	14.3			
WA8330	34	59.0	15.1	44	59.2	14.3			
WA8355	34	58.8	14.5						
Hale (WA8315)	33	59.5	15.1	42	59.7	14.5			
Kelse	33	57.8	15.5	41	58.2	14.8	41	59.5	14.2
WA8356	32	57.7	15.2						
Glee	32	58.5	14.7	43	59.1	14.1	42	60.1	13.5
Alum	32	58.5	14.8	41	58.4	14.3	41	59.5	13.9
AP Renegade	32	57.0	15.3	42	57.4	14.6	42	58.6	13.8
WB9303	31	60.1	16.0	38	60.1	15.7			
Chet	31	59.4	15.4	39	59.5	14.8	40	60.2	14.3
Net CL+	30	59.1	15.2	40	58.7	14.7	41	59.9	14.1
WB9668	29	59.0	16.4	39	59.6	15.9	37	60.1	15.8
WA8357	28	60.0	16.1						
C.V.%	12	2.0	4.1	11	2.1	4.2	11	1.8	4.0
LSD	2	0.8	0.4	2	0.6	0.4	2	0.4	0.3
Average	32	58.8	15.3	41	59.0	14.8	41	59.7	14.2
Highest	34	60.1	16.4	44	60.1	15.9	42	60.2	15.8
Lowest	28	57.0	14.5	38	57.4	14.1	37	58.6	13.5



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

Variety Name <i>Hard White Italicized</i>	2 Years			3 Years			5 Years		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
WA8355	18	62.1	14.3						
Net CL+	18	62.7	14.9	23	62.2	14.3	27	62.4	14.2
Chet	18	62.9	14.9	23	62.7	14.5	26	62.4	14.4
Alum	18	62.4	14.4	24	62.3	13.8	27	62.1	13.7
Hale (WA8315)	18	62.4	15.1	23	62.2	14.4			
Kelse	17	62.2	15.2	22	61.9	14.8	24	62.1	14.7
WA8356	17	62.3	14.8						
Glee	17	62.8	14.6	21	62.5	14.1	25	62.4	13.9
WA8330	17	62.6	15.2	22	62.5	14.5			
AP Renegade	16	61.1	15.1	21	61.1	14.5	25	61.0	14.1
WA8357	15	63.4	16.1						
WB9668	13	62.3	17.2	18	62.0	16.9	21	61.4	16.5
WB9303	11	62.5	16.5	14	62.4	16.3			
C.V.%	10	0.7	2.5	9	0.9	2.8	9	0.8	2.7
LSD	1	0.6	0.3	1	0.5	0.2	1	0.7	0.2
Average	17	62.4	15.2	21	62.2	14.8	25	62.0	14.5
Highest	18	63.4	17.2	24	62.7	16.9	27	62.4	16.5
Lowest	11	61.1	14.3	14	61.1	13.8	21	61.0	13.7



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

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 3 loc/yr			3 Years 2020-2022, 5 loc/yr			5 Years 2018-2022, 9 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
	124	60.4	13.9						
WA8342	117	59.2	14.9						
WA8356	116	58.8	14.1						
WA8359	116	59.8	14.9	118	60.7	15.1	116	61.3	15.5
WB9662	115	59.2	14.6	116	60.1	14.4	121	61.0	14.3
AP Renegade	114	58.8	14.0	122	60.2	14.0	125	61.0	14.0
SY Gunsight	112	59.2	14.5	111	60.0	14.5	111	61.0	14.7
Glee	110	56.0	14.4	120	58.0	14.4			
AP Venom	110	59.2	15.6	113	60.2	15.6			
Kelse	109	59.4	15.7	113	60.8	15.7	115	61.7	15.9
WB9668	107	60.3	15.7						
Buck Pronto	99	58.7	15.0	101	59.6	15.2	105	60.5	15.3
C.V.%	8	1.6	1.9	7	1.2	1.5	7	1.0	1.6
LSD	6	1.1	0.3	6	1.0	0.3	5	0.6	0.3
Average	112	59.1	14.8	114	59.9	14.9	116	61.1	14.9
Highest	124	60.4	15.7	122	60.8	15.7	125	61.7	15.9
Lowest	99	56.0	13.9	101	58.0	14.0	105	60.5	14.0



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Almira

Variety Name <i>Hard White Italicized</i>	2022					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>								
Jefferson HF	48	60.2	13.1	29	179			
Hale (WA8315)	46	60.0	12.9	29	178	31	34	
Glee	43	57.7	12.5	29	179	28	33	39
Jefferson	42	59.3	13.2	30	178			
WB9668	42	58.5	14.8	25	177	30	33	41
WB9303	41	60.5	14.8	30	174	35	35	
Net CL+	39	60.2	13.6	30	183	29	33	40
Kelse	39	56.8	14.7	31	181	28	33	40
WB9623	38	56.2	14.0	31	182			
Alum	37	57.8	13.5	29	181	28	31	38
AP Renegade	37	56.6	14.9	27	179	27	32	38
Chet	36	60.4	13.4	37	181	28	33	39
CP3055	35	50.8	13.9	31	186			
CP3530	33	55.4	13.9	33	182			
CP3099A	32	51.4	13.9	35	186			
<i>Experimental Lines</i>								
WA8358 CL+	46	59.4	13.2	29	179			
WA8355	45	59.4	13.0	31	180	35		
WA8389 CL+	42	60.8	13.1	31	182			
WA8330	41	58.2	13.9	29	179	32	35	
WA8356	38	57.9	13.7	30	179	31		
WA8388 CL+	37	57.9	13.3	27	180			
WA8387 CL+	37	57.6	13.8	29	180			
WA8357	36	61.8	13.8	33	181	26		
CPX39120	35	52.1	14.5	32	187			
C.V.	9	2.4	5.8	6	1	18	15	14
LSD	7	2.7	1.6	4	3	NS	NS	NS
Average	39	57.8	13.7	30	181	30	33	39
Highest	48	61.8	14.9	37	187	35	35	41
Lowest	32	50.8	12.5	25	174	26	31	38

Agronomic Information

Planting Date:	4/12/2022
Harvest Date:	8/28/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	217
P ₂ O ₅ (lb/ac) 1-ft sample	142
S (lb/ac) 2-ft sample	45
pH (top 6 inches)	5.3

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.

Trial Notes:

1. The nursery was located approximately 7 miles north of Almira, WA.
2. The nursery was fertilized at seeding at a rate of 14N, 3P, 9K, 9S. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 86% greater and test weight was 3.4 lb/bu more than in 2021.

Cooperator: Dan McKay



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Bickleton

Variety Name <i>Hard White Italicized</i>	2022					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>								
CP3055	35	57.0	11.8	--	181			
CP3099A	34	57.1	11.5	--	178			
Net CL+	33	63.7	12.2	--	180	22	21	27
Glee	32	63.6	12.0	--	179	21	21	25
WB9623	32	61.6	12.3	--	178			
AP Renegade	31	61.7	13.8	--	183	19	19	23
Hale (WA8315)	31	63.3	12.2	--	181	21	21	
Alum	30	61.9	12.2	--	179	21	22	25
Kelse	30	63.1	12.6	--	180	21	21	24
Jefferson HF	29	62.0	12.3	--	178			
CP3530	28	61.9	12.3	--	181			
Chet	28	63.5	12.3	--	178	21	21	25
WB9668	27	62.6	14.5	--	177	15	16	20
Jefferson	25	62.3	13.0	--	181			
WB9303	21	63.5	14.8	--	175	14	15	
<i>Experimental Lines</i>								
CPX39120	33	57.2	12.2	--	180			
WA8355	32	63.2	11.6	--	182	21		
WA8388 CL+	31	63.1	12.0	--	180			
WA8356	31	63.1	12.1	--	177	20		
WA8387 CL+	30	63.3	12.1	--	180			
WA8358 CL+	29	63.7	12.4	--	177			
WA8389 CL+	29	63.9	11.8	--	177			
WA8330	29	63.8	12.2	--	180	20	20	
WA8357	27	64.2	13.4	--	178	18		
C.V.	8	0.9	4.8	--	1	11	12	15
LSD	5	1.3	1.3	--	3	3	2	3
Average	30	62.3	12.5	--	179	20	20	24
Highest	35	64.2	14.8	--	183	22	22	27
Lowest	21	57.0	11.5	--	175	14	15	20

Agronomic Information

Planting Date:	3/30/2022
Harvest Date:	9/13/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	106
P ₂ O ₅ (lb/ac) 1-ft sample	150
S (lb/ac) 2-ft sample	22
pH (top 6 inches)	6.0

Herbicides: 2,4-D (10oz), Dicamba (2oz), and Ally (0.1oz) were applied by the cooperator.

Trial Notes:

1. The nursery was located approximately 4 miles northeast of Bickleton, WA.
2. No additional fertilizer was applied on this trial.
3. Overall yield was 200% greater and test weight was 2.0 lb/bu more than in 2021.

Cooperator: Andy & Ron Juris



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Dayton

Variety Name <i>Hard White Italicized</i>	2022					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>								
WB9303	60	59.5	15.3	32	178	59		
Jefferson	56	57.9	14.7	34	183			
Hale (WA8315)	56	57.2	14.5	35	183	60	60	
WB9668	56	57.9	16.1	28	182	60	56	50
AP Renegade	55	58.0	15.1	31	184	61	61	56
Glee	55	57.1	14.5	33	182	58	59	55
Kelse	54	57.8	15.1	34	183	58	57	53
Jefferson HF	53	56.8	15.0	34	183			
WB9623	50	55.5	15.4	32	184			
CP3099A	50	53.8	14.7	38	189			
Net CL+	49	57.5	16.0	35	186	57	56	52
Chet	47	57.4	16.2	46	185	50	50	48
Alum	45	55.1	15.3	36	185	52	50	50
CP3055	44	49.1	15.7	36	190			
CP3530	43	55.6	16.5	37	188			
Experimental Lines								
WA8330	58	57.5	15.1	33	182	63		
WA8355	56	59.0	14.4	34	182			
WA8356	53	56.0	16.1	33	183			
WA8358 CL+	52	58.4	14.9	32	182			
WA8387 CL+	51	57.4	14.5	34	183			
WA8357	50	59.4	16.2	40	182			
WA8388 CL+	50	58.3	15.4	31	183			
WA8389 CL+	48	57.6	15.7	33	184			
CPX39120	46	51.2	16.6	33	190			
C.V.	8	2.0	3.6	6	0.4	5	6	7
LSD	9	2.5	1.2	4	1	4	3	2
Average	52	56.7	15.4	34	184	58	56	52
Highest	60	59.5	16.6	46	190	63	61	56
Lowest	43	49.1	14.4	28	178	50	50	48

*Multi-year averages do not include data from the 2021 season.

Agronomic Information

Planting Date:	4/29/2022
Harvest Date:	9/15/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	94
P ₂ O ₅ (lb/ac) 1-ft sample	158
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	6.3

Trial Notes:

1. The nursery was located approximately 3 miles northeast of Dayton, WA.
2. The nursery was fertilized prior to seeding at a rate of 90N, 14S by the cooperator. An additional 101N was applied after spring soil sampling.
3. Overall yield was 18% less and test weight was 1.4 lb/bu less than in 2020. 2021 data not published.

Cooperator: Justin Ingram

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.

Nexicor (13oz) was applied on July 1.



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Endicott

Variety Name <i>Hard White Italicized</i>	2022					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>								
Jefferson	64	61.3	13.4	36	167			
Jefferson HF	61	61.5	12.9	36	169			
CP3055	59	59.8	12.8	36	172			
Alum	58	63.8	11.7	36	169	39	48	49
Kelse	57	62.0	13.1	38	170	39	51	46
Net CL+	57	63.7	12.7	36	171	36	48	48
WB9623	57	63.1	14.1	34	170			
Hale (WA8315)	56	62.8	12.9	35	167	40	52	
Glee	56	62.9	12.6	36	165	37	52	48
AP Renegade	55	62.2	13.9	29	167	35	53	49
CP3099A	52	61.9	12.1	35	172			
Chet	51	63.9	13.8	44	169	35	48	45
WB9303	51	61.8	14.2	34	164	33	41	
CP3530	48	61.6	13.4	38	171			
WB9668	48	62.7	15.1	29	166	31	43	38
<i>Experimental Lines</i>								
WA8330	63	63.5	13.2	35	165	43	56	
WA8388 CL+	58	62.2	12.9	33	168			
WA8389 CL+	56	63.5	12.9	34	171			
CPX39120	56	57.6	12.4	36	172			
WA8356	56	61.6	12.9	35	167	36		
WA8355	53	63.3	12.4	36	169	40		
WA8387 CL+	53	63.1	13.0	34	168			
WA8358 CL+	52	62.5	12.7	34	168			
WA8357	50	65.3	14.0	39	168	31		
C.V.	10	2.0	6.1	4	0	13	13	13
LSD	11	2.5	1.6	3	2	6	6	4
Average	55	62.4	13.1	35	168	37	49	46
Highest	64	65.3	15.1	44	172	43	56	49
Lowest	48	57.6	11.7	29	164	31	41	38

* 5 year average used data for 2022, 2021, 2020, 2018, and 2017.

Agronomic Information

Planting Date:	3/29/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	135
P ₂ O ₅ (lb/ac) 1-ft sample	191
S (lb/ac) 2-ft sample	43
pH (top 6 inches)	6.3

Trial Notes:

1. The nursery was located approximately 3.5 miles southwest of Endicott, WA.
2. The nursery was fertilized at seeding at a rate of 19N, 5P, 12K, 12S. An additional 38N was applied after spring soil sampling.
3. Overall yield was 190% greater and test weight was 3.3 lb/bu more than in 2021.

Cooperator: Monty Miller

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Fairfield

Variety Name <i>Hard White Italicized</i>	2022					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>								
Glee	70	61.9	11.8	34	185	52	63	58
Chet	69	63.3	13.0	44	186	50	53	51
Hale (WA8315)	68	62.7	12.3	34	188	54	68	
WB9623	66	61.7	12.7	33	188			
CP3099A	66	59.3	11.5	38	192			
CP3055	66	58.6	12.0	34	191			
Jefferson HF	65	61.9	12.7	33	189			
Alum	65	61.9	12.5	34	188	51	62	58
Jefferson	65	61.9	12.7	33	188			
WB9303	63	62.5	13.5	33	181	44	52	
Kelse	63	62.7	13.2	35	187	49	58	54
WB9668	62	61.8	14.0	28	185	49	59	53
Net CL+	62	63.3	12.7	34	187	48	56	
CP3530	57	61.5	13.0	36	188			
AP Renegade	56	61.8	13.7	27	187	47	59	
<i>Experimental Lines</i>								
WA8358 CL+	67	62.7	13.1	31	188			
WA8330	67	62.9	12.5	33	185	52	65	
WA8388 CL+	66	62.3	12.1	30	186			
CPX39120	65	58.9	12.0	37	192			
WA8355	64	62.3	12.3	33	187	52		
WA8389 CL+	64	63.1	13.0	33	187			
WA8387 CL+	62	62.2	12.8	32	186			
WA8356	62	61.8	12.7	33	187	51		
WA8357	60	63.4	14.8	37	186	45		
C.V.	4	0.8	2.7	5	1	8	6	7
LSD	5	1.1	0.8	3	2	5	4	3
Average	64	61.9	12.8	34	187	50	60	55
Highest	70	63.4	14.8	44	192	54	68	58
Lowest	56	58.6	11.5	27	181	44	52	51

*5 year average used data from 2022, 2021, 2020, 2018, and 2016.

Agronomic Information

Planting Date:	4/25/2022
Harvest Date:	9/8/2022
Seeding Rate (seeds/ft ²):	22.5
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	209
P ₂ O ₅ (lb/ac) 1-ft sample	108
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	4.9

Trial Notes:

- The nursery was located approximately 5.5 miles east of Fairfield, WA.
- The nursery was fertilized at seeding at a rate of 24N, 6P, 15K, 15S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 73% greater and test weight was 4.1 lb/bu more than in 2021.

Cooperator: David Degon

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on June 7.

Nexicor (13oz) was applied on June 30.



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Farmington

Variety Name <i>Hard White Italicized</i>	2022					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>								
Hale (WA8315)	98	62.6	13.5	40	186	69	67	
Glee	95	60.4	12.5	40	185	66	68	68
CP3099A	94	59.6	12.5	44	190			
Jefferson HF	91	61.1	13.7	38	189			
WB9623	91	60.8	12.5	36	188			
CP3055	91	59.0	11.8	41	191			
Jefferson	90	61.0	14.3	39	188			
Chet	89	63.2	13.4	52	186	64	63	62
WB9303	89	63.1	13.4	34	180	64	64	
Alum	87	60.7	14.3	39	187	62	59	59
Net CL+	87	62.8	13.6	40	188	66	63	61
WB9668	86	61.9	15.9	31	184	59	59	59
Kelse	85	61.4	13.2	39	187	59	61	61
CP3530	82	60.5	15.2	41	188			
AP Renegade	81	62.3	15.0	32	188	59	62	64
<i>Experimental Lines</i>								
WA8330	94	61.7	12.4	36	184	69	69	
WA8355	94	61.8	14.0	36	186	69		
WA8388 CL+	93	62.7	12.9	34	185			
WA8387 CL+	91	61.6	13.1	36	186			
WA8358 CL+	90	62.2	13.4	38	188			
WA8356	87	61.6	12.9	37	186	66		
CPX39120	87	58.5	13.3	42	191			
WA8389 CL+	86	62.6	13.0	37	188			
WA8357	85	63.3	13.9	42	187	62		
C.V.	3	1.5	8.9	3	0.4	6	6	8
LSD	4	2.1	2.7	3	2	4	4	3
Average	89	61.5	13.5	38	187	64	63	62
Highest	98	63.3	15.9	52	191	69	69	68
Lowest	81	58.5	11.8	31	180	59	59	59

*Multi-year averages do not include data from 2020.

