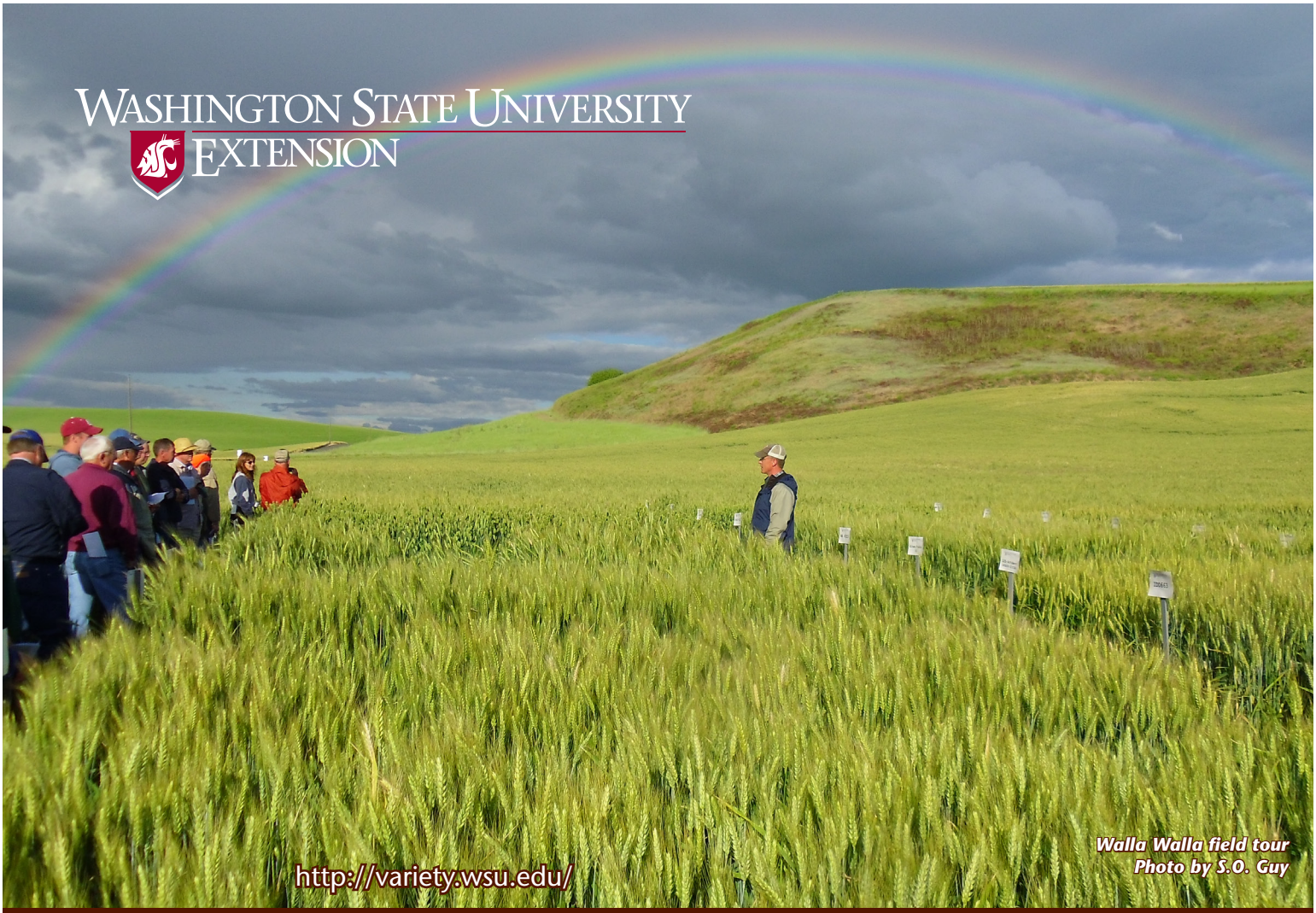
WSU Extension Variety Testing Program

Cereal and Grain Legume Variety Performance Trials 2012

DEPARTMENT OF CROP AND SOIL SCIENCES • TECHNICAL REPORT 12-3



Walla Walla field tour
Photo by S.O. Guy

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http://variety.wsu.edu/

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Entry Contributors

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USDA/ARS Wheat Genetics - R. E. Allan	Progene – K. Braunwart
OSU Wheat Breeding – R. Zemetra	
UI Wheat Breeding – J. Chen	
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USDA-ARS Barley Breeding – Hu Gongshe	
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Cooperator	Location	County	Cooperator	Location	County
Dan McKay	Almira	Lincoln	Gil White	Lamont	Whitman
Jeff Johnson	Anatone	Asotin	Bruce Sauer	Lind	Adams
Steve Matsen	Bickleton	Klickitat	Roger/Randy Koller	Mayview	Garfield
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Dan Bauermeister	Connell	Franklin	Steve Tokunaga	Mosel Lake	Grant
Bob Bandy	Creston	Lincoln	Chris Fleener	Palouse	Whitman
Jay Penner	Dayton	Columbia	Norm Druffel & Sons	Pullman	Whitman
Bob Morasch	Dusty	Whitman	Ryan Davis	Pullman	Whitman
Steve Camp	Dusty	Whitman	Hal Johnson	Reardan	Lincoln
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Dave Roseberry	H. Heaven	Benton	Glen Smith	Walla Walla	Walla Walla
Jim Moon	H. Heaven	Benton			

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INTRODUCTION

The goal of the WSU Extension Variety Testing Program is to provide growers and the agribusiness industry with comprehensive information on the adaptation and performance of winter and spring, wheat, barley and spring legume 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 small-grain and grain legume cultivar performance tested in WSU Extension variety trials in crop year 2012.

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 and other important performance characteristics are also averaged within rainfall zones because of the strong influence of rainfall on agronomic performance.

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 recommending any variety over other varieties.

METHODS

Experimental Materials and Procedures

The data presented in this report were generated in cereal and legume variety testing trials conducted in 2012. The total number of varieties and locations was:

soft white winter wheat: 48 entries at 21 locations;
hard winter wheat: 24 entries at 11 locations;
irrigated hard winter wheat: 30 entries at 1 location;
soft white spring wheat: 25 entries at 16 locations;
hard white spring wheat: 9 entries at 16 locations;
hard red spring wheat: 21 entries at 16 locations;
spring barley: 30 entries at 10 locations;
lentils: 24 entries at 4 locations;
peas: 24 entries at 4 locations;
chickpeas: 14 entries at 4 locations.
Additional 6 spring wheat entries were included in the irrigated spring wheat trial at Moses Lake, WA.

Tables 1-5 list all entries for the winter and spring cereal trials. An alpha lattice design with three replications was used for all cereal trials. For each crop, the seeding rate was a specific number of seeds planted per square foot. Planting rates were determined by weighing 1000 seeds (1000 kernel weight) of each cultivar (Tables 6-8). Winter wheat entries were treated with CruiserMaxx .50 Cereal Custom Blend (3.55 oz/cwt). All spring cereals were treated with CruiserMaxx 1.0 Cereal Custom Blend (3.55 oz/cwt). Entries were planted in small plots using one of four planter drill opener configurations based on the trial location (Tables 13 and 14). All trials were maintained under grower management conditions specific to each trial location. In 2012 most of the cereal experiments received an application of fungicides when conditions were conducive to development of stripe rust. Fungicide management details are listed with the results of individual experiments. Exceptions to this were winter wheat experiments at Connell, Dusty, Farmington and St. John. These winter wheat sites did not receive fungicide applications in order to observe variety performance with the stripe rust pathogen present at natural levels. Spring wheat experiments at Almira, Mayview and Pullman were duplicated and one set of experiments at each of these locations did not receive any fungicide treatments. This served as non-sprayed control. Data from the sprayed and non-sprayed paired experiments is summarized in this report.

Spring Grain Legume experiments were conducted at 4 locations. Tables 9-11 list all entries for the spring grain legume trials. Seeding rates were determined by weighing 100 seeds (100 seed weight) of each cultivar (Table 12). Pea and lentil experiments were designed using alpha lattice with 3 replications, while chickpea were a randomized complete block design (RCBD) with 3 replications. Grain legume trials were planted in small plots using double disk drill. Details for each trial location are presented in Table 15. Grain legume trial entries were treated with the blend of Apron XL LS, Maxim 4 FS, Mertect LSP, Cruiser 5 FS and Sodium Molybdate. Peas and lentils were treated with 10 oz/cwt rate of the blend; chickpeas were treated with 14 oz/cwt of the above blend. *Rhizobium* inoculum was added to grain legume seed for locations when naturally occurring *Rhizobium* is not present in the soil or present at low

levels. Seeding rates for grain legumes were: peas 8, lentils 9, chickpeas 5 seeds/sq.ft.

Fertility levels for all crops were maintained under typical grower management practices at each location. Soil sampling was done at all locations with hard wheat trials. Soil test results were used to estimate the amount of nitrogen needed to attain a minimum grain protein level of 11.5% for average yield potentials for winter wheat trials for each location. The calculation estimate used for hard winter wheat was 3.0 pounds of nitrogen X expected bushel yield. Nitrogen level requirements for hard spring wheat trials was based on attaining a minimum 14% grain protein levels, calculated as 3.7 pounds of nitrogen X expected bushel yield. All additional fertilizer was spring applied as urea ammonium sulfate (40-0-0-6) using a broadcast surface application, unless application was made by a grower.

Weed management included spring herbicide applications of commercial herbicides typically used by growers in each region. Clearfield® varieties were not treated with Beyond® herbicide since experiments were designed to compare each entry under uniform conditions. Applying Beyond® to Clearfield® varieties could create bias in the trials since all entries would not be managed the same.

Weed management for legume variety trials was based on standard commercial practices and consisted of post-plant pre-emergence application of Lorox (1.25 lb/A) and Sencor (6 oz/A) at all locations. Additional hand weeding was utilized when needed.

Farmington, Palouse and Walla Walla pea experiments were treated with Asana XL (9.6 oz/A) to control pea weevils. Quadris Opti (2 pints/A) was applied to chickpeas at all four locations to prevent Ascochyta blight infection.

Variety plot tours were conducted at each location to provide growers and agribusiness personnel opportunities to conduct in-field observations of all entries (Figure 1). Prior to each plot tour, experiments were trimmed to final harvest dimensions using rotary mowers to cut alleyways between ranges.

When reported, stripe rust (*Puccinia striiformis*, West) ratings were measured using expanded scales for recording stripe rust. Seed samples of all winter wheat, spring wheat and spring barley were provided for additional screening conducted by Dr. X. Chen, Plant Pathologist, USDA/ARS. These evaluations were done at various locations under field conditions. Winter wheat entries were additionally screened under greenhouse conditions. Stripe rust evaluations for all trial entries can be found in Tables 44, 45, 63, 64, 95, 126 and 142.

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. 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 grain protein percentage. Plot size for all trials ranges from 48 to 80 square feet (Tables 13 and 14). The 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.

All legume entries were evaluated for yield (reported in pounds per acre) and 100 seed weight. Additionally, canopy height is reported for pea trials and plant height is reported for all legume trials. Canopy index (canopy height/plant height) is included in pea trial results.

After harvest experiment data were analyzed, summarized, and sent out via e-mail list serve to anyone who requested being listed on the e-mail list. Winter wheat data had priority in processing to provide growers immediate information to help in making fall planting decisions. Spring data were also sent on the e-mail list serve and all spring data were completed by the end of September 2010. Data were also posted to the Variety Testing Program web site (http://variety.wsu.edu/) in nearly the same time sequence. E-mail contacts can be added to the list serve by sending a request to sguy@wsu.edu.

Statistical Analysis and Interpretation

Entry means (averages) are shown within the body of the data tables and the overall trial average at the bottom of the tables for yield, test weight and protein. The least significant difference (LSD) and the coefficient of variation (CV) are also listed. The LSD is presented at the 10 percent error level and is an aid in comparing the performance of any two varieties within a given year and location. If the reported value of a variety is greater than another variety by more than the LSD value, then there is at least a 9 out of 10 chance the yields of those varieties are different and not due to random variation. If the measured values differ by less than the LSD value, the differences may be due to random error rather than actual differences. Yield values are reported from highest to lowest within a table, and some varieties are shown in bolded type that are within the LSD range of the highest yielding variety. This only shows the LSD range of the top yielding varieties and LSD comparisons can be done on any varieties of interest within a table. 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 variation is not due to variety differences but 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 for variation was present. The higher the CV, the more difficult it is to detect differences between varieties.

Table 1. 2012 Soft White Winter Wheat Entries

Name	Originator	Class	PI Number	Old Name
ARS-Amber	USDA-ARS/WSU	SWW[1]	PI 665047	ARS960277L
ARS-Chrystal	USDA-ARS/WSU	WC[2]	PI 665049	ARS970075-3
ARS-Crescent	USDA-ARS/WSU	WC	PI 665048	ARS970163-4C
ARS010762-2C	USDA-ARS/WSU	WC		
ARS010780-3C	USDA-ARS/WSU	WC		
ARS970161-2L	USDA-ARS/WSU	SWW		
ARS970161-3L	USDA-ARS/WSU	SWW		
ARS970277L reselect	USDA-ARS/WSU	SWW		
ARS990077-1C	USDA-ARS/WSU	WC		
Bruehl	WSU	WC	PI 606764	WA 7833
Cara	USDA-ARS/WSU	WC	PI 643435	ARS97-135-9
Chukar	USDA-ARS/WSU	WC	PI 628641	WA 7855
Coda	USDA-ARS/WSU	WC	PI 594372	WA 7752
Eltan	USDA-ARS/WSU	SWW	PI 536994	WA 7431
Eltan/Tubbs 06		SWW		ELT50TUB0650
Goetze/Skiles		SWW		Goetze/Skiles
IDO663	UofI	SWW		
LCS-Artdeco	Limagrain LLC	SWW		NSA06-2153A
LWW-04-4009	Limagrain LLC	SWW		
Madsen	USDA-ARS/WSU	SWW	PI 511673	WA 7163
Madsen/Rod		SWW		MAD50ROD50
Mary	OSU	SWW		OR2040726
Masami	WSU	SWW	PI 634715	WA 7916
OR08047P94	OSU	SWW		
OR2070870	OSU	SWW		
OR2071628	OSU	SWW		
OR2701071	OSU	SWW		
ORCF-102	OSU	SWWI[3]	PI 641787	OR201007
ORCF-103	OSU	SWWI	PI 658153	ORI2042037
Otto	WSU	SWW		WA 8092
Rod	WSU	SWW	PI 558510	WA 7662
Skiles	OSU	SWW	PI 658154	ORH010085
Stephens	OSU	SWW	Cltr 17596	OR 65-116
Tubbs 06	OSU	SWW	PI 651023	Tubbs 06
WA 8116	WSU	SWW		F/E-35
WA 8134	WSU	SWW		
WA 8135	WSU	SWW		
WA 8136	WSU	SWW		
WA 8137	WSU	SWW		
WA 8142	WSU	SWWI		
WA 8143	WSU	SWWI		
WA 8151	WSU	SWW		
WA 8152	WSU	SWW		
WA 8153	WSU	SWW		
WA 8154	WSU	SWW		
WA 8155	WSU	SWWI		
WB-528	WestBred LLC	SWW	PI 643142	BZ 6W98-528
Xerpha	WSU	SWW	PI 645605	WA 7973

[1] - Soft White Winter

[2] - Winter Club

[3] - Soft White Winter, Clearfiled

Table 2. 2012 Hard Winter Wheat Entries

Name	Originator	Class	PI Number	Old Name
Altigo	Limagrain LLC.	HRW[1]		
Azimut	Limagrain LLC.	HRW		
Bauermeister	WSU	HRW	PI 634717	WA007939
Boundary	UofI	HRW	PI 603039	IDO467
Eddy	WestBred, LLC	HRW	PI 643423	BZ9W96-788-E
Eltan	USDA-ARS/WSU	SWW[4]	PI 536994	WA 7431
Farnum	WSU	HRW	PI 638535	WA007975
Finley	WSU	HRW	PI 586757	WA 7773
IDO816	UofI	HRW		
MDM	WSU	HWW[2]	PI 634716	WA007936
Norwest 553	OSU	HRW	PI 655030	ORN00B553
OR2080156H	OSU	HWW		OR2080156H
OR2080227H	OSU	HWW		
OR2080229H	OSU	HWW		OR2080229H
OR2080236H	OSU	HWW		
UI SRG	UofI	HRW	PI 660546	IDO656
UI Silver	UofI	HWW	PI 658467	IDO658
UICF-Grace	UofI	HWWI[3]	PI 658468	IDO651
WA 8118	WSU	HRW		KKHR05001-0-0-0-97
WA 8119	WSU	HRW		J030189-1
WA 8156	WSU	HRW		
WA 8157	WSU	HRW		
WA 8158	WSU	HWW		
WA 8159	WSU	HWW		
Irrigated Entries				
DH02-18-69	Western Ag. Innovations	HWW		
DH02-18-88	Western Ag. Innovations	HWW		
Esperia	AllsStar LLC.	HRW		Esperia
Genesis	AllStar LLC.	HRW		Genesi
WA 8061-10	WSU	HRW		
WA 8115	WSU	SWW		WA 8115
WA 8139	WSU	HRW		

[1] - Hard Red Winter

[2] - Hard White Winter

[3] - Hard White Winnter, Clearfield

Table 3. 2012 Soft White Spring Wheat Entries

Name	Originator	Class	PI Number	Old Name
Alpowa	WSU	SWS[1]	PI 566596	WA 7677
Alturas	UofI	SWS	PI 620631	IDO526
Babe	WSU	SWS	PI 656791	WA008039
Diva	WSU	SWS	PI 660663	WA008090
JD	WSU	SC[2]	PI 656790	WA008047
Nick	Westbred, LLC	SWS	PI 638697	BZ698-031
Wakanz	WSU	SWS	PI 506352	WA 7183
WB-1035CL+	Westbred, LLC	SWS		
Whit	WSU	SWS	PI 653841	WA008008
Zak	WSU	SWS	PI 607839	WA 7850
WA 8124	WSU	SWS		WA008124
Louise	WSU	SWS	PI 634865	WA007921
Louise-G2		SWS		
Louise-0W		SWS		
ARS03173LS	USDA-ARS/WSU	SWS		ARS03173LS
ARS03174CS	USDA-ARS	SWC		
WA 8160	WSU	SWC		
WA 8161	WSU	SWS		
WA 8162	WSU	SWS		
IDO671	UofI	SWS		IDO671
IDO686	UofI	SWS		
IDO687	UofI	SWS		
IDO599	UofI	SWS		IDO599
WA 8131[3]	WSU	SC		
IDO669[4]	UofI	SWS		IDO669

[1] - Soft White Spring

[2] - Spring Club

[3] - >16" precipitation locations only

[4] - <16" precipitation locations only

Table 4. 2012 Hard Spring Wheat Entries

Name	Originator	Class	PI Number	Old Name
V272	Allstar Seed Co.	HRS[1]		
LCS-ALbany	Limagrain Cereal Seeds	HRS		
WA 8163	WSU	HWS[2]		
WA 8164	WSU	HRS		
WA 8165	WSU	HRS		
WA 8166	WSU	HRS		
WA 8167	WSU	HRS		
LCS-Buck Pronto	Limagrain Cereal Seeds	HRS	PI 619397	T 1052
LCS-Powerplay	Limagrain Cereal Seeds	HRS		10Fx Inc. 1
Jefferson	UofI	HRS	PI 603040	IDO462
IDO694	UofI	HWS		
Dayn (WA 8123)	WSU	HWS		WA008123
Glee (WA 8074)	WSU	HRS		H0500135
Lassik	UC Davis	HRS	PI 653535	LASSIK
Clear White 515	UC Davis	HWS		
Patwin 515	UC Davis	HWS		
BR7030	General Mills	HWS		GMBR7030
Bullseye	AgriPro	HRS	PI 658036	AP-81
Hank	WestBred, LLC	HRS	PI 613585	BZ 922-322
Hollis	WSU	HRS	PI 632857	WA007859
Kelse	WSU	HRS	PI 653842	WA007954
Otis	WSU	HWS	PI 634866	WA007931
Scarlet	WSU	HRS	PI 601814	WA007802
Tara 2002	WSU	HRS	PI 617073	WA007824
WB-Fuzion	WestBred, LLC	HRS	PI 661160	BZ901-717
WA 8168	WSU	HWS		
Jedd	WestBred, LLC	HRS		
Expresso	WestBred, LLC	HRS	PI 651616	DA984-034SRR
WB Hartline	Westbred, LLC	HWS		
SY605 CL	Syngenta	HRS	PI 659810	03S0409-16
Irrigated Entries				
Westbred 926	WestBred, LLC	HRS		WESTBRED 926
UI Winchester	UofI	HRS	PI 642362	IDO578
Cabernet	AgriPro	HRS	PI 646196	95WV10616
Malbec	AgriPro	HRS		RSI50603
WB-Rockland	Westbred, LLC	HRS	PI 659487	
Solano	WestBred, LLC	HRS	PI 644067	DA900-229
Volt	WestBred, LLC	HRS	PI 655039	

[1] - Hard Red Spring

[2] - Hard White Spring

Table 5. 2012 Spring Barley Entries

Name	Originator	Class	PI Number	Old Name
Bentley	Alberta Agricultue	S2[1]	PI 655071	BENTLEY
CDC Copeland	U of Saskatchewan	S2		SKTR0150
CDC Meredith	U of Saskatchewan	S2		CDC MEREDITH
Newdale	Agriculture & Agri-Food Canada	S2		
2Ab04-X01084-27	USDA-ARS, Aberdeen	S2		
Lenetah	USDA-ARS, Aberdeen	S2	PI 652440	01Ab11107
2Ab09-X06F058HL-23	USDA-ARS, Aberdeen	S2NWx[2,3]		
2004NZ151	WSU	S2		2004NZ151
2004NZ163	WSU	S2		2004NZ163
2004NZ170	WSU	S2		
LSC LN09-0920	Limagrain Cereal Seeds	S2		
Baronesse	Nord Saat/WestBred, LLC	S2	PI 568246	BARONESSE
Bob	WSU	S2	PI 629288	WA 8682-96
Champion	WestBred, LLC	S2	PI 654517	YU-501-385D
Harrington	U of Saskatchewan	S2		WA006783
Meresse	WestBred, LLC	S2NWx	PI 613618	BZ 594-35
Radiant	WSU	S2A[4]	PI 633971	98NZ223
07WA-601.6	WSU	S2		
07WA-614.4	WSU	S2		
07WA-682.1	WSU	S2		
05WA-316.99	WSU	S2		05WA-316.99
05WA-316.K	WSU	S2		05WA-316.K
08WA-109.17	WSU	S2		
09WA-265.14	WSU	S2NWx		
08WA-140.11	WSU	S2		
08WA-118.12	WSU	S2		
X05056-T211	WSU	S2NWx		
08WA-107.8	WSU	S2		
X05013-T267	WSU	S2Wx		
06WA-412.4	WSU	S2		06WA-412.4

[1] - 2-row

[2] - "N" - Hulless

[3] - "Wx" - Waxy

[4] - "A" - Pro-Anthocyanidin Free

Table 6. 2012 WSU Winter Wheat Variety Trial Seed Weight

Name	1000 KW (grams)	Seeds per Pound
Soft White Common		
ARS970161-2L	33.6	13,482
ARS970161-3L	33.7	13,442
ARS970277L reselect	42.6	10,634
ARS-Amber	42.5	10,659
Eltan	45.3	10,000
Eltan/Tubbs 06	48.7	9,302
Goetze/Skiles	43.4	10,438
IDO663	39.8	11,382
LWW-04-4009	39.7	11,411
Madsen	45.5	9,956
Madsen/Rod	42.7	10,609
Mary	38.3	11,828
Masami	43.8	10,342
NSA06-2153A	37.1	12,210
OR08047P94	36.4	12,445
OR2070870	37.8	11,984
OR2071628	25.4	17,835
OR2701071	38.9	11,645
ORCF-102	46.1	9,826
ORCF-103	47.9	9,457
Otto	44.4	10,203
Rod	42.6	10,634
Skiles	43.4	10,438
Stephens	52.0	8,712
Tubbs 06	50.6	8,953
WA 8115	32.2	14,068
WA 8116	31.6	14,335
WA 8134	33.0	13,727
WA 8135	25.3	17,905
WA 8136	27.4	16,533
WA 8137	24.9	18,193
WA 8142	41.1	11,022
WA 8143	39.8	11,382
WA 8151	28.3	16,007
WA 8152	31.0	14,613
WA 8153	30.0	15,100
WA 8154	34.8	13,017
WA 8155	44.5	10,180
WB-528	46.9	9,659
Xerpha	46.9	9,659

Name	1000 KW (grams)	Seeds per Pound
Soft White Club		
ARS010762-2C	24.6	18,415
ARS010780-3C	32.4	13,981
ARS990077-1C	29.8	15,201
ARS-Chrystal	34.0	13,324
ARS-Crescent	38.0	11,921
Bruehl	43.6	10,390
Cara	37.6	12,048
Chukar	39.5	11,468
Coda	38.3	11,828
Hard White Winter		
DH02-18-69	30.5	14,852
DH02-18-88	26.7	16,966
MDM	43.7	10,366
OR2080156H	36.8	12,310
OR2080227H	36.8	12,310
OR2080229H	39.6	11,439
OR2080236H	36.9	12,276
UI Silver	32.6	13,896
UICF-Grace	32.5	13,938
WA 8159	28.1	16,121
Hard Red Winter		
Altigo	38.8	11,675
Azimut	32.0	14,156
Bauermeister	41.2	10,995
Boundary	40.3	11,241
Eddy	42.5	10,659
Esperia	34.3	13,207
Farnum	35	12,943
Finley	46.1	9,826
Genesi	37.7	12,016
IDO816	30.3	14,950
Norwest 553	47.8	9,477
UI SRG	37.7	12,016
WA 8061-10	30.3	14,950
WA 8118	29.1	15,567
WA 8119	22.9	19,782
WA 8139	32.8	13,811
WA 8156	36.9	12,276
WA 8157	35.3	12,833
WA 8158	24.3	18,642

Table 7. 2012 WSU Spring Wheat Variety Trial Seed Weight

Name	1000 KW (grams)	Seeds per Pound
Soft White Common		
Alpowa	38.9	11,645
Alturas	37.8	11,984
ARS03173LS	42.4	10,684
Babe	30.3	14,950
Diva	49.2	9,207
IDO599	38.6	11,736
IDO669	41.1	11,022
IDO671	36.9	12,276
IDO686	36.3	12,479
IDO687	36.8	12,310
Louise	51.3	8,830
Louise-0W	51.8	8,745
Louise-G2	50.5	8,970
Nick	48.0	9,438
WA 8124	32.9	13,769
WA 8161	41.6	10,889
WA 8162	39.3	11,527
Wakanz	43.5	10,414
WB-1035CL+	44.8	10,112
Whit	40.7	11,130
Zak	44.3	10,226
Soft White Club		
JD	43.6	10,390
WA 8131	35.0	12,943
ARS03174CS	37.4	12,112
WA 8160	42.4	10,684
Hard Red Spring		
Bullseye	44.2	10,249
Cabernet	42.5	10,659
Expresso	40.1	11,297
Glee (WA 8074)	47.3	9,577
Hank	50.8	8,917
Hollis	53.4	8,483
Jedd	42.6	10,634
Jefferson	36.2	12,514
Kelse	48.0	9,438
Lassik	38.2	11,859
LCS- Powerplay	38.8	11,675
LCS-ALbany	26.1	17,356
LCS-Buck Pronto	45.6	9,934
Malbec	39.7	11,411
Scarlet	43.5	10,414
Solano	40.3	11,241
SY605 CL	34.8	13,017
Tara 2002	45.1	10,044
UI Winchester	44.5	10,180
V272	41.4	10,942
Volt	35.0	12,943
WA 8164	42.9	10,559
WA 8165	45.7	9,912
WA 8166	44.5	10,180
WA 8167	42.9	10,559
WB-Fuzion	46.3	9,784
WB-Rockland	45.5	9,956
Westbred 926	40.0	11,325
Hard White Spring		
BR7030	43.5	10,414
Clear White 515	44.5	10,180
IDO694	34.2	13,246
Otis	44.9	10,089
Patwin 515	44.3	10,226
WA 8123	36.4	12,445
WA 8163	37.8	11,984
WB Heartland	58.5	7,744

Table 8. 2012 WSU Spring Barley Variety Trial Seed Weight

Name	1000 KW (grams)	Seeds per Pound
2-row		
Baronesse	43.8	10,342
Bentley	53.5	8,467
Bob	56.0	8,089
CDC Copeland	53.0	8,547
CDC Meredith	48.6	9,321
Champion	53.0	8,547
Harrington	44.8	10,112
Lenetah	48.3	9,379
LSC LN09-0920	49.8	9,096
Radiant	48.2	9,398
05WA-316.99	47.8	9,477
05WA-316.K	48.2	9,398
06WA-412.4	41.9	10,811
07WA-601.6	47.1	9,618
07WA-614.4	46.1	9,826
07WA-682.1	46.6	9,721
08WA-107.8	52.2	8,678
08WA-109.17	46.0	9,848
08WA-118.12	51.9	8,728
08WA-137.6	43.1	10,510
08WA-140.11	47.1	9,618
2004NZ151	45.8	9,891
2004NZ163	47.7	9,497
2004NZ170	50.0	9,060
2Ab04-X01084-27	45.5	9,956

Name	1000 KW (grams)	Seeds per Pound
2-row Waxy		
X05013-T267	42.8	10,584
2-row Waxy Hulless		
09WA-265.14	42.4	10,684
2Ab09-X06F058HL-23	41.2	10,995
Meresse	40.3	11,241
X05056-T211	44.4	10,203

Table 9. 2012 WSU Spring Dry Pea Entries

Name	Originator	Class
Aragorn	ProGene	Green
Ariel	Crop & Food Res., NZ	Green
Banner	ProGene	Green
Columbian	Campbell Soup Co.	Green
Pacifica	ProGene	Green
PS07100471	USDA - WSU	Green
PS05100736	USDA - WSU	Green
PS05100840	USDA - WSU	Green
PS03101445	USDA - WSU	Green
PS07100470	USDA - WSU	Green
PS05100735	USDA-WSU	Green
NDP080111	NDSU	Green
PS07ND0190	USDA-WSU	Green
Pro 7040	ProGene	Green
Pro 081-7116	ProGene	Green
Pro 091-7137	ProGene	Green
Carousel	ProGene	Yellow
Universal	ProGene	Yellow
PS03101822	USDA - WSU	Yellow
PS07100925	USDA-WSU	Yellow
PS08101108	USDA-WSU	Yellow
PS08101004	USDA-WSU	Yellow
Pro 822	ProGene	Yellow
Pro 793	ProGene	Yellow

Table 10. 2012 WSU Lentil Entries

Name	Originator	Class
LC016022273E	USDA-WSU	Eston
LC05600812E	USDA-WSU	Eston
LC08600005E	USDA-WSU	Eston
LC07ND068E	NDSU	Eston
LC07ND055E	NDSU	Eston
Riveland	USDA-WSU	Laird
Eston	U. of Saskatchewan	Eston
LC08600113P	USDA-WSU	Pardina
LC08600116P	USDA-WSU	Pardina
Pardina	Spain	Pardina
Morena	USDA-WSU	Pardina
LC06601734L	USDA-WSU	Laird
LC0700376L	USDA-WSU	Laird
LC07600536L	USDA-WSU	Laird
LC0860B123L	USDA-WSU	Laird
Brewer	USDA-WSU	Laird
Merrit	USDA-WSU	Laird
LC01602300R	USDA_WSU	Laird
Richlea	CDC - Ag. Canada	Richlea
LC01602062T	USDA-WSU	Turkish Red
LC05600043T	USDA-WSU	Turkish Red
LC07ND176T	NDSU	Turkish Red
LC07ND202T	NDSU	Turkish Red
Crimson	USDA-WSU	Turkish Red

Table 11. 2012 WSU Chickpea Entries

Name	Originator
Dwelley	USDA-WSU
Evans	USDA-WSU
Sawyer	USDA-WSU
Sierra	USDA-WSU
Billy beans	Spain
CA0390B007C	USDA_WSU
CA04900421C	USDA-WSU
CA04900843C	USDA-WSU
CA0690B0250C	USDA-WSU
CA0790B0043C	USDA-WSU
CDC Alma	CDC - Ag. Canada
CDC Orion	CDC - Ag. Canada
CDC Frontier	CDC - Ag. Canada

Table 12. 2012 WSU Legume Trials Seed Weight

Name	100 seed wt (grams)	Seeds per Pound
Peas		
Aragorn	18.2	2,492
Ariel	16.7	2,716
Banner	19.2	2,362
Columbian	17.9	2,534
Pacifica	19.5	2,326
PS07100471	22.7	1,998
PS05100736	23.9	1,898
PS05100840	21.9	2,071
PS03101445	23.5	1,930
PS07100470	23.6	1,922
PS05100735	24.6	1,844
NDP080111	17.4	2,607
PS07ND0190	18.7	2,426
Pro 7040	19.6	2,314
Pro 081-7116	20.0	2,268
Pro 091-7137	18.0	2,520
Carousel	22.5	2,016
Universal	19.6	2,314
PS03101822	26.9	1,686
PS07100925	25.8	1,758
PS08101108	27.6	1,643
PS08101004	25.3	1,793
Pro 822	21.7	2,090
Pro 793	22.3	2,034

Name	100 seed wt (grams)	Seeds per Pound
Lentils		
LC016022273E	3.6	12,583
LC05600812E	3.2	14,156
LC08600005E	4.1	11,049
LC07ND068E	3.9	11,615
LC07ND055E	3.3	13,727
Riveland	8	5,663
Eston	3.4	13,324
LC08600113P	5	9,060
LC08600116P	5.4	8,389
Pardina	4.3	10,535
Morena	4.3	10,535
LC06601734L	7.8	5,808
LC0700376L	7.6	5,961
LC07600536L	7.3	6,205
LC0860B123L	9.5	4,768
Brewer	6.1	7,426
Merrit	7.1	6,380
LC01602300R	5.2	8,712
Richlea	5.4	8,389
LC01602062T	5	9,060
LC05600043T	4.8	9,438
LC07ND176T	3.2	14,156
LC07ND202T	2.9	15,621
Crimson	3.6	12,583
Chickpeas		
Dwelley	55.1	822
Evans	41.4	1,094
Sawyer	46.3	978
Sierra	55.6	815
Billy beans	31.1	1,457
CA0390B007C	56.6	800
CA04900421C	55	824
CA04900843C	64.8	699
CA0690B0250C	54.8	827
CA0790B0043C	57.8	784
CDC Alma	40.2	1,127
CDC Orion	48.1	942
CDC Frontier	37.1	1,221

Table 13. Cultural Data for 2012 WSU Winter Wheat Variety Trial Locations.

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Fertilizer		Planting				Harvest Area	Harvest Date	Crop Year Pptn.	Soil Type	Soil pH	Location Data		
			Base	Hard Trial Additional	Date	Rate (lb/A)	Planter Type[1]	Row Space (in)	(ft.^{2})		(in.)			Elevation	Latitude	Longitude
< 12	Connell	Fallow	70N 10S	---	5-Sep	50	DF	15	72	24-Jul	10.26	Ritzville	5.6	1194	N46 36.099	W118 45.308
	Harrington	Fallow	70N	---	20-Sep	50	DF	15	48	31-Jul	7.32	Renslow Silt Loam	---		N47.40747	W118.25336
	Lind	Fallow	50N 10S	---	12-Sep	50	DF	15	72	26-Jul	9.07	Ritzville	5.8	1607	N47 00.144	W118 34.296
	Ritzville	Fallow	60N 10S	48N 7S	12-Sep	50	DF	15	72	3-Aug	11.57	Ritzville	6.1	1860	N47 08.290	W118 28.350
	St. Andrews	Fallow	50N 10S	---	13-Sep	50	DF	15	72	1-Aug	7.59	Siweeka	6.1	2387	N47 38.494	W119 26.050
12-16	Almira	Spring Wheat	85N 10S	24N 4S	13-Sep	85	DD	6	51	8-Aug	11.49	Bagdad Silt Loam	5.1	2303	N47 48.983	W118 51.898
	Anatone	Fallow	80N 15S 5K	---	10-Oct	85	DD	6	51	10-Aug	15.11	Neconda and/or Ferdinand Silt Loam	---	3264	N46 10.619	W117 06.692
	Creston	Chem Fallow	n.d.[#]	---	27-Sep	85	DD	6	51	21-Aug	14.82	Bagdad Silt Loam	---		N47 47.247	W118 40.298
	Dusty	Fallow	75N 10S	---	16-Sep	85	DD	6	51	15-Aug	18.43	Onyx Silt Loam	---	1562	N46 51.765	W117 42.120
	Lamont	Fallow	80N 30S	---	15-Sep	85	H	9	51	16-Aug	16.72	Athena Silt Loam	4.9	1951	N47 09.146	W117 50.479
16-20	Dayton	Fallow	35N 15P 15S 10(	110N 17S	28-Sep	85	DD	6	51	7-Aug	22.80	Mondovi	5.2	1990	N46 23.244	W118 03.306
	Mayview	Fallow	85N 15S	---	8-Oct	85	DD	6	51	13-Aug	23.63	Athena Silt Loam	---		N47 36.988	W117 24.763
	Reardan	Chem Fallow	92N 20P	---	23-Sep	85	DD	6	51	22-Aug	14.30	Hanning Silt Loam	5.5	2523	N47 41.253	W117 49.124
	St. John	Fallow	90N 15P	---	27-Sep	85	DD	6	51	23-Aug	12.36	Athena Silt Loam	---	2220	N47 04.876	W117 31.011
	Walla Walla	Chem Fallow	114N 20P 20S	---	28-Sep	85	NT	10	60	2-Aug	23.85	Walla Walla Silt Loam	5.7		N46 09.895	W118 17.710
> 20	Colton	Lentils	114N 20P 20S	---	29-Sep	95	NT	10	60	20-Aug	20.02	Latah Silt Loam	---	2610	N46 33.403	W117 07.899
	Fairfield	Sp. Barley	114N 20P 20S	---	13-Oct	95	NT	10	60	24-Aug	15.91	Palouse Silt Loam	---	2675	N46 31.275	W116 59.428
	Farmington	Peas	114N 20P 20S	---	29-Sep	95	NT	10	60	24-Aug	22.14	Thatuna Silt Loam	---		N47 04.885	W117 03.195
	Pullman	Garbanzo Beans	20N 32P 30S 15	10N	19-Oct	95	DD	6	51	14-Aug	23.11	Latah and/or Reardan Silt Loam	5.5		N46 41.713	W117 07.753
Irrigated	Moses Lake	Potatoes	200N 100P	38N 6S	18-Oct	95	DD	6	51	14-Aug	---	Timmerman Coarse Sandy Loam	5.0		N46 07.638	W119 40.202

[1] - DF = Deep Furrow: DD = Double Disc; H = Hoe openers; NT = No-till Cross Slot

[#] - no data

50# = 12.5 Seeds/Ft

85# = 21.5 Seeds/Ft

95# = 23.75 Seeds/Ft

Table 14. Cultural Data for the 2012 WSU Spring Wheat and Barley Variety Trial Locations.

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Fertilizer		Planting					Harvest Area	Precipitation		Harvest Date	Soil Type	Soil pH	Location Data		
			Base	Additional	Date	Rate (lb/A)		Planter Type[1]	Row Space		Soil Moisture	Rainfall				Elevation	Latitude	Longitude
						Wheat	Barley		(in)	($ft.^2$)	(in)	(in)						
< 12	Bickleton	Spring Wheat	10P 10S	--	13-Apr	60		NT-H	12	80	5.08	4.09	5-Sep	Broadax Silt Loam	6.0	2824	N45 59.207	W120 14.441
	Connell	Fallow	70N 10S	--	2-Apr	80		DD	6	64	3.59	6.11	31-Jul	Ritzville	5.6	1159	N46 36.097	W118 45.342
	Horse Heaven	Chem Fallow	10P 10S	--	23-Mar	60		NT-H	12	80	2.71	1.30	1-Aug	Shano Silt Loam	6.0	1072	N46 07.677	W119 41.044
	Lind	Fallow	50N 10S	--	9-May	60		DD	6	80	3.39	6.38	1-Aug	Ritzville	5.9		N47 00.340	W118 33.580
12-16	Almira	Winter Wheat	75N 10S	--	24-Apr	80	80	DD	6	80	7.25	5.18	29-Aug	Bagdad Silt Loam	5.5	2655	N47 49.903	W118 53.693
	Endicott	Spring Wheat	20N 3P 3S	40N 7P 7S	7-May	80		NT-X	10	80		7.56	23-Aug	Onyx Silt Loam	7.4		N46 55.048	W117 34.141
	Lamont	Winter Wheat	80N 30S	--	19-Apr	80	80	DD	6	72	7.72	6.95	31-Aug	Athena Silt Loam	5.0	1861	N47 08.076	W117 49.540
16-20	Dayton	Winter Wheat	142N 10P 20S	10N	1-May	80	90	DD	6	80	7.22	9.22	28-Aug	Mondovi	5.4	2043	N46 23.645	W118 03.365
	Mayview	Winter Wheat	70N 10S	--	24-Apr	80	80	DD	6	80	9.06	7.95	30-Aug	Athena Silt Loam	5.9	2415	N46 36.256	W117 24.201
	Reardan	Winter Wheat	77N 14P 14S	34N 6P 6S	23-Apr	80		NT-X	10	80		6.36	4-Sep	Hanning Silt Loam	5.5		N47 41.257	W117 48.100
	Reardan BLY	Winter Wheat	77N 14P 14S	--	20-Apr		90	NT-H	12	80		---	4-Sep	Hanning Silt Loam	5.5			
	St. John	Winter Wheat	80N 10P	36N	13-Apr	80	90	DD	6	72	8.84	5.85	4-Sep	Athena Silt Loam	5.8		N47 04.788	W117 31.180
	Walla Walla	Winter Wheat	120N 10P 15S	--	22-Apr	80	90	DD	6	80	10.31	7.99	27-Aug	Walla Walla Silt Loam	5.1	1648	N46 11.775	W118 06.666
> 20	Fairfield	Winter Wheat	90N 16P 16S	--	21-Apr	90	90	NT-X	10	80	9.22	5.60	10-Sep	Palouse Silt Loam	5.3	2578	N47 24.337	W117 13.586
	Farmington	Winter Wheat	120N 27S 7P	30N 3S 3P	11-May	90	90	NT-X	10	80	11.66	8.20	17-Sep	Thatuna Silt Loam	5.6	2433	N46 57.804	W117 05.656
	Pullman, SW	Winter Barley	100N 20P 20S	--	25-Apr	90		DD	6	80		6.24	15-Aug	Latah and/or Reardan Silt Loam	5.8		N46 41.918	W117 08.075
	Pullman, BLY	Winter Wheat	100N 20P 20S	--	9-May		90	DD	6	80		---	20-Aug	Latah and/or Reardan Silt Loam				
Irrigated	Moses Lake	Potatoes	250N	100N	23-Mar	100		DD	6	80		---	9-Aug	Timmerman Coarse Sandy Loam	8.4		N47 00.871	W119 16.470

[1] - DD = double disc drill; NT-X = Cross Slot; NT-H = No Till Hoe

60# = 15 Seeds/Ft (wheat)/18 Seeds/Ft (barley)

80# = 20 Seeds/Ft (wheat)/24 Seeds/Ft (barley)

90# = 22.5 Seeds/Ft (wheat)/27 Seeds/Ft (barley)

100# = 25 Seeds/Ft (wheat)/30 Seeds/Ft (barley)

Table 15. Cultural Data for the 2012 WSU Spring Grain Legume Variety Trial Locations.

Average Annual Rainfall (in)	Nursery Location	Experiment	Previous Crop	Planting					Harvest Area	Season Precip.	Harvest Date	Soil Type	Location Data		
				Date	Rate		Planter Type[1]	Row Space					Elevation	Latitude	Longitude
					Seeds/Ft^2	Lbs/A		(in)	(ft.^{2})	(in)					
12-16	Dusty	Pea	Winter wheat	10-Apr	8	150	DD	6	64	7.26	1-Aug	Walla Walla Silt Loam	---	N46 47.960	W117 48.120
		Lentil		10-Apr	9	60					1-Aug				
		Chickpea		10-Apr	5	240					17-Aug				
16-20	Farmington	Pea	Spring wheat	17-May	8	150	DD	6	64	8.20	30-Aug	Thatuna Silt Loam	2622	N47 02.270	W117 02.972
		Lentil		17-May	9	60					30-Aug				
		Chickpea		17-May	5	240					25-Sep				
> 20	Palouse	Pea	Winter wheat	15-May	8	150	DD	6	64	6.24	20-Aug	Latah and/or Reardan	2646	N46 46.214	W117 02.987
		Lentil		15-May	9	60					20-Aug	Silt Loam			
		Chickpea		15-May	5	240					6-Sep				
	Walla Walla	Pea	Winter wheat	23-Apr	8	150	DD	6	64	7.86	26-Jul	Walla Walla Silt Loam	1092	N46 03.227	W118 16.638
		Lentil		23-Apr	9	60					9-Aug				
		Chickpea		23-Apr	5	240					17-Aug				

[1] - DD = double disc drill

Figure 1.

2012 WSU Variety Testing Program PNW Crop Tour Schedule

The 2012 crop tour season will soon be starting and provides opportunities to view field trials and interact with Washington State University personnel and others about cereal varieties and crop management practices. Cereal breeders, extension agronomists, end-use quality experts, and plant pathologists will be presenting information at various events. The small grain variety and research tours, listed below, provide a guide for wheat and barley tours in Washington and nearby locations.

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

– Stephen Guy, WSU Extension Agronomist

Date	*Time*	*Location*	*Contact*
30-May	9:00 AM	Horse Heaven	Steven Norberg, 509-545-3511
5-Jun	6:00 PM	Connell	Steven Norberg, 509-545-3511
7-Jun	8:00 AM	Western Whitman County Tour	Steve Van Vleet, 509-397-6290
7-Jun	1:00 PM	Ritzville	Aaron Esser, 509-659-3210
12-Jun	8:30 AM	Pendleton Field Day	Don Wysocki, 541-278-4396
13-Jun	7:30 AM	Sherman Station Field Day	Don Wysocki, 541-278-4396
13-Jun	8:00 AM	Moses Lake - irrigated with CHS	Andy McGuire, 509-754-2011
13-Jun	6:00 PM	Harrington	Diana Roberts, 509-477-2167
14-Jun	8:30 AM	Lind Field Day	Bill Schillinger, 509-235-1933
14-Jun	4:00 PM	Almira	Diana Roberts, 509-477-2167
15-Jun	6:00 PM	St. Andrews	Dale Whaley, 509-745-8531
18-Jun	4:00 PM	Whitman County/Spillman Tour	Steve Van Vleet, 509-397-6290
19-Jun	7:00 AM	Fairfield	Diana Roberts, 509-477-2167
20-Jun	7:00 AM	Reardan	Diana Roberts, 509-477-2167
20-Jun	10:00 AM	Wilke Farm	Aaron Esser, 509-659-3210
20-Jun	1:00 PM	WSU Weed Science Field Tour	Ian Burke, 509-335-2858
21-Jun	7:30 AM	UI Weed Science Tour	Don Thill, 208-885-6214
21-Jun	9:00 AM	Mayview	Mark Heitstuman, 509-243-2009
21-Jun	2:30 PM	Anatone	Mark Heitstuman, 509-243-2009
26-Jun	3:00 PM	Walla Walla	Paul Carter, 509-382-4741
26-Jun	6:00 PM	Walla Walla	Paul Carter, 509-382-4741
27-Jun	8:30 AM	Dayton	Paul Carter, 509-382-4741
27-Jun	1:00 PM	Bickelton	Susan Kerr, 509-773-5817
10-Jul	6:00 PM	Colton (PNW Farmers Cooperative)	Steve Van Vleet, 509-397-6290
11-13 July		WSCS* & WWW Meeting - Pullman	Kim Campbell, 509-335-0582
17-Jul	2:00 PM	St. John	Steve Van Vleet, 509-397-6290
17-Jul	5:00 PM	Lamont	Steve Van Vleet, 509-397-6290

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2012 Soft White Winter Wheat

2012 WSU Soft White Winter Wheat Trial Summary
Precipitation Zone >20”

1. Soft white winter wheat grain yield across five 2012 locations (four rain-fed and one irrigated) and 48 entries in the >20” precipitation zone averaged 106 bushels/acre, 33 bushels/acre lower than the 2011 average of 139 bushels/acre and 27 bushels/acre lower than the 2010 average of 133 bushels/acre. The CV value of 7% for the 2012 average data was similar to the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged narrowly from 92 to 113 bushels/acre. ‘Tubbs 06’ was the highest yielding named variety. There are 10 entries indicated in bold within the top LSD (0.10) range of 4 bushels/acre. Stripe rust levels were mostly low to moderate and rust was effectively controlled with fungicide applications except for Farmington, a planned non-treated site, but there was little or no stripe rust impact at Farmington.
3. Test weight averaged 59.1 lbs/bu across all trials and was much lower than last year’s 61.7 lbs/bu average. Grain protein averaged 10.5% a little higher than protein level as in 2011.

2012 WSU Soft White Winter Wheat Trial Summary
Precipitation Zone 16”-20”

1. Soft white winter wheat grain yield across five 2012 locations and 48 entries in the 16”-20” precipitation zone averaged 110 bushels/acre, 29 bushels/acre lower than the 2011 average of 139 bushels/acre and 9 bushels/acre lower than the 2010 average of 119 bushels/acre. The CV value of 7% for the 2012 average data was lower than the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 92 to 122 bushels/acre and reflected a mostly average growing season. ‘LCS-Artdeco’ was the highest yielding named variety followed by the club ‘ARS-Crescent’. There are four entries indicated in bold within the top LSD (0.10) range of 3 bushels/acre. Stripe rust levels were mostly moderate and rust was effectively controlled with fungicide applications except for St. John, a planned non-treated site, and there was a significant level of stripe rust impact at St. John on susceptible entries.
3. Test weight averaged 60.7 lbs/bu across all trials and was close to last year’s 60.6 lbs/bu average. Grain protein averaged 10.2% the same protein level as 2011.

2012 WSU Soft White Winter Wheat Trial Summary
Precipitation Zone 12”-16”

1. Soft white winter wheat grain yield across five 2012 locations and 48 entries in the 12”-16” precipitation zone averaged 100 bushels/acre, 9 bushels/acre lower than the 2011 average of 109 bushels/acre and 15 bushels/acre lower than the 2010 average of 115 bushels/acre. The CV value of 8% for the 2012 average data was lower than the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 88 to 114 bushels/acre and reflected a mostly average growing season. ‘Tubbs 06’ was the highest yielding named variety, but two numbered lines from Oregon were higher averaged across locations within the top 10% LSD range (4 bushels/acre) and are indicated in bold. Stripe rust levels were mostly moderate and rust was effectively controlled with fungicide applications except for Dusty, a planned non-treated site, and there was a moderate level of stripe rust impact at Dusty on susceptible entries.
3. Test weight averaged 60.4 lbs/bu across all trials and was close to last year’s 60.5 lbs/bu average. Grain protein averaged 11.0% and was higher than last year’s 10.4% value.