Agronomic Information

Planting Date:	4/22/2022
Harvest Date:	9/12/2022
Seeding Rate (seeds/ft ²):	22.5
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	165
P ₂ O ₅ (lb/ac) 1-ft sample	183
S (lb/ac) 2-ft sample	34
pH (top 6 inches)	5.1

Herbicides: Anthem Flex (3.5oz) was applied on May 1.

Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), and Tilt (2oz) were applied on June 7, 2022.

Trial Notes:

- The nursery was located approximately 4 miles south of Farmington, WA.
- The nursery was fertilized at seeding at a rate of 32N, 8P, 20K, 20S. An additional 68N was applied after spring soil sampling.
- Overall yield was 123% greater and test weight was 3.3 lb/bu more than in 2021.

Cooperator: Andrew Nelson



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Horse Heaven

Variety Name <i>Hard White Italicized</i>	2022					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>								
CP3055	32	60.0	10.5	25	169			
CP3099A	32	60.4	10.8	28	168			
WB9623	31	62.8	11.8	28	165			
Net CL+	27	63.8	12.2	25	166	17	20	23
Hale (WA8315)	26	63.5	13.1	25	164	18	24	
Jefferson	26	62.8	11.7	24	164			
Chet	26	63.9	12.9	30	164	18	23	24
AP Renegade	24	62.9	13.9	20	164	16	18	22
Alum	24	63.8	12.4	23	165	17	22	24
Jefferson HF	24	62.4	12.1	22	163			
Glee	23	64.1	11.8	25	163	16	18	21
Kelse	23	63.7	12.4	29	165	17	20	23
CP3530	22	62.0	11.8	27	166			
WB9303	17	63.6	15.0	22	162	12	13	
WB9668	16	63.5	15.5	20	164	11	15	18
<i>Experimental Lines</i>								
CPX39120	31	59.2	11.1	27	169			
WA8389 CL+	28	64.1	11.7	26	165			
WA8388 CL+	26	63.8	11.7	25	164			
WA8358 CL+	26	63.7	12.5	26	164			
WA8330	23	64.1	12.3	24	163	15	19	
WA8387 CL+	23	64.1	12.0	24	164			
WA8355	22	64.0	11.2	24	165	17		
WA8356	22	63.5	12.1	23	163	16		
WA8357	22	64.6	14.2	25	164	14		
C.V.	9	0.7	4.0	6	0	15	16	13
LSD	5	1.0	1.1	3	2	3	3	2
Average	25	63.1	12.4	25	165	16	19	22
Highest	32	64.6	15.5	30	169	18	24	24
Lowest	16	59.2	10.5	20	162	11	13	18

Agronomic Information

Planting Date:	3/16/2022
Harvest Date:	8/11/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	95
P ₂ O ₅ (lb/ac) 1-ft sample	41
S (lb/ac) 2-ft sample	14
pH (top 6 inches)	6.7

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on June 3.

Trial Notes:

1. The nursery was located approximately 6 miles southwest of Benton City, WA.
2. The nursery was fertilized at a rate of 16N, 4P, 10K, 10S after spring soil sampling.
3. Overall yield was 213% greater and test weight was 2.0 lb/bu more than in 2021.

Cooperator: Chad Smith



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Lamont

Variety Name <i>Hard White Italicized</i>	2022					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)
Released Varieties								
WB9303	59	63.3	15.0	35	168	35	42	
Kelse	57	55.2	16.0	36	175	33	37	35
Hale (WA8315)	56	59.0	14.8	36	174	37	41	
Jefferson HF	54	58.2	15.2	35	173			
Jefferson	54	58.1	15.2	33	174			
AP Renegade	54	59.2	15.3	31	173	38	41	38
Glee	52	56.7	15.3	34	172	34	41	38
WB9668	51	57.4	16.7	31	172	33	39	33
Chet	51	59.2	15.3	44	176	32	36	37
WB9623	50	56.0	15.4	34	175			
CP3055	50	51.7	15.3	37	180			
CP3099A	48	54.7	13.7	38	179			
Alum	47	56.3	14.8	36	176	32	37	36
Net CL+	46	58.4	15.1	36	177	32	38	35
Experimental Lines								
WA8355	57	58.7	14.2	35	175	36		
WA8388 CL+	55	57.8	15.0	33	174			
WA8356	52	57.0	15.9	34	173	35		
WA8387 CL+	52	60.2	14.3	33	174			
WA8330	52	58.5	14.8	34	171	35	40	
WA8358 CL+	51	58.6	14.9	37	174			
WA8357	50	60.8	15.5	40	174	34		
WA8389 CL+	48	58.8	14.8	34	176			
CP3530	46	54.8	15.3	38	177			
CPX39120	41	51.4	15.9	39	180			
C.V.	6	2.2	3.4	4	0	13	15	16
LSD	6	2.8	1.2	3	1	NS	NS	NS
Average	51	57.5	15.2	36	175	34	39	36
Highest	59	63.3	16.7	44	180	38	42	38
Lowest	41	51.4	13.7	31	168	32	36	33

Agronomic Information

Planting Date:	4/1/2022
Harvest Date:	8/28/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Spring Barley
Spring soil test:	
N (lb/ac) 4-ft sample	187
P ₂ O ₅ (lb/ac) 1-ft sample	200
S (lb/ac) 2-ft sample	32
pH (top 6 inches)	5.5

Trial Notes:

- The nursery was located approximately 4 miles west of Ewan, WA.
- The nursery was fertilized prior to seeding at a rate of 75N, 10P, 10K by the cooperator. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 200% greater and test weight was 1.5 lb/bu more than in 2021.

Cooperator: Rod Mills

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Lind

Variety Name <i>Hard White Italicized</i>	2022					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>								
CP3099A	32	60.3	13.5	31	172			
CP3055	31	58.9	13.8	26	172			
Net CL+	27	63.0	16.0	31	169	16	28	32
Chet	27	63.7	16.5	33	166	16	26	30
Jefferson	26	62.5	16.1	30	165			
Alum	26	63.5	15.8	28	167	16	27	31
WB9623	26	62.6	15.9	30	168			
CP3530	25	60.3	16.3	31	170			
Jefferson HF	25	62.1	16.6	28	166			
Kelse	24	62.4	17.3	32	167	14	24	27
AP Renegade	23	61.7	17.1	26	165	15	26	30
Glee	23	63.2	16.4	30	164	14	25	29
Hale (WA8315)	23	63.2	17.2	31	165	14	25	
WB9668	22	61.8	19.0	26	165	13	22	25
WB9303	15	60.8	18.4	27	160	9	15	
<i>Experimental Lines</i>								
CPX39120	33	60.5	14.4	28	172			
WA8355	27	62.8	15.6	30	166	17		
WA8389 CL+	25	63.6	15.8	28	169			
WA8358 CL+	24	62.7	16.7	28	166			
WA8388 CL+	23	62.7	16.2	28	165			
WA8356	23	61.6	17.5	29	164	15		
WA8330	23	61.9	16.9	28	163	15	25	
WA8387 CL+	23	62.6	16.5	29	165			
WA8357	21	63.5	17.9	32	166	14		
C.V.	7	1.2	2.3	3	0.3	11	8	8
LSD	4	1.6	0.8	2	1	2	2	2
Average	25	62.2	16.4	29	167	15	24	29
Highest	33	63.7	19.0	33	172	17	28	32
Lowest	15	58.9	13.5	26	160	9	15	25

Agronomic Information

Planting Date:	3/22/2022
Harvest Date:	8/4/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Fallow
Spring soil test:	
N (lb/ac) 4-ft sample	188
P ₂ O ₅ (lb/ac) 1-ft sample	116
S (lb/ac) 2-ft sample	25
pH (top 6 inches)	5.7

Herbicides: LV-6 (10oz) was applied on May 11 by the cooperator.

Trial Notes:

1. The nursery was located approximately 3 miles northeast of Lind, WA.
2. The nursery was fertilized prior to seeding at a rate of 50N, 10S by the cooperator. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 400% greater than in 2021. No test weight data from 2021.

Cooperator: Bruce Sauer



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Mayview

Variety Name <i>Hard White Italicized</i>	2022					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>								
WB9303	52	61.8	15.2	28	180	27	38	
AP Renegade	52	61.0	15.1	27	187	39	47	54
Glee	51	61.4	13.8	33	183	36	46	51
WB9623	49	59.6	14.3	32	187			
Hale (WA8315)	47	61.3	13.9	33	186	36	47	
Net CL+	47	61.2	14.8	32	188	34	44	51
CP3099A	47	57.3	13.5	35	192			
Jefferson HF	46	61.0	14.2	34	186			
Jefferson	45	60.2	14.3	33	186			
WB9668	45	62.0	15.6	28	183	35	42	45
Kelse	45	61.0	14.4	34	187	35	45	51
Chet	42	60.9	14.9	42	187	31	42	47
Alum	41	59.8	14.5	30	188	33	42	50
CP3530	41	60.3	15.0	34	189			
CP3055	39	55.1	14.3	30	194			
<i>Experimental Lines</i>								
WA8355	49	61.7	13.5	32	186	35		
WA8330	49	61.3	14.3	30	183	37	50	
WA8387 CL+	48	61.6	14.0	32	184			
WA8388 CL+	48	60.6	13.8	28	185			
WA8356	46	60.1	14.4	30	185	34		
WA8357	45	62.0	15.3	36	185	33		
WA8358 CL+	43	60.7	14.4	33	185			
WA8389 CL+	42	61.6	14.7	31	187			
CPX39120	42	56.2	14.4	29	194			
C.V.	6	1.2	2.7	5	0	9	8	9
LSD	6	1.6	0.9	3	1	4	3	3
Average	46	60.4	14.4	32	186	34	44	50
Highest	52	62.0	15.6	42	194	39	50	54
Lowest	39	55.1	13.5	27	180	27	38	

Agronomic Information

Planting Date:	4/28/2022
Harvest Date:	9/3/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	181
P ₂ O ₅ (lb/ac) 1-ft sample	191
S (lb/ac) 2-ft sample	35
pH (top 6 inches)	4.8

Trial Notes:

1. The nursery was located approximately 13 miles northeast of Pomeroy, WA.
2. The nursery was fertilized prior to seeding at a rate of 70N, 10S by the cooperator. An additional 50N was applied after spring soil sampling.
3. Overall yield was 92% greater and test weight was 0.7 lb/bu more than in 2021.

Cooperator: Randy & Wyatt Koller

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Moses Lake

Variety Name <i>Hard White Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
CP3099A	132	60.7	13.2	42	167	0			
Kelse	129	63.0	15.1	41	161	0	116	112	
AP Renegade	124	62.9	15.0	35	161	0	119	115	129
CP3530	122	61.3	14.2	41	163	10			
SY Gunsight	119	61.1	13.9	34	160	3			
CP3055	119	63.2	15.0	41	168	23			
WB9662	119	62.4	15.2	34	162	0	115	110	120
WB9623	117	59.3	15.3	39	164	57			
Buck Pronto	114	62.6	16.1	38	157	3	109		
AP Venom	114	60.3	14.3	36	164	0	113	116	
WB9668	114	62.2	15.6	34	159	0	112	109	120
Jefferson HF	110	61.6	14.6	39	160	30			
Glee	107	60.9	14.6	38	158	30	113	107	118
Alum	106	61.4	14.8	39	160	27	99	96	113
Jefferson	99	61.1	14.5	39	160	73			
Experimental Lines									
WA8373	130	63.1	13.8	36	158	0			
WA8342	128	62.2	14.1	36	159	0	126		
WA8372	123	62.9	14.5	36	158	0			
WA8374	122	62.3	14.4	34	160	0			
WA8376	116	62.4	14.2	34	160	0			
WA8356	116	61.1	15.2	38	159	23	119		
WA8359	115	61.4	14.0	35	161	0	121		
WA8375	115	61.5	14.2	34	158	0			
CPX39120	111	59.4	14.4	41	171	0			
C.V.	4	0.9	1.4	3	1	84	7	5	7
LSD	10	1.2	0.5	2	3	17	9	6	6
Average	117	61.7	14.6	37	161	12	115	109	120
Highest	132	63.2	16.1	42	171	73	126	116	129
Lowest	99	59.3	13.2	34	157	0	99	96	113

Agronomic Information

Planting Date:	3/11/2022
Harvest Date:	8/5/2022
Seeding Rate (seeds/ft ²):	25
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	181
P ₂ O ₅ (lb/ac) 1-ft sample	475
S (lb/ac) 2-ft sample	212
pH (top 6 inches)	5.4

Herbicides: Gold Sky, Affinity, and Wetcit were applied by the cooperator.

Quilt Xcel, Starane, and Dimate were applied at flagleaf by the cooperator.

Dimate was applied again at the end of June by the cooperator.

Trial Notes:

1. The nursery was located approximately 9 miles southeast of Moses Lake, WA.
2. The nursery was fertilized prior to seeding at a rate of 180N by the cooperator. An additional 100N was applied via fertigation.
3. Overall yield was 6% greater and test weight was 1.6 lb/bu more than in 2021.

Cooperator: James Getzinger



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Palouse

Variety Name <i>Hard White Italicized</i>	2022					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>								
CP3099A	89	59.2	13.0	45	--			
Hale (WA8315)	88	61.8	13.5	41	--	66	68	
AP Renegade	87	61.6	14.7	33	--	64	63	70
WB9303	87	63.3	14.5	34	--	60	60	
WB9668	83	61.1	15.4	32	--	60	60	63
CP3055	78	59.1	13.6	43	--			
Chet	77	62.8	14.2	53	--	60	63	68
WB9623	77	58.2	14.5	37	--			
Glee	75	59.9	13.5	37	--	57	58	68
Net CL+	75	62.2	14.0	39	--	59	60	68
Kelse	70	59.3	14.7	38	--	53	53	59
Alum	70	59.8	13.6	40	--	56	56	65
Jefferson	66	59.1	13.2	38	--			
Jefferson HF	63	58.8	13.3	38	--			
CP3530	54	58.3	13.7	43	--			
<i>Experimental Lines</i>								
WA8355	85	62.2	13.5	38	--	64		
WA8358 CL+	83	62.0	14.3	38	--			
WA8389 CL+	83	61.1	14.2	38	--			
CPX39120	79	57.4	14.6	44	--			
WA8357	79	64.3	14.8	42	--	58		
WA8330	78	60.2	13.9	34	--	59	60	
WA8387 CL+	78	61.4	13.4	37	--			
WA8388 CL+	73	59.8	14.2	34	--			
WA8356	71	59.7	14.2	34	--	56		
C.V.	5	0.9	1.8	3	--	8	9	9
LSD	7	1.3	0.6	2	--	6	5	4
Average	77	60.5	14.0	39	--	59	60	66
Highest	89	64.3	15.4	53	--	66	68	70
Lowest	54	57.4	13.0	32	--	53	53	59

Agronomic Information

Planting Date:	4/8/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	118
P ₂ O ₅ (lb/ac) 1-ft sample	216
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.7

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 1.

Trial Notes:

1. The nursery was located approximately 7 miles northwest of Palouse, WA.
2. The nursery was fertilized prior to seeding at a rate of 100N, 12P, 15S by the cooperator. An additional 202N was applied after spring soil sampling.
3. Overall yield was 93% greater and test weight was 3.8 lb/bu more than in 2021.

Cooperator: David Lange



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Plaza

Variety Name <i>Hard White Italicized</i>	2022					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>								
Alum	66	62.0	13.7	35	--	46	55	66
WB9623	65	61.0	13.9	34	--			
Chet	64	61.8	14.8	44	--	46	65	65
Net CL+	63	63.4	14.4	32	--	43	54	66
Kelse	63	62.4	14.2	35	--	43	50	62
Hale (WA8315)	61	62.8	14.2	33	--	44	62	
Glee	61	62.8	13.6	33	--	45	57	68
Jefferson	60	62.6	13.9	32	--			
CP3530	59	60.9	14.0	31	--			
Jefferson HF	56	62.2	13.9	34	--			
CP3055	56	58.6	13.1	35	--			
AP Renegade	55	62.1	15.3	28	--	39	54	67
CP3099A	48	59.2	12.3	30	--			
WB9303	46	63.3	15.9	29	--	26	45	
WB9668	42	61.7	16.2	27	--	29	49	58
<i>Experimental Lines</i>								
WA8389 CL+	64	62.9	14.0	33	--			
WA8330	63	62.6	14.2	31	--	47	59	
WA8357	62	64.0	15.3	37	--	42		
CPX39120	62	58.5	13.3	38	--			
WA8355	61	63.1	13.2	30	--	44		
WA8387 CL+	61	62.8	13.5	33	--			
WA8358 CL+	61	62.4	14.3	32	--			
WA8356	55	62.7	14.6	31	--	45		
WA8388 CL+	54	62.3	13.4	29	--			
C.V.	8	1.2	2.0	5	--	13	10	11
LSD	10	1.7	0.7	4	--	7	5	5
Average	59	62.0	14.1	33	--	42	54	65
Highest	66	64.0	16.2	44	--	47	62	68
Lowest	42	58.5	12.3	27	--	26	45	58

Agronomic Information

Planting Date:	4/1/2022
Harvest Date:	9/8/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	326
P ₂ O ₅ (lb/ac) 1-ft sample	283
S (lb/ac) 2-ft sample	47
pH (top 6 inches)	4.8

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 1.

Trial Notes:

1. The nursery was located approximately 4 miles northeast of Rosalia, WA.
2. The nursery was fertilized prior to seeding at a rate of 80N, 30P, 20S by the cooperator. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 136% greater and test weight was 1.0 lb/bu more than in 2021.