2012 WSU Soft White Winter Wheat Trial Summary
Precipitation Zone <12”

1. Soft white winter wheat grain yield across five locations and 48 entries in the <12” precipitation zone averaged 57 bushels/acre, 5 bushels/acre lower than the 2011 average of 62 bushels/acre but 7 bushels/acre higher than the 2010 average of 50 bushels/acre. The CV for the average data was 11% similar to the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 41 to 66 bushels/acre and reflected a mostly average growing season. ‘Xerpha’ ‘Chukar’ and ‘Rod’ were the highest yielding named varieties averaged across locations and were the named varieties in the top 10% LSD range (3 bushels/acre) of the highest yield and are shown in bold. Stripe rust was effectively controlled with fungicide application except for Connell, a planned non-treated site, but had little stripe rust impact.
3. Test weight averaged 59.7 lbs/bu across locations and entries and was lower than last year’s 61.0 lbs/bu average. Grain protein averaged 11.1% and was higher than last year’s 10.5% value.

Table 16. **2012 WSU Variety Testing Soft White Winter Wheat Trial Summary**

Precipitation Zone >20"

Variety Name *(Club Italicized)*	Yield (Bu/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Colton	Fairfield	Farmington	Moses Lake *(Irrigated)*	Pullman	Average	Colton	Fairfield	Farmington	Moses Lake *(Irrigated)*	Pullman	Average	Colton	Fairfield	Farmington	Moses Lake *(Irrigated)*	Pullman	Average
Tubbs 06	135	53	128	127	121	**113**	59.6	57.8	60.5	54.2	59.7	58.4	8.3	11.4	9.8	13.6	8.8	10.4
OR08047P94	132	67	114	135	112	**112**	59.1	57.9	59.5	53.7	58.1	57.7	8.9	10.0	10.6	12.2	9.4	10.2
Eltan/Tubbs 06	129	55	120	138	114	**111**	58.5	59.6	60.5	56.2	58.5	58.7	8.1	10.0	10.0	12.2	9.0	9.9
WA 8134	133	54	117	135	116	**111**	60.3	58.6	61.2	56.3	60.3	59.4	8.5	11.1	10.6	12.9	9.1	10.5
Xerpha	129	63	114	136	112	**111**	60.6	61.0	61.0	56.0	60.1	59.7	9.5	10.7	10.9	11.7	9.4	10.4
ARS-Chrystal (ARS970075-3C)	128	58	112	145	106	**110**	60.2	59.1	61.0	58.4	60.8	59.9	8.6	10.6	10.6	11.9	9.6	10.3
WA 8153	121	61	112	143	111	**110**	60.7	59.7	61.0	58.0	61.2	60.1	8.8	11.0	10.3	13.0	9.6	10.6
OR2071628	127	55	115	139	111	**109**	59.2	58.5	59.7	55.3	59.3	58.4	7.5	10.4	10.3	10.6	9.1	9.6
WA 8154	124	58	118	129	116	**109**	61.3	60.1	62.0	59.2	61.5	60.8	8.8	11.0	10.7	11.3	9.4	10.2
ARS990077-1C	132	62	115	124	110	**109**	59.3	59.6	60.0	57.1	59.4	59.1	8.0	10.2	10.7	12.5	9.7	10.2
Rod	133	54	118	120	116	108	59.3	58.6	60.3	53.7	59.3	58.3	9.6	10.7	9.9	12.1	9.4	10.3
ARS-Crescent (ARS970163-4C)	137	72	115	106	112	108	60.2	58.7	60.7	54.5	59.4	58.7	9.1	9.1	9.9	11.8	8.6	9.7
LWW-04-4009	122	49	116	132	120	108	60.2	58.8	61.5	58.1	61.1	60.0	7.9	11.4	10.1	12.9	9.0	10.3
ORCF-102	121	58	114	134	112	108	60.0	59.3	61.1	56.7	60.4	59.5	8.6	10.9	10.4	13.2	9.4	10.5
WA 8152	120	64	114	134	107	108	61.0	60.4	61.3	57.2	59.7	59.9	8.8	10.4	11.4	13.8	10.1	10.9
Madsen/Rod	127	56	111	127	113	107	59.9	58.5	60.6	55.4	59.8	58.9	8.5	11.3	10.3	12.5	9.2	10.4
LCS-Artdeco (NSA06-2153A)	129	51	112	137	105	107	59.8	57.7	60.2	55.4	60.8	58.8	8.7	11.3	11.0	11.3	9.7	10.4
Otto (WA 8092)	118	56	108	135	116	107	60.0	59.5	60.0	56.1	53.8	57.9	8.4	10.4	10.6	12.8	10.1	10.5
WA 8151	124	51	116	125	117	107	59.6	58.7	61.2	54.5	60.2	58.8	7.2	11.3	10.6	12.5	9.1	10.1
ARS-Amber (ARS960277L)	133	57	110	119	115	107	60.5	59.5	61.0	56.3	60.3	59.5	8.2	10.6	10.2	13.5	9.2	10.3
ARS970277L reselect	125	55	107	128	117	107	60.4	59.5	61.0	55.0	60.3	59.2	9.0	11.0	10.4	12.5	9.2	10.4
OR2701071	115	55	119	132	112	107	57.8	56.7	58.1	53.4	57.5	56.7	8.4	11.3	10.2	11.6	9.1	10.1
Stephens	124	45	112	133	118	106	60.1	57.9	61.2	55.9	61.1	59.2	8.1	12.3	10.7	12.2	9.6	10.6
Madsen	123	60	113	123	112	106	60.1	58.7	60.9	57.0	60.4	59.4	8.9	10.7	10.9	11.9	9.6	10.4
Mary (OR2040726)	118	55	118	151	87	106	61.3	59.6	61.9	59.1	60.9	60.6	8.7	10.4	10.1	9.8	9.2	9.6
ORCF-103	129	69	122	94	114	106	59.6	58.0	60.2	53.0	58.8	57.9	9.0	10.1	10.2	12.8	9.2	10.3
ARS970161-3L	127	53	120	125	103	106	61.7	60.4	62.1	59.5	61.3	**61.0**	10.4	11.4	10.8	12.6	9.7	**11.0**
Masami	131	50	118	121	107	106	59.6	56.9	59.9	54.1	59.0	57.9	8.1	10.7	10.0	12.1	9.1	10.0
ARS970161-2L	126	48	118	126	110	106	62.0	59.6	62.0	59.0	61.4	60.8	9.4	12.2	10.9	12.4	9.7	10.9
Goetze/Skiles	114	51	109	144	106	105	60.7	59.4	60.6	56.0	60.7	59.5	8.9	11.9	11.2	12.3	10.4	10.9
Bruehl	122	64	112	120	105	105	56.8	56.5	58.0	52.8	57.2	56.3	9.5	10.4	10.4	12.3	9.2	10.4
WA 8135	118	61	111	126	106	104	60.6	61.2	61.7	58.0	61.3	60.6	7.9	10.7	11.4	13.2	10.0	10.7
Chukar	129	60	117	115	100	104	59.4	58.8	59.5	55.0	58.5	58.2	9.0	10.4	10.6	13.6	9.4	10.6
WB-528	109	46	101	150	114	104	61.0	59.8	61.9	58.9	62.0	60.7	9.0	12.0	11.6	12.5	10.0	**11.0**
WA 8142	113	58	111	135	102	104	61.1	60.5	62.2	57.7	61.5	60.6	8.6	12.1	11.3	12.2	10.2	10.9
OR2070870	118	64	105	132	98	103	60.1	59.5	60.5	56.2	60.5	59.4	9.3	11.8	10.9	12.1	10.2	10.9
Skiles	116	60	110	127	103	103	61.9	60.3	61.8	56.4	61.6	60.4	9.4	11.5	11.7	12.6	10.4	**11.1**
ARS010780-3C	126	52	110	122	106	103	60.5	59.2	60.3	57.8	60.0	59.6	9.6	11.7	11.0	13.5	9.8	**11.1**
ARS010762-2C	120	54	107	130	101	103	59.7	57.8	59.7	56.5	59.0	58.5	9.8	11.3	11.0	11.5	10.1	10.7
WA 8116	120	64	107	110	112	103	60.6	59.8	60.8	56.0	58.0	59.1	7.9	10.8	10.7	13.4	9.6	10.5
WA 8143	121	61	106	110	113	102	60.1	60.4	60.4	55.2	56.5	58.5	7.8	10.0	10.6	12.7	9.3	10.1
Eltan	114	66	110	109	110	102	60.5	59.9	60.5	55.8	56.5	58.6	8.1	10.2	10.0	12.2	9.3	10.0
IDO663	121	36	104	146	100	101	60.4	57.4	61.8	55.7	61.5	59.4	8.8	12.4	11.1	12.4	9.7	10.9
WA 8155	113	68	108	100	115	101	60.6	60.9	60.3	54.4	56.1	58.5	7.8	9.8	10.2	12.7	9.1	9.9
WA 8137	117	47	107	124	105	100	61.4	59.4	62.2	56.7	60.1	60.0	8.9	11.5	10.6	12.9	9.2	10.6
Coda	127	49	105	110	106	99	62.3	61.8	62.7	58.6	62.3	**61.5**	9.9	11.8	11.6	13.2	9.9	**11.3**
Cara	123	60	103	106	98	98	58.4	58.4	59.7	53.5	58.1	57.6	8.8	10.6	11.1	14.3	10.1	**11.0**
WA 8136	102	40	103	106	106	92	56.8	56.2	58.3	50.3	53.8	55.1	8.4	11.6	11.0	12.5	10.1	10.7
C.V. %	5	10	4	10	7	7	0.9	1.2	0.6	3.4	0.9	1.6	9.1	6.1	2.8	9.7	2.4	7.0
LSD (0.10)	7	6	5	13	8	4	0.5	0.8	0.4	2.0	0.6	0.5	0.8	0.7	0.3	1.3	0.2	0.3
Average	123	56	112	127	109	106	60.1	59.1	60.7	56.0	59.6	59.1	8.7	11.0	10.6	12.5	9.5	10.5
Highest	137	72	128	151	121	113	62.3	61.8	62.7	59.5	62.3	61.5	10.4	12.4	11.7	14.3	10.4	11.3
Lowest	102	36	101	94	87	92	56.8	56.2	58.0	50.3	53.8	55.1	7.2	9.1	9.8	9.8	8.6	9.6

Table 17. **2012 WSU Variety Testing Soft White Winter Wheat Trial Summary**

Precipitation Zone 16-20"

Variety Name *(Club Italicized)*	Yield (Bu/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
LCS-Artdeco (NSA06-2153A)	155	89	73	145	146	**122**	61.7	61.3	59.4	59.7	61.2	60.7	9.5	9.5	11.6	9.6	9.7	10.0
ARS-Crescent (ARS970163-4C)	141	103	82	131	142	**120**	61.5	60.7	59.8	59.9	60.9	60.6	9.2	8.9	10.1	9.0	9.1	9.3
OR2701071	134	99	78	137	146	**119**	59.3	58.0	59.1	57.3	58.8	58.5	9.7	9.0	10.7	9.1	9.6	9.6
Chukar	143	97	80	136	136	**119**	60.9	58.7	59.2	59.0	59.8	59.5	9.6	8.7	11	9.3	9.3	9.6
WA 8134	141	98	82	131	137	118	62.0	61.1	60.9	60.3	61.1	61.1	10.1	9.7	11.9	10.7	9.6	10.4
OR08047P94	146	88	80	135	139	118	60.2	58.7	57.9	57.7	59.9	58.9	9.6	9.5	10.4	10.0	9.7	9.8
ARS-Amber (ARS960277L)	143	105	72	134	133	117	61.5	60.5	61.7	60.2	61.3	61.1	9.3	9.7	11.8	9.4	9.4	9.9
ARS970161-3L	146	89	79	134	137	117	63.7	62.0	62.4	62.1	62.2	**62.5**	9.9	9.8	11.7	10.2	9.6	10.2
ARS970277L reselect	136	102	77	131	131	116	61.5	60.8	61.3	59.4	60.8	60.8	9.4	9.8	12.1	9.4	9.2	10.0
ARS970161-2L	130	90	82	128	145	115	63.4	61.7	62.2	61.9	62.7	**62.4**	10.0	10.1	11.7	10.2	10.3	10.5
LWW-04-4009	134	107	80	127	126	115	62.5	62.1	62.1	60.6	62.1	61.9	9.9	9.5	12.4	10.1	9.9	10.4
ARS-Chrystal (ARS970075-3C)	148	90	75	124	134	114	62.6	60.4	60.1	60.4	61.9	61.1	9.7	9.9	11.1	9.2	9.5	9.9
WA 8153	139	96	67	135	133	114	62.2	62.0	61.5	60.5	61.3	61.5	9.9	10.8	13.4	10.6	10.1	**11.0**
IDO663	147	97	67	134	124	114	62.3	61.8	60.6	59.8	61.9	61.3	9.7	9.2	12.2	10.6	10.3	10.4
ARS990077-1C	139	100	73	127	130	114	61.3	60.2	60.8	59.3	60.4	60.4	10.0	9.5	11.6	9.4	9.4	10.0
Cara	140	97	74	126	130	113	61.0	59.2	59.4	59.1	59.7	59.7	9.8	9.5	12	9.8	9.5	10.1
WA 8151	133	94	75	126	138	113	61.8	60.4	60.8	59.1	61.0	60.6	9.8	9.8	11.9	10.2	9.5	10.3
Bruehl	138	104	81	126	115	113	58.4	58.1	59.2	56.7	58.5	58.2	9.5	8.9	10.6	10.2	10.0	9.8
Tubbs 06	131	106	85	109	132	113	60.6	60.0	60.5	57.9	60.4	59.9	9.4	9.0	11.3	9.3	9.2	9.6
Stephens	145	97	69	131	120	112	61.8	61.6	61.6	59.7	61.3	61.2	10.1	9.6	11.9	10.4	9.7	10.3
Madsen	137	94	73	128	126	111	61.9	61.3	60.4	60.3	61.4	61.1	11.1	9.8	11.9	11.1	10.3	10.8
WA 8152	148	92	68	124	122	111	62.0	60.5	60.6	60.2	62.0	61.1	10.3	10.0	12.6	9.4	10.3	10.5
Madsen/Rod	135	96	77	116	129	111	61.2	60.8	60.8	58.6	60.6	60.4	10.3	9.8	11.6	11.3	9.6	10.5
OR2071628	131	94	73	126	128	111	61.0	59.9	60.1	58.8	60.4	60.0	9.2	9.4	11.3	10.4	9.5	10.0
Eltan/Tubbs 06	141	99	81	108	121	110	60.9	60.2	60.8	57.7	61.0	60.1	9.4	9.0	11.5	10.0	9.3	9.8
Xerpha	133	101	87	96	132	110	61.4	61.5	60.9	56.4	60.7	60.2	9.6	9.7	11.4	12.1	9.3	10.4
WA 8137	140	94	75	108	133	110	62.7	61.8	62	60.0	62.0	61.7	9.7	9.3	11.5	9.6	9.8	10.0
Skiles	138	98	67	129	114	109	62.8	61.9	60.7	61.3	62.4	61.8	10.0	10.5	13.1	9.9	10.5	10.8
OR2070870	137	91	70	116	131	109	61.8	60.8	60.1	59.5	60.6	60.6	10.6	9.2	13.1	10.6	10.2	10.7
WA 8154	136	94	75	125	114	109	62.0	61.8	61.9	61.1	61.7	61.7	10.2	9.6	12	9.8	10.2	10.4
WB-528	141	99	63	120	120	109	62.7	62.6	62.4	61.5	62.5	**62.4**	9.5	9.8	13.2	10.3	10.0	10.6
Masami	133	92	75	115	125	108	60.7	59.4	59.6	58.1	60.6	59.7	9.7	9.0	10.6	9.1	9.4	9.6
WA 8116	136	99	74	107	123	108	62.5	61.1	61.3	59.9	61.9	61.3	9.4	9.7	11.6	9.5	10.2	10.1
Otto (WA 8092)	138	93	78	117	113	108	61.2	60.4	60.7	59.3	60.2	60.4	10.4	9.1	11.6	10.8	10.2	10.4
Rod	132	96	79	108	123	108	60.4	60.5	60.2	57.3	59.3	59.6	9.3	9.2	10.9	9.1	9.2	9.5
ORCF-102	133	97	75	105	124	107	61.9	61.4	61.3	59.5	62.0	61.2	9.6	9.0	12	10.5	9.8	10.2
ORCF-103	127	101	75	110	119	107	61.0	59.7	60.6	58.0	60.9	60.0	9.7	9.3	11	9.1	9.8	9.8
Coda	133	91	73	114	121	106	63.5	62.7	62.7	61.9	62.0	**62.6**	10.4	10.4	12.5	9.7	9.8	10.6
ARS010780-3C	129	73	75	128	127	106	62.5	60.6	60.6	60.9	61.3	61.2	10.7	10.9	11.9	10.9	10.2	10.9
Mary (OR2040726)	142	85	72	108	122	106	62.4	61.6	61.4	58.6	61.5	61.1	9.8	10.4	11.6	10.6	9.5	10.4
Goetze/Skiles	131	98	70	101	123	105	61.5	61.1	60.6	57.4	61.6	60.4	9.9	9.7	13.2	11.0	10.4	10.8
ARS010762-2C	135	78	65	115	124	103	61.4	58.7	57.9	59.2	60.0	59.5	10.3	9.9	12.1	10.1	10.1	10.5
WA 8136	125	87	75	109	115	102	59.5	58.5	58.5	56.6	59.1	58.4	9.7	9.9	11.6	8.9	9.9	10.0
WA 8142	130	81	61	121	116	102	62.5	62.8	61.3	61.4	62.1	62.0	11.1	10.6	13.5	10.4	10.9	**11.3**
WA 8135	130	73	67	115	113	100	63.0	62.2	61.2	61.3	62.5	62.0	10.8	10.6	11.8	11.1	10.5	**11.0**
WA 8143	102	100	84	101	95	96	60.4	61.0	61.2	59.1	59.9	60.3	9.5	9.4	11.2	9.8	10.3	10.0
WA 8155	102	97	82	104	84	94	60.9	61.2	61.6	59.6	59.3	60.5	9.5	9.4	10.9	9.2	10.3	9.9
Eltan	107	101	71	96	85	92	60.3	60.7	61.5	57.5	60.0	60.0	9.8	8.8	11.5	9.6	10.7	10.1
C.V. %	6	6	6.2	8	6	7	0.5	0.5	0.6	1.6	0.7	0.9	4.2	5.3	3.9	12.7	4.2	6.8
LSD (0.10)	9	6	4.9	10	8	3	0.3	0.3	0.4	1.0	0.4	0.2	0.4	0.5	0.5	1.3	0.4	0.3
Average	135	95	74.8	120	125	110	61.6	60.8	60.7	59.4	61.0	60.7	9.9	9.6	11.7	10.0	9.9	10.2
Highest	156	107	87.1	145	146	122	63.7	62.8	62.7	62.1	62.7	62.6	11.1	10.9	13.5	12.1	10.9	11.3
Lowest	102	73	61.2	96	84	92	58.4	58.0	57.9	56.4	58.5	58.2	9.2	8.7	10.1	8.9	9.1	9.3

Table 18. **2012 WSU Variety Testing Soft White Winter Wheat Trial Summary**

Precipitation Zone 12-16"

Variety Name *(Club Italicized)*	Yield (Bu/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Almira	Anatone	Creston	Dusty	Lamont	Average	Almira	Anatone	Creston	Dusty	Lamont	Average	Almira	Anatone	Creston	Dusty	Lamont	Average
OR08047P94	127	88	80	117	157	**114**	59.6	58.4	59.5	56.9	59.6	58.8	9.5	9.8	11.3	11.5	10.5	10.5
OR2701071	130	87	88	117	136	**112**	59.6	57.1	60.2	55.2	59.1	58.2	9.2	9.5	10.7	12.4	10.0	10.4
Tubbs 06	139	80	91	100	138	**110**	61.0	59.4	60.9	55.2	59.5	59.2	9.4	10.7	11.3	11.5	10.3	10.7
WA 8151	121	82	86	109	140	108	61.3	60.2	61.7	57.7	61.1	60.4	9.6	10.7	12.0	10.7	10.5	10.7
ARS970161-3L	129	83	80	99	147	108	63.0	61.7	62.9	59.2	62.8	61.9	10.3	11.1	12.4	13.4	10.8	11.6
ARS-Crescent (ARS970163-4C)	129	84	88	104	131	107	61.6	60.0	60.9	59.6	60.7	60.6	9.2	9.6	11.5	10.9	10.0	10.3
ARS010780-3C	122	73	81	120	129	105	61.8	60.2	61.9	60.6	61.5	61.2	9.5	11.0	12.6	11.4	11.5	11.2
Cara	120	89	76	104	133	104	60.3	59.0	60.5	59.1	60.5	59.9	9.4	10.4	12.3	11.3	11.0	10.9
Mary (OR2040726)	123	79	79	123	117	104	62.5	61.7	62.5	58.7	59.6	61.0	10.0	10.6	11.9	11.9	10.8	11.1
Masami	121	83	80	102	135	104	59.9	59.0	60.4	56.3	59.8	59.1	9.6	9.9	11.6	11.1	10.4	10.5
ARS-Amber (ARS960277L)	127	86	85	90	131	104	61.3	60.3	62.2	56.3	61.0	60.2	8.6	10.3	12.0	12.9	10.5	10.9
Madsen/Rod	124	89	81	92	132	104	61.5	59.5	61.0	56.8	60.9	59.9	9.6	9.9	11.9	12.9	10.4	11.0
WA 8135	118	83	77	104	131	103	62.9	61.4	62.5	59.4	62.5	61.7	10.0	10.0	12.5	13.7	11.7	11.6
WA 8134	123	84	82	97	126	102	62.1	60.5	62.4	58.7	61.9	61.1	10.2	11.4	12.6	11.0	10.6	11.2
ARS970161-2L	119	89	73	100	131	102	62.7	61.8	62.2	60.2	62.4	61.9	9.5	11.0	12.5	11.7	11.0	11.1
WA 8136	111	75	78	123	124	102	59.7	58.0	59.3	54.9	58.9	58.2	9.3	9.6	11.7	12.5	10.9	10.8
WA 8137	115	83	83	99	131	102	62.0	61.7	62.8	59.2	61.7	61.5	10.3	10.6	12.1	11.2	10.9	11.0
Xerpha	127	96	87	66	128	101	61.8	60.4	61.8	54.3	60.7	59.8	10.1	10.5	11.8	12.1	10.5	11.0
OR2070870	109	77	70	115	136	101	61.6	60.7	61.1	58.8	61.7	60.8	10.1	11.1	13.1	11.2	10.4	11.2
ARS990077-1C	123	78	81	92	128	100	61.2	60.3	62.4	58.4	60.9	60.6	8.8	9.7	11.7	12.4	11.3	10.8
Skiles	121	84	68	97	131	100	62.3	60.9	61.0	57.3	61.5	60.6	9.9	11.4	13.3	13.5	11.2	**11.9**
Madsen	120	86	73	98	123	100	62.0	59.8	61.4	58.2	61.9	60.7	10.2	10.6	12.3	12.6	11.6	11.5
WA 8153	115	84	81	92	127	100	62.6	61.6	62.4	57.8	62.2	61.3	9.3	10.6	12.6	11.5	10.8	11.0
ORCF-102	118	85	78	94	124	100	61.7	60.7	62.1	57.8	61.4	60.8	9.4	11.3	12.1	11.5	9.8	10.8
WA 8142	115	81	66	105	129	99	62.6	62.0	62.3	59.3	62.0	61.6	10.6	12.4	13.4	13.1	11.2	**12.2**
ARS970277L reselect	121	79	73	95	126	99	61.2	59.3	62.3	58.4	60.4	60.3	9.8	10.7	12.2	10.7	10.2	10.7
Stephens	119	68	78	91	138	99	61.6	60.7	62.3	57.8	62.2	60.9	10.2	10.7	11.9	11.7	10.8	11.1
Chukar	118	84	76	97	119	99	60.3	58.4	60.7	58.9	60.8	59.8	8.3	10.1	11.5	12.6	11.1	10.7
OR2071628	112	80	77	94	130	99	62.0	60.3	61.9	57.6	60.2	60.4	9.9	10.3	11.9	10.3	10.2	10.5
WA 8152	119	79	83	93	119	99	62.1	60.7	62.1	58.0	61.3	60.8	10.3	10.2	12.6	11.8	11.6	11.3
ARS-Chrystal (ARS970075-3C)	122	89	75	85	121	99	62.8	61.1	61.6	58.7	61.0	61.0	10.1	11.1	13.1	11.6	11.3	11.4
WA 8154	119	84	79	85	124	99	62.2	61.2	62.9	57.1	62.2	61.1	10.1	10.5	12.0	11.9	11.1	11.1
WA 8116	122	81	81	95	112	98	62.4	60.9	62.0	58.0	60.6	60.8	9.4	10.7	11.8	10.9	10.9	10.7
Eltan/Tubbs 06	130	87	83	72	119	98	61.7	59.9	61.7	56.2	60.1	59.9	9.1	9.8	11.7	12.3	10.5	10.7
ARS010762-2C	119	77	75	101	117	98	60.9	58.0	60.6	59.2	59.3	59.6	9.6	10.7	12.2	12.2	11.7	11.3
Goetze/Skiles	116	83	72	96	122	98	61.8	60.1	61.7	56.8	61.2	60.3	9.7	11.3	12.8	11.9	10.5	11.2
Rod	128	90	77	69	125	98	60.9	59.4	60.9	54.4	60.0	59.1	8.9	10.2	11.4	11.7	10.3	10.5
Bruehl	122	81	84	71	128	97	58.8	57.9	59.9	53.8	57.7	57.6	9.4	10.4	11.7	12.0	11.5	11.0
Coda	112	81	74	89	128	97	63.0	62.6	63.2	59.4	63.1	**62.3**	9.9	11.5	13.1	12.8	11.1	11.7
IDO663	112	63	76	110	122	97	62.2	60.3	62.6	57.9	62.2	61.1	9.7	11.5	11.7	11.2	10.6	10.9
LWW-04-4009	120	83	80	83	116	96	62.8	61.0	62.4	56.8	62.3	61.1	10.1	10.3	12.6	11.9	10.9	11.2
WB-528	124	78	81	88	106	95	63.3	62.5	63.7	59.0	62.3	**62.2**	10.1	11.1	11.9	11.9	10.3	11.1
Otto (WA 8092)	118	89	74	84	110	95	61.1	60.5	61.3	56.3	60.1	59.9	10.0	10.5	12.2	12.8	10.7	11.2
LCS-Artdeco (NSA06-2153A)	94	78	86	116	95	94	61.0	60.4	61.5	59.6	61.2	60.8	9.5	9.9	11.1	10.7	11.5	10.5
ORCF-103	118	78	84	64	112	91	61.7	60.3	61.5	54.9	59.6	59.6	9.7	10.8	11.8	11.2	9.9	10.7
Eltan	119	82	83	58	100	88	61.1	61.7	62.6	55.7	59.3	60.1	9.0	10.4	11.7	11.4	10.3	10.6
WA 8143	120	90	71	65	92	88	61.7	61.6	62.0	56.6	60.3	60.4	9.4	10.7	11.9	11.6	10.3	10.8
WA 8155	118	84	78	63	94	88	61.6	61.9	62.4	57.1	60.0	60.6	9.6	9.6	12.0	11.6	10.5	10.7
C.V. %	5	6	7	13	8	8	0.8	1.0	0.8	2.0	1.0	1.2	7.4	7.5	3.9	10.6	7.2	7.7
LSD (0.10)	7	5	6	13	10	4	0.5	0.6	0.6	1.2	0.6	0.3	0.8	0.8	0.5	1.3	0.8	0.4
Average	120	83	79	94	124	100	61.6	60.4	61.7	57.6	60.9	60.4	9.7	10.6	12.1	11.9	10.8	11.0
Highest	139	96	91	123	157	114	63.3	62.6	63.7	60.6	63.1	62.3	10.6	12.4	13.4	13.7	11.7	12.2
Lowest	94	63	66	58	92	88	58.8	57.1	59.3	53.8	57.7	57.6	8.3	9.5	10.7	10.3	9.8	10.3

Table 19. **2012 WSU Variety Testing Soft White Winter Wheat Trial Summary**

Precipitation Zone <12"

Variety Name *(Club Italicized)*	Yield (Bu/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Connell	Harrington	Lind	Ritzville	St. Andrews	Average	Connell	Harrington	Lind	Ritzville	St. Andrews	Average	Connell	Harrington	Lind	Ritzville	St. Andrews	Average
Xerpha	45	87	54	80	64	**66**	58.7	59.7	59.5	60.4	61.6	60.0	13.4	9.7	12.3	7.4	10.7	10.7
Chukar	35	84	56	75	73	**65**	57.8	57.5	58.1	58.0	61.6	58.6	14.1	10.2	11.7	6.9	10.0	10.6
Rod	37	86	52	89	54	**64**	57.9	59.0	58.5	59.6	61.2	59.2	13.6	9.6	11.4	7.7	10.5	10.6
ARS970161-2L	33	90	53	75	63	**63**	59.1	60.8	60.8	61.2	62.7	**60.9**	13.9	10.5	12.4	8.4	10.8	11.2
ARS970161-3L	33	89	54	75	61	**63**	59.0	60.8	60.3	60.9	63.2	**60.9**	14.2	10.0	12.2	7.8	11.3	11.1
Masami	36	83	57	71	62	62	58.5	58.8	58.8	60.1	60.9	59.4	13.3	10.4	11.2	7.6	10.1	10.5
Tubbs 06	34	86	52	70	68	62	57.4	59.1	58.8	59.7	61.4	59.3	14.3	10.1	11.6	7.2	9.3	10.5
Bruehl	33	83	56	71	62	61	58.9	56.8	59.4	58.9	60.2	58.8	15.0	10.5	11.6	7.7	10.7	11.1
WA 8116	33	88	49	74	61	61	58.4	60.4	60.2	60.9	62.0	60.4	13.5	9.9	12.2	8.1	11.4	11.1
Otto (WA 8092)	32	90	46	74	62	61	59.3	58.9	60.4	60.1	61.6	60.1	13.8	10.3	12.5	7.9	11.3	11.2
ORCF-103	35	85	53	70	61	61	59.3	59.1	59.7	59.3	61.9	59.9	13.3	10.3	11.9	7.9	10.7	10.8
ARS-Crescent (ARS970163-4C)	33	82	58	67	61	60	57.5	59.1	58.6	58.9	62.2	59.3	13.9	10.5	11.5	6.9	10.5	10.6
ARS-Amber (ARS960277L)	34	81	46	74	61	59	58.7	58.6	59.2	59.3	61.4	59.4	12.6	10.0	11.9	7.9	9.7	10.4
Madsen/Rod	35	80	53	73	54	59	58.0	59.5	59.0	59.8	61.2	59.5	14.5	10.9	12.3	8.4	10.9	11.4
Eltan/Tubbs 06	34	82	46	72	58	59	58.4	60.2	59.5	60.0	61.1	59.8	13.1	9.8	11.8	8.1	9.9	10.5
ARS970277L reselect	34	77	47	69	65	58	58.6	57.2	59.2	58.7	62.1	59.2	12.7	10.1	11.7	6.9	10.0	10.3
ORCF-102	31	78	44	76	59	58	57.9	60.9	59.5	60.4	61.8	60.1	14.8	11.0	12.6	8.7	10.7	11.6
OR2701071	30	82	49	72	57	58	56.5	56.1	57.6	57.6	58.8	57.3	12.8	10.3	10.8	7.2	9.2	10.1
OR08047P94	33	76	48	73	58	58	56.5	57.4	57.5	57.9	58.7	57.6	12.8	10.1	11.0	7.3	9.6	10.2
WA 8152	37	80	41	70	58	58	59.7	60.2	60.2	61.1	61.8	60.6	13.6	10.9	13.1	8.1	11.5	11.5
Eltan	29	83	48	68	59	58	58.4	59.4	60.1	59.4	62.2	59.9	13.2	10.0	11.8	7.9	11.0	10.8
WA 8134	36	78	41	73	59	58	58.4	60.2	59.0	59.3	61.5	59.7	13.4	10.3	12.4	7.8	10.9	11.0
WA 8137	35	77	45	69	60	57	59.6	59.8	61.0	61.4	63.0	**61.0**	12.9	11.1	12.0	7.8	10.9	11.0
Coda	36	76	52	69	52	57	59.2	61.4	59.9	61.0	62.8	**60.9**	14.5	10.8	12.6	8.6	11.6	11.6
WA 8136	38	77	44	74	52	57	58.0	57.2	59.2	59.8	60.5	59.0	12.3	10.1	11.9	7.8	10.6	10.5
Madsen	34	77	47	64	59	56	58.2	60.6	59.2	59.8	61.8	59.9	14.4	11.4	12.5	8.6	10.8	11.6
ARS010780-3C	38	76	50	64	53	56	58.5	59.9	59.5	59.5	61.9	59.9	13.2	11.5	12.3	7.7	10.7	11.1
Cara	31	74	47	67	60	56	57.5	57.2	57.9	57.5	60.9	58.2	14.4	10.6	11.6	7.1	10.2	10.8
ARS-Chrystal (ARS970075-3C)	24	82	48	74	50	55	57.1	59.5	59.3	59.7	62.1	59.5	15.0	10.0	12.1	7.9	10.4	11.1
OR2070870	28	86	39	65	58	55	57.5	59.8	58.7	59.6	61.3	59.4	15.2	10.7	13.4	8.6	12.1	**12.0**
WA 8155	33	78	41	62	61	55	59.8	57.9	60.8	60.5	61.9	60.2	13.2	11.4	12.2	7.5	11.2	11.1
ARS010762-2C	33	74	46	70	51	55	57.1	58.1	57.9	58.8	59.9	58.4	14.3	11.3	11.8	8.4	11.3	11.4
Skiles	26	81	47	70	47	54	57.4	60.1	58.7	61.4	61.3	59.8	15.7	10.2	13.5	8.3	10.7	11.7
LWW-04-4009	36	79	39	58	57	54	58.9	60.1	60.5	60.9	62.6	60.6	13.6	11.7	13.6	7.5	10.9	11.5
WA 8154	30	77	44	66	52	54	59.1	61.1	59.9	59.8	62.4	60.5	14.6	10.6	12.8	8.6	11.2	11.6
OR2071628	21	85	35	70	56	54	57.6	59.8	58.5	58.8	61.3	59.2	14.0	9.3	12.4	8.5	10.4	10.9
WA 8151	28	83	38	61	56	53	58.3	59.0	58.5	59.5	61.3	59.3	13.8	9.9	12.7	6.7	10.6	10.7
WA 8143	34	78	40	56	57	53	60.0	58.6	60.8	60.4	62.0	60.4	13.4	10.3	11.9	7.5	11.3	10.9
Stephens	17	75	50	63	58	53	58.4	59.3	59.1	59.0	61.7	59.5	15.3	11.1	12.0	8.3	11.2	11.6
WB-528	25	80	36	68	52	53	59.2	61.0	60.9	60.7	62.8	**60.9**	14.7	11.3	13.8	8.1	10.8	11.8
IDO663	26	81	40	61	52	52	58.4	60.4	59.4	59.5	61.9	59.9	14.7	10.1	12.1	8.3	11.1	11.3
Goetze/Skiles	26	76	38	71	47	52	57.3	59.8	58.6	59.9	61.0	59.3	15.3	10.1	13.4	8.5	12.2	**11.9**
Mary (OR2040726)	23	78	37	68	51	51	56.5	60.4	58.4	59.9	61.5	59.3	14.9	10.6	13.0	8.7	11.1	11.7
WA 8135	29	71	41	64	49	51	59.5	59.8	59.9	61.4	62.6	**60.7**	13.8	12.4	13.6	9.2	11.1	**12.0**
WA 8153	26	80	44	58	45	51	58.0	60.7	60.0	60.6	62.4	60.3	15.2	10.5	13.8	8.6	12.7	**12.2**
ARS990077-1C	31	72	42	57	49	50	59.5	60.1	59.7	58.6	61.6	59.9	13.6	10.9	12.5	6.9	10.1	10.8
WA 8142	24	75	38	65	47	50	58.8	61.0	60.1	61.2	62.5	**60.7**	15.7	11.3	13.5	8.7	11.7	**12.2**
LCS-Artdeco (NSA06-2153A)	13	76	30	27	59	41	55.6	59.2	56.3	57.4	60.1	57.7	14.5	10.1	12.4	10.5	10.2	11.6
C.V. %	14	8	12	13	10	11	0.7	1.3	0.7	0.8	0.9	0.9	4.6	8.0	4.8	9.2	7.0	6.5
LSD (0.10)	5	7	6	9	6	3	0.4	0.8	0.4	0.5	0.6	0.3	0.7	0.9	0.6	0.8	0.8	0.3
Average	31	80	46	68	57	57	58.3	59.4	59.3	59.8	61.6	59.7	14.0	10.5	12.3	8.0	10.8	11.1
Highest	46	90	58	89	73	66	60.0	61.4	61.0	61.4	63.2	61.0	15.7	12.4	13.8	10.5	12.7	12.2
Lowest	13	71	30	27	45	41	55.6	56.1	56.3	57.4	58.7	57.3	12.3	9.3	10.8	6.7	9.2	10.1

Table 20. **WSU Soft White Winter Wheat Trial Multi-Year Summary**

Precipitation Zone >20"

(Colton, Fairfield, Farmington, Moses Lake, Pullman)

Variety Name*	2 Years 2011-2012, 10 loc/yrs			3 Years 2010-2012, 14 loc/yrs			5 Years 2008-2012, 24 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
WA 8134	128	60.5	10.2						
WA 8143	126	60.1	10.0						
Otto (WA 8092)	126	59.8	10.2	128	59.3	10.4			
OR2071628	126	59.5	9.7						
Rod	126	59.6	10.2	129	59.1	10.1	129	58.8	10.4
ARS-Chrystal (ARS970075-3C)	126	61.0	10.1	129	60.9	10.2	125	60.3	10.7
Bruehl	125	58.0	10.3	127	57.7	10.4	127	57.7	10.7
ARS-Amber (ARS960277L)	125	60.6	10.0	129	60.1	10.0	129	59.9	10.3
Madsen	125	60.6	10.4	127	60.1	10.6	123	59.5	10.9
ARS970161-3L	125	62.1	10.7						
Madsen/Rod	125	60.1	10.3	127	59.6	10.4	127	59.2	10.6
ARS-Crescent (ARS970163-4C)	124	60.5	9.7	127	60.0	9.8			
Xerpha	124	60.6	10.4	125	59.8	10.4	132	59.6	10.6
Chukar	124	59.9	10.4	127	59.6	10.4	122	58.8	10.7
Stephens	124	60.2	10.5	127	59.9	10.6	127	59.5	10.7
Skiles	123	61.7	11.0	124	61.2	11.1	122	60.3	11.3
LCS-Artdeco (NSA06-2153A)	123	59.9	10.2						
WA 8116	123	60.6	10.2	126	60.1	10.3			
ORCF-102	122	60.3	10.4	127	60.1	10.4	131	59.9	10.7
WB-528	122	61.8	10.7	126	61.5	10.6	126	61.1	10.9
Eltan/Tubbs 06	122	59.8	10.0	127	59.4	9.9	128	59.3	10.4
Cara	122	59.5	10.6	125	59.3	10.6	120	58.5	11.0
Tubbs 06	122	59.3	10.2	124	58.7	10.2	125	58.6	10.4
Eltan	121	60.2	9.8	124	59.7	9.9	126	59.6	10.3
Mary (OR2040726)	121	61.3	9.8	127	60.8	9.9			
ORCF-103	121	59.5	10.1	125	59.1	10.2	127	59.0	10.6
WA 8135	120	61.8	10.6						
WA 8142	119	61.6	10.9						
Masami	119	59.2	9.8	120	58.5	9.9	122	58.4	10.2
Goetze/Skiles	119	60.7	11.0	120	60.2	11.0			
IDO663	118	60.8	10.5						
Coda	116	62.7	11.0	121	62.5	11.0	118	61.5	11.3
WA 8136	114	57.6	10.3						
C.V. %	7	1.3	5.9	7	1.3	5.3	7	1.2	4.8
LSD (.10)	3	0.3	0.2	2	0.2	0.2	2	0.2	0.1
Average	123	60.3	10.3	126	59.9	10.3	126	59.4	10.7
Highest	128	62.7	11.0	129	62.5	11.1	132	61.5	11.3
Lowest	114	57.6	9.7	120	57.7	9.8	118	57.7	10.2

** Club Wheat Italicized*

Table 21. **WSU Soft White Winter Wheat Trial Multi-Year Summary**

Precipitation Zone = 16-20"

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

Variety Name*	2 Years 2011-2012, 10 loc/yrs			3 Years 2010-2012, 15 loc/yrs			5 Years 2008-2012, 25 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
ARS970161-3L	138	62.4	10.4						
WA 8134	136	60.9	10.4						
Cara	135	60.0	10.2	138	60.1	10.4	130	59.5	10.6
LCS-Artdeco (NSA06-2153A)	134	60.6	10.1						
ARS-Amber (ARS960277L)	134	60.8	9.7	132	60.5	10.0	126	60.1	10.3
Chukar	134	59.9	9.9	136	59.9	10.0	128	59.5	10.3
ARS-Chrystal (ARS970075-3C)	132	61.4	10.0	133	61.4	10.2	127	60.9	10.6
Skiles	131	62.0	10.7	132	61.8	11.0	126	61.1	11.4
ARS-Crescent (ARS970163-4C)	130	60.8	9.4	132	60.7	9.7			
Madsen	130	61.2	10.8	129	61.0	11.0	121	60.5	11.3
WA 8116	129	61.0	10.1	126	60.8	10.2			
OR2071628	129	59.8	9.9						
Mary (OR2040726)	126	61.2	10.3	125	61.1	10.5			
Madsen/Rod	125	60.3	10.7	124	60.1	10.8	121	59.7	11.0
Bruehl	125	58.0	10.0	125	57.9	10.3	119	57.8	10.8
Otto (WA 8092)	124	59.7	10.5	124	59.7	10.6			
WA 8136	124	58.3	10.1						
IDO663	124	61.1	10.2						
WB-528	123	62.2	10.4	119	61.7	10.6	118	61.5	11.1
ORCF-102	123	61.1	10.1	126	60.9	10.3	123	60.7	10.8
Goetze/Skiles	123	60.9	10.9	125	60.8	11.1			
Eltan/Tubbs 06	122	59.9	9.8	115	59.2	10.1	115	59.3	10.6
WA 8142	122	62.0	10.9						
Coda	121	62.6	10.8	124	62.6	10.9	118	61.9	11.3
Stephens	120	60.8	10.5	119	60.5	10.7	115	59.7	11.1
Rod	120	59.5	9.6	121	59.4	10.0	119	59.0	10.4
Masami	119	59.5	9.7	118	58.7	10.0	115	58.7	10.5
WA 8135	119	62.1	10.9						
Tubbs 06	119	59.8	9.6	116	58.8	10.0	117	58.8	10.5
Xerpha	119	60.7	10.4	116	59.7	10.7	120	59.7	11.0
ORCF-103	117	60.1	10.0	116	59.6	10.2	114	59.5	10.8
WA 8143	112	60.0	10.2						
Eltan	106	59.7	10.3	105	59.2	10.4	107	59.6	10.8
C.V. %	8	0.9	6.5	8	1.0	5.8	8	1.0	5.6
LSD (.10)	3	0.2	0.2	3	0.2	0.2	2	0.1	0.1
Average	125	60.6	10.2	124	60.3	10.4	120	59.9	10.8
Highest	138	62.6	10.9	138	62.6	11.1	130	61.9	11.4
Lowest	106	58.0	9.4	105	57.9	9.7	107	57.8	10.3

** Club Wheat Italicized*

Table 22. **WSU Soft White Winter Wheat Trial Multi-Year Summary**

Precipitation Zone = 12-16"

(Almira, Anatone, Creston, Dusty, Lamont)

Variety Name*	2 Years 2011-2012, 10 loc/yrs			3 Years 2010-2012, 15 loc/yrs			5 Years 2008-2012, 24 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Xerpha	115	60.3	10.7	117	59.3	10.7	113	59.3	10.5
Skiles	112	61.1	11.4	117	60.5	11.5	108	60.0	11.5
ARS-Chrystal (ARS970075-3C)	111	61.2	10.9	116	60.8	11.0	109	60.2	11.1
Bruehl	111	58.0	10.6	113	56.9	10.8	105	57.3	10.8
Cara	110	59.9	10.7	117	59.4	10.9	106	58.6	10.8
ARS-Amber (ARS960277L)	110	60.3	10.4	114	59.6	10.4	109	59.1	10.3
ARS970161-3L	109	61.8	11.2						
WA 8134	109	61.0	10.8						
Coda	108	62.5	11.2	110	62.0	11.4	101	61.4	11.1
Tubbs 06	108	59.4	10.4	110	58.6	10.5	103	58.5	10.6
ARS-Crescent (ARS970163-4C)	108	60.6	10.3	112	59.8	10.5			
OR2071628	107	60.1	10.2						
Madsen/Rod	107	60.0	10.7	110	59.3	10.7	103	59.0	10.7
ORCF-102	107	60.8	10.5	112	60.2	10.8	105	60.0	10.7
Mary (OR2040726)	107	61.1	10.8	111	60.7	11.0			
Rod	106	59.3	10.4	109	58.4	10.5	104	58.2	10.5
Masami	106	59.3	10.4	110	58.2	10.5	104	58.2	10.5
Chukar	106	59.9	10.4	111	59.3	10.6	102	58.6	10.6
WA 8143	106	60.2	10.4						
WA 8135	105	61.6	11.0						
WA 8116	104	60.6	10.7	111	59.8	10.7			
Eltan/Tubbs 06	104	59.9	10.3	106	58.9	10.5	103	58.8	10.5
Madsen	103	60.6	11.1	108	60.0	11.1	101	59.7	11.1
Eltan	102	60.0	10.3	104	58.8	10.5	101	59.0	10.4
WA 8136	102	58.3	10.8						
Otto (WA 8092)	101	59.7	10.9	104	58.4	11.1			
WA 8142	101	61.6	11.7						
Goetze/Skiles	101	60.7	11.0	109	60.2	11.1			
ORCF-103	98	59.7	10.6	101	58.6	10.8	98	58.7	10.8
WB-528	97	62.2	10.9	104	61.6	11.0	96	61.2	11.0
Stephens	96	60.5	11.0	100	59.9	11.1	94	59.3	11.1
IDO663	96	60.7	10.7						
LCS-Artdeco (NSA06-2153A)	84	59.5	10.3						
C.V. %	9	1.3	8.1	9	1.4	7.4	10	1.3	7.0
LSD (.10)	3	0.3	0.3	3	0.2	0.2	2	0.2	0.2
Average	105	60.4	10.7	110	59.6	10.8	103	59.2	10.8
Highest	115	62.5	11.7	117	62.0	11.5	113	61.4	11.5
Lowest	84	58.0	10.2	100	56.9	10.4	94	57.3	10.3

** Club Wheat Italicized*

Table 23. **WSU Soft White Winter Wheat Trial Multi-Year Summary**

Precipitation Zone = <12"

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

Variety Name*	2 Years 2011-2012, 11 loc/yrs			3 Years 2010-2012, 17 loc/yrs			5 Years 2008-2012, 27 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Xerpha	66	60.7	10.3	64	60.6	10.5	54	60.1	11.0
Rod	65	59.9	10.4	59	59.6	10.6	49	58.9	11.3
ARS970161-3L	65	61.7	11.0						
Bruehl	65	59.1	10.5	61	59.3	10.8	51	59.0	11.6
Chukar	65	59.4	10.3	62	59.6	10.4	51	58.6	11.3
Otto (WA 8092)	64	60.4	11.1	61	60.3	11.2			
WA 8116	64	61.0	10.5	60	60.8	10.8			
Madsen/Rod	63	60.2	10.9	57	60.0	11.1	48	59.5	11.7
Skiles	63	60.6	11.3	57	60.4	11.8	49	59.9	12.3
Eltan/Tubbs 06	63	60.4	10.2	59	60.3	10.5	50	59.9	11.3
Masami	62	59.9	10.4	60	60.0	10.5	50	59.4	11.2
Tubbs 06	62	59.7	10.5	58	59.8	10.7	48	59.2	11.4
ARS-Amber (ARS960277L)	62	60.0	10.2	59	60.0	10.4	52	59.7	10.9
ORCF-102	62	60.8	11.2	58	60.7	11.3	48	60.3	11.8
ARS-Crescent (ARS970163-4C)	62	60.4	10.5	59	60.3	10.6			
Eltan	61	60.4	10.7	59	60.4	10.8	51	60.1	11.4
WA 8136	61	59.6	10.4						
Coda	61	61.7	10.9	58	61.7	11.1	48	61.1	11.9
WA 8134	60	60.4	10.8						
WA 8143	60	60.8	10.5						
ARS-Chrystal (ARS970075-3C)	60	60.7	10.7	57	60.8	11.0	51	60.3	11.4
Madsen	59	60.6	11.0	55	60.4	11.4	46	60.0	12.0
OR2071628	59	60.1	10.5						
ORCF-103	59	60.5	10.7	57	60.3	10.9	49	60.0	11.6
Cara	59	59.3	10.6	57	59.4	10.7	46	58.4	11.6
Mary (OR2040726)	57	60.3	10.9	54	60.3	11.2			
Goetze/Skiles	57	60.2	11.5	53	60.2	11.9			
WA 8135	57	61.4	11.4						
IDO663	57	60.6	10.8						
Stephens	56	60.2	11.2	51	60.1	11.3	42	59.4	11.9
WB-528	56	61.6	11.1	53	61.5	11.4	45	61.1	11.9
WA 8142	55	61.3	11.8						
LCS-Artdeco (NSA06-2153A)	41	58.9	11.0						
C.V. %	11	0.9	7.7	11	1.0	6.9	11	1.3	6.4
LSD (.10)	2	0.2	0.3	2	0.2	0.2	1	0.2	0.1
Average	60	60.4	10.8	58	60.3	11.0	49	59.7	11.5
Highest	66	61.7	11.8	64	61.7	11.9	54	61.1	12.3
Lowest	41	58.9	10.2	51	59.3	10.4	42	58.4	10.9

** Club Wheat Italicized*

Table 24. **2012 WSU Variety Testing SW Winter Wheat Trial, Almira**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Tubbs 06	113	122	122	**139**	61.0	9.4	43	154
OR2701071				130	59.6	9.2	38	155
Eltan/Tubbs 06	111	115	126	130	61.7	9.1	42	154
ARS-Crescent (ARS970163-4C)		114	105	129	61.6	9.2	43	159
ARS970161-3L			106	129	**63.0**	10.3	39	155
Rod	114	124	121	128	60.9	8.9	39	155
Xerpha	112	115	122	127	61.8	10.1	43	158
ARS-Amber (ARS960277L)	113	123	119	127	61.3	8.6	40	155
OR08047P94				127	59.6	9.5	39	153
Madsen/Rod	107	115	112	124	61.5	9.6	40	156
WB-528	103	108	91	124	**63.3**	10.1	40	149
ARS990077-1C				123	61.2	8.8	40	155
Mary (OR2040726)		125	113	123	62.5	10.0	40	151
WA 8134			104	123	62.1	10.2	43	155
ARS010780-3C				122	61.8	9.5	41	158
Bruehl	113	122	121	122	58.8	9.4	41	159
WA 8116		114	109	122	62.4	9.4	37	156
ARS-Chrystal (ARS970075-3C)	109	120	113	122	**62.8**	10.1	43	154
WA 8151				122	61.3	9.6	39	155
Skiles	113	123	113	121	62.3	9.9	39	151
ARS970277L reselect				121	61.2	9.8	41	157
Masami	106	108	110	121	59.9	9.6	40	159
Madsen	110	120	116	120	62.0	10.2	41	157
Cara	105	115	101	120	60.3	9.4	42	154
WA 8143			129	120	61.7	9.4	40	158
LWW-04-4009				120	**62.8**	10.1	38	156
Stephens	106	115	107	120	61.6	10.2	40	150
WA 8154				120	62.2	10.1	41	154
ARS970161-2L				119	62.7	9.5	40	155
Eltan	107	112	120	119	61.1	9.0	41	158
ARS010762-2C				119	60.9	9.6	44	156
WA 8152				119	62.1	10.3	44	154
WA 8155				118	61.6	9.6	40	157
Chukar	105	120	110	118	60.3	8.3	41	157
Otto (WA 8092)		105	102	118	61.1	10.0	41	159
WA 8135			115	118	**62.9**	10.0	41	157
ORCF-102	107	112	106	118	61.7	9.4	43	153
ORCF-103	102	106	105	118	61.7	9.7	41	158
Goetze/Skiles		116	102	116	61.8	9.7	39	148
WA 8137				115	62.0	10.3	39	160
WA 8153				115	62.6	9.3	43	153
WA 8142			108	115	62.6	10.6	41	150
IDO663			110	112	62.2	9.7	38	150
OR2071628			119	112	62.0	9.9	40	153
Coda	106	118	113	112	**63.0**	9.9	43	154
WA 8136			104	111	59.7	9.3	36	160
OR2070870				109	61.6	10.1	39	156
LCS-Artdeco (NSA06-2153A)			64	94	61.0	9.5	36	148

2012 WSU Variety Testing SW Winter Wheat Trial, Almira

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	9	10	9	5	0.8	7.4	3	1
LSD (.10)	5	7	8	7	0.5	0.8	1	2
Average	108	116	110	120	61.6	9.7	40	155
Highest	114	125	129	139	63.3	10.6	44	160
Lowest	102	105	64	94	58.8	8.3	36	148

Almira Soft White Winter Wheat

1. Grain yield in the 2012 Almira soft white winter wheat trial averaged 120 bushels/acre, 12 bushels/acre higher than the 5-year average yield. The Almira nursery was located about six miles north of Almira, WA (Dan McKay, cooperator).