Cooperator: Joe Schmitz



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Pullman

Variety Name <i>Hard White Italicized</i>	2022					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>								
WB9303	93	62.9	14.2	36	--	62	75	
Hale (WA8315)	90	61.4	12.9	40	--	65	76	
WB9668	88	61.1	14.7	33	--	61	71	69
AP Renegade	83	61.3	13.8	34	--	59	70	73
CP3099A	81	58.6	12.5	42	--			
WB9623	80	57.8	14.2	38	--			
Glee	78	58.9	13.2	38	--	63	75	75
Net CL+	75	61.1	13.9	38	--	55	69	71
Jefferson HF	73	59.4	13.3	40	--			
Chet	72	61.4	14.0	48	--	56	69	69
Alum	70	58.4	14.0	39	--	56	68	70
CP3055	69	54.5	14.6	42	--			
Kelse	68	58.1	15.0	38	--	51	64	65
Jefferson	67	58.8	13.4	38	--			
CP3530	63	59.6	14.1	40	--			
<i>Experimental Lines</i>								
WA8358 CL+	87	61.8	13.9	39	--			
WA8355	83	61.1	13.1	38	--	60		
WA8387 CL+	81	61.6	12.9	36	--			
WA8330	80	59.7	14.0	36	--	61	74	
WA8388 CL+	79	60.0	13.4	36	--			
WA8389 CL+	77	60.5	14.1	38	--			
WA8356	76	58.6	14.2	37	--	58		
WA8357	73	62.0	14.3	46	--	56		
CPX39120	72	56.3	14.2	42	--			
C.V.	6	1.9	4.4	4	--	7	6	6
LSD	10	2.6	1.4	3	--	5	4	3
Average	77	59.8	13.8	39	--	59	71	70
Highest	93	62.9	15.0	48	--	65	76	75
Lowest	63	54.5	12.5	33	--	51	64	65

Agronomic Information

Planting Date:	4/25/2022
Harvest Date:	8/27/2022
Seeding Rate (seeds/ft ²):	22.5
Previous Crop:	Spring Barley
Spring soil test:	
N (lb/ac) 4-ft sample	190
P ₂ O ₅ (lb/ac) 1-ft sample	162
S (lb/ac) 2-ft sample	33
pH (top 6 inches)	5.5

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 3.

Tilt was applied on July 8.

Trial Notes:

- The nursery was located approximately 2.5 miles southeast of Pullman, WA.
- The nursery was fertilized prior to seeding at a rate of 105N, 15P, 20S, 20Cl by the cooperator. An additional 58N was applied after spring soil sampling.
- Overall yield was 108% greater and test weight was 0.2 lb/bu less than in 2021.

Cooperator: Frank Ankerson



2022 WSU Variety Testing Hard Red Spring Wheat Trial, St. John

Variety Name <i>Hard White Italicized</i>	2022					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>								
AP Renegade	67	60.2	14.6	28	176	42	52	62
Hale (WA8315)	63	60.5	12.8	34	178	45	53	
Jefferson HF	60	60.2	13.6	32	178			
WB9623	59	58.1	13.7	34	179			
Kelse	59	61.0	13.4	34	179	42	51	58
Glee	58	60.5	12.8	33	177	43	55	61
CP3099A	58	56.1	12.8	41	184			
Net CL+	57	60.8	13.5	33	180	42	52	60
Jefferson	56	60.2	13.9	33	178			
WB9668	56	61.3	15.1	28	176	38	48	54
Alum	53	59.2	13.2	34	179	41	47	60
Chet	53	60.8	13.8	46	180	37	45	55
CP3530	51	59.6	14.2	37	181			
WB9303	50	62.2	15.0	30	172	34	46	
CP3055	49	54.3	13.3	36	185			
<i>Experimental Lines</i>								
WA8355	61	61.5	12.6	34	178	44		
WA8330	60	60.1	13.5	31	176	43	53	
WA8358 CL+	60	61.1	12.9	32	178			
WA8388 CL+	57	59.2	13.7	30	178			
WA8387 CL+	56	61.5	13.1	33	178			
WA8389 CL+	55	60.5	13.7	33	179			
CPX39120	55	52.6	14.9	41	185			
WA8356	55	60.1	13.9	31	177	42		
WA8357	51	62.0	14.3	36	177	40		
C.V.	8	1.4	3.5	4	0	10	12	9
LSD	9	1.6	1.1	3	1	5	6	4
Average	57	59.7	13.7	34	179	41	50	58
Highest	67	62.2	15.1	46	185	45	55	62
Lowest	49	52.6	12.6	28	172	34	45	54

Agronomic Information

Planting Date:	4/7/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	380
P ₂ O ₅ (lb/ac) 1-ft sample	145
S (lb/ac) 2-ft sample	43
pH (top 6 inches)	5.5

Trial Notes:

1. The nursery was located approximately 3 miles southeast of St. John, WA.
2. The nursery was fertilized prior to seeding at a rate of 75N, 10P, 10K by the cooperator. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 128% greater and test weight was 0.9 lb/bu less than in 2021.

Cooperator: Rod Mills

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.



2022 WSU Variety Testing Hard Red Spring Wheat Trial, Walla Walla

Variety Name <i>Hard White Italicized</i>	2022					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>								
CP3055	95	59.6	12.4	41	174			
Alum	93	63.8	12.8	39	169	59	68	70
CP3099A	92	61.2	12.2	44	173			
WB9623	91	61.9	13.5	39	168			
Hale (WA8315)	90	62.9	13.4	40	167	58	67	
Glee	89	62.7	12.9	37	165	56	65	69
AP Renegade	88	61.8	14.9	30	166	54	65	71
Jefferson	86	62.5	13.9	38	167			
Net CL+	86	63.9	13.5	38	170	55	64	70
Kelse	84	62.5	13.8	38	167	54	61	67
Chet	84	63.4	14.2	51	169	54	62	66
Jefferson HF	82	62.6	13.8	38	167			
CP3530	81	62.4	12.8	41	171			
WB9668	80	63.1	14.9	30	166	51	57	60
WB9303	79	62.2	15.3	33	159	47	49	
<i>Experimental Lines</i>								
WA8330	98	63.3	13.1	36	165	62	65	
CPX39120	91	59.5	12.8	42	174			
WA8387 CL+	88	63.3	13.3	36	167			
WA8355	88	62.8	13.4	36	166	57		
WA8356	87	62.3	13.8	35	166	55		
WA8389 CL+	84	63.6	13.0	35	170			
WA8357	84	63.7	14.2	42	167	53		
WA8388 CL+	84	62.9	13.0	33	167			
WA8358 CL+	82	63.4	14.2	37	167			
C.V.	5	0.6	2.9	3	0	6	15	8
LSD	7	0.9	0.9	2	1	4	9	4
Average	87	62.6	13.6	38	168	55	62	67
Highest	98	63.9	15.3	51	174	62	68	71
Lowest	79	59.5	12.2	30	159	47	49	60

Agronomic Information

Planting Date:	3/29/2022
Harvest Date:	9/1/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	508
P ₂ O ₅ (lb/ac) 1-ft sample	154
S (lb/ac) 2-ft sample	42
pH (top 6 inches)	5.2

Herbicides: Axial Star (16.4oz), Talinor (13.7oz), and Slant (4oz) were applied by the cooperator.

Nexicor (13oz) was applied on June 9.

Trial Notes:

1. The nursery was located approximately 5 miles northeast of Walla Walla, WA.
2. The nursery was fertilized prior to seeding at a rate of 100N, 10P, 20S by the cooperator. No additional fertilizer was applied after spring soil sampling
3. Overall yield was 278% greater and test weight was 4.4 lb/bu more than in 2021.

Cooperator: Pat McConnel

**2022 WSU Variety Testing Fall Planted Hard Red Spring Wheat
Trial Summary- Irrigated**

Variety Name <i>(Hard White Italicized)</i>	Mattawa	Moses Lake	Average	Mattawa	Moses Lake	Average	Mattawa	Moses Lake	Average
	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
<i>Released Varieties</i>									
SY Gunsight	174	156	165	63.3	57.5	60.4	12.5	12.7	12.6
<i>Dayn</i>	152	166	159	64.9	60.7	62.8	13.9	13.4	13.7
AP Venom	153	155	154	63.2	57.3	60.3	14.0	13.2	13.6
WB4303 (HRW Check)	153	153	153	64.1	58.4	61.2	13.6	12.3	12.9
WB9662	142	135	139	64.2	59.8	62.0	15.3	13.8	14.5
AP Renegade	139	136	138	64.3	59.3	61.8	15.6	14.0	14.8
Kelse	124	143	133	63.7	60.3	62.0	15.6	14.6	15.1
Jefferson HF	140	115	127	64.5	60.5	62.5	13.9	13.3	13.6
WB9668	124	128	126	64.2	61.4	62.8	15.9	14.4	15.1
<i>Experimental Lines</i>									
WA8373	167	156	161	65.8	61.2	63.5	13.8	12.8	13.3
WA8372	144	142	143	65.5	61.7	63.6	14.9	13.4	14.2
WA8342	145	137	141	65.0	59.7	62.3	14.3	13.0	13.7
WA8376	152	128	140	65.3	59.2	62.2	14.2	13.5	13.9
WA8374	135	143	139	64.5	59.6	62.0	15.1	13.3	14.2
WA8359	139	129	134	64.3	58.5	61.4	13.9	13.1	13.5
WA8375	125	135	130	64.0	58.5	61.3	15.0	13.2	14.1
WA8356	119	138	128	63.9	59.6	61.7	14.5	13.6	14.0
IDO2105S	135	121	128	65.1	60.0	62.5	14.0	13.2	13.6
C.V. %	6	10	8	0.6	1.1	0.8	1.6	1.9	1.8
LSD (0.05)	18	32	13	0.8	1.4	0.6	0.5	0.6	0.3
Average	142	134	142	64.4	59.6	62.0	14.4	13.4	13.9
Highest	174	166	165	65.8	61.7	63.6	15.9	14.6	15.1
Lowest	119	115	126	63.2	57.3	60.3	12.5	12.3	12.6

*Some individual locations are analyzed using nearest neighbor analysis due to field variability.
Multi-location average analyzed as an RCBD leading to different calculated averages.



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

Precipitation Zone - Irrigated (Moses Lake, Mattawa, Pasco)

Variety Name <i>Hard White Italicized</i>	2 Years 2021-2022, 4 loc/yr			3 Years 2020-2022			5 Years 2018-2022		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
	144	60.7	13.0						
SY Gunsight	141	60.3	13.0						
WB4303 (HRW Check)	140	62.2	13.6						
<i>Dayn</i>	140	60.2	13.5						
AP Venom	131	62.0	14.4						
WA8342	129	61.8	13.7						
WB9662	126	61.9	14.4						
<i>Kelse</i>	122	61.7	14.6						
WB9668	114	62.3	15.0						
C.V. %	5	1.1	2.2						
LSD	5	0.5	0.3						
Average	132	61.5	13.9						
Highest	144	62.3	15.0						
Lowest	114	60.2	13.0						



2022 WSU Variety Testing Fall Planted Hard Red Spring Wheat Trial, Dayton

Variety Name <i>Hard White Italicized</i>	2022					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>								
WB4303 (HRW Check)	107	58.3	11.9	36	149			
SY Gunsight	106	58.7	11.9	33	144			
<i>Dayn</i>	92	60.7	12.7	33	145			
WB9662	87	61.3	13.6	29	146			
AP Venom	87	59.0	11.9	31	145			
Jefferson HF	87	61.7	12.7	36	145			
Kelse	86	61.7	13.3	38	147			
AP Renegade	85	61.0	14.2	30	149			
WB9668	71	61.3	14.9	31	149			
<i>Experimental Lines</i>								
WA8373	103	62.3	12.2	33	145			
WA8376	94	61.0	12.4	30	147			
WA8374	91	61.7	12.4	30	148			
WA8342	90	61.7	12.3	31	145			
WA8372	89	63.7	12.2	29	146			
IDO2105S	88	61.0	13.4	31	145			
WA8359	84	61.0	12.7	31	145			
WA8375	83	61.0	13.3	29	146			
WA8356	78	60.7	12.8	32	146			
C.V.	5	1.9	4.3	5	2			
LSD	7	2.6	1.3	4	NS			
Average	89	61.0	12.8	32	146			
Highest	107	63.7	14.9	38	149			
Lowest	71	58.3	11.9	29	144			

Agronomic Information

Planting Date:	10/21/2021
Harvest Date:	9/13/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Billy Beans
Spring soil test:	
N (lb/ac) 4-ft sample	94
P ₂ O ₅ (lb/ac) 1-ft sample	158
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	6.3

Trial Notes:

1. The nursery was located approximately 3 miles northeast of Dayton, WA.
2. The nursery was fertilized prior to seeding at a rate of 90N, 14S by the cooperator. An additional 101N was applied after spring soil sampling.
3. First year for trial at Dayton. Some winter freeze injury occurred which likely influenced yield ranking.

Cooperator: Justin Ingram

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.

Nexicor (13oz) was applied on July 1.



2022 WSU Variety Testing Fall Planted Hard Red Spring Wheat Trial, Mattawa

Variety Name <i>Hard White Italicized</i>	2022							2 Year	3 Year	5 Year
	Yield (Bu/A)	Test WT (Lbs/Bu)	Protein (%)	Plant HT (In)	Head Date	Lodge (%)	Cold Dam. Rating	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Released Varieties										
SY Gunsight	174	63.3	12.5	38	142	0	1	165		
WB4303 (HRW Check)	153	64.1	13.6	40	138	27	1	155		
AP Venom	153	63.2	14.0	39	135	0	3	158		
<i>Dayn</i>	152	64.9	13.9	39	134	0	4	153		
WB9662	142	64.2	15.3	38	137	0	3	141		
Jefferson HF	140	64.5	13.9	40	138	50	5			
AP Renegade	139	64.3	15.6	37	138	0	3	145		
WB9668	124	64.2	15.9	35	139	0	7	130		
Kelse	124	63.7	15.6	42	140	3	4	136		
Experimental Lines										
WA8373	167	65.8	13.8	41	135	0	2			
WA8376	152	65.3	14.2	35	135	0	3			
WA8342	145	65.0	14.3	37	137	0	4	146		
WA8372	144	65.5	14.9	35	136	0	4			
WA8359	139	64.3	13.9	38	139	0	6			
IDO2105S	135	65.1	14.0	37	139	0	6			
WA8374	135	64.5	15.1	35	137	7	4			
WA8375	125	64.0	15.0	34	139	0	7			
WA8356	119	63.9	14.5	39	140	0	7			
C.V. %	6	0.6	2	3	1	139	12	5		
LSD (0.05)	18	0.8	0.5	3	2	15	1	10		
Average	142	64.4	14.4	38	138	5	4	148		
Highest	174	65.8	15.9	42	142	50	7	165		
Lowest	119	63.2	12.5	34	134	0	1	130		

Agronomic Information

Planting Date:	10/12/2021
Harvest Date:	8/2/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	619
P (ppm-bicarb) 2-ft sample	309
S (lb/ac) 2-ft sample	254
pH (top 6 inches)	6.7

Trial Notes:

1. The nursery was located approximately 9 miles southeast of Mattawa, Wa.
2. The nursery was fertilized prior to seeding at a rate of 75N, 50P, 100K, and 40S by the cooperator. An additional 105N was applied via fertigation.
3. Overall yield was 5% less and test weight was 1.4 lb/bu more than 2021.
4. Cold damage ratings were taken on 02/14/22 following earlier cold snap. (1=no damage; 9=dead)

Cooperator: Mike Anderson

Herbicides: Weedar (1.5pt), Clarity (6.5oz), Tilt (4oz), Inplace (4oz) and Rainer-EA were applied by the cooperator on March 28.



2022 WSU Variety Testing Fall Planted Hard Red Spring Wheat Trial, Moses Lake

Variety Name <i>Hard White Italicized</i>	2022						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	Lodging (%)			
Released Varieties									
Dayn	166	60.7	13.4	41	144	0	149		
SY Gunsight	156	57.5	12.7	36	150	0	144		
AP Venom	155	57.3	13.2	40	145	0	145		
WB4303 (HRW Check)	153	58.4	12.3	39	148	0	145		
Kelse	143	60.3	14.6	45	149	17	130		
AP Renegade	136	59.3	14.0	37	146	0	141		
WB9662	135	59.8	13.8	37	145	0	130		
WB9668	128	61.4	14.4	35	145	0	116		
Jefferson HF	115	60.5	13.3	44	147	63			
Experimental Lines									
WA8373	156	61.2	12.8	42	145	0			
WA8374	143	59.6	13.3	36	144	0			
WA8372	142	61.7	13.4	40	144	0			
WA8356	138	59.6	13.6	39	144	47			
WA8342	137	59.7	13.0	37	145	0	129		
WA8375	135	58.5	13.2	36	144	0			
WA8359	129	58.5	13.1	38	146	0			
WA8376	128	59.2	13.5	35	145	0			
IDO2105S	121	60.0	13.2	37	143	30			
C.V.	10	1.1	1.9	3	1	171	8		
LSD	32	1.4	0.6	3	2	26	14		
Average	134	59.6	13.4	39	145	9	137		
Highest	166	61.7	14.6	45	150	63	149		
Lowest	115	57.3	12.3	35	143	0	116		

Agronomic Information

Planting Date:	10/21/2021
Harvest Date:	8/18/2022
Seeding Rate (seeds/ft ²):	23.75
Previous Crop:	Potatoes
Spring soil test:	
N (lb/ac) 4-ft sample	656
P ₂ O ₅ (lb/ac) 1-ft sample	192
S (lb/ac) 2-ft sample	202
pH (top 6 inches)	5.9

Herbicides: Huskie (15oz), Miravis Ace (7oz), and Tilt (2oz) were applied on May 1.

Trial Notes:

1. The nursery was located approximately 11.5 miles southeast of Moses Lake, Wa.
2. The nursery was fertilized prior to seeding by the cooperator. All topdressed N was applied via fertigation.
3. Overall yield was 4% greater and test weight was 0.9 lb/bu less than in 2021.

Cooperator: Dennis Treat

Hard Red Spring Wheat Variety Characteristics

Variety	Class ^a	Year Released	Plant Height	Maturity	Winter Survival Index ^b	Aluminum Tolerance ^c	Lodging Rating ^d	Hessian Fly Rating ^e	Stripe Rust Rating ^e	Falling Number Rating ^f	End Use Quality ^g
Alum	HRS	2015	Medium	Medium	--	T	6	R	R	3	MD
AP Renegade	HRS	2018	Short-Med.	Medium	3	MTS	3	R	R	2	D
AP Venom	HRS	2019	Medium	Medium	3	S	1	S	R	--	--
Buck Pronto	HRS	2001	Medium	Medium	6	S	3	S	S	--	A
Chet	HRS	2016	Tall	Medium	7	T	8	R	R	9	MD
CP3099A	HRS	--	Med.-Tall	Late	--	S	--	S	R	--	--
CP3530	HRS	--	Med.-Tall	Med.-Late	--	MTS	--	S	S	--	--
CP3055	HRS	--	Med.-Tall	Late	--	S	--	S	R	--	--
Dayn	HWS	2012	Medium	Medium	3	S	1	S	MR	--	D
Glee	HRS	2012	Medium	Medium	--	S	7	R	MR	7	MD
Hale	HRS	2021	Med.-Tall	Medium	--	S	--	R	R	--	MD
Jefferson	HRS	1998	Medium	Medium	--	S	--	R	S	--	MD
Jefferson HF	HRS	2020	Medium	Medium	--	S	5	MR	S	--	--
Kelse	HRS	2009	Med.-Tall	Medium	4	S	2	R	MS	3	D
Net CL+	HRS	2019	Medium	Med.-Late	8	S	6	R	MS	--	MD
SY Gunsight	HRS	2017	Short-Med.	Medium	1	S	1	S	R	3	MD
WB9303	HRS	2019	Short-Med.	Early	4	S	--	R	R	--	--
WB9623	HRS	2023	Medium	Medium	--	T	--	R	R	--	--
WB9662	HRS	2020	Short-Med.	Medium	3	T	1	S	R	8	LD
WB9668	HRS	2013	Short-Med.	Early-Med.	7	T	1	R	R	1	D

^a HRS= Hard Red Spring, HWS= Hard White Spring

^b Rankings from 1 to 9, 1 = highest survival, 9 = lowest survival.

^c T = Tolerant, TMT = Tolerant- Moderately Tolerant, MT = Moderately Tolerant, MTS = Moderately Tolerant-Susceptible, S = Susceptible

^d Rating from 1 to 9, 1 = least likely to lodge, 9 = most likely to lodge.

^e R = resistant, MR = moderately resistant, MS = moderately susceptible, and S = susceptible.

^f Rating reflects the degree of resistance and ranges from 1 to 9, where 1 = highly resistant and 9 = highly susceptible.

^g MD= Most Desirable, D= Desirable, A= Acceptable, LD= Least Desirable

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**2022 WSU Variety Testing Spring Barley Trial Summary
Precipitation Zone - >20"**

Variety Name <i>(Malt 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 (%)				
Released Varieties															
KWS Willis	4620	6890	7080	6170	6070	50.1	50.2	51.2	47.2	50.5	10.9	10.2	10.1	--	10.4
Claymore	4570	6590	6510	4910	6000	50.9	51.5	53.0	45.9	51.8	11.0	10.7	10.4	--	10.6
BC Lexy	4580	6780	6250	5970	5960	49.8	50.0	51.4	46.1	50.4	10.8	9.3	10.2	--	9.8
KWS Jessie	4610	6690	6470	6610	5950	50.9	51.3	50.8	48.3	51.0	10.8	9.4	10.4	--	10.3
KWS Amadora	4350	6330	6380	5970	5810	52.6	51.2	52.2	48.8	52.1	11.0	9.7	10.6	--	10.3
Altorado	4570	6630	6500	5420	5810	51.6	52.8	53.9	48.1	52.8	11.5	9.8	11.2	--	11.1
Oreana	4550	5920	6520	6030	5730	52.1	52.0	52.6	48.3	52.2	11.8	10.5	10.8	--	11.0
BC Ellinor	4190	6610	6130	5640	5710	49.9	48.6	50.5	44.8	49.7	12.0	9.7	10.8	--	10.8
BC Leandra	4260	6230	6450	5760	5680	49.6	49.6	51.0	45.0	50.1	11.7	10.0	10.6	--	10.9
Lyon	4520	6480	5930	5700	5640	51.7	51.9	52.9	49.9	52.1	11.6	10.3	10.8	--	10.8
LCS Opera	4260	6790	5720	5600	5540	49.7	50.3	51.3	42.4	50.3	11.3	9.9	9.6	--	10.4
LCS Odyssey	4060	6810	6180	5510	5540	52.0	50.5	51.7	44.8	51.4	11.9	10.0	10.9	--	10.8
Lenetah	4580	5720	6020	4780	5330	52.9	52.2	53.8	48.6	53.1	11.1	11.1	11.0	--	11.2
Palmer	4180	5910	5560	4620	5200	51.5	51.1	52.9	48.2	51.8	12.7	11.3	11.9	--	11.9
CDC Copeland	3950	6180	5730	3960	5200	50.7	51.2	52.1	43.7	51.4	11.7	10.0	10.8	--	10.8
Survivor	3890	5680	5830	4550	5160	51.9	52.9	53.1	49.3	52.6	12.4	10.7	12.3	--	11.7
ACC Synergy	3950	5920	5570	4830	5060	50.4	49.9	51.7	48.2	50.7	11.3	10.5	11.3	--	11.2
ACC Connect	3750	5440	5760	4580	4870	51.0	50.3	52.0	47.7	51.1	12.2	11.5	11.6	--	11.8
Experimental Lines															
HO516-579	4480	6610	6240	5450	5790	52.5	51.9	52.5	45.9	52.3	11.3	10.4	10.7	--	10.7
HO516-429	4780	6170	6000	5240	5700	51.9	52.2	53.2	46.1	52.5	11.5	10.2	11.4	--	11.0
14WAIM-3604.29	4140	6160	6200	5210	5580	50.2	51.4	52.2	47.3	51.3	11.8	10.2	10.6	--	10.8
14WAIF-3613.2	4530	5930	6150	4720	5570	51.9	51.9	53.6	47.4	52.4	11.9	10.7	11.5	--	11.6
14WAIM-3620.68	3420	5770	6310	4030	5230	51.0	52.5	53.7	46.5	52.3	12.7	10.3	11.0	--	11.6
C.V. %	6	6	5	12	8	1.9	1.1	0.8	2.9	1.3	4.3	4.6	3.1	--	5.0
LSD (0.05)	500	690	570	860	400	2.1	1.2	1.0	1.9	0.7	1.1	0.9	0.8	--	0.5
Average	4280	6250	6130	5270	5570	51.1	51.2	52.3	46.9	51.6	11.6	10.3	10.9	--	10.9
Highest	4780	6890	7080	6610	6070	52.9	52.9	53.9	49.9	53.1	12.7	11.5	12.3	--	11.9
Lowest	3420	5440	5510	3960	4870	49.6	48.6	50.5	42.4	49.7	10.8	9.3	9.6	--	9.8

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCBD leading to different calculated averages.



**2021 WSU Variety Testing Spring Barley Trial Summary
Precipitation Zone - 16-20"**

Variety Name <i>(Malt 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 (%)				
Released Varieties															
KWS Jessie	5370	5140	5370	6800	5750	48.5	49.5	52.6	51.5	50.6	11.1	10.4	11.0	11.3	10.9
KWS Willis	5390	5010	5140	7320	5670	48.8	49.2	52.4	51.9	50.7	11.6	10.6	10.8	11.4	11.0
Oreana	5380	4470	5700	6910	5620	50.3	50.7	53.7	52.8	52.0	11.7	11.0	11.3	11.6	11.2
BC Lexy	5190	4840	4840	6880	5460	46.4	49.1	48.4	52.3	48.9	11.6	10.2	11.3	11.5	11.3
KWS Amadora	4990	4600	4970	6960	5430	51.0	50.4	53.3	53.1	51.9	11.3	10.8	10.9	11.3	11.2
Claymore	4860	4040	5260	7150	5280	48.4	49.1	51.5	53.5	50.4	12.1	11.7	11.3	10.8	11.5
Altorado	4960	3780	5510	6740	5270	50.5	51.3	53.5	53.7	52.2	11.6	11.1	12.0	12.9	12.1
BC Leandra	4880	4270	4940	6140	5070	46.8	47.7	52.4	51.6	49.7	11.8	10.8	11.3	11.6	11.3
BC Ellinor	4190	3930	5260	6480	5060	44.0	46.8	49.6	51.3	48.0	11.3	11.1	10.9	12.0	11.3
LCS Opera	4510	4280	5010	6120	5030	46.2	47.8	49.8	52.0	48.9	11.1	10.3	11.1	10.7	10.7
Lyon	4680	3970	4970	6260	4960	50.0	51.4	53.3	52.7	51.8	12.1	11.8	11.2	12.5	11.8
LCS Odyssey	4040	3810	4880	6840	4890	46.2	47.2	51.2	52.3	49.2	12.2	11.3	11.6	12.1	11.9
Lenetah	4810	3640	5130	5930	4760	51.4	51.6	54.6	53.9	52.8	12.2	11.7	11.3	13.0	12.0
Palmer	4310	3250	4820	5660	4530	50.2	50.2	52.6	52.6	51.6	12.6	12.5	12.4	14.3	12.9
ACC Synergy	4040	3320	4450	5910	4440	50.5	50.4	52.7	52.7	51.6	12.3	11.6	11.7	12.0	12.1
CDC Copeland	3870	2760	4390	6180	4360	47.9	47.0	50.6	52.6	49.5	12.8	12.2	12.4	12.4	12.5
Survivor	3880	3300	4820	5460	4340	51.7	52.1	54.3	53.3	52.7	13.6	12.8	12.6	13.5	13.2
ACC Connect	4280	2890	3990	5790	4160	50.8	50.3	53.7	53.1	51.9	12.7	12.3	12.8	12.6	12.6
Experimental Lines															
HO516-579	4640	4270	5670	7040	5510	47.3	49.9	52.0	52.5	50.6	12.3	10.9	11.4	11.5	11.4
HO516-429	4910	4310	5360	6640	5220	48.8	50.1	52.1	53.5	51.1	12.2	11.6	12.0	11.1	11.7
14WAI-3613.2	4810	4160	4700	6230	5000	51.1	52.4	53.9	54.0	53.0	12.2	11.9	12.1	11.8	11.9
14WAIM-3604.29	4700	3790	4740	5860	4690	50.2	50.6	52.6	52.7	51.5	12.0	11.4	11.5	12.2	11.9
14WAIM-3620.68	4120	2850	4320	6260	4310	50.5	49.6	53.1	53.8	51.7	12.4	12.8	12.1	12.0	12.2
C.V. %	8	6	10	2	8	1.7	2.1	1.9	0.9	1.9	4.2	3.7	3.0	4.2	6.3
LSD (0.05)	690	440	1090	240	330	1.8	2.3	2.2	0.8	0.8	1.0	1.0	0.7	0.9	0.6
Average	4620	3900	4910	6410	4960	49.0	49.6	52.3	52.7	50.9	12.1	11.5	11.7	12.0	11.8
Highest	5390	5140	5700	7320	5750	51.7	52.4	54.6	54.0	53.0	13.6	13.1	13.1	14.3	13.2
Lowest	3870	2760	3510	5460	4160	44.0	46.8	48.4	51.3	48.0	11.1	10.2	10.8	10.7	10.7

*Some individual locations are analyzed using nearest neighbor analysis due to field variability. Multi-location average analyzed as an RCB leading to different calculated averages.



**WSU Variety Testing Spring Barley Trial Multi-Year Summary
Precipitation Zone - >20" (Fairfield, Farmington, Palouse, Pullman)**

Variety Name <i>Malt Italicized</i>	2 Years 2021-2022, 7 loc/yr			3 Years 2020-2022, 9 loc/yr			5 Years 2018-2022, 17 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
KWS Jessie	4440	49.8	12.1	4680	50.3	11.3			
Oreana	4240	50.9	12.6	4540	51.4	11.7	4820	51.3	10.9
KWS Amadora	4230	49.8	11.9	4410	50.4	11.0			
BC Ellinor	4210	48.4	12.2						
HO516-579	4210	50.2	12.6	4520	51.0	11.8			
BC Leandra	4200	48.2	12.1						
Claymore	4180	49.5	12.2	4370	50.2	11.4	4700	50.7	10.7
Altorado	4140	50.6	12.9	4310	51.2	11.9	4890	51.5	11.1
LCS Opera	4120	48.7	12.1	4320	49.3	11.2	4940	50.0	10.4
LCS Odyssey	4100	49.1	12.2	4350	49.8	11.3	4820	50.2	10.7
Survivor	3870	50.8	12.9	3760	51.2	12.3	4310	51.8	11.5
Lenetah	3800	50.9	12.6	4100	51.6	11.8	4610	52.1	10.8
Palmer	3710	49.7	13.6	3760	50.0	12.7	4370	51.3	11.7
C.V.%	11	1.7	4.1	10	1.6	4.1	13	1.9	4.6
LSD	270	0.5	0.3	240	0.4	0.3	230	0.4	0.2
Average	4110	49.7	12.4	4280	50.6	11.7	4680	51.1	11.0
Highest	4440	50.9	13.6	4680	51.6	12.7	4940	52.1	11.7
Lowest	3710	48.2	11.9	3760	49.3	11.0	4310	50.0	10.4



**WSU Variety Testing Spring Barley Trial Multi-Year Summary
Precipitation Zone - 16-20" (Dayton, Mayview, St. John, Walla Walla)**

Variety Name <i>Malt Italicized</i>	2 Years 2021-2022, 5 loc/yr			3 Years 2020-2022, 9 loc/yr			5 Years 2018-2022, 15 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
KWS Jessie	4370	50.3	11.9	4740	50.9	11.4			
KWS Amadora	4250	51.4	11.9	4560	52.0	11.5			
Oreana	4200	51.3	12.4	4540	51.8	11.8	4700	52.6	11.4
HO516-579	4110	50.2	12.5	4640	51.2	12.0			
Altorado	4040	51.1	12.7	4410	51.9	12.0	4610	52.2	11.7
Claymore	3980	49.7	12.5	4390	51.0	11.7	4660	51.8	11.4
LCS Opera	3900	49.0	11.7	4320	50.0	11.2	4790	51.4	10.8
BC Leandra	3790	49.4	12.3						
LCS Odyssey	3720	49.0	12.6	4300	50.4	12.0	4540	51.3	11.6
Palmer	3570	50.4	13.4	3980	51.0	13.1	4300	52.3	12.5
Lenetah	3530	51.3	12.9	4060	52.5	12.1	4440	53.3	11.5
Survivor	3360	51.4	13.7	3650	52.3	13.1	3980	52.9	12.5
C.V.%	8	1.3	4.6	8	1.3	4.8	8	1.2	5.3
LSD	280	0.5	0.5	230	0.4	0.4	160	0.5	0.3
Average	3900	50.4	12.5	4330	51.4	12.0	4500	52.2	11.7
Highest	4370	51.4	13.7	4740	52.5	13.1	4790	53.3	12.5
Lowest	3360	49.0	11.7	3650	50.0	11.2	3980	51.3	10.8



**WSU Variety Testing Spring Barley Trial Multi-Year Summary
Precipitation Zone - 12-16" (Almira, Endicott, Lamont, Reardan)**

Variety Name <i>Malt Italicized</i>	2 Years 2021-2022, 4 loc/yr			3 Years 2020-2022, 8 loc/yr			5 Years 2018-2022, 14 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Oreana	2640	47.7	13.6	3330	48.8	12.8	3330	49.1	12.7
KWS Amadora	2630	47.1	12.6	3440	48.0	12.0			
HO516-579	2540	47.0	13.6	3340	48.5	12.7			
Lenetah	2470	47.1	13.5	3320	49.1	12.4	3300	49.8	12.2
KWS Jessie	2460	45.7	12.7	3330	47.3	12.0			
LCS Opera	2460	44.6	13.3	3170	46.2	12.3	3340	47.5	12.0
LCS Odyssey	2450	45.8	13.3	3280	46.8	12.5	3260	47.7	12.4
Survivor	2430	47.0	14.1	3060	49.0	13.2	3090	49.8	13.0
Altorado	2420	46.5	13.4	3260	47.5	12.7	3300	48.0	12.5
Claymore	2350	45.8	13.9	3130	47.5	12.9	3140	48.1	12.6
BC Leandra	2330	43.7	13.3						
Palmer	2310	45.8	14.6	3020	47.0	13.9	3050	48.3	13.3
C.V.%	11	2.2	4.4	9	2.3	5.4	10	2.4	5.3
LSD	160	0.7	0.4	150	0.8	0.4	140	0.7	0.3
Average	2460	46.2	13.5	3240	47.8	12.7	3230	48.6	12.6
Highest	2640	47.7	14.6	3440	49.1	13.9	3340	49.8	13.3
Lowest	2310	43.7	12.6	3020	46.2	12.0	3050	47.5	12.0



2022 WSU Variety Testing Spring Barley Trial, Dayton

Variety Name <i>Malt Italicized</i>	2022						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Released Varieties									
<i>KWS Willis</i>	5390	48.8	11.6	93.8	32	185			
<i>Oreana</i>	5380	50.3	11.7	85.4	29	185	5143	4905	4178
<i>KWS Jessie</i>	5370	48.5	11.1	91.6	28	184	5320		
<i>BC Lexy</i>	5190	46.4	11.6	94.1	31	186			
<i>KWS Amadora</i>	4990	51.0	11.3	92.8	30	185	4842		
<i>Altorado</i>	4960	50.5	11.6	80.3	31	183	4837	4759	4193
<i>BC Leandra</i>	4880	46.8	11.8	89.0	30	185			
<i>Claymore</i>	4860	48.4	12.1	79.6	36	186	4629	4502	3985
<i>Lenetah</i>	4810	51.4	12.2	90.8	34	185	4939	4894	4347
<i>Lyon</i>	4680	50.0	12.1	90.1	32	183			
<i>LCS Opera</i>	4510	46.2	11.1	87.3	27	186	4805	4746	4642
<i>Palmer</i>	4310	50.2	12.6	90.1	36	184	4223	4195	3802
<i>ACC Connect</i>	4280	50.8	12.7	92.1	35	186			
<i>BC Ellinor</i>	4190	44.0	11.3	88.4	32	187			
<i>LCS Odyssey</i>	4040	46.2	12.2	90.1	30	187	4387	4349	3857
<i>ACC Synergy</i>	4040	50.5	12.3	91.9	38	185			
<i>Survivor</i>	3880	51.7	13.6	93.0	34	183	3984	4081	3681
<i>CDC Copeland</i>	3870	47.9	12.8	85.7	39	187			
Experimental Lines									
HO516-429	4910	48.8	12.2	86.2	37	184			
14WAI-3613.2	4810	51.1	12.2	89.3	33	184			
14WAIM-3604.29	4700	50.2	12.0	90.5	32	184			
HO516-579	4640	47.3	12.3	63.2	26	186	5093		
14WAIM-3620.68	4120	50.5	12.4	86.3	40	187			
C.V.	8	1.7	4.2	3.8	5	0.4	9	9	9
LSD	690	1.8	1.0	7.4	4	2	482	396	259
Average	4620	49.0	12.1	87.7	33	185	4745	4554	4071
Highest	5390	51.7	13.6	94.1	41	189	5320	4905	4642
Lowest	3870	44.0	11.1	63.2	26	183	3984	4081	3681

Agronomic Information

Planting Date:	4/29/2022
Harvest Date:	9/15/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	94
P ₂ O ₅ (lb/ac) 1-ft sample	158
S (lb/ac) 2-ft sample	19
pH (top 6 inches)	6.3

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.