2. This nursery was seeded on 13 September, 2011 following spring wheat. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 85#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 94 to 139 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The variety ‘Tubbs 06’ was the highest yielding entry in the trial, and was the only entry of the 48 entries within the top LSD range. ‘Rod’ was the top yielding entry across five years of results at this location. ‘LSC-Artdeco’ came in at the bottom of the trial here but has done well elsewhere. Last year LCS-Artdeco was killed at Almira by snow mold and it could have been hurt some this year too. It appears to be highly sensitive to snow mold. Stripe rust potential at this location was controlled by fungicide applied 5 May at herbicide timing and on 11 June.

4. Test weights were very good averaging 61.6 lbs/bu and ranged from 58.8 to 63.3 lbs/bu. Grain protein averaged 9.7% and ranged from 8.3 to 10.6%. Plant height averaged 40 inches and there was no lodging.

Table 25. **2012 WSU Variety Testing SW Winter Wheat Trial, Anatone**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Xerpha	109	119	117	**96**	60.4	10.5	36	165
WA 8143			106	**91**	61.6	10.7	39	168
Rod	91	102	102	90	59.4	10.2	35	165
ARS-Chrystal (ARS970075-3C)	101	110	107	89	61.1	11.1	35	164
Otto (WA 8092)		98	92	89	60.5	10.5	36	169
Madsen/Rod	88	98	98	89	59.5	9.9	36	165
Cara	86	99	97	89	59.0	10.4	32	164
ARS970161-2L				89	61.8	11.0	37	164
OR08047P94				88	58.4	9.8	33	164
OR2701071				87	57.1	9.5	35	164
Eltan/Tubbs 06	92	102	100	87	59.9	9.8	38	163
Madsen	93	101	103	86	59.8	10.6	36	165
ARS-Amber (ARS960277L)	91	97	93	86	60.3	10.3	36	164
ORCF-102	93	102	100	85	60.7	11.3	37	164
Skiles	90	101	100	84	60.9	11.4	34	164
WA 8154				84	61.2	10.5	37	165
ARS-Crescent (ARS970163-4C)		98	96	84	60.0	9.6	35	168
WA 8155				84	61.9	9.6	39	169
WA 8134			96	84	60.5	11.4	39	164
WA 8153				84	61.6	10.6	39	163
Chukar	85	95	93	84	58.4	10.1	34	166
Goetze/Skiles		98	95	83	60.1	11.3	33	162
LWW-04-4009				83	61.0	10.3	34	167
ARS970161-3L			91	83	61.7	11.1	36	165
Masami	89	100	96	83	59.0	9.9	36	169
WA 8137				83	61.7	10.6	37	170
WA 8135			95	83	61.4	10.0	40	168
Eltan	96	107	101	82	61.7	10.4	36	169
WA 8151				82	60.2	10.7	36	165
Bruehl	90	103	100	82	57.9	10.4	37	169
WA 8116		99	92	81	60.9	10.7	33	167
Coda	89	98	95	81	**62.6**	11.5	38	165
WA 8142			97	81	**62.0**	12.4	35	163
Tubbs 06	84	91	92	80	59.4	10.7	40	164
OR2071628			94	80	60.3	10.3	33	163
ARS970277L reselect				80	59.3	10.7	36	165
WA 8152				79	60.7	10.2	40	164
Mary (OR2040726)		98	94	79	61.7	10.6	34	162
LCS-Artdeco (NSA06-2153A)			97	78	60.4	9.9	32	162
ORCF-103	87	93	92	78	60.3	10.8	34	168
WB-528	88	100	98	78	**62.5**	11.1	35	162
ARS990077-1C				78	60.3	9.7	34	167
ARS010762-2C				77	58.0	10.7	37	166
OR2070870				77	60.7	11.1	34	163
WA 8136			83	75	58.0	9.6	31	169
ARS010780-3C				73	60.2	11.0	34	166
Stephens	77	80	79	68	60.7	10.7	33	162
IDO663			75	63	60.3	11.5	32	162

2012 WSU Variety Testing SW Winter Wheat Trial, Anatone

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	8	7	7	6	1.0	7.5	5	1
LSD (.10)	3	4	5	5	0.6	0.8	2	1
Average	90	100	96	83	60.4	10.6	36	165
Highest	109	119	117	96	62.6	12.4	40	170
Lowest	77	80	75	63	57.1	9.5	31	162

Anatone Soft White Winter Wheat

1. Grain yield in the 2012 Anatone soft white winter wheat trial averaged 83 bushels/acre, 7 bushels/acre lower than the 5-year average yield. The Anatone nursery was located about three miles north of Anatone, WA (J. Johnson, cooperator).
2. This nursery was seeded on 10 October, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 80#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.
3. Yields ranged from 63 to 96 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The variety ‘Xerpha’ was the highest yielding entry in the trial, and there were 2 of the 48 entries within the top LSD range. Xerpha was also the top yielding entry across five years of results at this location. Stripe rust potential at this location was light and fungicide was applied with the herbicide.
4. Test weights were good averaging 60.4 lbs/bu and ranged from 57.1 to 62.6 lbs/bu. Grain protein averaged 10.6% and ranged from 9.5 to 12.4%. Plant height averaged 36 inches and there was no lodging.

Table 26. **2012 WSU Variety Testing SW Winter Wheat Trial, Colton**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
ARS-Crescent (ARS970163-4C)		137	138	**137**	60.2	9.1	42	168
Tubbs 06	128	135	137	**135**	59.6	8.3	41	162
Rod	130	136	140	**133**	59.3	9.6	40	165
ARS-Amber (ARS960277L)	133	133	135	**133**	60.5	8.2	41	164
WA 8134			139	**133**	60.3	8.5	42	163
OR08047P94				**132**	59.1	8.9	39	163
ARS990077-1C				**132**	59.3	8.0	41	168
Masami	126	132	132	**131**	59.6	8.1	41	169
Xerpha	131	133	136	**130**	60.6	9.5	39	164
ORCF-103	129	132	133	129	59.6	9.0	41	168
Chukar	122	133	137	129	59.4	9.0	43	166
Eltan/Tubbs 06	132	137	136	129	58.5	8.1	42	163
LCS-Artdeco (NSA06-2153A)			133	129	59.8	8.7	34	160
ARS-Chrystal (ARS970075-3C)	128	132	133	128	60.2	8.6	43	164
Madsen/Rod	127	134	133	127	59.9	8.5	39	165
ARS970161-3L			132	127	61.7	10.4	40	165
OR2071628			132	127	59.2	7.5	36	161
Coda	123	126	125	127	**62.3**	9.9	44	163
ARS970161-2L				126	**62.0**	9.4	40	166
ARS010780-3C				126	60.5	9.6	41	168
ARS970277L reselect				125	60.4	9.0	41	164
Stephens	125	128	127	124	60.1	8.1	37	160
WA 8154				124	61.3	8.8	41	164
WA 8151				124	59.6	7.2	39	164
Cara	117	127	130	123	58.4	8.8	39	165
Madsen	119	127	128	123	60.1	8.9	39	166
LWW-04-4009				122	60.2	7.9	37	167
Bruehl	128	134	135	122	56.8	9.5	42	168
IDO663			121	121	60.4	8.8	35	160
WA 8143			131	121	60.1	7.8	41	169
WA 8153				121	60.7	8.8	40	163
ORCF-102	128	130	131	121	60.0	8.6	39	163
WA 8152				120	61.0	8.8	44	165
WA 8116		129	132	120	60.6	7.9	37	168
ARS010762-2C				120	59.7	9.8	41	165
Otto (WA 8092)		131	130	118	60.0	8.4	42	169
WA 8135			121	118	60.6	7.9	41	169
Mary (OR2040726)		126	125	118	61.3	8.7	35	161
OR2070870				118	60.1	9.3	36	163
WA 8137				117	61.4	8.9	40	169
Skiles	116	123	127	116	**61.9**	9.4	37	162
OR2701071				115	57.8	8.4	36	163
Eltan	130	133	130	114	60.5	8.1	41	169
Goetze/Skiles		119	123	114	60.7	8.9	35	160
WA 8155				113	60.6	7.8	42	169
WA 8142			119	113	61.1	8.6	36	159
WB-528	119	122	122	109	61.0	9.0	36	159
WA 8136			116	102	56.8	8.4	38	169

2012 WSU Variety Testing SW Winter Wheat Trial, Colton

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	7	5	5	5	0.9	9.1	4	1
LSD (.10)	4	4	5	7	0.5	0.8	2	1
Average	126	130	130	123	60.1	8.7	40	165
Highest	133	137	140	137	62.3	10.4	44	169
Lowest	116	119	116	102	56.8	7.2	34	159

Colton Soft White Winter Wheat

1. Grain yield in the 2012 Colton soft white winter wheat trial averaged 123 bushels/acre, 3 bushels/acre lower than the 5-year average yield. The Colton nursery was located less than one mile south of Colton, WA (A. Schultheis, cooperator).

2. This nursery was seeded on 29 September, 2011 following lentils. Seed was placed at an 85#/acre seeding rate using a no-till plot drill equipped with Cross-Slot openers set on 10-inch spacing. Base fertilizer was 114#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged narrowly from 102 to 137 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The recently released club ‘ARS-Crescent’ was the highest yielding entry in the trial, and 9 of the 48 entries were within the top LSD range. The recent release common variety ‘ARS-Amber’ was the top yielding entry across five years of results at this location. Stripe rust potential was low at this location and fungicide was applied 26 April and 28 May.

4. Test weights were good averaging 60.1 lbs/bu and ranged from 56.8 to 62.3 lbs/bu. Grain protein averaged 8.7% and ranged from 7.2 to 10.4%. Plant height averaged 40 inches and there was no lodging.

Table 27. **2012 WSU Variety Testing SW Winter Wheat Trial, Connell**

Variety Name *Club Italized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Xerpha	53	56	51	**45**	58.7	13.4	32	144
WA 8136			53	38	58.0	12.3	28	146
ARS010780-3C				38	58.5	13.2	29	142
Rod	51	53	54	37	57.9	13.6	26	145
WA 8152				37	**59.7**	13.6	35	144
Coda	50	56	54	36	59.2	14.5	27	143
Masami	51	55	50	36	58.5	13.3	28	144
WA 8134			55	36	58.4	13.4	31	145
LWW-04-4009				36	58.9	13.6	28	143
Chukar	51	55	52	35	57.8	14.1	27	143
Madsen/Rod	50	53	55	35	58.0	14.5	30	142
ORCF-103	51	50	44	35	59.3	13.3	28	144
WA 8137				35	**59.6**	12.9	28	143
Madsen	48	51	53	34	58.2	14.4	29	142
Tubbs 06	49	50	45	34	57.4	14.3	30	145
ARS-Amber (ARS960277L)	48	51	47	34	58.7	12.6	29	141
Eltan/Tubbs 06	49	53	48	34	58.4	13.1	31	142
WA 8143			49	34	**60.0**	13.4	30	144
ARS970277L reselect				34	58.6	12.7	28	144
Bruehl	48	55	53	33	58.9	15.0	28	146
WA 8116		53	49	33	58.4	13.5	27	142
ARS-Crescent (ARS970163-4C)		54	50	33	57.5	13.9	29	145
ARS970161-3L			54	33	59.0	14.2	28	142
OR08047P94				33	56.5	12.8	28	144
ARS970161-2L				33	59.1	13.9	30	145
ARS010762-2C				33	57.1	14.3	28	145
WA 8155				33	**59.8**	13.2	31	146
Otto (WA 8092)		56	51	32	59.3	13.8	32	144
Cara	47	54	50	31	57.5	14.4	27	145
ORCF-102	51	52	51	31	57.9	14.8	29	144
ARS990077-1C				31	59.5	13.6	28	142
OR2701071				30	56.5	12.8	29	145
WA 8154				30	59.1	14.6	30	144
Eltan	48	50	43	29	58.4	13.2	30	144
WA 8135			45	29	59.5	13.8	28	143
OR2070870				28	57.5	15.2	26	144
WA 8151				28	58.3	13.8	28	145
Skiles	50	51	54	26	57.4	15.7	28	145
Goetze/Skiles		50	50	26	57.3	15.3	26	142
IDO663			47	26	58.4	14.7	26	143
WA 8153				26	58.0	15.2	30	145
WB-528	47	46	46	25	59.2	14.7	25	147
ARS-Chrystal (ARS970075-3C)	47	50	49	24	57.1	15.0	26	145
WA 8142			48	24	58.8	15.7	27	143
Mary (OR2040726)		47	48	23	56.5	14.9	27	144
OR2071628			46	21	57.6	14.0	25	144
Stephens	44	43	43	17	58.4	15.3	27	145
LCS-Artdeco (NSA06-2153A)			26	13	55.6	14.5	25	142

2012 WSU Variety Testing SW Winter Wheat Trial, Connell

Variety Name *Club Italized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	11	10	10	14	0.7	4.6	7	1
LSD (.10)	2	3	4	5	0.4	0.7	2	2
Average	49	52	49	31	58.3	14.0	28	144
Highest	53	56	55	45	60.0	15.7	35	147
Lowest	44	43	26	13	55.6	12.3	25	141

Connell Soft White Winter Wheat

1. Grain yield in the 2012 Connell soft white winter wheat trial averaged 31 bushels/acre, 18 bushels/acre lower than the 5-year average. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister, cooperator).

2. This nursery was seeded on 12 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 70#N/acre pre-plant applied. Fall seeding conditions were favorable and emergence and stand establishment were good.

3. Yields ranged from 13 to 45 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘Xerpha’ was the highest yielding entry in the trial, and was alone in the top LSD range. Xerpha was also the top yielding entry across five years of results at this location. Some plants at this site experienced damaging frost at the beginning of heading. The early varieties were damaged the most and later varieties showed little or no injury. This variable frost injury increased CV values for this trial, but are important responses to evaluate. There was a low amount of stripe rust potential at this location and no fungicide was applied. This is the one site selected out of five in the <12” rainfall zone that did not receive fungicides for stripe rust control in 2012.

4. Test weights averaged 58.3 lbs/bu and ranged from 55.6 to 60.0 lbs/bu. Grain protein averaged 14.0% with a range of 12.3 to 15.7%. Plant height averaged 28 inches and there was no lodging. Late season water stress and the frost at heading increased protein levels and lowered test weights. A soil test showed ample N at this site.

Table 28. 2012 WSU Variety Testing SW Winter Wheat Trial, Creston

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Tubbs 06	115	114	110	**91**	60.9	11.3	38	162
OR2701071				**89**	60.2	10.7	34	164
ARS-Crescent (ARS970163-4C)		113	102	**88**	60.9	11.5	35	166
Xerpha	127	126	120	**87**	61.8	11.8	36	164
LCS-Artdeco (NSA06-2153A)			62	**86**	61.5	11.1	31	161
WA 8151				**86**	61.7	12.0	34	164
ARS-Amber (ARS960277L)	118	118	114	**85**	62.2	12.0	33	163
ORCF-103	109	110	106	84	61.5	11.8	35	165
Bruehl	118	120	112	84	59.9	11.7	38	166
Eltan/Tubbs 06	116	108	101	83	61.7	11.7	37	163
WA 8137				83	62.8	12.1	34	168
WA 8152				83	62.1	12.6	41	162
Eltan	112	107	103	83	62.6	11.7	37	166
WA 8134			116	82	62.4	12.6	39	163
WA 8153				82	62.4	12.6	37	163
WA 8116		118	113	81	62.0	11.8	32	164
ARS010780-3C				81	61.9	12.6	32	166
ARS990077-1C				81	62.4	11.7	33	166
Madsen/Rod	112	109	105	81	61.0	11.9	35	165
WB-528	105	108	108	81	**63.7**	11.9	35	162
Masami	118	116	108	80	60.4	11.6	35	166
ARS970161-3L			112	80	62.9	12.4	36	162
OR08047P94				80	59.5	11.3	31	163
LWW-04-4009				80	62.4	12.6	34	166
Mary (OR2040726)		114	117	79	62.5	11.9	33	162
WA 8154				79	62.9	12.0	37	163
WA 8136			109	78	59.3	11.7	33	169
WA 8155				78	62.4	12.0	39	166
Stephens	103	103	104	78	62.3	11.9	31	161
ORCF-102	112	114	105	78	62.1	12.1	37	163
Rod	116	113	108	77	60.9	11.4	34	164
OR2071628			107	77	61.9	11.9	34	162
WA 8135			99	77	62.5	12.5	37	164
Cara		112	105	76	60.5	12.3	33	165
Chukar		111	102	76	60.7	11.5	33	165
IDO663			99	76	62.6	11.7	32	161
ARS-Chrystal (ARS970075-3C)	112	116	106	75	61.6	13.1	34	165
ARS010762-2C				75	60.6	12.2	37	165
Coda	108	112	109	75	**63.2**	13.1	36	164
Otto (WA 8092)		111	107	74	61.3	12.2	37	166
ARS970277L reselect				73	62.3	12.2	34	163
ARS970161-2L				73	62.2	12.5	35	163
Madsen	106	100	96	73	61.4	12.3	36	165
Goetze/Skiles		99	93	72	61.7	12.8	32	161
WA 8143			108	71	62.0	11.9	38	165
OR2070870				70	61.1	13.1	34	164
Skiles	109	112	106	68	61.0	13.3	32	162
WA 8142			94	66	62.3	13.4	34	162

2012 WSU Variety Testing SW Winter Wheat Trial, Creston

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	11	8	8	7	0.8	3.9	4	1
LSD (.10)	6	5	6	6	0.6	0.5	1	1
Average	113	112	105	79	61.7	12.1	35	164
Highest	127	126	120	91	63.7	13.4	41	169
Lowest	103	99	62	66	59.3	10.7	31	161

Creston Soft White Winter Wheat

1. Grain yield in the 2012 Creston soft white winter wheat trial averaged 79 bushels/acre, 34 bushels/acre lower than the 5-year average yield. The Creston nursery was located about seven miles northwest of Creston, WA (B. Bandy, cooperator).

2. This nursery was seeded on 27 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged narrowly from 66 to 91 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘Tubbs 06’ was the highest yielding entry in the trial, and 7 of the 48 entries were within the top LSD range. ‘Xerpha’ was the top yielding entry across five years of results at this location. Stripe rust potential was low at this location and fungicide was applied on 26 May with the herbicide.

4. Test weights were very good averaging 61.7 lbs/bu and ranged from 59.3 to 63.7 lbs/bu. Grain protein was high averaging 12.1% and ranged from 10.7 to 13.4%. Plant height averaged 35 inches and there was no lodging.

Table 29. **2012 WSU Variety Testing SW Winter Wheat Trial, Dayton**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
LCS-Artdeco (NSA06-2153A)			168	**156**	61.7	9.5	38	148
WA 8152				**148**	62.0	10.3	47	153
ARS-Chrystal (ARS970075-3C)	139	151	145	**148**	62.6	9.7	45	154
IDO663			149	**147**	62.3	9.7	41	151
ARS970161-3L			156	146	**63.7**	9.9	43	155
OR08047P94				146	60.2	9.6	39	155
Stephens	136	144	148	145	61.8	10.1	41	152
Chukar	142	154	151	143	60.9	9.6	44	155
ARS-Amber (ARS960277L)	141	150	145	143	61.5	9.3	43	154
Mary (OR2040726)		144	150	142	62.4	9.8	40	154
WB-528	141	145	153	141	62.7	9.5	43	148
Eltan/Tubbs 06	134	141	149	141	60.9	9.4	46	154
WA 8134			145	141	62.0	10.1	48	153
ARS-Crescent (ARS970163-4C)		149	146	141	61.5	9.2	44	157
WA 8137				140	62.7	9.7	44	157
Cara	147	161	153	140	61.0	9.8	40	155
ARS990077-1C				139	61.3	10.0	43	155
WA 8153				139	62.2	9.9	44	153
Skiles	143	156	155	138	62.8	10.0	41	154
Otto (WA 8092)		149	146	138	61.2	10.4	44	158
Bruehl	138	153	147	138	58.4	9.5	44	156
OR2070870				137	61.8	10.6	38	154
Madsen	138	148	148	137	61.9	11.1	42	154
ARS970277L reselect				136	61.5	9.4	44	155
WA 8154				136	62.0	10.2	47	154
WA 8116		143	143	136	62.5	9.4	42	157
ARS010762-2C				136	61.4	10.3	48	156
Madsen/Rod	135	137	144	135	61.2	10.3	42	155
LWW-04-4009				134	62.5	9.9	40	157
OR2701071				134	59.3	9.7	42	154
Masami	123	126	131	133	60.7	9.7	43	156
WA 8151				133	61.8	9.8	43	154
ORCF-102	140	143	142	133	61.9	9.6	44	153
Coda	135	141	131	133	**63.5**	10.4	47	155
Xerpha	137	137	141	133	61.4	9.6	44	154
Rod	137	140	136	132	60.4	9.3	41	154
Goetze/Skiles		144	150	131	61.5	9.9	40	148
Tubbs 06	128	127	141	131	60.6	9.4	46	154
OR2071628			142	131	61.0	9.2	40	152
ARS970161-2L				130	**63.4**	10.0	43	155
WA 8142			145	130	62.5	11.1	43	153
WA 8135			138	130	63.0	10.8	44	157
ARS010780-3C				129	62.5	10.7	45	157
ORCF-103	130	134	133	127	61.0	9.7	42	157
WA 8136			132	126	59.5	9.7	41	158
Eltan	125	127	120	107	60.3	9.8	43	157
WA 8155				102	60.9	9.5	45	158
WA 8143			119	102	60.4	9.5	44	158

2012 WSU Variety Testing SW Winter Wheat Trial, Dayton

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	6	6	6	6	0.5	4.2	3	1
LSD (.10)	4	5	6	9	0.3	0.4	1	1
Average	136	144	144	135	61.6	9.9	43	155
Highest	147	161	168	156	63.7	11.1	48	158
Lowest	123	126	119	102	58.4	9.2	38	148

Dayton Soft White Winter Wheat

1. Grain yield in the 2012 Dayton soft white winter wheat trial averaged 135 bushels/acre, similar to the 5-year average yield. The Dayton nursery was located about six miles northwest of Dayton, WA (Jay Penner, cooperator).

2. This nursery was seeded on 28 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 135#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 102 to 156 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The variety ‘LCS-Artdeco’ was the highest yielding entry in the trial, and 4 of the 48 entries were within the top LSD range. The club variety ‘Cara’ was the top yielding entry across five years of results at this location. Stripe rust potential at this location was moderate and fungicide was applied 29 March at herbicide timing and on 29 April along with an insecticide.

4. Test weights were very good averaging 61.6 lbs/bu and ranged from 58.4 to 63.7 lbs/bu. Grain protein averaged 9.9% and ranged from 9.2 to 11.1%. Plant height averaged 43 inches and there was no lodging.