Nexicor (13oz) was applied on July 1.

Trial Notes:

- The nursery was located approximately 3 miles northeast of Dayton, WA.
- The nursery was fertilized prior to seeding at a rate of 90N, 14S by the cooperator. An additional 58N was applied after spring soil sampling.
- Overall yield was the same and test weight was 3.3 lb/bu less than in 2020. 2021 data not published.

Cooperator: Justin Ingram



2022 WSU Variety Testing Spring Barley Trial, Endicott

Variety Name <i>Malt Italicized</i>	2022						2 Year	3 Year	4 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Released Varieties									
Oreana	5420	52.4	9.4	91.8	29	169	3197	3987	3641
BC Ellinor	5280	49.9	9.7	94.5	29	171	2962		
KWS Willis	5190	51.0	9.4	95.3	28	169			
KWS Jessie	5170	50.1	9.1	93.8	27	169	3011	4103	
KWS Amadora	5060	52.0	9.8	90.5	27	167	3022	3805	
Altorado	5060	52.2	9.8	84.9	28	167	2970	3793	3674
LCS Odyssey	5020	51.4	9.0	93.6	28	169	2945	3916	3514
LCS Opera	4950	50.9	9.4	91.8	28	172	2856	3980	4125
Claymore	4820	51.9	9.3	90.0	32	168	2819	3652	3497
BC Leandra	4780	50.2	9.2	93.4	25	168	2882		
BC Lexy	4770	50.0	8.8	94.5	27	170			
Palmer	4590	51.7	10.3	93.3	33	167	2697	3644	3593
Lyon	4540	51.1	10.6	88.1	30	166			
Lenetah	4540	52.6	8.9	92.7	30	168	2629	3641	3467
Survivor	4540	52.1	9.8	89.9	30	167	2745	3411	3306
ACC Synergy	4440	50.5	9.6	95.6	36	168			
CDC Copeland	4130	50.6	9.4	93.9	38	171			
ACC Connect	3890	50.4	10.8	91.7	36	168			
Experimental Lines									
14WAI/F-3613.2	4650	53.0	10.1	91.3	32	167			
14WAIM-3604.29	4710	50.9	9.7	91.3	30	169			
14WAIM-3620.68	4060	52.4	9.0	91.4	36	173			
HO516-429	4930	52.3	9.0	93.6	30	168			
HO516-579	4890	52.1	9.2	76.4	28	170	2896	3983	
C.V.	8	1.1	5.1	2.3	5	1	9	9	12
LSD	730	1.2	1.0	4.6	3	3	NS	321	309
Average	4740	51.3	9.6	91.6	30	169	2894	3810	3589
Highest	5420	53.0	10.8	95.6	38	173	3197	4103	4125
Lowest	3890	49.9	8.8	76.4	25	166	2629	3411	3306

Agronomic Information

Planting Date:	3/29/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	15
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	135
P ₂ O ₅ (lb/ac) 1-ft sample	191
S (lb/ac) 2-ft sample	43
pH (top 6 inches)	6.3

Trial Notes:

- The nursery was located approximately 3.5 miles southwest of Endicott, WA.
- The nursery was fertilized at seeding at a rate of 19N, 5P, 12K, 12S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 445% greater test weight was 6.6 lb/bu more than in 2021.

Cooperator: Monty Miller

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.



2022 WSU Variety Testing Spring Barley Trial, Fairfield

Variety Name <i>Malt Italicized</i>	2022						2 Year Average (Bu/A)	3 Year Average (Bu/A)	5 Year Average (Bu/A)
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date			
Released Varieties									
KWS Willis	4620	50.1	10.9	96.3	27.9	187			
KWS Jessie	4610	50.9	10.8	96.0	25.8	186	3134	4254	
BC Lexy	4580	49.8	10.8	95.7	28.2	188			
Lenetah	4580	52.9	11.1	94.3	29.5	187	2957	3730	3937
Claymore	4570	50.9	11.0	93.3	33.4	188	3321	3961	3790
Altorado	4570	51.6	11.5	90.0	28.1	187	3176	3918	4238
Oreana	4550	52.1	11.8	93.3	26.4	187	3272	4200	4258
Lyon	4520	51.7	11.6	94.7	28.4	186			
KWS Amadora	4350	52.6	11.0	95.0	23.7	187	3064	3950	
BC Leandra	4260	49.6	11.7	97.3	25.7	189	2984		
LCS Opera	4260	49.7	11.3	95.0	28.7	190	3162	3869	4248
BC Ellinor	4190	49.9	12.0	92.7	28.5	188	3141		
Palmer	4180	51.5	12.7	95.3	33.5	187	2910	3219	3583
LCS Odyssey	4060	52.0	11.9	94.7	27.3	188	2990	3744	3928
ACC Synergy	3950	50.4	11.3	95.3	30.3	187			
CDC Copeland	3950	50.7	11.7	95.3	33.3	188			
Survivor	3890	51.9	12.4	93.3	28.4	188	2932	2987	3270
ACC Connect	3750	51.0	12.2	92.0	33.2	186			
Experimental Lines									
HO516-429	4780	51.9	11.5	93.7	32.1	188			
14WAI-3613.2	4530	51.9	11.9	94.0	29.2	186			
HO516-579	4480	52.5	11.3	87.3	26.2	188	3395	4329	
14WAIM-3604.29	4140	50.2	11.8	93.7	29.0	188			
14WAIM-3620.68	3420	51.0	12.7	94.0	31.9	190			
C.V.	6	1.9	4.3	1.6	4.7	1	9	8	13
LSD	500	2.1	1.1	3.3	2.7	3	NS	288	362
Average	4280	51.1	11.6	94.0	29.4	188	3110	3833	3906
Highest	4780	52.9	12.7	97.3	36.0	190	3395	4329	4258
Lowest	3420	49.6	10.8	87.3	23.7	186	2910	2987	

Agronomic Information

Planting Date:	4/25/2022
Harvest Date:	9/8/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Spring Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	209
P ₂ O ₅ (lb/ac) 1-ft sample	108
S (lb/ac) 2-ft sample	30
pH (top 6 inches)	4.9

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on June 7.

Nexicor (13oz) was applied on June 30.

Trial Notes:

1. The nursery was located approximately 5.5 miles east of Fairfield, WA.
2. The nursery was fertilized at seeding at a rate of 24N, 6P, 15K, 15S. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 130% greater test weight was 1.4 lb/bu more than in 2021.

Cooperator: David Degon



2022 WSU Variety Testing Spring Barley Trial, Farmington

Variety Name <i>Malt Italicized</i>	2022						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Released Varieties									
KWS Willis	6890	50.2	10.2	97.3	26	--			
LCS Odyssey	6810	50.5	10.0	97.0	28	--	4449	4694	5074
LCS Opera	6790	50.3	9.9	95.7	27	--	4455	4539	4984
BC Lexy	6780	50.0	9.3	96.0	28	--			
KWS Jessie	6690	51.3	9.4	97.3	26	--	4685	4635	
Altorado	6630	52.8	9.8	94.0	31	--	4462	4446	5012
BC Ellinor	6610	48.6	9.7	95.0	29	--	4635		
Claymore	6590	51.5	10.7	95.0	35	--	4718	4746	5028
Lyon	6480	51.9	10.3	95.0	31	--			
KWS Amadora	6330	51.2	9.7	95.3	26	--	4468	4419	
BC Leandra	6230	49.6	10.0	96.7	28	--	4555		
CDC Copeland	6180	51.2	10.0	95.7	36	--			
ACC Synergy	5920	49.9	10.5	95.3	32	--			
Oreana	5920	52.0	10.5	96.3	28	--	4376	4626	4972
Palmer	5910	51.1	11.3	95.0	36	--	4024	4027	4440
Lenetah	5720	52.2	11.1	93.3	33	--	4065	4385	4894
Survivor	5680	52.9	10.7	96.0	32	--	4199	4016	4484
ACC Connect	5440	50.3	11.5	92.3	34	--			
Experimental Lines									
HO516-579	6610	51.9	10.4	93.0	25	--	4664	4777	
HO516-429	6170	52.2	10.2	94.7	36	--			
14WAIM-3604.29	6160	51.4	10.2	95.3	31	--			
14WAIF-3613.2	5930	51.9	10.7	94.7	32	--			
14WAIM-3620.68	5770	52.5	10.3	95.7	35	--			
C.V.	6	1.1	4.6	1.1	5	--	10	10	10
LSD	690	1.2	0.9	2.3	4	--	NS	434	340
Average	6250	51.2	10.3	95.3	31	--	4443	4483	4861
Highest	6890	52.9	11.5	97.3	38	--	4718	4777	5074
Lowest	5440	48.6	9.3	92.3	25	--	4024	4016	4440

Agronomic Information

Planting Date:	4/22/2022
Harvest Date:	9/12/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	165
P ₂ O ₅ (lb/ac) 1-ft sample	183
S (lb/ac) 2-ft sample	34
pH (top 6 inches)	5.1

Herbicides: Anthem Flex (3.5oz) was applied on May 1.

Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Trial Notes:

- The nursery was located approximately 4 miles south of Farmington, WA.
- The nursery was fertilized at seeding at a rate of 32N, 8P, 20K, 20S. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 141% greater test weight was 2.6 lb/bu more than in 2021.

Cooperator: Andrew Nelson



2022 WSU Variety Testing Spring Barley Trial, Mayview

Variety Name <i>Malt Italicized</i>	2022						2 Year	3 Year	5 Year
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date	Average (Bu/A)	Average (Bu/A)	Average (Bu/A)
Released Varieties									
KWS Jessie	5140	49.5	10.4	90.1	24	189	3662	4009	
KWS Willis	5010	49.2	10.6	90.5	28	188			
BC Lexy	4840	49.1	10.2	89.4	27	189			
KWS Amadora	4600	50.4	10.8	85.5	27	188	3433	3786	
Oreana	4470	50.7	11.0	75.8	26	188	2969	3340	3981
LCS Opera	4280	47.8	10.3	82.2	26	190	3090	3426	4259
BC Leandra	4270	47.7	10.8	86.6	26	190	2885		
Claymore	4040	49.1	11.7	75.0	37	187	2882	3344	3959
Lyon	3970	51.4	11.8	80.9	32	187			
BC Ellinor	3930	46.8	11.1	87.5	30	190	2889		
LCS Odyssey	3810	47.2	11.3	84.9	27	191	2814	3414	4074
Altorado	3780	51.3	11.1	71.7	30	187	2806	3381	4016
Lenetah	3640	51.6	11.7	85.6	33	188	2435	2970	3740
ACC Synergy	3320	50.4	11.6	88.8	35	187			
Survivor	3300	52.1	12.8	84.9	34	187	2475	2719	3312
Palmer	3250	50.2	12.5	82.7	36	187	2652	3032	3774
ACC Connect	2890	50.3	12.3	81.8	35	188			
CDC Copeland	2760	47.0	12.2	74.8	35	191			
Experimental Lines									
HO516-429	4310	50.1	11.6	83.8	36	187			
HO516-579	4270	49.9	10.9	57.8	25	189	2984	3541	
14WAI-3613.2	4160	52.4	11.9	85.1	34	187			
14WAIM-3604.29	3790	50.6	11.4	84.5	31	186			
14WAIM-3620.68	2850	49.6	12.8	75.4	38	190			
C.V.	6	2.1	3.7	6.0	4	0	11	10	10
LSD	440	2.3	1.0	10.9	3	1	388	316	297
Average	3900	49.6	11.5	81.6	31	189	2921	3360	3889
Highest	5140	52.4	13.1	90.5	39	192	3662	4009	4259
Lowest	2760	46.8	10.2	57.8	24	186	2435	2719	3312

Agronomic Information

Planting Date:	4/28/2022
Harvest Date:	9/3/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	181
P ₂ O ₅ (lb/ac) 1-ft sample	191
S (lb/ac) 2-ft sample	35
pH (top 6 inches)	4.8

Trial Notes:

- The nursery was located approximately 13 miles northeast of Pomeroy, WA.
- The nursery was fertilized prior to seeding at a rate of 70N, 10S by the cooperator. No additional fertilizer was applied after spring soil sampling.
- Overall yield was 124% greater and test weight was 1.1 lb/bu more than in 2021.

Cooperator: Randy & Wyatt Koller

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 23.



2022 WSU Variety Testing Spring Barley Trial, Palouse

Variety Name <i>Malt Italicized</i>	2022						2 Year Average (Bu/A)	3 Year Average (Bu/A)	5 Year Average (Bu/A)
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date			
Released Varieties									
KWS Willis	7080	51.2	10.1	97.4	27	--			
Oreana	6520	52.6	10.8	96.1	30	--	6545	6450	6311
Claymore	6510	53.0	10.4	97.2	37	--	6110	6425	6115
Altorado	6500	53.9	11.2	95.3	33	--	6641	6609	6206
KWS Jessie	6470	50.8	10.4	96.3	27	--			
BC Leandra	6450	51.0	10.6	97.5	28	--			
KWS Amadora	6380	52.2	10.6	96.6	26	--			
BC Lexy	6250	51.4	10.2	97.3	26	--			
LCS Odyssey	6180	51.7	10.9	97.4	28	--	6508	6642	6059
BC Ellinor	6130	50.5	10.8	96.8	28	--			
Lenetah	6020	53.8	11.0	95.6	35	--	6202	6565	6236
Lyon	5930	52.9	10.8	95.7	33	--			
Survivor	5830	53.1	12.3	95.9	34	--	6114	5961	5626
ACC Connect	5760	52.0	11.6	96.5	37	--			
CDC Copeland	5730	52.1	10.8	96.1	39	--			
LCS Opera	5720	51.3	9.6	96.1	31	--	6677	6706	
ACC Synergy	5570	51.7	11.3	97.0	35	--			
Palmer	5560	52.9	11.9	97.2	36	--	6211	6420	6152
Experimental Lines									
14WAIM-3620.68	6310	53.7	11.0	96.7	36	--			
HO516-579	6240	52.5	10.7	93.9	25	--			
14WAIM-3604.29	6200	52.2	10.6	95.9	31	--			
14WAIF-3613.2	6150	53.6	11.5	95.5	34	--			
HO516-429	6000	53.2	11.4	97.9	38	--			
C.V.	5	0.8	3.1	0.9	4	--	8	10	11
LSD	570	1.0	0.8	1.8	2	--	NS	NS	NS
Average	6130	52.3	10.9	96.4	32	--	6376	6472	6101
Highest	7080	53.9	12.3	97.9	39	--	6677	6706	6311
Lowest	5510	50.5	9.6	93.9	25	--	6110	5961	5626

Agronomic Information

Planting Date:	4/8/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	118
P ₂ O ₅ (lb/ac) 1-ft sample	216
S (lb/ac) 2-ft sample	26
pH (top 6 inches)	5.7

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 1.

Trial Notes:

1. The nursery was located approximately 7 miles northwest of Palouse, WA.
2. The nursery was fertilized prior to seeding at a rate of 100N, 12P, 15S by the cooperator. An additional 116N was applied after spring soil sampling.
3. Overall yield was the same and test weight was 2.8 lb/bu less than in 2019 (last year with data).

Cooperator: David Lange



2022 WSU Variety Testing Spring Barley Trial, Pullman

Variety Name <i>Malt Italicized</i>	2022						2 Year Average (Bu/A)	3 Year Average (Bu/A)	5 Year Average (Bu/A)
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date			
Released Varieties									
KWS Jessie	6610	48.3	--	95.7	25	184	4480		
KWS Willis	6170	47.2	--	95.7	30	180			
Oreana	6030	48.3	--	79.0	29	180	3940	4450	4500
BC Lexy	5970	46.1	--	97.5	28	184			
KWS Amadora	5970	48.8	--	91.3	27	185	4080		
BC Leandra	5760	45.0	--	89.3	28	184	3950		
Lyon	5700	49.9	--	89.0	34	175			
BC Ellinor	5640	44.8	--	94.3	31	182	3910		
LCS Opera	5600	42.4	--	85.7	30	178	3950	4500	
LCS Odyssey	5510	44.8	--	93.0	29	177	3810	4320	4340
Altorado	5420	48.1	--	82.3	31	178	3620	4310	4790
Claymore	4910	45.9	--	73.0	35	181	3340	4140	4300
ACC Synergy	4830	48.2	--	91.3	36	175			
Lenetah	4780	48.6	--	85.7	34	180	3280	4000	4330
Palmer	4620	48.2	--	92.7	37	180	3290	3840	4270
ACC Connect	4580	47.7	--	87.7	35	177			
Survivor	4550	49.3	--	89.3	30	180	3480	4590	4500
CDC Copeland	3960	43.7	--	81.0	33	185			
Experimental Lines									
HO516-579	5450	45.9	--	58.3	29	180	3540		
HO516-429	5240	46.1	--	79.7	37	180			
14WAIM-3604.29	5210	47.3	--	88.3	33	175			
14WAIF-3613.2	4720	47.4	--	80.0	34	175			
14WAIM-3620.68	4030	46.5	--	78.0	35	174			
C.V.	12	2.9	--	5.4	8	0	15	12	19
LSD	860	1.9	--	6.4	3	1	640	430	NS
Average	5270	46.9	--	86.0	32	179	3760	4270	4430
Highest	6610	49.9	--	97.5	37	185	4480	4590	4790
Lowest	3960	42.4	--	58.3	25	174	3280	3840	4270

Agronomic Information

Planting Date:	4/25/2022
Harvest Date:	N/A
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Spring Barley
Spring soil test:	
N (lb/ac) 4-ft sample	190
P ₂ O ₅ (lb/ac) 1-ft sample	162
S (lb/ac) 2-ft sample	33
pH (top 6 inches)	5.5

Herbicides: Huskie, Dagger, Axial Bold, and Tilt were applied on June 3.

Tilt was applied on July 8.

Trial Notes:

1. The nursery was located approximately 2.5 miles southeast of Pullman, WA.
2. This nursery was maintained by the WSU Barley Breeding Program.
3. Overall yield was 161% greater and test weight was 0.7 lb/bu less than in 2021.

Cooperator: Frank Anderson



2022 WSU Variety Testing Spring Barley Trial, St. John

Variety Name <i>Malt Italicized</i>	2022						2 Year Average (Bu/A)	3 Year Average (Bu/A)	5 Year Average (Bu/A)
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date			
Released Varieties									
Oreana	5700	53.7	11.3	89.0	28	179	3446	4373	5488
Altorado	5510	53.5	12.0	78.2	32	178	3433	4090	5114
KWS Jessie	5370	52.6	11.0	87.9	25	179	3334	4052	
BC Ellinor	5260	49.6	10.9	87.2	28	181	3238		
Claymore	5260	51.5	11.3	86.3	33	179	3111	4153	5338
KWS Willis	5140	52.4	10.8	90.6	26	180			
Lenetah	5130	54.6	11.3	90.4	32	179	2854	3759	
LCS Opera	5010	49.8	11.1	84.9	28	182	3252	4167	5220
Lyon	4970	53.3	11.2	87.6	31	178			
KWS Amadora	4970	53.3	10.9	91.3	28	179	3400	4006	
BC Leandra	4940	52.4	11.3	91.6	27	180	3517		
LCS Odyssey	4880	51.2	11.6	90.3	29	181	2929	3942	5121
BC Lexy	4840	48.4	11.3	84.8	27	181			
Palmer	4820	52.6	12.4	89.6	35	179	3041	3663	4676
Survivor	4820	54.3	12.6	96.2	34	178	2915	3396	4418
ACC Synergy	4450	52.7	11.7	93.0	37	180			
CDC Copeland	4390	50.6	12.4	83.0	38	182			
ACC Connect	3990	53.7	12.8	86.7	36	180			
Experimental Lines									
HO516-579	5670	52.0	11.4	72.6	26	180	3336	4299	
HO516-429	5360	52.1	12.0	89.3	36	179			
14WAIM-3604.29	4740	52.6	11.5	91.2	31	179			
14WAIF-3613.2	4700	53.9	12.1	88.1	31	178			
14WAIM-3620.68	4320	53.1	12.1	90.1	37	182			
C.V.	10	1.9	3.0	4.6	5	0	12	12	9
LSD	1090	2.2	0.7	9.1	3	2	NS	435	341
Average	4910	52.3	11.7	87.7	31	180	3212	3989	5053
Highest	5700	54.6	13.1	96.2	38	183	3517	4373	5488
Lowest	3510	48.4	10.8	72.6	25	178	2854	3396	4418

Agronomic Information

Planting Date:	4/7/2022
Harvest Date:	9/5/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	380
P ₂ O ₅ (lb/ac) 1-ft sample	145
S (lb/ac) 2-ft sample	43
pH (top 6 inches)	5.5

Herbicides: Axial (16.4oz), Huskie (15oz), Miravis Ace (7oz), Tilt (2oz), and Zidua (4oz) were applied on May 20.

Nexicor (13oz) was applied on June 27.

Trial Notes:

1. The nursery was located approximately 3 miles southeast of St. John, WA.
2. The nursery was fertilized prior to seeding at a rate of 75N, 10P, 10K by the cooperator. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 9% less and test weight was 2.3 lb/bu less than in 2020 (no data in 2021).

Cooperator: Rod Mills



2022 WSU Variety Testing Spring Barley Trial, Walla Walla

Variety Name <i>Malt Italicized</i>	2022							2 Year Average (Bu/A)	3 Year Average (Bu/A)	5 Year Average (Bu/A)
	Yield (Lbs/A)	Test WT (Lbs/Bu)	Protein (%)	Plump (%)	Plant HT (In)	Head Date	Lodging (%)			
Released Varieties										
KWS Willis	7320	51.9	11.4	97.0	31	168	13			
Claymore	7150	53.5	10.8	95.3	37	169	10	6072	5667	5921
KWS Amadora	6960	53.1	11.3	96.1	32	168	3	6288		
Oreana	6910	52.8	11.6	95.5	34	168	0	5973	5575	5760
BC Lexy	6880	52.3	11.5	96.6	31	169	0			
LCS Odyssey	6840	52.3	12.1	96.7	32	170	7	6124	5759	6070
KWS Jessie	6800	51.5	11.3	96.2	29	167	0	6307		
Altorado	6740	53.7	12.9	92.8	34	166	23	5999	5502	5756
BC Ellinor	6480	51.3	12.0	95.1	31	169	3			
Lyon	6260	52.7	12.5	93.0	32	166	23			
CDC Copeland	6180	52.6	12.4	93.9	43	170	33			
BC Leandra	6140	51.6	11.6	94.9	31	168	0			
LCS Opera	6120	52.0	10.7	95.5	30	170	0	5412	5322	
Lenatah	5930	53.9	13.0	93.1	35	166	30	5251	5044	5501
ACC Synergy	5910	52.7	12.0	95.5	38	167	10			
ACC Connect	5790	53.1	12.6	95.3	39	168	17			
Palmer	5660	52.6	14.3	93.3	37	166	33	5626	5322	5566
Survivor	5460	53.3	13.5	93.6	34	168	30	5084	4997	5234
Experimental Lines										
HO516-579	7040	52.5	11.5	89.0	31	169	3	6372		
HO516-429	6640	53.5	11.1	94.8	40	167	7			
14WAIM-3620.68	6260	53.8	12.0	95.1	43	172	23			
14WAIF-3613.2	6230	54.0	11.8	94.1	34	165	10			
14WAIM-3604.29	5860	52.7	12.2	92.1	33	167	30			
C.V.	2	0.9	4.2	1.6	4	0	108	9	10	9
LSD	240	0.8	0.9	3.3	2	1	26	644	536	369
Average	6410	52.7	12.0	94.5	35	168	14	5864	5398	5687
Highest	7320	54.0	14.3	97.0	43	172	33	6372	5759	6070
Lowest	5460	51.3	10.7	89.0	29	165	0	5084	4997	5234

Agronomic Information

Planting Date:	3/29/2022
Harvest Date:	9/1/2022
Seeding Rate (seeds/ft ²):	20
Previous Crop:	Winter Wheat
Spring soil test:	
N (lb/ac) 4-ft sample	508
P ₂ O ₅ (lb/ac) 1-ft sample	154
S (lb/ac) 2-ft sample	42
pH (top 6 inches)	5.2

Trial Notes:

1. The nursery was located approximately 5 miles northeast of Walla Walla, WA.
2. The nursery was fertilized prior to seeding at a rate of 100N, 10P, 20S by the cooperator. No additional fertilizer was applied after spring soil sampling.
3. Overall yield was 217% greater and test weight was 0.4 lb/bu more than in 2020 (No data in 2021).

Cooperator: Pat McConnel

Herbicides: Axial Star (16.4oz), Talinor (13.7oz), and Slant (4oz) were applied by the cooperator.

Nexicor (13oz) was applied on June 9.

Spring Barley Variety Characteristics

Variety	Row Type	Class	Year Released	Height Rating ^a	Maturity ^b	Lodging Rating ^c	Hessian Fly Rating ^d	Stripe Rust Rating ^d
ACC Connect	2	Malting	2016	MT	M	2	S	R
ACC Synergy	2	Malting	2015	MT	M	1	S	R
Altorado	2	Feed	2016	M	EM	3	R	MR
BC Elinor	2	Malting	--	SM	ML	1	R	MR
BC Leandra	2	Malting	--	SM	M	1	R	MS
BC Lexy	2	Malting	--	SM	M	1	S	R
CDC Copeland	2	Malting	1999	T	ML	4	S	R
Claymore	2	Feed	2015	MT	M	1	--	MS
KWS Amadora	2	Malting	2015	S	M	1	MR	R
KWS Jessie	2	Malting	2019	S	M	1	S	MS
KWS Willis	2	Malting	--	SM	M	2	S	MS
LCS Odyssey	2	Malting	2015	SM	M	1	S	R
LCS Opera	2	Malting	2021	SM	M	1	S	R
Lenetah	2	Feed	2008	MT	M	3	S	MR
Lyon	2	Feed	--	M	EM	3	--	MS
Oreana	2	Feed	2015	SM	M	1	MR	MS
Palmer	2	Malting	2019	T	M	4	S	MS
Survivor	2	Feed	2017	M	M	3	S	MR

^a S = short, SM = short medium, M = medium, MT = medium tall, T = tall.

^b E = early, EM = early medium, M = medium, ML = Medium Late, L = late.

^c Rating from 1 to 9, 1 = least likely to lodge, 9 = most likely to lodge.

^d R = resistant, MR = moderately resistant, MS = moderately susceptible, and S = susceptible.

Appendix 1: 2022 Winter Wheat Hessian Fly Raw Data

Entry	Class	REP 1		REP 2		REP 3		REP 4		No. of Plants	No. infested	% infested	Response
		N	I	N	I	N	I	N	I				
09PN118-02 CL2	SWW	3	3	5	5	5	5	4	4	17	17	100	S
ARS12097-12C	SWW	5	5	5	5	5	5	5	5	20	20	100	S
ARS13659-4C	SWW	4	4	5	5	5	5	5	5	19	19	100	S
ARS141114-64C	SWW	5	20	20	100	S							
ARS14DH1014-C	SWW	5	5	5	5	5	5	5	5	20	20	100	S
ARSX09500-17CBW	SWW	5	0	5	0	5	1	5	0	20	1	5	R
Brawl CL Plus	SWW	5	5	5	5	4	4	5	3	19	17	89.47	S
GHR10	HRW	5	5	5	5	5	5	4	4	19	19	100	S
GS2	SWW	5	5	5	5	5	5	5	5	20	20	100	S
GS3	SWW	5	5	5	5	5	5	4	4	19	19	100	S
Irv	HRW	5	5	5	5	5	5	4	4	19	19	100	S
LCS Helix AX	HRW	5	5	5	5	5	5	5	5	20	20	100	S
LWH18-0122	HRW	5	5	5	5	5	5	5	5	20	20	100	S
LWH19-0192	HRW	5	5	5	4	5	2	5	3	20	14	70	S
LWH19-1103	HRW	5	5	5	4	4	4	5	5	19	18	94.74	S
LWH19-5663	HRW	3	2	5	5	5	5	5	5	18	17	94.44	S
LWH19-5691	HRW	4	4	5	4	4	4	5	5	18	17	94.44	S
LWW17-5877	SWW	5	5	5	5	5	5	5	5	20	20	100	S
LWW17-8185	SWW	5	5	5	5	5	5	5	5	20	20	100	S
LWW19-1576	SWW	5	5	5	5	5	5	5	5	20	20	100	S
LWW19-2232	SWW	5	5	5	5	5	5	5	5	20	20	100	S
LWW19-5862	SWW	5	5	5	5	5	5	5	4	20	19	95	S
LWW19-6219	SWW	5	5	5	5	5	5	5	5	20	20	100	S
LWW19-6591	SWW	5	5	5	5	5	5	5	5	20	20	100	S
OR2160065H	HRW	5	1	5	0	5	1	5	2	20	4	20	MR
OR2170052H	HRW	5	5	5	5	5	5	5	5	20	20	100	S
OR2170199R	HRW	5	4	5	5	5	5	5	5	20	19	95	S
OR2170559	SWW	5	5	5	5	5	5	5	5	20	20	100	S
OR2180149	SWW	5	5	5	5	5	5	5	5	20	20	100	S
OR2180377	SWW	5	5	5	5	5	5	5	5	20	20	100	S
OR2190027 CL+	SWW	5	5	5	5	5	5	5	5	20	20	100	S
OR2190064R	HRW	5	1	5	2	5	1	5	0	20	4	20	MR
OR5180071	SWW	5	5	5	5	5	5	5	5	20	20	100	S
PN13001002-04	HRW	5	5	5	5	5	5	5	5	20	20	100	S
Snowmass 2.0	HRW	5	5	5	5	5	5	5	5	20	20	100	S
TMC2021SWW	SWW	5	5	5	5	5	5	5	5	20	20	100	S
UIL 14-085001A	SWW	5	5	5	4	5	5	5	5	20	19	95	S
UIL 15-423062A	SWW	5	5	5	5	5	5	5	5	20	20	100	S
UIL 16-478001	SWW	5	5	5	5	5	5	5	5	20	20	100	S
UIL 16-072025	SWW	5	5	5	4	5	5	5	5	20	19	95	S
WA8338	HRW	5	5	4	4	5	5	5	5	19	19	100	S
WA8340	HRW	5	5	5	5	5	5	5	5	20	20	100	S
WA8345 AX	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8346 AX	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8347 AX	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8348 AX	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8349 AX	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8362	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8363	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8364	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8365	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8366	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8367	HRW	5	5	5	5	5	5	5	5	20	20	100	S
WA8368	HRW	5	0	5	0	5	0	5	0	20	0	0	R
WA8369	HRW	5	5	5	5	5	5	5	5	20	20	100	S

		REP 1		REP 2		REP 3		REP 4					
Entry	Class	N	I	N	I	N	I	N	I	No. of Plants	No. infested	% infested	Response
WA8370	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WA8371	SWW	5	5	5	5	5	5	4	4	19	19	100	S
WB1621	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WB1720	SWW	5	5	5	5	5	5	5	5	20	20	100	S
WB4510CLP	HRW	5	5	5	5	5	5	5	5	20	20	100	S
YSC-1001	HRW	5	3	5	5	5	5	5	4	20	17	85	S
YSC-1002	HRW	5	5	5	5	5	5	5	5	20	20	100	S
YSC-217	SWW	5	5	5	5	5	5	5	5	20	20	100	S
Alturas (Susceptible Check)	SWS	15	15	15	15	15	15	15	15	60	60	100	S
Hollis (Resistant check)	HRS	15	0	15	0	15	0	15	0	60	0	0	R

N= Number of plants that had Hessian fly eggs on them 24hrs after plants were exposed to Hessian flies

I = number of plants that had Hessian fly larvae and/or puparia 21 days after plants were exposed to Hessian flies.

R = absence of larvae and/or puparia (0-15% infested)

MR= Moderately resistant; some larvae and/or puparia present (low susceptibility)

S = presence of larvae and/or puparia

Response= indicates the outcome of the screening

	R1 & R2	R3 &R4
Planting date	10/14/2021	11/14/2021
Infestation date	10/25/2021	11/25/2021
evaluation date	11/15/2021	12/16/2021

Appendix 2: Spring Wheat Hessian Fly Raw Data

Variety	Class	REP 1		REP 2		REP 3		REP 4		No. infested plants	% infested	Response
		N	I	N	I	N	I	N	I			
14WAIF-3613.2	BLY	4	1	5	1	5	0	5	0	19	2	10.52
14WAIM-3604.29	BLY	5	4	5	2	4	0	5	2	19	8	42.1
14WAIM-3620.68	BLY	4	4	5	3	5	1	5	3	19	11	57.89
ACC Connect	BLY	5	4	4	2	5	1	5	3	19	10	52.63
ACC Synergy	BLY	4	3	5	4	4	1	5	1	18	9	50
BC Lexy	BLY	5	5	5	5	4	4	5	5	19	19	100
CDC Copeland	BLY	5	5	5	5	5	3	5	5	20	18	90
HO516-429	BLY	3	3	5	5	3	0	4	2	15	10	66.67
KWS Willis	BLY	5	1	5	5	5	3	5	4	20	13	65
CP3055	HRS	5	5	5	5	5	5	5	5	20	20	100
CP3099A	HRS	5	5	5	5	5	5	5	5	20	20	100
CP3530	HRS	5	5	4	4	5	5	5	5	19	19	100
CPX39120	HRS	5	5	5	5	5	4	5	5	20	19	95
Jefferson	HRS	5	1	4	0	5	1	5	0	19	2	10.53
Jefferson HF	HRS	5	1	5	2	4	1	4	1	18	5	27.78
WA 8355	HRS	5	0	5	0	5	0	5	0	20	0	0
WA 8375	HRS	5	5	5	5	3	3	5	5	18	18	100
WA 8387 CL+	HRS	5	0	4	0	5	0	5	0	19	0	0
WA 8388 CL+	HRS	5	5	5	5	5	5	5	5	20	20	100
WA 8389 CL+	HRS	5	5	5	5	5	5	5	5	20	20	100
WB9623	HRS	5	0	5	0	5	0	5	0	20	0	0
WA 8372	HWS	5	4	5	5	5	5	5	5	20	19	95
WA 8373	HWS	5	4	4	2	5	5	5	5	19	16	84.21
WA 8374	HWS	5	5	4	4	4	4	5	5	18	18	100
WA 8376	HWS	5	4	5	5	5	5	4	3	19	17	89.47
WA 8379 CL+	SWS	5	0	5	0	5	1	5	0	20	1	5
WA 8380 CL+	SWS	5	0	3	0	5	0	5	0	18	0	0
WA 8381 CL+	SWS	5	0	5	0	5	1	5	0	20	1	5
Alturas		5	5	5	5	5	5	4	4	19	19	100
Hollis		5	0	5	0	3	0	5	0	18	0	0

N= Number of plants that had Hessian fly eggs on them 24hrs after plants were exposed to Hessian flies

I = number of plants that had Hessian fly larvae and/or puparia 21 days after plants were exposed to Hessian flies.