Table 30. **2012 WSU Variety Testing SW Winter Wheat Trial, Dusty**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
Mary (OR2040726)	--	126	110	**123**	58.7	11.9	44	153	2
WA 8136	--		110	**123**	54.9	12.5	41	158	2
ARS010780-3C	--			**120**	**60.6**	11.4	45	157	23
OR2701071	--			**117**	55.2	12.4	43	154	12
OR08047P94	--			**117**	56.9	11.5	41	154	53
LCS-Artdeco (NSA06-2153A)	--		105	**116**	59.6	10.7	41	153	25
OR2070870	--			**115**	58.8	11.2	42	154	7
IDO663	--		91	**110**	57.9	11.2	41	153	40
WA 8151	--			109	57.7	10.7	45	155	28
WA 8142	--		97	105	59.3	13.1	43	154	33
Cara	--	132	111	104	59.1	11.3	45	153	70
WA 8135	--		104	104	59.4	13.7	48	157	55
ARS-Crescent (ARS970163-4C)	--	125	116	104	59.6	10.9	46	155	12
Masami	--	108	100	102	56.3	11.1	43	157	15
ARS010762-2C	--			101	59.2	12.2	48	154	47
Tubbs 06	--	108	94	100	55.2	11.5	47	154	2
ARS970161-2L	--			100	**60.2**	11.7	43	156	37
WA 8137	--			99	59.2	11.2	43	158	32
ARS970161-3L	--		103	99	59.2	13.4	43	155	48
Madsen	--	112	93	98	58.2	12.6	44	154	52
Chukar	--	117	107	97	58.9	12.6	46	154	80
Skiles	--	126	114	97	57.3	13.5	42	156	42
WA 8134	--		102	97	58.7	11.0	45	153	63
Goetze/Skiles	--	118	99	97	56.8	11.9	40	154	47
ARS970277L reselect	--			95	58.4	10.7	42	155	72
WA 8116	--	113	105	95	58.0	10.9	38	157	55
OR2071628	--		96	94	57.6	10.3	41	154	47
ORCF-102	--	117	102	94	57.8	11.5	47	153	53
WA 8152	--			94	58.0	11.8	47	155	88
Madsen/Rod	--	113	98	92	56.8	12.9	44	155	52
ARS990077-1C	--			92	58.4	12.4	44	155	77
WA 8153	--			92	57.8	11.5	46	153	85
Stephens	--	101	81	91	57.8	11.7	42	153	68
ARS-Amber (ARS960277L)	--	115	101	90	56.3	12.9	46	155	85
Coda	--	110	102	89	59.4	12.8	46	154	78
WB-528	--	103	87	88	59.0	11.9	43	153	65
ARS-Chrystal (ARS970075-3C)	--	113	101	85	58.7	11.6	45	154	85
WA 8154	--			85	57.1	11.9	44	154	87
Otto (WA 8092)	--	98	101	84	56.3	12.8	43	158	90
LWW-04-4009	--			83	56.8	11.9	42	156	92
Eltan/Tubbs 06	--	94	84	72	56.2	12.3	44	153	75
Bruehl	--	109	104	71	53.8	12.0	44	155	87
Rod	--	100	91	69	54.4	11.7	40	156	80
Xerpha	--	99	94	66	54.3	12.1	44	154	47
WA 8143	--		87	66	56.6	11.6	44	156	92
ORCF-103	--	86	82	64	54.9	11.2	42	155	65
WA 8155	--			63	57.1	11.6	43	155	91
Eltan	--	89	88	58	55.7	11.4	43	155	90

2012 WSU Variety Testing SW Winter Wheat Trial, Dusty

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
C.V. %	--	11	11	13	2.0	10.6	5	0	42
LSD (.10)	--	7	8	13	1.2	1.3	2	1	24
Average	--	110	99	94	57.6	11.9	44	155	55
Highest	--	132	116	123	60.6	13.7	48	158	92
Lowest	--	86	81	58	53.8	10.3	38	153	2

Dusty Soft White Winter Wheat

1. Grain yield in the 2012 Dusty soft white winter wheat trial averaged 94 bushels/acre, 16 bushels/acre lower than the 3-year average yield. The Dusty nursery was located about seven miles northwest of Dusty, WA (B. Morasch, cooperator).

2. This nursery was seeded on 16 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 75#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 58 to 123 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The newly released OSU variety ‘Mary’ was the highest yielding entry in the trial, and there were 8 of the 48 entries within the top LSD range. The club ‘Cara’ was the top yielding entry across three years of results at this location. This location is a no fungicide location. Stripe rust potential at this location was moderate and did impact yields of more susceptible entries. In addition, lodging occurred early after heading and influenced yields for high lodging entries. Both stripe rust and lodging contributed to variability across the trial.

4. Test weights were variable averaging 57.6 lbs/bu and ranged from 53.8 to 60.6 lbs/bu. Grain protein averaged 11.9% and ranged from 10.3 to 13.7%. Plant height averaged 44 inches. Lodging was widespread in this trial averaging 55% and ranged from 2% to 92% and had an impact on yield and test weights.

Table 31. **2012 WSU Variety Testing SW Winter Wheat Trial, Fairfield**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
ARS-Crescent (ARS970163-4C)	--	--	86	**72**	58.7	9.1	37	169
ORCF-103	--	--	82	**69**	58.0	10.1	37	170
WA 8155	--	--		**68**	60.9	9.8	38	171
OR08047P94	--	--		**67**	57.9	10.0	34	167
Eltan	--	--	80	**66**	59.9	10.2	35	171
Bruehl	--	--	82	64	56.5	10.4	38	171
WA 8116	--	--	79	64	59.8	10.8	33	170
WA 8152	--	--		64	60.4	10.4	38	169
OR2070870	--	--		64	59.5	11.8	33	168
Xerpha	--	--	80	63	**61.0**	10.7	36	167
ARS990077-1C	--	--		62	59.6	10.2	32	171
WA 8143	--	--	86	61	60.4	10.0	36	171
WA 8153	--	--		61	59.7	11.0	35	167
WA 8135	--	--	78	61	**61.2**	10.7	34	171
Chukar	--	--	81	61	58.8	10.4	34	169
Cara	--	--	79	61	58.4	10.6	31	169
Skiles	--	--	77	60	60.3	11.5	34	167
Madsen	--	--	81	60	58.7	10.7	34	170
WA 8154	--	--		59	60.1	11.0	36	168
ARS-Chrystal (ARS970075-3C)	--	--	77	58	59.1	10.6	33	168
WA 8142	--	--	73	58	60.5	12.1	35	165
ORCF-102	--	--	75	58	59.3	10.9	35	167
ARS-Amber (ARS960277L)	--	--	78	57	59.5	10.6	33	167
Otto (WA 8092)	--	--	76	56	59.5	10.4	35	171
Madsen/Rod	--	--	71	56	58.5	11.3	34	167
ARS970277L reselect	--	--		55	59.5	11.0	34	167
Mary (OR2040726)	--	--	71	55	59.6	10.4	33	164
OR2071628	--	--	70	55	58.5	10.4	32	165
Eltan/Tubbs 06	--	--	68	55	59.6	10.0	36	168
OR2701071	--	--		55	56.7	11.3	34	167
WA 8134	--	--	69	54	58.6	11.1	36	168
Rod	--	--	72	54	58.6	10.7	32	168
ARS010762-2C	--	--		54	57.8	11.3	36	169
Tubbs 06	--	--	65	53	57.8	11.4	36	166
ARS970161-3L	--	--	69	53	60.4	11.4	34	167
ARS010780-3C	--	--		52	59.2	11.7	34	168
Goetze/Skiles	--	--	70	51	59.4	11.9	30	164
WA 8151	--	--		51	58.7	11.3	33	168
LCS-Artdeco (NSA06-2153A)	--	--	65	51	57.7	11.3	30	165
Masami	--	--	69	50	56.9	10.7	33	171
Coda	--	--	65	49	**61.8**	11.8	35	167
LWW-04-4009	--	--		49	58.8	11.4	32	170
ARS970161-2L	--	--		48	59.6	12.2	33	168
WA 8137	--	--		47	59.4	11.5	33	171
WB-528	--	--	69	46	59.8	12.0	33	165
Stephens	--	--	57	45	57.9	12.3	34	164
WA 8136	--	--	58	41	56.2	11.6	29	172
IDO663	--	--	54	36	57.4	12.4	31	165

2012 WSU Variety Testing SW Winter Wheat Trial, Fairfield

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	--	--	10	10	1.2	6.1	4	1
LSD (.10)	--	--	5	6	0.8	0.7	2	1
Average	--	--	73	56	59.1	11.0	34	168
Highest	--	--	86	72	61.8	12.4	38	172
Lowest	--	--	54	36	56.2	9.1	29	164

Fairfield Soft White Winter Wheat

1. Grain yield in the 2012 Fairfield soft white winter wheat trial averaged 56 bushels/acre, 33 bushels/acre lower than the 2011 yield. The Fairfield nursery was located about one mile northeast of Fairfield, WA (A. Anderberg, cooperator).

2. This nursery was seeded on 13 October, 2011 following barley. Seed was placed at an 85#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was 114#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 36 to 72 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The recently released club ‘ARS-Crescent’ was the highest yielding entry in the trial, and 5 of the 48 entries were within the top LSD range. ARS-Crescent was also the top yielding entry across two years of results at this location. Stripe rust potential was low at this location with fungicide applied 10 May with herbicide. Significant levels of Cephalosporium-stripe were observed at this location and may have influenced yields.

4. Test weights averaged 59.1 lbs/bu and ranged from 56.2 to 61.8 lbs/bu. Grain protein averaged 11.0% and ranged from 9.1 to 12.4%. Plant height averaged 34 inches and there was no lodging.

Table 32. 2012 WSU Variety Testing SW Winter Wheat Trial, Farmington

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
Tubbs 06	107	101	106	**128**	60.5	9.8	40	0
ORCF-103	121	122	119	122	60.2	10.2	39	0
ARS970161-3L			137	120	62.1	10.8	38	0
Eltan/Tubbs 06	113	110	107	120	60.5	10.0	40	0
OR2701071				119	58.1	10.2	37	0
Masami	111	107	112	118	59.9	10.0	39	0
Mary (OR2040726)		116	118	118	61.9	10.1	35	0
WA 8154				118	62.0	10.7	39	0
ARS970161-2L				118	62.0	10.9	40	0
Rod	117	117	120	118	60.3	9.9	38	0
WA 8134			124	117	61.2	10.6	40	0
Chukar	116	122	126	117	59.5	10.6	40	0
LWW-04-4009				116	61.5	10.1	38	0
WA 8151				116	61.2	10.6	38	0
OR2071628			119	115	59.7	10.3	35	0
ARS-Crescent (ARS970163-4C)		114	122	115	60.7	9.9	39	0
ARS990077-1C				115	60.0	10.7	38	0
ORCF-102	123	114	109	114	61.1	10.4	39	0
Xerpha	115	101	102	114	61.0	10.9	38	0
OR08047P94				114	59.5	10.6	35	0
WA 8152				114	61.3	11.4	42	0
Madsen	114	118	122	113	60.9	10.9	39	0
Bruehl	120	119	122	112	58.0	10.4	41	0
WA 8153				112	61.0	10.3	40	0
Stephens	116	116	125	112	61.2	10.7	35	0
LCS-Artdeco (NSA06-2153A)			120	112	60.2	11.0	35	0
ARS-Chrystal (ARS970075-3C)	103	111	113	112	61.0	10.6	40	0
Madsen/Rod	118	115	121	112	60.6	10.3	39	0
WA 8135			116	111	61.7	11.4	41	0
WA 8142			123	111	62.2	11.3	37	0
Skiles	117	117	125	110	61.8	11.7	37	0
ARS-Amber (ARS960277L)	116	118	121	110	61.0	10.2	39	0
ARS010780-3C				110	60.3	11.0	40	0
Eltan	112	113	115	110	60.5	10.0	39	0
Goetze/Skiles		108	111	109	60.6	11.2	36	0
Otto (WA 8092)		118	122	108	60.0	10.6	39	8
WA 8155				108	60.3	10.2	41	32
ARS010762-2C				108	59.7	11.0	44	0
WA 8137				107	62.2	10.6	39	0
ARS970277L reselect				107	61.0	10.4	39	0
WA 8116		116	116	107	60.8	10.7	38	0
WA 8143			122	106	60.4	10.6	40	13
OR2070870				105	60.5	10.9	36	0
Coda	109	116	119	105	**62.7**	11.6	42	0
IDO663			108	104	61.8	11.1	37	0
WA 8136			119	103	58.3	11.0	36	0
Cara	116	121	127	103	59.7	11.1	36	0
WB-528	112	108	112	101	61.9	11.6	36	0

2012 WSU Variety Testing SW Winter Wheat Trial, Farmington

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
C.V. %	8	7	6	4	0.6	2.8	4	525
LSD (.10)	4	5	5	5	0.4	0.3	2	6
Average	115	114	118	112	60.7	10.7	39	1
Highest	123	122	137	128	62.7	11.7	44	32
Lowest	103	101	102	101	58.0	9.8	35	0

Farmington Soft White Winter Wheat

1. Grain yield in the 2012 Farmington soft white winter wheat trial averaged 112 bushels/acre, 3 bushels/acre lower than the 5-year average yield. The Farmington nursery was located less than one mile south of Farmington, WA (B. Nelson, cooperator).

2. This nursery was seeded on 29 September, 2011 following dry peas. Seed was placed at an 85#/acre seeding rate using a no-till plot drill equipped with Cross-Slot openers set on 10-inch spacing. Base fertilizer was 114#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged narrowly from 101 to 128 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘Tubbs 06’ was the highest yielding entry in the trial and was the only entry of the 48 entries within the top LSD range. ‘ORCF-102’ was the top yielding entry across five years of results at this location. Stripe rust potential was low at this location and no fungicides were applied because this site was planned as a no spray site.

4. Test weights averaged 60.7 lbs/bu and ranged from 58.0 to 62.7 lbs/bu. Grain protein averaged 10.7% and ranged from 9.8 to 11.7%. Plant height averaged 39 inches and there was no lodging.

Table 33. **2012 WSU Variety Testing SW Winter Wheat Trial, Harrington**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
Otto (WA 8092)	--	66	75	**90**	58.9	10.3	36
ARS970161-2L	--			**90**	**60.8**	10.5	33
ARS970161-3L	--		79	**89**	**60.8**	10.0	35
WA 8116	--	67	76	**88**	60.4	9.9	34
Xerpha	--	70	76	**87**	59.7	9.7	34
OR2070870	--			**86**	59.8	10.7	36
Rod	--	66	77	**86**	59.0	9.6	32
Tubbs 06	--	65	71	**86**	59.1	10.1	35
ORCF-103	--	61	70	**85**	59.1	10.3	37
OR2071628	--		75	**85**	59.8	9.3	34
Chukar	--	70	78	**84**	57.5	10.2	35
Bruehl	--	68	76	**83**	56.8	10.5	36
Eltan	--	65	72	**83**	59.4	10.0	35
WA 8151	--			**83**	59.0	9.9	34
Masami	--	65	70	**83**	58.8	10.4	35
Eltan/Tubbs 06	--	64	73	82	60.2	9.8	37
OR2701071	--			82	56.1	10.3	35
ARS-Chrystal (ARS970075-3C)	--	67	75	82	59.5	10.0	35
ARS-Crescent (ARS970163-4C)	--	64	71	82	59.1	10.5	35
IDO663	--		69	82	60.4	10.1	36
ARS-Amber (ARS960277L)	--	66	73	81	58.6	10.0	36
Skiles	--	67	76	81	60.1	10.2	34
WB-528	--	63	72	81	**61.0**	11.3	34
WA 8153	--			80	**60.7**	10.5	37
WA 8152	--			80	60.2	10.9	36
Madsen/Rod	--	64	73	80	59.5	10.9	35
LWW-04-4009	--			79	60.1	11.7	35
ORCF-102	--	69	76	79	**60.9**	11.0	35
Mary (OR2040726)	--	61	71	78	60.4	10.6	36
WA 8134	--		71	78	60.2	10.3	35
WA 8155	--			78	57.9	11.4	34
WA 8143	--		72	78	58.6	10.3	33
Madsen	--	65	73	77	**60.6**	11.4	34
WA 8137	--			77	59.8	11.1	36
ARS970277L reselect	--			77	57.2	10.1	36
WA 8154	--			77	**61.1**	10.6	35
WA 8136	--		70	77	57.2	10.1	34
LCS-Artdeco (NSA06-2153A)	--		61	76	59.2	10.1	31
Goetze/Skiles	--	62	70	76	59.8	10.1	35
ARS010780-3C	--			76	59.9	11.5	35
Coda	--	63	69	76	**61.4**	10.8	35
OR08047P94	--			76	57.4	10.1	34
WA 8142	--		72	75	**61.0**	11.3	36
Stephens	--	57	66	75	59.3	11.1	37
Cara	--	66	71	74	57.2	10.6	35
ARS010762-2C	--			74	58.1	11.3	35
ARS990077-1C	--			72	60.1	10.9	36
WA 8135	--		64	71	59.8	12.4	37

2012 WSU Variety Testing SW Winter Wheat Trial, Harrington

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
C.V. %	--	9	8	8	1.3	8.0	6
LSD (.10)	--	4	4	7	0.8	0.9	2
Average	--	65	72	80	59.4	10.5	35
Highest	--	70	79	90	61.4	12.4	37
Lowest	--	57	61	71	56.1	9.3	31

Harrington Soft White Winter Wheat

1. Grain yield in the 2012 Harrington soft white winter wheat trial averaged 80 bushels/acre, 15 bushels/acre higher than the 3-year average. The Harrington nursery was located about five miles south of Harrington, WA (Mark Kramer, cooperator).

2. This nursery was seeded on 20 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 70#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 71 to 90 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The recently released variety ‘Otto’ was the highest yielding entry in the trial, and 15 of the 48 entries were within the top LSD range. Otto is an Eltan derivative with improved stripe rust resistance and end-use quality and also has Strawbreaker foot rot resistance. More information about Otto is available at: http://variety.wsu.edu/varieties.html. ‘Xerpha’ and the club ‘Chukar’ were the top yielding entries across three years of results at this location. Stripe rust potential at this location was low and fungicide was applied once for stripe rust control.

4. Test weights averaged 59.4 lbs/bu and ranged from 56.1 to 61.4 lbs/bu. Grain protein averaged 10.5% and ranged from 9.3 to 12.4%. Plant height averaged 35 inches and there was no lodging.

Table 34. **2012 WSU Variety Testing SW Winter Wheat Trial, Lamont**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
OR08047P94				**157**	59.6	10.5	38	13
ARS970161-3L			133	**147**	**62.8**	10.8	40	0
WA 8151				140	61.1	10.5	38	3
Stephens	90	101	109	138	62.2	10.8	38	0
Tubbs 06	103	117	122	138	59.5	10.3	41	3
OR2070870				136	61.7	10.4	38	0
OR2701071				136	59.1	10.0	35	0
Masami	106	119	116	135	59.8	10.4	41	0
Cara	114	128	136	133	60.5	11.0	39	0
Madsen/Rod	102	115	121	132	60.9	10.4	40	0
ARS970161-2L				131	62.4	11.0	40	7
ARS-Crescent (ARS970163-4C)		111	120	131	60.7	10.0	42	10
WA 8137				131	61.7	10.9	42	35
WA 8135			114	131	**62.5**	11.7	41	0
ARS-Amber (ARS960277L)	112	119	121	131	61.0	10.5	37	0
Skiles	110	122	127	131	61.5	11.2	35	0
OR2071628			120	130	60.2	10.2	36	0
ARS010780-3C				129	61.5	11.5	41	0
WA 8142			110	129	62.0	11.2	37	0
Bruehl	99	111	116	128	57.7	11.5	43	17
Xerpha	114	124	124	128	60.7	10.5	40	0
ARS990077-1C				128	60.9	11.3	38	32
Coda	102	112	123	128	**63.1**	11.1	44	25
WA 8153				127	62.2	10.8	39	0
WA 8134			125	126	61.9	10.6	43	27
ARS970277L reselect				126	60.4	10.2	38	7
Rod	99	105	110	125	60.0	10.3	36	0
WA 8154				125	62.2	11.1	39	0
ORCF-102	104	116	121	124	61.4	9.8	41	0
WA 8136			105	124	58.9	10.9	36	0
Madsen	93	108	110	123	61.9	11.6	39	0
Goetze/Skiles		114	114	122	61.2	10.5	36	0
IDO663			102	122	62.2	10.6	35	0
ARS-Chrystal (ARS970075-3C)	110	119	127	121	61.0	11.3	40	0
WA 8152				119	61.3	11.6	40	37
Chukar	104	112	118	119	60.8	11.1	43	30
Eltan/Tubbs 06	99	109	108	119	60.1	10.5	38	17
ARS010762-2C				117	59.3	11.7	43	0
Mary (OR2040726)		91	100	117	59.6	10.8	36	0
LWW-04-4009				116	62.3	10.9	37	47
ORCF-103	98	110	105	112	59.6	9.9	38	47
WA 8116		108	101	112	60.6	10.9	35	20
Otto (WA 8092)		106	105	110	60.1	10.7	41	57
WB-528	91	101	101	106	62.3	10.3	41	0
Eltan	99	104	100	100	59.3	10.3	39	68
LCS-Artdeco (NSA06-2153A)			91	95	61.2	11.5	34	0
WA 8155				94	60.0	10.5	41	93
WA 8143			99	92	60.3	10.3	41	88

2012 WSU Variety Testing SW Winter Wheat Trial, Lamont

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
C.V. %	10	10	10	8	1.0	7.2	6	96
LSD (.10)	5	7	8	10	0.6	0.8	2	14
Average	103	112	114	124	60.9	10.8	39	14
Highest	114	128	136	157	63.1	11.7	44	93
Lowest	90	91	91	92	57.7	9.8	34	0

Lamont Soft White Winter Wheat

1. Grain yield in the 2012 Lamont soft white winter wheat trial averaged 124 bushels/acre, 21 bushels/acre higher than the 5-year average yield. The Lamont nursery was located about four miles southeast of Lamont, WA (G. White, cooperator).

2. This nursery was seeded on 15 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a hoe-type opener plot drill set on 9-inch spacing. Base fertilizer was 80#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 92 to 157 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘Stephens’ was the highest yielding named entry in the trial, but there were three numbered lines with higher yield and 2 of the 48 entries were within the top LSD range. The club ‘Cara’ and ‘Xerpha’ were the top yielding entries across five years of results at this location. Stripe rust potential at this location was low and fungicide was applied with herbicide on May 10.

4. Test weights were good averaging 60.9 lbs/bu and ranged from 57.7 to 63.1 lbs/bu. Grain protein averaged 10.8% and ranged from 9.8 to 11.7%. Plant height averaged 39 inches. Lodging was variable in this trial averaging 14% but ranged from 0% to 93% and had an impact on yield and test weights for high lodging entries

Table 35. **2012 WSU Variety Testing SW Winter Wheat Trial, Lind**

Variety Name *Club Italized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
ARS-Crescent (ARS970163-4C)		52	52	**58**	58.6	11.5	29	146
Masami	41	52	50	**57**	58.8	11.2	31	143
Bruehl	43	54	54	**56**	59.4	11.6	34	147
Chukar	40	53	52	**56**	58.1	11.7	29	147
Xerpha	42	52	53	**54**	59.5	12.3	33	143
ARS970161-3L			53	**54**	60.3	12.2	32	144
Madsen/Rod	34	46	48	**53**	59.0	12.3	30	147
ORCF-103	40	48	48	**53**	59.7	11.9	31	146
ARS970161-2L				**53**	**60.8**	12.4	32	147
Coda	39	51	51	**52**	59.9	12.6	33	147
Rod	37	46	49	**52**	58.5	11.4	29	144
Tubbs 06	38	49	50	**52**	58.8	11.6	31	141
Stephens	33	42	45	50	59.1	12.0	30	142
ARS010780-3C				50	59.5	12.3	31	148
WA 8116		47	46	49	60.2	12.2	29	146
OR2701071				49	57.6	10.8	31	145
Eltan	40	47	48	48	60.1	11.8	33	148
ARS-Chrystal (ARS970075-3C)	40	48	46	48	59.3	12.1	28	147
OR08047P94				48	57.5	11.0	30	142
Cara	36	46	45	47	57.9	11.6	28	147
Madsen	34	45	45	47	59.2	12.5	31	144
Skiles	38	44	48	47	58.7	13.5	29	141
ARS970277L reselect				47	59.2	11.7	29	146
ARS-Amber (ARS960277L)	39	46	46	46	59.2	11.9	31	145
Eltan/Tubbs 06	39	47	46	46	59.5	11.8	34	140
Otto (WA 8092)		47	46	46	60.4	12.5	31	148
ARS010762-2C				46	57.9	11.8	30	145
WA 8137				45	**61.0**	12.0	31	148
ORCF-102	35	44	44	44	59.5	12.6	33	142
WA 8136			47	44	59.2	11.9	31	148
WA 8153				44	60.0	13.8	33	143
WA 8154				44	59.9	12.8	32	142
ARS990077-1C				42	59.7	12.5	30	147
WA 8134			40	41	59.0	12.4	34	141
WA 8135			45	41	59.9	13.6	32	144
WA 8152				41	60.2	13.1	34	141
WA 8155				41	**60.8**	12.2	35	147
IDO663			40	40	59.4	12.1	30	141
WA 8143			44	40	**60.8**	11.9	35	144
OR2070870				39	58.7	13.4	30	146
LWW-04-4009				39	60.5	13.6	30	148
Goetze/Skiles		40	41	38	58.6	13.4	29	144
WA 8142			37	38	60.1	13.5	34	141
WA 8151				38	58.5	12.7	30	147
Mary (OR2040726)		40	38	37	58.4	13.0	30	141
WB-528	31	38	38	36	**60.9**	13.8	32	140
OR2071628			39	35	58.5	12.4	30	140
LCS-Artdeco (NSA06-2153A)			28	30	56.3	12.4	26	141

2012 WSU Variety Testing SW Winter Wheat Trial, Lind

Variety Name *Club Italized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	13	11	13	12	0.7	4.8	5	1
LSD (.10)	2	3	4	6	0.4	0.6	2	2
Average	38	47	46	46	59.3	12.3	31	144
Highest	43	54	54	58	61.0	13.8	35	148
Lowest	31	38	28	30	56.3	10.8	26	140

Lind Soft White Winter Wheat

1. Grain yield in the 2012 Lind soft white winter wheat trial averaged 46 bushels/acre, 8 bushels/acre higher than the 5-year average. The Lind nursery was located on the WSU Lind Dryland Experiment Station three miles NE of the town of Lind.