R = absence of larvae and/or puparia (0-15% infested)

MR= Moderately resistant; some larvae and/or puparia present (low susceptibility)

S = presence of larvae and/or puparia

Response= indicates the outcome of the screening

Response= indicates the outcome of the screening

Appendix 3: STRIPE RUST INFECTION TYPE (IT^a) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER WHEAT VARIETY TRIAL NURSERY (EXP102) (COORDINATED BY CLARK NEELY) AT SPILLMAN (LOC 01), PLANT PATH (LOC 03), AND PALOUSE CONSERVATION FIELD STATION (LOC 04) NEAR PULLMAN; MOUNT VERNON (LOC 05); WALLA WALLA (LOC 06); LIND (LOC 07); AND CENTRAL FERRY (LOC 08), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2022

Sequence	Entry	Class	PLOT	LOC 01	LOC 03	LOC 04	LOC 05 ^b		LOC 06	LOC 07	LOC 08	Summary ^c	Overall rating ^d	Level of possible HTAP ^e resistance								
				6/21	6/22	6/24	4/13	5/18	6/16	6/16	6/23											
				Fks 10.5	Fks 10.5	Fks 10.5	Fks 4	Fks 10	Fks 11	Fks 11	Fks 10.54											
				IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %											
1	09PN118-02 CL2	SWW	1	3	50	4	20	3	20	-	-	7	40	2	2	3	5	MS	6	High		
2	AP Dynamic	SWW	2	2	2	2	2	2	2	5	2	2	2	2	2	0	0	R	1	High		
3	AP Exceed	SWW	3	2	15	2	2	2	5	2	5	2	2	2	2	5	3	5	R	2	High	
4	AP Iliad	SWW	4	2	5	2	2	2	2	-	-	-	-	2	5	2	2	0	0	R	1	High
5	Appleby CL+	SWW	5	2	10	2	5	2	5	2	5	2	5	2	2	2	0	0	R	1	Moderate	
6	ARS Crescent	SWW	6	2	20	2	10	2	15	2	5	2	10	2	10	7	10	3	15	MR	4	Low
7	ARS12097-12C	SWW	7	4	30	2	15	2	15	2	5	2	5	2	10	4	5	2	10	MR	4	Low
8	ARS13659-4C	SWW	8	2	5	2	5	2	5	-	-	-	-	2	2	2	2	0	0	R	1	High
9	ARS141114-64C	SWW	9	2	10	2	2	2	10	2	5	2	2	2	2	2	2	2	2	R	1	Low
10	ARS14DH1014-C	SWW	10	2	15	4	15	2	15	-	-	-	-	3	25	5	10	5	30	MR	4	Low
11	ARS-Selbu 2.0	SWW	11	2	10	2	5	2	5	-	-	-	-	2	5	2	2	2	2	R	1	High
12	ARSX09500-17CBW	SWW	12	2	5	2	10	2	10	-	-	-	-	2	5	2	2	3	5	R	1	Moderate
13	Battle AX	HRW	13	8	60	8	90	9	100	2	5	8	80	8	70	8	5	8	80	S	9	Low
14	Bobtail	SWW	14	2	5	2	2	2	2	2	5	2	10	2	5	2	2	2	2	R	1	High
15	Brawl CL Plus	SWW	15	8	80	7	90	9	100	-	-	-	-	8	70	8	10	5	40	S	9	Low
16	Cameo (ARSX09492-6C)	SWW	16	2	15	2	15	2	5	-	-	-	-	2	5	2	5	2	5	R	2	High
17	Canvas	HRW	17	8	80	8	70	5	30	2	5	2	5	5	60	2	2	8	40	S	8	Low
18	Castella	SWW	18	2	5	2	2	2	2	-	-	-	-	2	5	2	2	2	5	R	1	Moderate
19	Curiosity CL+	SWW	19	4	30	3	20	3	30	2	5	7	60	8	30	8	30	8	50	MS	7	Low
20	Devote	SWW	20	3	30	3	20	3	30	2	5	2	10	8	30	2	2	2	5	MS	6	Moderate
CHK	PS279	CHK	21	9	100	9	100	9	100	8	5	9	80	9	100	8	20	9	100	S	9	No
21	GHR10	HRW	22	5	60	5	50	8	60	2	5	5	20	8	50	8	10	5	20	MS	7	Low
22	GS2	SWW	23	7	80	4	50	5	60	8	5	2	10	5	70	2	2	3	30	MS	6	Low
23	GS3	SWW	24	2	15	4	20	2	15	2	5	2	10	5	30	2	2	5	40	MS	6	Low
24	Guardian	HRW	25	8	80	5	70	8	80	2	5	2	10	5	70	2	2	3	30	S	8	Low
25	Irv	HRW	26	6	60	4	50	8	40	2	5	2	5	2,8	2,20	2	2	2	5	MS	6	Moderate
26	Kairos	HRW	27	2	15	2	10	2	5	2	5	2	2	2	5	2	2	2	5	R	1	Low
27	Keldin	HRW	28	6	80	5	30	5	40	-	-	-	-	8	20	8	10	3	30	MS	6	Moderate
28	LCS Artdeco	SWW	29	6	50	3	15	2	10	-	-	-	-	2	2	5	20	2	10	MR	5	Moderate
29	LCS Blackjack	SWW	30	2	2	2	2	2	2	2	5	2	2	2	2	2	2	0	0	R	1	High
30	LCS Evina	HRW	31	3	5	2	2	2	5	2	5	2	2	2	5	2	2	0	0	R	1	High
31	LCS Helix AX	HRW	32	6	80	4	30	5	40	-	-	-	-	5	30	2	2	5	30	MS	6	Low
32	LCS Hulk	SWW	33	2	5	2	5	2	5	2	5	2	5	2	5	2	2	5	R	1	High	
33	LCS Jet	HRW	34	6	60	6	50	8	60	-	-	-	-	8	40	2	2	2	5	MS	7	Low
34	LCS Rocket	HRW	35	2	10	2	5	2	5	-	-	-	-	2	5	2	2	0	0	R	1	High
35	LCS Shine	SWW	36	2	5	2	5	2	2	2	5	2	2	2	2	2	2	0	0	R	1	High
36	LCS Sonic	SWW	37	2	20	2	10	2	10	2	5	2	5	2	10	2	2	2	5	R	2	High
37	LWH18-0122	HRW	38	2	15	2	10	2	5	2	5	2	2	5	15	2	2	0	0	R	3	Low
38	LWH19-0192	HRW	39	2	15	2	10	2	5	-	-	-	-	5	15	2	2	0	0	R	3	Low
39	LWH19-1103	HRW	40	3	30	4	20	3	20	-	-	-	-	8	10	2	2	2	5	MR	4	Moderate
CHK	PS279	CHK	41	9	100	9	100	9	100	8	5	9	80	9	100	8	30	9	100	S	9	No
40	LWH19-5663	HRW	42	2	15	2	10	2	10	2	5	2	5	2	5	2	2	0	0	R	2	Moderate
41	LWH19-5691	HRW	43	3	30	4	50	3	20	2	5	2	5	3	15	2	2	2	10	MR	5	Low
42	LWW17-5877	SWW	44	2	5	2	2	2	5	-	-	-	-	2	5	2	2	0	0	R	1	High
43	LWW17-8185	SWW	45	3	10	2	5	2	5	2	5	2	5	2	5	2	2	0	0	R	1	High
44	LWW19-1576	SWW	46	2	2	2	2	2	2	2	5	2	5	2	2	2	2	0	0	R	1	Unknown ^c
45	LWW19-2232	SWW	47	2	10	2	10	2	5	-	-	2	2	2	2	2	2	0	0	R	1	High
46	LWW19-5862	SWW	48	2	2	2	2	2	10	-	-	-	-	2	2	2	2	0	0	R	1	High
47	LWW19-6219	SWW	49	2	5	2	5	2	5	2	5	2	5	2	5	2	2	0	0	R	1	High

Sequence	Entry	Class	PLOT	LOC 01		LOC 03		LOC 04		LOC 05 ^b		LOC 06		LOC 07		LOC 08		Summary ^c	Overall rating ^d	Level of possible HTAP ^e resistance			
				6/21		6/22		6/24		4/13		5/18		6/16		6/16							
				Fks 10.5		Fks 10.5		Fks 10.5		Fks 4		Fks 10		Fks 11		Fks 11							
				IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %						
48	LWW19-6591	SWW	50	2	5	2	2	2	2	2	5	2	5	2	5	2	2	2	R	1	High		
49	Mela CL+	SWW	51	6	30	3	15	3	40	-	-	2	2	8	15	8	10	8	MS	7	Low		
50	Millie	HRW	52	5	30	2	5	2	10	-	-	-	-	8	10	2	2	2	MR	4	Moderate		
51	M-press	SWW	53	2	10	2	5	2	15	2	5	2	2	2	5	2	2	2	R	1	Moderate		
52	Nixon	SWW	54	2	10	2	5	2	5	2	5	2	2	2	2	2	2	5	R	1	High		
53	Norwest Duet	SWW	55	2	10	2	5	2	5	-	-	2	5	2	5	2	2	2	R	1	High		
54	Norwest Tandem	SWW	56	2	10	2	2	2	5	-	-	-	-	2	5	2	2	2	R	1	High		
55	OR2130755	SWW	57	2	5	2	2	2	5	2	5	2	2	2	2	2	2	5	R	1	High		
56	OR2160065H	HRW	58	2	15	4	20	2	10	-	-	2	2	2	5	2	2	2,8	2,10	R	3	High	
57	OR2160243	SWW	59	2	2	2	10	2	5	5	5	2	2	2	5	2	2	2	R	1	High		
58	OR2160264	SWW	60	2	5	2	5	2	5	-	-	2	10	2	2	2	2	0	R	1	High		
CHK	PS279	CHK	61	9	100	9	100	9	100	8	5	9	80	9	100	8	30	9	100	S	9	No	
59	OR2170052H	HRW	62	2	10	2	10	2	5	2	5	2	10	2	2	2	2	0	0	R	1	High	
60	OR2170199R	HRW	63	2	10	2	10	2	5	-	-	2	2	2	5	2	2	0	0	R	1	Low	
61	OR2170559	SWW	64	2	5	2	5	2	5	3	5	2	5	2	2	2	2	5	R	1	Low		
62	OR2180149	SWW	65	2	20	2	10	2	10	2	5	2	5	2	2	2	2	5	R	2	Low		
63	OR2180377	SWW	66	2	5	2	5	2	5	5	5	2	5	2	2	2	0	0	R	1	High		
64	OR2190025 CL+	SWW	67	2	5	2	2	2	2	2	5	2	5	2	2	2	0	0	R	1	High		
65	OR2190027 CL+	SWW	68	2	5	2	2	2	2	2	5	2	5	2	2	2	0	0	R	1	High		
66	OR2190064R	HRW	69	3	20	2,7	10,70	2	15	2	5	2	2	8	10	2	2	2	5	MR	4	Low	
67	OR2x2	SWW	70	2	2	2	2	2	5	2	5	2	5	2	2	2	2	5	R	1	High		
68	OR5180071	SWW	71	3	10	2	5	2	5	2	5	2	2	2	5	2	2	2	R	1	Moderate		
69	Otto	SWW	72	4	30	4	20	2	15	2	5	2	5	8	15	2	2	8	5	MR	5	Moderate	
70	Piranha CL+	SWW	73	4	20	2	2	2	5	2	5	2	2	2	2	2	2	5	R	3	Moderate		
71	PN13001002-04	HRW	74	4	30	2	15	2	15	2	10	2	5	3	15	2	2	3	20	MR	4	Low	
72	Pritchett	SWW	75	4	20	2	10	2	5	8	10	2	5	2	2	2	2	3	10	R	3	Moderate	
73	Purl	SWW	76	3	5	2	5	2	5	2	5	2	2	2	2	2	2	5	R	1	Moderate		
74	Resilience CL+	SWW	77	2	2	2	5	2	2	2	5	2	2	2	5	2	2	3	5	R	1	High	
75	Rosalyn	SWW	78	2	10	2	5	2	5	2	5	3	20	2	2	2	2	2	R	2	High		
76	Scorpio	HRW	79	5	50	5	20	2	10	2	5	2	2	8	15	2	2	3	10	MR	5	Low	
77	Sequoia	HRW	80	3	20	2	10	2	10	2	10	8	20	3	15	2	2	2	5	MR	5	Low	
CHK	PS279	CHK	81	9	100	9	100	9	100	8	5	9	80	9	100	8	30	9	100	S	9	No	
78	Snowmass 2.0	HRW	82	9	100	8	90	9	10	2	5	8	10	8	40	8	20	5	20	S	9	Low	
79	Sockeye CL+	SWW	83	2	5	2	2	2	5	2	5	2	5	2	2	2	2	5	R	1	High		
80	Stephens	SWW	84	3	50	4	60	3	20	2	5	3	20	3	15	2	2	3	15	MR	5	Low	
81	Stingray CL+	SWW	85	3	10	2	2	2	5	2	5	2	2	2	5	2	2	2	5	R	1	High	
82	SY Assure	SWW	86	2	10	2	2	2	2	2	5	2	2	2	2	2	2	5	R	1	High		
83	SY Dayton	SWW	87	2	20	2	10	2	5	2	5	2	2	2	2	2	2	5	R	2	High		
84	TMC2021SWW	SWW	88	2	20	3	15	2	15	2	5	2	2	2	5	2	2	2	5	R	2	Moderate	
85	UI Magic CL+	SWW	89	8	60	8	80	7	80	2	5	2	5	9	80	2	2	8	40	S	8	Low	
86	UIL 14-085001A	SWW	90	2	5	2	2	2	2	2	5	2	2	2	5	2	2	2	5	R	1	High	
87	UIL 15-028024	SWW	91	3	5	2	2	2	5	8	10	2	10	2	5	2	2	2	5	R	1	Moderate	
88	UIL 15-423062A	SWW	92	2	2	2	2	2	5	2	5	2	2	2	2	2	2	5	R	1	High		
89	UIL 16-478001	SWW	93	2	2	2	2	2	5	-	-	2	2	2	5	2	2	5	R	1	Unknown		
90	UIL 17-7706 (CL+)	SWW	94	2	2	2	2	2	2	2	2	2	5	2	2	2	2	0	0	R	1	Moderate	
91	UIL16-072025	SWW	95	2	2	2	2	2	2	2	5	2	2	2	5	2	2	2	5	R	1	High	
92	VI Frost	SWW	96	2	5	2	10	2	5	2	5	2	2	2	2	2	2	0	0	R	1	High	
93	VI Presto CL+	SWW	97	2	10	2	10	2	5	2	5	2	2	2	2	2	2	0	0	R	1	Moderate	
94	VI Voodoo CL+	SWW	98	6	50	2	5	3	10	2	5	2	5	8	15	2	2	0	0	MR	5	Moderate	
95	WA8307	SWW	99	2	2	2	2	2	5	2	5	2	2	2	2	2	2	0	0	R	1	High	
96	WA8309	HRW	100	2	5	2	5	2	5	2	5	2	2	2	10	2	2	2	5	R	1	High	
CHK	PS279	CHK	101	9	100	9	100	9	100	8	10	9	90	9	100	8	20	9	100	S	9	No	