2. This nursery was seeded on 12 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 50#N/acre pre-plant applied. Fall seeding conditions were favorable and emergence and stand establishment were good.

3. Yields ranged from 30 to 58 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. 'ARS-Crescent' was the highest yielding named entry in the trial, and 12 of the 48 entries were within the top LSD range. ‘Bruehl’ (club) and ‘Xerpha’ were the top two yielding entries across five years of results at this location. There was a low amount of stripe rust potential at this location and a fungicide was applied 9 April at herbicide timing.

4. Test weights averaged 59.3 lbs/bu and ranged from 56.3 to 61.0 lbs/bu. Grain protein averaged 12.3% with a range of 10.8 to 13.8%. A soil test showed ample N at this site. Plant height averaged 31 inches and there was no lodging.

Table 36. **2012 WSU Variety Testing SW Winter Wheat Trial, Mayview**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
LWW-04-4009				**107**	62.1	9.5	35	165
Tubbs 06	103	112	117	**107**	60.0	9.0	39	159
ARS-Amber (ARS960277L)	110	119	127	**105**	60.5	9.7	35	162
Bruehl	104	112	125	**104**	58.1	8.9	39	166
ARS-Crescent (ARS970163-4C)		116	116	**103**	60.7	8.9	36	166
ARS970277L reselect				**102**	60.8	9.8	36	162
ORCF-103	103	111	118	**102**	59.7	9.3	35	166
Eltan	98	105	121	**101**	60.7	8.8	36	167
Xerpha	107	113	121	**101**	61.5	9.7	38	162
WA 8143			123	100	61.0	9.4	37	168
ARS990077-1C				100	60.2	9.5	36	165
Eltan/Tubbs 06	102	107	116	99	60.2	9.0	38	160
OR2701071				99	58.0	9.0	36	160
WB-528	105	112	117	99	**62.6**	9.8	35	157
WA 8116		121	126	99	61.1	9.7	33	167
Goetze/Skiles		110	116	98	61.1	9.7	34	157
WA 8134			121	98	61.1	9.7	40	161
Skiles	107	114	123	98	61.9	10.5	34	160
ORCF-102	106	115	118	97	61.4	9.0	38	160
Chukar	107	117	114	97	58.7	8.7	36	164
Stephens	98	103	111	97	61.6	9.6	34	158
WA 8155				97	61.2	9.4	37	168
IDO663			117	97	61.8	9.2	34	158
Cara	105	118	119	97	59.2	9.5	33	163
Madsen/Rod	104	112	115	96	60.8	9.8	36	162
WA 8153				96	62.0	10.8	37	161
Rod	104	110	116	96	60.5	9.2	35	163
WA 8154				94	61.8	9.6	36	161
Madsen	102	112	116	94	61.3	9.8	37	164
OR2071628			115	94	59.9	9.4	34	159
WA 8151				94	60.4	9.8	34	162
WA 8137				94	61.8	9.3	36	167
Otto (WA 8092)		114	122	93	60.4	9.1	37	168
Masami	101	107	107	92	59.4	9.0	36	167
WA 8152				92	60.5	10.0	41	163
OR2070870				91	60.8	9.2	34	160
Coda	101	112	113	91	**62.7**	10.4	37	161
ARS970161-2L				90	61.7	10.1	35	163
ARS-Chrystal (ARS970075-3C)	109	113	117	90	60.4	9.9	34	162
ARS970161-3L			116	89	62.0	9.8	35	163
LCS-Artdeco (NSA06-2153A)			114	89	61.3	9.5	33	157
OR08047P94				88	58.7	9.5	35	160
WA 8136			114	87	58.5	9.9	34	167
Mary (OR2040726)		107	110	85	61.6	10.4	33	158
WA 8142			102	81	**62.8**	10.6	36	156
ARS010762-2C				78	58.7	9.9	35	163
ARS010780-3C				73	60.6	10.9	35	167
WA 8135			98	73	62.2	10.6	37	167

2012 WSU Variety Testing SW Winter Wheat Trial, Mayview

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	7	6	5	6	0.5	5.3	4	1
LSD (.10)	3	4	4	6	0.3	0.5	1	1
Average	104	112	116	95	60.8	9.6	36	163
Highest	110	121	127	107	62.8	10.9	41	168
Lowest	98	103	98	73	58.0	8.7	33	156

Mayview Soft White Winter Wheat

1. Grain yield in the 2012 Mayview soft white winter wheat trial averaged 95 bushels/acre, 9 bushels/acre lower than the 5-year average yield. The Mayview nursery was located about three miles south of the Lower Granite Dam on the Snake River, or 12 miles northeast of Pomeroy, WA (R. & R. Koller, cooperators).
2. This nursery was seeded on 8 October, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 85#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.
3. Yields ranged from 73 to 107 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The variety ‘Tubbs 06’ was the highest yielding entry in the trial, and there were 9 of the 48 entries within the top LSD range. ‘ARS-Amber’ was the top yielding entry across five years of results at this location. Stripe rust potential at this location was moderate and fungicide was applied with the herbicide on 7 May.
4. Test weights were good averaging 60.8 lbs/bu and ranged from 58.0 to 62.8 lbs/bu. Grain protein averaged 9.6% and ranged from 8.7 to 10.9%. Plant height averaged 36 inches and there was no lodging.

Table 37. **2012 WSU Variety Testing SW Winter Wheat Trial, Moses Lake**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
Mary (OR2040726)		166	168	**151**	**59.1**	9.8	38	142	0
WB-528	174	165	164	**150**	**58.9**	12.5	40	144	27
IDO663			168	**146**	55.7	12.4	40	143	18
ARS-Chrystal (ARS970075-3C)	165	161	162	**145**	**58.4**	11.9	42	145	0
Goetze/Skiles		158	163	**144**	56.0	12.3	38	143	0
WA 8153				**143**	**58.0**	13.0	43	145	0
OR2071628			166	**139**	55.3	10.6	39	144	0
Eltan/Tubbs 06	161	157	157	**138**	56.2	12.2	42	145	27
LCS-Artdeco (NSA06-2153A)			159	137	55.4	11.3	37	143	0
Xerpha	172	158	164	136	56.0	11.7	41	147	0
OR08047P94				135	53.7	12.2	37	145	17
WA 8134			160	135	56.3	12.9	43	146	43
Otto (WA 8092)		146	156	135	56.1	12.8	43	147	42
WA 8142			150	135	**57.7**	12.2	40	145	0
ORCF-102	168	159	158	135	56.7	13.2	42	146	13
WA 8152				134	57.2	13.8	43	146	8
Stephens	172	161	163	133	55.9	12.2	37	142	0
OR2701071				132	53.4	11.6	39	145	0
LWW-04-4009				132	**58.1**	12.9	39	148	38
OR2070870				132	56.2	12.1	38	146	0
ARS010762-2C				130	56.5	11.5	44	146	0
WA 8154				129	**59.2**	11.3	43	145	0
ARS970277L reselect				128	55.0	12.5	41	147	25
Tubbs 06	167	156	159	127	54.2	13.6	43	145	13
Skiles	155	147	148	127	56.4	12.6	38	145	0
Madsen/Rod	161	154	156	127	55.4	12.5	42	148	20
WA 8135			148	126	**58.0**	13.2	44	147	0
ARS970161-2L				126	**59.0**	12.4	41	147	12
WA 8151				125	54.5	12.5	42	146	30
ARS970161-3L			147	125	**59.5**	12.6	41	146	0
ARS990077-1C				124	57.1	12.5	42	147	0
WA 8137				124	56.7	12.9	42	147	32
Madsen	158	150	149	123	57.0	11.9	40	146	15
ARS010780-3C				122	**57.8**	13.5	39	147	17
Masami	150	140	152	121	54.1	12.1	43	147	12
Rod	163	154	155	120	53.7	12.1	40	147	27
Bruehl	157	144	144	120	52.8	12.3	41	147	30
ARS-Amber (ARS960277L)	153	144	144	119	56.3	13.5	40	147	25
Chukar	144	137	134	116	55.0	13.6	42	148	65
WA 8143			144	110	55.2	12.7	42	147	33
WA 8116		145	143	110	56.0	13.4	38	146	25
Coda	142	136	135	110	**58.6**	13.2	42	147	47
Eltan	149	137	135	109	55.8	12.2	41	146	73
WA 8136			139	106	50.3	12.5	39	149	17
ARS-Crescent (ARS970163-4C)		136	134	106	54.5	11.8	42	148	38
Cara	144	139	133	106	53.5	14.3	40	146	7
WA 8155				100	54.4	12.7	41	147	40
ORCF-103	149	135	138	94	53.0	12.8	40	146	82

2012 WSU Variety Testing SW Winter Wheat Trial, Moses Lake

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
C.V. %	7	7	7	10	3.4	9.7	3	1	122
LSD (.10)	5	6	8	13	2.0	1.3	1	1	25
Average	158	149	151	127	56.0	12.5	41	146	19
Highest	174	166	168	151	59.5	14.3	44	149	82
Lowest	142	135	133	94	50.3	9.8	37	142	0

Moses Lake (Irrigated) Soft White Winter Wheat

1. Grain yield in the 2012 irrigated Moses Lake soft white winter wheat trial averaged 127 bushels/acre, 31 bushels/acre lower than the 5-year average yield. The Moses Lake nursery was located about seven miles south of Moses Lake, WA (J. Heilig, cooperator).

2. This nursery was seeded on 18 October, 2011 following potatoes. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 200#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 94 to 151 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The recently released Oregon variety ‘Mary’ was the highest yielding entry in the trial, and there were 8 of the 48 entries within the top LSD range. ‘WB-528’ was the top yielding entry across five years of results at this location. Stripe rust potential at this location was low/moderate and fungicide was applied with the herbicide on 20 April and again on 24 May. Soil and water variability at this site was high. This influenced grain filling, maturity, and lodging. We also believe that heat stress affected later maturing tillers. Despite this variation, the yield CV was less than 10%.

4. Test weights were highly variable averaging 56.0 lbs/bu and ranged from 50.3 to 59.5 lbs/bu. Grain protein averaged 12.5% and ranged from 9.8 to 14.3%. Plant height averaged 41 inches. Lodging was highly variable in this trial, averaged 19%, ranged from 0% to 82%, and influenced performance.

Table 38. **2012 WSU Variety Testing SW Winter Wheat Trial, Pullman**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Tubbs 06	143	143	141	**121**	59.7	8.8	38	160
LWW-04-4009				**120**	61.1	9.0	34	164
Stephens	141	149	147	**118**	61.1	9.6	34	158
WA 8151				**117**	60.2	9.1	35	162
ARS970277L reselect				**117**	60.3	9.2	36	162
Otto (WA 8092)		150	146	**116**	53.8	10.1	38	167
WA 8154				**116**	61.5	9.4	39	162
Rod	146	146	143	**116**	59.3	9.4	35	163
WA 8134			147	**116**	60.3	9.1	39	162
ARS-Amber (ARS960277L)	151	154	148	**115**	60.3	9.2	37	162
WA 8155				**115**	56.1	9.1	41	166
WB-528	140	147	143	**114**	**62.0**	10.0	35	158
Eltan/Tubbs 06	142	145	142	**114**	58.5	9.0	38	161
ORCF-103	138	138	134	**114**	58.8	9.2	36	165
Madsen/Rod	140	144	143	**113**	59.8	9.2	35	162
WA 8143			150	**113**	56.5	9.3	41	167
OR2701071				112	57.5	9.1	34	161
OR08047P94				112	58.1	9.4	33	161
Madsen	137	146	146	112	60.4	9.6	34	164
WA 8116		146	143	112	58.0	9.6	36	166
Xerpha	145	140	138	112	60.1	9.4	35	162
ORCF-102	140	142	138	112	60.4	9.4	37	161
ARS-Crescent (ARS970163-4C)		147	143	112	59.4	8.6	36	165
OR2071628			143	112	59.3	9.1	33	159
WA 8153				111	61.2	9.6	37	161
ARS990077-1C				111	59.4	9.7	35	165
ARS970161-2L				110	61.4	9.7	36	163
Eltan	143	144	147	110	56.5	9.3	40	166
WA 8152				108	59.7	10.1	40	163
Masami	138	132	128	107	59.0	9.1	35	166
ARS010780-3C				106	60.0	9.8	36	165
ARS-Chrystal (ARS970075-3C)	141	149	143	106	60.8	9.6	37	162
WA 8135			135	106	61.3	10.0	40	167
Coda	138	143	137	106	**62.3**	9.9	39	161
WA 8136			137	106	53.8	10.1	33	167
Goetze/Skiles		127	127	106	60.7	10.4	32	158
LCS-Artdeco (NSA06-2153A)			137	105	60.8	9.7	32	158
Bruehl	138	143	144	105	57.2	9.2	38	166
WA 8137				105	60.1	9.2	37	166
ARS970161-3L			140	103	61.3	9.7	36	162
Skiles	133	139	139	103	61.6	10.4	33	161
WA 8142			131	102	61.5	10.2	33	158
ARS010762-2C				101	59.0	10.1	38	163
IDO663			136	101	61.5	9.7	33	158
Chukar	140	145	141	100	58.5	9.4	36	164
Cara	136	145	141	98	58.1	10.1	34	163
OR2070870				98	60.5	10.2	34	161
Mary (OR2040726)		135	125	87	60.9	9.2	35	159

2012 WSU Variety Testing SW Winter Wheat Trial, Pullman

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	7	7	7	7	0.9	2.4	3	1
LSD (.10)	4	5	7	8	0.6	0.2	1	1
Average	141	143	140	109	59.6	9.5	36	163
Highest	151	154	150	121	62.3	10.4	41	167
Lowest	133	127	125	87	53.8	8.6	32	158

Pullman Soft White Winter Wheat

1. Grain yield in the 2012 Pullman soft white winter wheat trial averaged 109 bushels/acre, 32 bushels/acre lower than the 5-year average yield. The Pullman nursery was located about three miles southeast of Pullman, WA (N. & R. Druffel, cooperators).

2. This nursery was seeded on 19 October, 2011 following chickpeas. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 120#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 87 to 121 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The variety ‘Tubbs 06’ was the highest yielding entry in the trial, and there were 16 of the 48 entries within the top LSD range. ‘ARS-Amber’ was the top yielding entry across five years of results at this location. Stripe rust potential at this location was moderate and fungicide was applied with the herbicide and at flag leaf emergence.

4. Test weights averaged 59.6 lbs/bu and ranged from 53.8 to 62.3 lbs/bu. Test weight was reduced by high grain moisture in some late maturity entries such as ‘Eltan’ and new cultivars derived from Eltan. Grain yields were corrected for moisture. Grain protein averaged 9.5% and ranged from 8.6 to 10.4%. Plant height averaged 36 inches and there was no lodging.

Table 39. **2012 WSU Variety Testing SW Winter Wheat Trial, Reardan**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Xerpha	111	124	109	**87**	60.9	11.4	38	168
Tubbs 06	101	113	98	**85**	60.5	11.3	37	166
WA 8143			115	**84**	61.2	11.2	34	172
WA 8134			128	**82**	60.9	11.9	38	166
WA 8155				**82**	61.6	10.9	35	172
ARS970161-2L				**82**	62.2	11.7	34	169
ARS-Crescent (ARS970163-4C)		127	114	**82**	59.8	10.1	32	173
Eltan/Tubbs 06	103	116	103	81	60.8	11.5	34	167
Bruehl	107	121	116	81	59.2	10.6	35	173
OR08047P94				80	57.9	10.4	31	168
Chukar	110	128	120	80	59.2	11.0	31	173
LWW-04-4009				80	62.1	12.4	31	171
ARS970161-3L			119	79	**62.4**	11.7	32	169
Rod	103	121	110	79	60.2	10.9	33	169
Otto (WA 8092)		118	107	78	60.7	11.6	33	174
OR2701071				78	59.1	10.7	34	168
Madsen/Rod	108	121	110	78	60.8	11.6	32	168
ARS970277L reselect				77	61.3	12.1	33	167
WA 8136			108	75	58.5	11.6	28	173
ORCF-103	100	110	100	75	60.6	11.0	35	171
ARS-Chrystal (ARS970075-3C)	116	126	113	75	60.1	11.1	32	172
WA 8151				75	60.8	11.9	33	168
Masami	103	114	104	75	59.6	10.6	33	171
ARS010780-3C				75	60.6	11.9	31	172
WA 8137				75	62.0	11.5	33	174
WA 8154				75	61.9	12.0	33	168
ORCF-102	105	114	104	75	61.3	12.0	34	167
Cara	109	123	116	74	59.4	12.0	30	173
WA 8116		122	114	74	61.3	11.6	30	173
OR2071628			109	73	60.1	11.3	31	167
Madsen	99	114	107	73	60.4	11.9	33	168
ARS990077-1C				73	60.8	11.6	32	173
LCS-Artdeco (NSA06-2153A)			101	73	59.4	11.6	30	166
Coda	103	119	111	73	**62.7**	12.5	36	169
Mary (OR2040726)		115	108	73	61.4	11.6	33	166
ARS-Amber (ARS960277L)	110	126	115	72	61.7	11.8	34	168
Eltan	100	108	94	71	61.5	11.5	33	173
Goetze/Skiles		112	105	70	60.6	13.2	30	166
OR2070870				70	60.1	13.1	32	168
Stephens	85	96	84	69	61.6	11.9	33	165
WA 8152				68	60.6	12.6	35	167
Skiles	100	110	103	68	60.7	13.1	30	168
IDO663			84	67	60.6	12.2	31	166
WA 8135			103	67	61.2	11.8	33	172
WA 8153				67	61.5	13.4	34	168
ARS010762-2C				65	57.9	12.1	35	173
WB-528	91	103	95	63	**62.4**	13.2	32	166
WA 8142			100	61	61.3	13.5	33	166

2012 WSU Variety Testing SW Winter Wheat Trial, Reardan

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	10	8	10	6	0.6	3.9	5	0
LSD (.10)	4	5	7	5	0.4	0.5	2	1
Average	103	117	107	75	60.7	11.8	33	169
Highest	116	128	128	87	62.7	13.5	38	174
Lowest	85	96	84	61	57.9	10.1	28	165

Reardan Soft White Winter Wheat

1. Grain yield in the 2012 Reardan soft white winter wheat trial averaged 75 bushels/acre, 28 bushels/acre lower than the 5-year average yield. The Reardan nursery was located about three miles northeast of Reardan, WA (H. Johnson & T. Carsten, cooperators).
2. This nursery was seeded on 23 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was 92#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.
3. Yields ranged from 61 to 87 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘Xerpha’ and ‘Tubbs 06’ were the highest yielding entries in the trial, and 7 of the 48 entries were within the top LSD range. The recently released club ‘ARS Chrystal’ was the top yielding entry across five years of results at this location. Stripe rust potential was low at this location and fungicide was applied on 8 May with the herbicide.
4. Test weights were good averaging 60.7 lbs/bu and ranged from 57.9 to 62.7 lbs/bu. Grain protein was high averaging 11.8% and ranged from 10.1 to 13.5%. Plant height averaged 33 inches and there was no lodging.

Table 40. **2012 WSU Variety Testing SW Winter Wheat Trial, Ritzville**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
Rod	62	78	87	**89**	59.6	7.7	34	146	0
Xerpha	64	77	84	**80**	60.4	7.4	38	146	0
ORCF-102	58	71	77	76	60.4	8.7	37	144	0
ARS970161-3L			77	75	**60.9**	7.8	36	146	0
Chukar	57	72	76	75	58.0	6.9	35	147	0
ARS970161-2L				75	**61.2**	8.4	36	147	0
Otto (WA 8092)		74	78	74	60.1	7.9	39	148	3
ARS-Amber (ARS960277L)	61	74	78	74	59.3	7.9	33	146	0
WA 8116		70	78	74	**60.9**	8.1	31	147	0
ARS-Chrystal (ARS970075-3C)	58	70	74	74	59.7	7.9	35	147	0
WA 8136			76	74	59.8	7.8	34	150	0
Madsen/Rod	58	71	76	73	59.8	8.4	35	146	0
OR08047P94				73	57.9	7.3	35	146	0
WA 8134			77	73	59.3	7.8	37	143	0
Eltan/Tubbs 06	60	73	78	72	60.0	8.1	39	143	2
OR2701071				72	57.6	7.2	35	146	0
Masami	62	74	73	71	60.1	7.6	36	147	0
Goetze/Skiles		65	72	71	59.9	8.5	34	142	0
Bruehl	61	71	75	71	58.9	7.7	38	149	0
OR2071628			74	70	58.8	8.5	35	144	2
WA 8152				70	**61.1**	8.1	40	142	10
ORCF-103	56	68	72	70	59.3	7.9	34	147	0
ARS010762-2C				70	58.8	8.4	37	147	0
Coda	55	68	73	69	**61.0**	8.6	37	148	0
Tubbs 06	55	68	75	70	59.7	7.2	39	142	0
Skiles	56	68	74	70	**61.4**	8.3	35	145	0
ARS970277L reselect				69	58.7	6.9	34	145	0
WA 8137				69	**61.4**	7.8	36	149	0
WB-528	53	64	71	68	60.7	8.1	36	142	0
Eltan	61	71	72	68	59.4	7.9	37	149	17
Mary (OR2040726)		70	76	68	59.9	8.7	34	144	0
ARS-Crescent (ARS970163-4C)		75	72	67	58.9	6.9	35	147	0
Cara	58	71	75	67	57.5	7.1	31	146	0
WA 8154				66	59.8	8.6	37	145	0
OR2070870				65	59.6	8.6	33	146	0
WA 8142			68	65	**61.2**	8.7	37	143	0
Madsen	54	66	67	64	59.8	8.6	34	145	0
WA 8135			71	64	**61.4**	9.2	38	148	0
ARS010780-3C				64	59.5	7.7	36	148	0
Stephens	49	61	68	63	59.0	8.3	34	142	0
WA 8155				62	60.5	7.5	37	149	15
IDO663			68	61	59.5	8.3	32	142	0
WA 8151				61	59.5	6.7	34	145	0
LWW-04-4009				58	**60.9**	7.5	33	147	0
WA 8153				58	60.6	8.6	37	145	0
ARS990077-1C				57	58.6	6.9	33	148	0
WA 8143			70	56	60.4	7.5	36	148	3
LCS-Artdeco (NSA06-2153A)			45	27	57.4	10.5	31	141	0

2012 WSU Variety Testing SW Winter Wheat Trial, Ritzville

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
C.V. %	10	10	10	13	0.8	9.2	4	1	203
LSD (.10)	3	4	6	9	0.5	0.8	1	1	2
Average	58	70	74	68	59.8	8.0	35	146	1
Highest	64	78	87	89	61.4	10.5	40	150	17
Lowest	49	61	45	27	57.4	6.7	31	141	0

Ritzville Soft White Winter Wheat

1. Grain yield in the 2012 Ritzville soft white winter wheat trial averaged 68 bushels/acre, 10 bushels/acre higher than the 5-year average. The Ritzville nursery was located about four miles west of Ritzville, WA (Ron Jirava, cooperator).

2. This nursery was seeded on 12 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 60#N/acre pre-plant applied. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 27 to 89 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘Rod’ and ‘Xerpha’ were the highest yielding named entries in the trial, were the only 2 of the 48 entries within the top LSD range. Xerpha was the top yielding entry across five years of results at this location. Stripe rust potential at this location was slight and fungicide was only applied for stripe rust control 10 April at herbicide application timing.

4. Test weights averaged 59.8 lbs/bu and ranged from 57.4 to 61.4 lbs/bu. Grain protein averaged 8.0% and ranged from 6.7 to 10.5%. Plant height averaged 35 inches and there was a little lodging

Table 41. **2012 WSU Variety Testing SW Winter Wheat Trial, St. Andrews**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Chukar	55	66	67	**73**	61.6	10.0	36	161
Tubbs 06	51	64	67	**68**	61.4	9.3	38	159
ARS970277L reselect				65	62.1	10.0	35	160
Xerpha	56	66	66	64	61.6	10.7	36	161
ARS970161-2L				63	**62.7**	10.8	36	160
Bruehl	55	64	65	62	60.2	10.7	36	162
Masami	52	62	66	62	60.9	10.1	36	162
Otto (WA 8092)		70	71	62	61.6	11.3	35	162
ARS-Crescent (ARS970163-4C)		57	64	61	62.2	10.5	35	163
ARS-Amber (ARS960277L)	58	61	62	61	61.4	9.7	35	160
WA 8155				61	61.9	11.2	37	162
WA 8116		64	68	61	62.0	11.4	32	162
ORCF-103	50	59	60	61	61.9	10.7	35	161
ARS970161-3L			60	61	**63.2**	11.3	36	160
WA 8137				60	**63.0**	10.9	34	162
Cara	46	53	55	60	60.9	10.2	33	160
LCS-Artdeco (NSA06-2153A)			36	59	60.1	10.2	32	157
ORCF-102	48	57	61	59	61.8	10.7	37	158
Madsen	44	51	56	59	61.8	10.8	35	160
WA 8134			59	59	61.5	10.9	37	158
Eltan	57	66	70	59	62.2	11.0	35	162
WA 8152				58	61.8	11.5	38	159
OR2070870				58	61.3	12.1	34	159
OR08047P94				58	58.7	9.6	33	159
Stephens	44	54	59	58	61.7	11.2	34	157
Eltan/Tubbs 06	53	61	70	58	61.1	9.9	37	160
LWW-04-4009				57	**62.6**	10.9	33	162
OR2701071				57	58.8	9.2	34	159
WA 8143			63	57	62.0	11.3	37	162
WA 8151				57	61.3	10.6	33	160
OR2071628			55	56	61.3	10.4	34	158
Rod	50	57	61	54	61.2	10.5	34	160
Madsen/Rod	49	57	63	54	61.2	10.9	36	160
ARS010780-3C				53	61.9	10.7	34	161
WB-528	44	51	51	52	**62.8**	10.8	34	156
WA 8136			58	52	60.5	10.6	32	162
IDO663			57	52	61.9	11.1	32	157
WA 8154				52	62.4	11.2	35	160
Coda	49	57	57	52	**62.8**	11.6	34	161
Mary (OR2040726)		54	53	51	61.5	11.1	33	158
ARS010762-2C				51	59.9	11.3	35	160
ARS-Chrystal (ARS970075-3C)	51	54	52	50	62.1	10.4	34	161
ARS990077-1C				49	61.6	10.1	34	161
WA 8135			53	49	**62.6**	11.1	36	160
Skiles	51	61	60	47	61.3	10.7	31	159
WA 8142			48	47	62.5	11.7	33	157
Goetze/Skiles		51	49	47	61.0	12.2	32	156
WA 8153				45	62.4	12.7	35	159

2012 WSU Variety Testing SW Winter Wheat Trial, St. Andrews

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
C.V. %	15	16	14	10	0.9	7.0	4	1
LSD (.10)	4	6	6	6	0.6	0.8	1	1
Average	51	59	59	57	61.6	10.8	35	160
Highest	58	70	71	73	63.2	12.7	38	163
Lowest	44	51	36	45	58.7	9.2	31	156

St. Andrews Soft White Winter Wheat

1. Grain yield in the 2012 St. Andrews soft white winter wheat trial averaged 57 bushels/acre, 6 bushels/acre higher than the 5-year average. The St. Andrews nursery was located about seven miles west of Coulee City, WA (Larry Tannenberg, cooperator).