Sequence	Entry	Class	PLOT	LOC 01		LOC 03		LOC 04		LOC 05 ^b		LOC 06		LOC 07		LOC 08		Summary ^c	Overall rating ^d	Level of possible HTAP ^e resistance			
				6/21		6/22		6/24		4/13		5/18		6/16		6/16							
				Fks 10.5		Fks 10.5		Fks 10.5		Fks 4		Fks 10		Fks 11		Fks 11							
				IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %	IT %							
97	WA8310	HRW	102	2	2	2	2	2	5	2	5	5	10	2	5	2	2	5	MR	4	Low		
98	WA8318 CL+	HRW	103	2	2	2	2	2	5	2	10	2	5	2	5	2	5	2	R	1	Low		
99	WA8334	SWW	104	2	5	2	2	2	2	2	10	2	5	2	5	2	2	5	R	1	Unknown		
100	WA8335	SWW	105	2	5	2	2	2	5	2	5	2	5	2	5	2	2	5	R	1	High		
101	WA8336	SWW	106	2	5	2	2	2	2	2	10	2	5	2	5	2	2	2	R	1	Unknown		
102	WA8338	HRW	107	2	10	2	5	2	5	2	10	2	5	2	5	2	2	2	R	1	Unknown		
103	WA8340	HRW	108	2	2	2	5	2	2	2	5	2	5	2	2	2	0	0	R	1	High		
104	WA8345 AX	SWW	109	3	20	2	10	3	10	2	5	2	5	8	20	2	2	8	20	MR	5	Low	
105	WA8346 AX	SWW	110	3	30	3	10	3	10	-	-	-	-	8	15	2	2	8	30	MS	6	Low	
106	WA8347 AX	SWW	111	4	50	4	30	3	30	2	5	3	20	5	30	8	20	7	50	MS	7	Low	
107	WA8348 AX	SWW	112	4	70	6	50	5	40	2	5	5	20	5	30	8	10	5	50	MR	5	Low	
108	WA8349 AX	SWW	113	4	50	4	20	5	30	2	5	3	15	8	40	2	2	8	30	MS	6	Low	
109	WA8362	SWW	114	2	5	2	5	2	2	2	5	2	2	2	2	2	5	2	R	1	High		
110	WA8363	SWW	115	3	40	3	20	3	30	2	5	3	15	5	40	2	2	5	60	MR	5	Low	
111	WA8364	SWW	116	2	30	3	20	2	15	8	20	2	20	2	5	2	2	2	10	MR	3	Low	
112	WA8365	SWW	117	3	20	2	10	2	10	2	5	2	2	2	5	2	2	5	10	R	2	Moderate	
113	WA8366	SWW	118	2	10	2	5	2	5	2	5	2	2	2	5	2	2	5	R	1	High		
114	WA8367	HRW	119	2	10	2	5	2	5	2	5	2	2	2	5	2	2	5	R	1	High		
115	WA8368	HRW	120	3	20	3	20	3	15	2	5	2	2	8	20	2	2	2	5	MR	5	Low	
CHK	PS279	CHK	121	9	100	9	100	9	100	-	-	-	-	9	100	8	20	9	100	S	9	No	
116	WA8369	HRW	122	2	5	2	2	2	2	2	5	2	2	2	2	2	2	0	0	R	1	Moderate	
117	WA8370	SWW	123	2	10	3	10	2	10	2	5	2	5	2	2	2	2	8	10	MR	4	High	
118	WA8371	SWW	124	2	5	2	2	2	2	2	5	2	5	2	2	2	2	5	R	1	High		
119	WB1529	SWW	125	2	5	3	10	2	5	2	5	2	5	2	2	2	2	5	R	1	High		
120	WB1621	SWW	126	2	2	2	2	2	5	2	5	2	5	3	10	2	5	8	10	MR	4	Moderate	
121	WB1720	SWW	127	2	20	2	20	2	5	5	10	2	20	2	5	2	2	5	R	2	Moderate		
122	WB4303	HRW	128	8	90	8	90	9	100	2	5	3	15	9	60	2	2	8	50	S	9	Low	
123	WB4311	HRW	129	3	20	3	10	5	10	-	-	-	-	5	10	3	5	5	10	R	2	Moderate	
124	WB4394	HRW	130	4	20	4	20	3	10	-	-	-	-	5	20	2	5	5	20	MR	3	Low	
125	WB4510CLP	HRW	131	2	10	2	5	2	5	-	-	-	-	2	5	2	2	2	5	R	1	High	
126	Whistler	HRW	132	5	70	7	80	8	100	2	5	2	5	8	70	2	2	8	50	S	9	Low	
127	YSC-1001	HRW	133	3	15	3	20	3	15	2	5	3	20	3	10	2	2	8	40	MS	6	Low	
128	YSC-1002	HRW	134	4	20	2	10	3	10	2	5	3	20	2	10	2	2	5	R	3	Moderate		
129	YSC-215	SWW	135	9	80	6	80	9	100	8	10	3	30	8	80	8	30	8	80	S	9	Low	
130	YSC-217	SWW	136	2	2	2	2	2	2,8	2,100	2	5	2	5	5	10	2	5	2,8	2,80	R,S	1,9	Low
131	YSC-93	SWW	137	4	50	3	40	3	20	2	5	3	15	5	15	8	20	3	20	MR	5	Low	
CHK	PS279	CHK	138	9	100	9	100	9	100	2	5	8	80	9	100	8	20	9	100	S	9	No	
CHK	PS279	CHK	139	9	100	9	100	9	100	2	5	9	80	9	100	8	20	9	100	S	9	-	
END	HUNDRED BARLEY (Fill)		140	0	0	0	0	0	0	0	8	5	8	20	0	0	0	0	-	-	-		

^a 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.

^b 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.

^c R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

^d 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.

^e 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.

Appendix 4: STRIPE RUST INFECTION TYPE (IT^a) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING EXTENSION DISEASE NURSERY (EXP202) (COORDINATED BY CLARK NEELY 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), CENTRAL FERRY (LOC 08), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL INFECTION IN 2022

Name	Type	VT NO.	2022 Plot	LOC 01		LOC 03		LOC 04		LOC 05 ^b				LOC 06		LOC 07		LOC 08		Field summary ^d	Overall rating ^e		
				7/5		7/5		7/5		5/19		6/27		6/29		6/28		6/23					
				Fks ^c 10.5		Fks 10.54		Fks 10.54		Fks 10		Fks 10.54		Fks 11.1		Fks 11		Fks 10.5					
				IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%				
AP Coachman	SWS	1	1	3	10	5	40	3	20	9	50	8	80	5	40	3	15	8	50	S	8		
AP Mondovi CL2	SWS	2	2	2	2	3	20	2	15	8	30	2	5	8	30	2	5	8	20	MS	6		
Hedge CL+	Club	3	3	2	5	2	10	2	5	2	10	2	10	2	5	2	5	2	5	R	1		
IDO1404S	SWS	4	4	2	5	2	5	2	2	5	20	3	20	2	5	2	5	2	5	R	2		
IDO1702S	SWS	5	5	2	5	3	20	2	5	0	0	2	5	2	5	2	2	2	5	R	2		
IDO1902S	SWS	6	6	2	10	3	20	3	30	9	50	2	5	3	20	3	5	8	40	MS	6		
JD	Club	7	7	2	5	2	5	2	10	2	10	2	10	2	5	3	5	2	10	R	1		
Louise	SWS	8	8	3	30	3	30	3	30	9	40	5	40	3	20	5	20	5	30	MR	4		
Melba	Club	9	9	2	5	2	5	2	10	3	15	2	20	2	5	2	5	2	10	R	2		
Roger (WA 8325)	Club	10	10	3	15	3	30	3	30	3	20	5	30	3	30	3	20	5	30	MR	4		
Ryan	SWS	11	11	2	10	3	20	2	15	9	50	5	30	3	30	2	10	3	20	MR	4		
Seahawk	SWS	12	12	2	2	2	5	2	2	0	0	2	5	2	2	2	2	2	2	R	1		
Tekoa	SWS	13	13	2	2	2	10	2	5	2	10	2	10	2	5	2	2	2	5	R	1		
TMC 2021	SWS	14	14	2	2	2	5	2	5	2	2	2	5	2	5	2	2	2	2	R	1		
UI Cookie	SWS	15	15	5	30	7	70	3	30	9	50	3	20	3	20	8	40	5	50	S	8		
WA 8321	SWS	16	16	2	2	2	10	2	10	8	2	2	5	2	10	2	5	2	2	R	1		
WA 8327	SWS	17	17	2	5	2	5	2	2	2	2	2	5	2	2	2	5	2	5	R	1		
WA 8351	SWS	18	18	2	5	3	20	2	15	2	10	2	5	2	5	2	2	2	2	R	2		
WA 8354 CL+	SWS	19	19	2	2	2	5	2	5	2	5	2	5	2	2	2	2	2	2	R	1		
WA 8377	SWS	20	20	5	20	3	20	3	20	9	40	3	30	3	15	3	15	5	30	MR	4		
AvS	CHK	21	9	100	9	100	9	100	9	50	9	100	9	100	8	70	9	100	S	9			
WA 8378	SWS	21	22	2	5	2	20	2	15	9	30	3	30	2	15	2	5	2	5	R	3		
WA 8379 CL+	SWS	22	23	2	5	2	2	2	2	2	5	2	5	2	2	2	2	2	2	R	1		
WA 8380 CL+	SWS	23	24	2	2	2	2	2	2	2	5	2	5	2	2	2	2	2	2	R	1		
WA 8381 CL+	SWS	24	25	2	2	2	10	2	5	2	5	2	5	2	5	2	5	2	5	R	1		
WA 8382	SWS	25	26	2	2	2	5	2	2	2	2	2	5	2	2	2	2	2	2	R	1		
WA 8383	SWS	26	27	2	5	3	15	3	20	3	15	2	20	2	5	3	10	2	10	R	2		
WA 8384	SWS	27	28	2	5	2	2	2	2	5	3	10	2	5	2	2	2	5	2	5	R	1	
WA 8385	SWS	28	29	2	2	2	5	2	2	2	5	2	5	2	5	2	5	2	2	R	1		
WB6121	SWS	29	30	2	2	2	2	2	2	2	5	2	5	2	2	2	2	2	5	R	1		
WB6211CLP	SWS	30	31	2	2	3	20	2	5	2	2	2	5	7	10	5	10	3	10	R	2		
YSC-603	SWS	31	32	2	5	2	10	2	5	9	50	3	30	3	20	5	40	5	40	MR	4		
YSC-605	SWS	32	33	2	2	2	5	2	2	9	5	2	5	2	5	2	2	2	2	R	1		
Alum	HRS	1	34	2	10	2	20	2	5	9	50	2	15	3	30	3	20	3	30	R	3		
AP Renegade	HRS	2	35	2	5	2	2	2	2	2	10	2	5	2	2	2	5	2	2	R	1		
AP Venom	HRS	3	36	2	2	2	5	2	2	0	0	2	2	2	2	2	2	2	2	R	1		
Buck Pronto	HRS	4	37	3	10	7	70	5	60	9	50	8	90	3	30	8	30	2	15	S	9		
Chet	HRS	5	38	2	5	2	5	2	5	9	50	2	15	3	30	2	15	2	15	R	3		
CP3055	HRS	6	39	2	5	2	5	2	5	9	50	2	15	2	15	2	10	2	15	R	2		
CP3099A	HRS	7	40	2	5	2	5	2	5	5	30	2	15	3	20	2	10	2	20	R	2		
AvS	CHK	41	9	100	9	100	9	100	9	50	9	100	9	100	8	70	9	100	S	9			
CP3530	HRS	8	42	8	70	8	90	8	80	9	50	9	100	8	90	3	20	9	90	S	9		
CPX39120	HRS	9	43	2	5	2	5	2	5	3	20	2	10	2	2	2	5	2	5	R	1		
Glee	HRS	10	44	2	10	3	20	2	20	9	50	3	20	3	30	2	10	2	10	R	2		
Hale (WA8315)	HRS	11	45	2	5	2	2	2	10	0	0	2	5	2	5	2	5	2	5	R	1		

Name	Type	VT	2022	LOC 01		LOC 03		LOC 04		LOC 05 ^b				LOC 06		LOC 07		LOC 08		Field summary ^d	Overall rating ^e		
				7/5		7/5		7/5		5/19		6/27		6/29		6/28		6/23					
				Fks ^c 10.5		Fks 10.54		Fks 10.54		Fks 10		Fks 10.54		Fks 11.1		Fks 11		Fks 10.5					
				IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%				
Jefferson	HRS	12	46	3	15	5	50	3	30	9	50	8	90	8	80	5	20	8	60	S	9		
Jefferson HF	HRS	13	47	2	10	7	70	3	30	9	50	8	90	8	70	3	15	8	60	S	9		
Kelse	HRS	14	48	3	10	5	50	3	20	9	50	5	40	5	50	5	30	8	60	MS	7		
Net CL+	HRS	15	49	2	5	2	20	2	10	9	40	3	20	3	30	2	15	8	30	MS	6		
SY Gunsight	HRS	16	50	2	2	2	5	2	5	8	30	2	15	2	15	2	5	2	5	R	2		
WA 8330	HWS	17	51	3	15	3	20	3	30	9	40	5	30	3	30	3	15	3	20	MR	4		
WA 8342	HRS	18	52	2	5	2	5	2	5	9	50	2	5	2	2	5	2	5	R	1			
WA 8355	HRS	19	53	2	5	2	5	2	2	2	2	2	5	2	2	2	2	2	5	R	1		
WA 8356	HRS	20	54	2	10	3	20	3	30	9	50	8	80	3	30	5	20	5	30	S	8		
WA 8357	HRS	21	55	2	5	2	5	2	5	9	10	2	10	3	20	2	5	3	15	R	2		
WA 8358 CL+	HRS	22	56	2	2	2	2	2	2	2	2	2	5	2	2	2	2	2	2	R	1		
WA 8359	HRS	23	57	2	2	2	5	2	2	2	5	2	2	2	2	2	5	2	5	R	1		
WA 8372	HWS	24	58	3	10	3	20	3	20	8	30	3	20	5	40	2	2	3	20	MR	4		
WA 8373	HWS	25	59	2	2	2	5	2	5	2	2	2	5	2	5	2	2	2	2	R	1		
WA 8374	HWS	26	60	2	2	2	5	2	5	0	0	2	5	2	5	3	5	2	2	R	1		
AvS	CHK	61	9	100	9	100	9	100	9	50	9	100	9	100	8	60	9	100	S	9			
WA 8375	HRS	27	62	2	5	2	5	2	5	8	20	2	5	2	15	2	5	2	5	R	1		
WA 8376	HWS	28	63	2	5	2	5	2	5	0	0	2	5	2	2	2	2	3	20	R	2		
WA 8387 CL+	HRS	29	64	2	10	2	10	2	5	9	50	3	20	5	30	2	10	3	30	MR	4		
WA 8388 CL+	HRS	30	65	2	10	3	20	2	20	9	50	5	30	3	30	2	5	3	30	MR	4		
WA 8389 CL+	HRS	31	66	2	2	2	5	2	2	2	10	2	5	2	2	2	2	2	5	R	1		
WB9303	HRS	32	67	2	2	2	5	2	5	0	0	2	2	5	2	2	2	2	2	R	1		
WB9623	HRS	33	68	2	2	2	5	2	5	0	0	2	2	2	2	2	2	2	5	R	1		
WB9662	HRS	34	69	2	2	2	2	2	2	9	2	2	2	2	2	2	2	2	2	R	1		
WB9668	HRS	35	70	2	2	2	5	2	2	0	0	2	2	2	2	2	2	2	2	R	1		

^a 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.

^b 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.

^c Feekes scale for growth stage.

^d R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

^e 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity of adult plants.

Appendix 5: STRIPE RUST INFECTION TYPE (IT ^a) AND PERCENT (%) ON CULTIVARS AND LINES IN THE SPRING BARLEY EXTENSION NURSERY (EXP211) (COORDINATED BY CLARK NEELY AS SPRING BARLEY VARIETY TRIAL NURSERY) AT SPILLMAN (LOC 01), PLANT PATH (LOC 03) AND PCFS FARM (LOC 04) NEAR PULLMAN, MT VERNON (LOC 05), WALLA WALLA (LOC 06), LIND (LOC 07), AND CENTRAL FERRY, WA, WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH UNDER NATURAL RUST INFECTION IN 2022.																								
Note: Barley stripe rust developed to moderate to high levels at LOC 05 and LOC 08; and low levels at LOC 01, LOC 03, LOC 04, LOC 06, and LOC 07.																								
Name	VT NO.	2022 Plot	LOC 01		LOC 03		LOC 04		LOC 05 ^b				LOC 06		LOC 07		LOC 08				Field summary ^d	Overall rating ^e		
			7/5		7/5		7/5		5/19		6/27		6/29		6/28		6/23							
			Fks 10.5 ^c		Fks 10.54		Fks 10.54		Fks 2		Fks 10.54		Fks 11.1		Fks 11.1		Fks 10.5							
			IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%				
MOREX (S check)	CHK	1	2	5	2	10	3	10	8	5	8	50	8	10	8	20	8	50	S	8				
14WAIF-3613.2	1	2	2	5	0	0	0	0	0	0	2	5	0	0	0	0	0	0	R	1				
14WAIM-3604.29	2	3	2	5	0	0	0	0	0	0	2	2	0	0	0	0	0	0	R	1				
14WAIM-3620.68	3	4	2	5	2	5	0	0	0	0	2	5	0	0	3	5	3	5	R	1				
ACC Connect	4	5	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	R	2				
ACC Synergy	5	6	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	R	3				
Altorado	6	7	2	5	0	0	0	0	9	10	5	20	0	0	0	0	8	10	MR	5				
BC Ellinor	7	8	2	5	0	0	0	0	0	0	5	20	0	0	0	0	0	0	MR	4				
BC Leandra	8	9	2	5	0	0	0	0	2	2	8	20	8	10	0	0	2	5	MS	6				
BC Lexy	9	10	2	5	0	0	0	0	0	0	5	10	2	5	0	0	0	0	R	3				
CDC Copeland	10	11	2	5	0	0	0	0	2	2	5	10	2	5	0	0	3	5	R	3				
Claymore	11	12	2	5	0	0	0	0	0	0	8	30	0	0	0	0	8	10	MS	7				
HO516-429	12	13	2	5	0	0	2	5	0	0	5	20	0	0	3	10	8	20	MS	6				
HO516-579	13	14	2	5	0	0	0	0	0	0	2	5	0	0	0	0	0	0	R	1				
KWS Amadora	14	15	2	5	0	0	0	0	0	0	5	20	0	0	3	5	0	0	R	1				
KWS Jessie	15	16	2	5	0	0	0	0	0	0	5	30	0	0	0	0	8	20	MS	6				
KWS Willis	16	17	8	5	2	5	0	0	2	2	8	20	8	10	8	10	8	20	MS	6				
LCS Odyssey	17	18	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	R	2				
LCS Opera	18	19	0	0	0	0	0	0	2	2	2	5	0	0	0	0	0	0	R	1				
Lenetah	19	20	0	0	0	0	0	0	0	0	2	5	0	0	0	0	8	10	MR	5				
MOREX (S check)	CHK	21	2	5	2	10	2	5	0	0	8	70	8	10	8	20	8	50	S	8				
Lyon	20	22	0	0	2	5	3	10	2	2	8	30	5	10	8	20	8	40	MS	7				
Oreana	21	23	0	0	2	5	0	0	8	5	8	20	0	0	8	20	0	0	MS	6				
Palmer	22	24	0	0	0	0	0	0	0	0	8	20	0	0	0	0	8	10	MS	6				
Survivor	23	25	0	0	0	0	0	0	2	5	5	20	0	0	0	0	2	5	MR	4				
MOREX (S check)	CHK	26	8	10	2	10	3	10	8	5	8	80	8	10	8	20	8	50	S	8				
MOREX (S check)	CHK	27	8	10	2	10	3	10	8	5	8	80	8	10	8	20	8	50	S	8				
MOREX (S check)	CHK	28	8	10	2	10	3	10	8	5	8	80	8	10	8	20	8	50	S	8				
MOREX (S check)	CHK	29	8	10	2	10	3	20	8	5	8	80	8	10	8	20	8	50	S	8				
MOREX (S check)	END	30	8	10	2	10	3	20	8	5	8	80	8	10	8	20	8	50	S	8				

^a 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.

^b 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.

^c Feekes scale for growth stage.

^d R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

^e 1 = most resistant and 9 most susceptible.

Note: The summary and ratings are based on the highest IT and % severity of adult plants.