2. This nursery was seeded on 13 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 50#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 45 to 73 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. The club variety ‘Chukar’ was the highest yielding entry in the trial, and 2 of the 48 entries were within the top LSD range. The recently released variety ‘ARS-Amber’ was the top yielding entry across five years of results at this location. Stripe rust potential at this location was low and fungicide was applied 7 May at herbicide timing for stripe rust control.

4. Test weights averaged 61.6 lbs/bu and ranged from 58.7 to 63.2 lbs/bu. Grain protein averaged 10.8% and ranged from 9.2 to 12.7%. Plant height averaged 35 inches and there was no lodging.

Table 42. **2012 WSU Variety Testing SW Winter Wheat Trial, St. John**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
LCS-Artdeco (NSA06-2153A)			150	**145**	59.7	9.6	38
OR2701071				**137**	57.3	9.1	38
Chukar	151	154	153	**136**	59.0	9.3	44
WA 8153				**135**	60.5	10.6	43
OR08047P94				**135**	57.7	10.0	39
ARS-Amber (ARS960277L)	145	148	153	134	60.2	9.4	42
IDO663			139	134	59.8	10.6	41
ARS970161-3L			158	134	**62.1**	10.2	41
ARS970277L reselect				132	59.4	9.4	42
Stephens	133	134	132	131	59.7	10.4	41
ARS-Crescent (ARS970163-4C)		143	145	131	59.9	9.0	44
WA 8134			149	131	60.3	10.7	43
Skiles	147	152	147	129	**61.3**	9.9	38
ARS970161-2L				128	**61.9**	10.2	41
Madsen	138	144	143	128	60.3	11.1	41
ARS010780-3C				128	60.9	10.9	42
LWW-04-4009				127	60.6	10.1	39
ARS990077-1C				127	59.3	9.4	42
Cara	154	161	152	126	59.1	9.8	39
OR2071628			143	126	58.8	10.4	39
Bruehl	133	137	125	126	56.7	10.2	43
WA 8151				126	59.1	10.2	41
WA 8154				125	**61.1**	9.8	42
ARS-Chrystal (ARS970075-3C)	136	144	146	124	60.4	9.2	44
WA 8152				124	60.2	9.4	45
WA 8142			136	121	**61.4**	10.4	40
WB-528	133	129	132	120	**61.5**	10.3	39
Otto (WA 8092)		139	137	117	59.3	10.8	42
OR2070870				116	59.5	10.6	38
Madsen/Rod	131	130	132	116	58.6	11.3	41
Masami	121	114	122	116	58.1	9.1	41
ARS010762-2C				115	59.2	10.1	45
WA 8135			137	115	**61.3**	11.1	43
Coda	130	136	129	114	**61.9**	9.7	44
ORCF-103	123	117	118	110	58.0	9.1	40
WA 8136			141	109	56.6	8.9	37
Tubbs 06	124	108	115	109	57.9	9.3	43
Eltan/Tubbs 06	123	114	121	108	57.7	10.0	44
Rod	129	126	127	108	57.3	9.1	39
Mary (OR2040726)		132	127	108	58.6	10.6	38
WA 8137				108	60.0	9.6	43
WA 8116		133	139	107	59.9	9.5	39
ORCF-102	132	130	123	105	59.5	10.5	43
WA 8155				104	59.6	9.2	44
Goetze/Skiles		126	123	101	57.4	11.0	38
WA 8143			119	101	59.1	9.8	42
Eltan	120	116	120	96	57.5	9.6	43
Xerpha	119	101	108	96	56.4	12.1	43

2012 WSU Variety Testing SW Winter Wheat Trial, St. John

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
C.V. %	8	8	8	8	1.6	12.7	3
LSD (.10)	5	6	8	10	1.0	1.3	1
Average	133	132	135	120	59.4	10.0	41
Highest	154	161	158	145	62.1	12.1	45
Lowest	119	101	108	96	56.4	8.9	37

St. John Soft White Winter Wheat

1. Grain yield in the 2012 St. John soft white winter wheat trial averaged 120 bushels/acre, 13 bushels/acre lower than the 5-year average yield. The St. John nursery was located about three miles east of St. John, WA (M. Mills, cooperator).

2. This nursery was seeded on 27 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was 90#N/acre applied pre-plant. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 96 to 145 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘LCS Artdeco’ was the highest yielding entry in the trial, and 5 of the 48 entries were within the top LSD range. The club ‘Cara’ was the top yielding entry across five years of results at this location. Stripe rust potential was moderate at this location with an estimated yield loss in the range of 25% by more rust susceptible cultivars. St. John was the planned no fungicide location in the 16”–20” rainfall zone to allow stripe rust reaction ratings.

4. Test weights averaged 59.4 lbs/bu and ranged from 56.4 to 62.1 lbs/bu with stripe rust lowering test weight of susceptible cultivars . Grain protein averaged 10.0% and ranged from 8.9 to 12.1%. Plant height averaged 41 inches and there was no lodging.

Table 43. **2012 WSU Variety Testing SW Winter Wheat Trial, Walla Walla**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
OR2701071				**146**	58.8	9.6	40	148	0
LCS-Artdeco (NSA06-2153A)			137	**146**	61.2	9.7	41	146	0
ARS970161-2L				**145**	**62.7**	10.3	45	150	0
ARS-Crescent (ARS970163-4C)		125	131	**142**	60.9	9.1	45	151	0
OR08047P94				**139**	59.9	9.7	41	149	0
WA 8151				**138**	61.0	9.5	43	150	0
WA 8134			140	137	61.1	9.6	48	148	0
ARS970161-3L			143	137	62.2	9.6	44	150	0
Chukar	131	125	130	136	59.8	9.3	48	150	0
ARS-Chrystal (ARS970075-3C)	134	132	137	134	61.9	9.5	48	149	0
ARS-Amber (ARS960277L)	124	116	129	133	61.3	9.4	44	150	0
WA 8153				133	61.3	10.1	46	149	0
WA 8137				133	62.0	9.8	45	154	0
Xerpha	124	106	115	132	60.7	9.3	43	150	0
Tubbs 06	126	116	126	132	60.4	9.2	48	148	0
ARS970277L reselect				131	60.8	9.2	46	151	7
OR2070870				131	60.6	10.2	40	149	0
ARS990077-1C				130	60.4	9.4	43	151	0
Cara	133	128	137	130	59.7	9.5	44	149	0
Madsen/Rod	125	119	125	129	60.6	9.6	45	150	0
OR2071628			134	128	60.4	9.5	41	148	0
ARS010780-3C				127	61.3	10.2	44	152	0
Madsen	126	124	134	126	61.4	10.3	43	150	0
LWW-04-4009				126	62.1	9.9	41	153	0
Masami	128	127	133	125	60.6	9.4	46	153	0
ARS010762-2C				124	60.0	10.1	50	150	0
ORCF-102	132	130	128	124	62.0	9.8	46	149	0
WA 8116		111	124	123	61.9	10.2	41	152	3
IDO663			130	124	61.9	10.3	43	147	0
Rod	120	106	113	123	59.3	9.2	41	151	23
Goetze/Skiles		135	118	123	61.6	10.4	41	148	0
Mary (OR2040726)		127	135	122	61.5	9.5	40	148	0
WA 8152				122	62.0	10.3	48	149	7
Coda	121	114	119	121	62.0	9.8	48	150	0
Eltan/Tubbs 06	113	99	119	121	61.0	9.3	46	148	0
Stephens	124	117	125	120	61.3	9.7	40	147	0
WB-528	120	106	118	120	**62.5**	10.0	41	147	30
ORCF-103	115	106	117	119	60.9	9.8	42	152	0
WA 8142			125	116	62.1	10.9	42	148	0
WA 8136			124	115	59.1	9.9	42	153	0
Bruehl	115	103	111	115	58.5	10.0	42	152	3
WA 8154				114	61.7	10.2	46	149	20
Skiles	132	127	128	114	**62.4**	10.5	41	148	0
WA 8135			121	113	**62.5**	10.5	43	151	0
Otto (WA 8092)		99	111	113	60.2	10.2	46	153	0
WA 8143			86	95	59.9	10.3	46	152	55
Eltan	91	69	77	85	60.0	10.7	42	152	63
WA 8155				84	59.3	10.3	44	152	83

2012 WSU Variety Testing SW Winter Wheat Trial, Walla Walla

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
C.V. %	9	11	10	6	0.7	4.2	4	1	213
LSD (.10)	5	8	9	8	0.4	0.4	2	1	14
Average	123	115	124	125	61.0	9.9	44	150	6
Highest	134	135	143	146	62.7	10.9	50	154	83
Lowest	91	69	77	84	58.5	9.1	40	146	0

Walla Walla Soft White Winter Wheat

1. Grain yield in the 2012 Walla Walla soft white winter wheat trial averaged 125 bushels/acre, slightly higher than the 5-year average. The Walla Walla nursery was located about six miles north of Walla Walla, WA (Jason Beechinor, cooperator).

2. This nursery was seeded on 28 September, 2011 following chem-fallow. Seed was placed at an 85#/acre seeding rate using a Cross-Slot opener equipped no-till plot drill set on 10-inch spacing. Base fertilizer was 114#N/acre pre-plant applied. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 84 to 146 bushels/acre. All yield values within the 10% LSD range of the highest yield are shown in bold. ‘LCS-Artdeco’ was the highest yielding named entry in the trial, and 6 of the 48 entries were within the top LSD range. ‘ARS Chrystal’ (club) was the top yielding entry across five years of results at this location. There was lodging in the trial and the lowest yielding varieties had the highest lodging ratings. There was moderate/high stripe rust potential at this location and fungicide was applied for stripe rust control in April at herbicide application timing and again shortly before head emergence at the end of May.

4. Test weights averaged 61.0 lbs/bu and ranged from 58.5 to 62.7 lbs/bu. Grain protein averaged 9.9% and narrowly ranged from 9.1 to 10.9%. Plant height averaged 44 inches and there was up to 83% lodging, but most cultivars did not show lodging.

Table 44. **STRIPE RUST INFECTION TYPE (IT*) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER VARIETY TRIAL NURSERY (EXP02) (COORDINATED BY STEPHEN GUY) AT SPILLMAN FARM (LOC 01), PLANT PATH FARM (LOC 03) AND WHITLOW FARM (LOC 04) NEAR PULLMAN, MT VERNON (LOC 05); WALLA WALLA (LOC 06); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2012 UNDER NATURAL INFECTION**

Variety	Class	Spillman Farm (Pullman)		Plant Path Farm (Pullman)		Whitlow Farm (Pullman)		Mt. Vernon				Walla Walla		Lind		Summary**	Overall rating***
		LOC 1		LOC 3		LOC 4		LOC 5				LOC 6		LOC 7			
		6/29		6/28		6/29		5/14		6/11		6/13		6/14			
		Milk		Milk		Milk		Stem elong.		Milk		Milk		Milk			
		IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%		
IDO663	SWW	5	15	2	2	8	20	5	50	2	10	3	30	2	5	MR-MS	5
Skiles	SWW	2	2	2	1	2	2	2	10	2	5	2	10	2	2	R	1
Tubbs 06	SWW	8	40	8	10	8	40	8	50	5	30	8	30	8	2	MS	6
ORCF-102	SWWI	5	35	3	5	5	30	8	60	3	20	8	30	2	2	MS	6
ORCF-103	SWWI	5	30	3	5	5	20	8	50	3	20	8	40	8	5	MS	6
Mary (OR2040726)	SWW	5	30	3	5	5	20	5	20	3	10	8	40	3	2	MS	6
OR2071628	SWW	3	10	2	2	3	5	2	10	3	5	5	30	2	5	MR	4
OR2701071	SWW	3	2	2	1	2	1	2	10	2	5	5	30	2	5	MR	4
OR2070870	SWW	5	20	2	1	5	10	2	20	3	5	5	40	2	2	MR-MS	5
OR08047P94	SWW	2	5	2	1	2	1	2	10	2	1	5	20	2	2	MR	3
Coda	WC	3	5	2	2	3	10	2	5	3	10	3	10	3	2	R	1
Chukar	WC	3	2	2	1	2	1	2	10	3	5	2	10	2	5	R	1
Cara	WC	2	2	2	1	2	1	2	2	3	5	2	10	2	2	R	1
Bruehl	WC	2	2	2	1	2	1	2	10	2	5	2	20	2	2	R	2
Madsen	SWW	2	2	2	1	2	2	2	5	3	10	2	10	2	2	R	1
PS279 (Susceptible Check)		**8**	**100**	**8**	**30**	**8**	**90**	**8**	**90**	**8**	**100**	**8**	**100**	**8**	**15**	**S**	**9**
Eltan	SWW	5	15	2	2	5	20	5	40	3	20	5	70	8	15	MS	6
Rod	SWW	8	80	2	1	8	30	5	30	3	20	8	50	8	10	S	8
Masami	SWW	8	45	5	2	7	30	5	30	2	5	8	40	8	2	MS	7
Xerpha	SWW	5	35	2	2	8	40	8	80	5	30	5	40	8	15	MS	6
Stephens	SWW	5	35	2	2	3	20	2	20	3	10	5	20	8	2	MR	4
WB-528	SWW	8	15	2	2	3	5	8	30	3	10	8	20	3	2	MR-MS	5
LCS-Artdeco (NSA06-2153A)	SWW	5	15	2	1	3	5	2	20	3	5	3	30	8	2	MR	3
LWW-04-4009	SWW	3	5	2	1	2	5	5	30	3	5	3	15	2	5	MR	3
ARS-Amber (ARS960277L)	SWW	3	5	2	1	3	5	5	30	3	5	3	20	3	5	MR	3
ARS-Crescent (ARS970163-4C)	WC	3	5	2	1	3	5	5	20	3	5	3	5	3	2	R	1
ARS970161-3L	SWW	2	5	2	1	2	2	2	30	3	5	2	5	2	5	R	1
ARS970277L reselect	SWW	5	10	2	1	3	5	2	20	3	10	3	10	3	2	R	2
ARS970161-2L	SWW	2	10	2	1	2	2	2	20	3	10	3	5	2	5	R	1
ARS990077-1C	WC	5	15	2	1	5	5	2	20	3	10	8	20	8	10	MR-MS	5
ARS010762-2C	WC	5	15	2	1	5	10	2	20	5	15	3	10	3	2	MR	3
ARS010780-3C	WC	3	5	2	1	3	5	2	10	3	5	3	5	2	5	R	1
Eltan/Tubbs 06	SWW	5	25	5	10	8	30	8	40	3	20	5,8	40	2	5	MS	6
Goetze/Skiles	SWW	5	15	3	5	5	20	5	30	2	5	5	40	8	2	MR	4
Madsen/Rod	SWW	5	20	8	5	2,8	10	2	10	3	5	3	20	2	5	MR	4
PS279 (Susceptible Check)		**8**	**95**	**8**	**90**	**8**	**95**	**8**	**90**	**8**	**100**	**8**	**70**	**8**	**15**	**S**	**9**
Otto (WA 8092)	SWW	3	5	3	1	2	2	2	10	2	5	2	10	8	2	MR	4
WA 8116	SWW	5	15	3	10	5	20	5	20	3	10	5	30	8	5	MR	4
WA 8134	SWW	5	15	3	10	5	10	5	10	3	5	5	20	2	5	MR	3
WA 8135	SWW	3	5	2	5	5	2	2	20	2	5	8	10	8	2	MR	4
WA 8136	SWW	3	5	2	1	2	2	2	5	2	10	8	10	8	2	MR	4
WA 8142	SWWI	3	5	2	2	2	2	2	5	2	5	5	10	2	2	R	2
WA 8143	SWWI	5	15	5	2	5	20	2	10	3	20	3	15	8	2	MR	4
WA 8137	SWW	5	25	3	30	5	20	5	50	3	20	5	20	8	2	MR	4
WA 8151	SWW	5	30	5	10	3	2	3	10	3	10	3	15	2	5	MR	4
WA 8152	SWW	2	1	3	10	3	20	5	30	3	10	3	10	3	5	MR	3
WA 8153	SWW	3	5	2	2	2	1	2	10	2	10	3	10	2	5	R	2
WA 8154	SWW	3	15	2	1	2	1	2	10	2	5	3	10	2	2	R	2
WA 8155	SWWI	8	15	3	1	5	20	2	10	2	10	3	20	8	2	MR	4
ARS-Chrystal (ARS970075-3C)	WC	8	50	3	1	5	10	6	20	5	30	3	10	8	5	MS	7

* 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. Entries with a high IT in the first note, but a low IT in the second note at LOC 05 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

** R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

*** 1 = most resistant and 9 most susceptible.

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

Table 45.

STRIPE RUST INFECTION TYPE (IT) ON ENTRIES IN 2012 WINTER EXTENSION DISEASE (VARIETAL TRIAL) NURSERY (EXP02) (COORDINATED BY STEPHEN GUY) TESTED WITH SELECTED STRIPE RUST RACES IN CONTROLLED GREENHOUSE TESTS FOR SEEDLING TESTS, DIURNAL TEMPERATURES GRADUALLY CHANGING FROM 4°C AT 2:00AM TO 20°C AT 2:00PM WERE USED AND IT WAS FOR 10-17 PLANTS, AND FOR ADULT-PLANT TESTS, DIURNAL TEMPERATURES GRADUALLY CHANGING FROM 10°C AT 2:00AM TO 30°C AT 2:00PM WERE USED AND IT WAS FOR INDIVIDUAL PLANTS.

Variety	Class	Infection type[a]														HTAP[c] Resustance
		Seedling test (4-20°C)[b]					Adult-plant test (10-30°C)[b]									
		PST-37	PST-45	PST-100	PST-114	PST-127	PST-100			PST-114			PST-127			
							Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	
IDO663	SWW	5	2,5	2	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	3,3,4	Moderate
Skiles	SWW	8	8	8	8	8	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2,	High
Tubbs 06	SWW	5	2,8(1)	8	8	8	5,5,5	3,3,5	5,5,7	2,2,2	2,2,2	3,3,3	5,5,5	3,7,7	7,7,7	Low
ORCF-102	SWWI	8	2	8	8	8	2,2,2	2,2,2	3,4,4	2,2,2	2,2,2	2,2,2	2,2,4	2,2,3	2,2,3	Moderate
ORCF-103	SWWI	8	9	8	8	8	2,3,5	2,2,2	5,5,5	2,3,3	5,5,5	3,4,4	4,5,5	5,5,5	4,7,7	Low
Mary (OR2040726)	SWW	5	2,8(1)	8	8	8	2,2,2	2,2,2	2,2,2	3,5,5	5,5,5	5,5,5	3,6,6	2,3,3	3,3,3	Moderate
OR2071628	SWW	5	8	8	8	5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	High
OR2701071	SWW	5,8	8	3	8	3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
OR2070870	SWW	2	2,3(1)	2	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
OR08047P94	SWW	2,3	2	3	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
Coda	WC	2	2	2	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
Chukar	WC	2	2	2	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
Cara	WC	2	2	2	2	2	2,2,2	2,2,2	2,2,2	2,2,2,	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	Unknown
Bruehl	WC	2	2	2	5	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
Madsen	SWW	2,8	2	2	2	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
PS279 (Susceptible Check)		**8**	**8**	**8**	**8**	**8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**No**
Eltan	SWW	8	8	8	8	8	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	5,5,4	5,5,5	5,5,5	5,5,5	Moderate
Rod	SWW	5	8	2,5	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,3,4	3,3,5	2,5,5	Moderate
Masami	SWW	8	2	8	8	8	2,3,3	2,2,3	2,3,5	2,2,2	2,3,3	2,2,4	2,3,3	2,2,5	2,2,3	Moderate
Xerpha	SWW	8	8	8	8	8	3,3,3	3,3,3	3,3,3	2,2,3	2,2,2	2,2,2	5,5,5	5,5,5	6,6,6	Low
Stephens	SWW	8	2	8	8	8	2,2,2	2,2,2	3,3,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	High
WB-528	SWW	8	2	8	8	8	2,2,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	3,3,3	High
LCS-Artdeco (NSA06-2153A)	SWW	2	8	5	8	5	2,2,3	2,2,2	3,3,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,3,5	High
LWW-04-4009	SWW	2	2	5	8	7	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	2,3,3	2,2,2	High
ARS-Amber (ARS960277L)	SWW	2,3	2,8(1)	3	2	2,8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,22,	Unknown
ARS-Crescent (ARS970163-4C)	WC	2	2	5	8	2,8	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	High
ARS970161-3L	SWW	2	2	2	5	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
ARS970277L reselect	SWW	2	2	8	2	5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
ARS970161-2L	SWW	2,5	2	2	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
ARS990077-1C	WC	2	2	5	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
ARS010762-2C	WC	2	2	2	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
ARS010780-3C	WC	2	2	2	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
Eltan/Tubbs 06	SWW	5	5	8	8	8	5,5,5	5,5,5	6,6,6	3,5,5	3,5,5	4,4,4	5,5,5	5,5,5	5,5,7	Low
Goetze/Skiles	SWW	2,5	2	8	8	8	2,2,2	2,2,2	5,5,5	2,2,2	2,2,2	2,2,2	4,5,5	3,5,6	2,5,5	Moderate
Madsen/Rod	SWW	2,5	2,8(2)	5	5	5	2,2,5	2,2,5	2,2,3	2,2,2	2,2,2	2,2,2	2,2,5	2,2,5	2,2,5	Moderate
PS279 (Susceptible Check)		**8**	**8**	**8**	**8**	**8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**No**
Otto (WA 8092)	SWW	2	2	2	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,2,3	High
WA 8116	SWW	3	5	8	8	8	3,3,3	3,3,3	4,4,4	2,2,2	2,2,2	2,2,2	3,3,4	3,4,4	5,5,5	Moderate
WA 8134	SWW	8	2	8	5	5	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8135	SWW	8	5	8	8	8	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	High
WA 8136	SWW	2	2	5	8	5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8142	SWWI	8	2	5	5,8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	High
WA 8143	SWWI	2	7	5	2	8	2,2,3	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	2,3,3	3,3,4	4,4,5	Moderate
WA 8137	SWW	8	8	8	8	8	2,2,2	2,2,2	3,3,2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,4	3,3,4	Moderate
WA 8151	SWW	8	8	5	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8152	SWW	8	2,5	8	8	8	2,2,2	2,2,2	2,2,4	2,2,2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	Moderate
WA 8153	SWW	8	2,3(1)	5	8	8	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,3,3	3,3,3	2,3,3	Moderate
WA 8154	SWW	8	2	8	8	5,8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8155	SWWI	8	2	8	8	8	2,3,3	2,2,2	3,3,3	2,2,2	2,2,2	2,2,2	3,5,5	3,3,5	4,4,5	Moderate
ARS-Chrystal (ARS970075-3C)	WC	2	2	5	8	2	3,3,3	2,3,3	3,3,3	2,2,2	2,2,2	2,2,4	2,2,2	2,2,2	2,2,2	High

[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 and the number of plants for each IT is indicated in "( )". For adult-plant tests, if the flag leaf has a IT different from the leaf below, the ITs are separated by"/" with the flag leaf IT first.

[b] The seedling tests were conducted in October to December 2009 for each race without replications. For adult-plant tests, seeds were planted in late November and seedlings of about 3-5 cm were vernalized at 2-4°C for 6 to 9 weeks and then transplanted into big pots and grown in the greenhouse (10 to 25°C diurnal temperature cycle, 16h light) from January to March. Plants at boot to flowering stages were inoculated (Jan to Feb 2010) with a mixture of urediniospores of a particular race with talc powdery at about 1:20 ratio, incubated for 20 to 24 h in a dew chamber (dark, 10°C) and then grown in a greenhouse growth chamber at the 10-30°C diurnal temperature cycle with 16 h light. IT was recorded for each plant 18 to 20 days after inoculation. The three reps for each race test were done in different time periods.

[c] Entries with a high IT in the seedling low-temperature test but with a low IT in the adult-plant tests under high temperatures have possibly high-temperature adult-plant (HTAP) resistance.

Note: All seeds were not treated with a fungicide and therefore, the data were good.

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

2012 Hard Winter Wheat

2012 WSU Hard Winter Wheat Trial Summary
Precipitation Zone >16”

1. Hard red and white winter wheat grain yield across four locations and 24 entries in the >16” precipitation zone averaged 98 bushels/acre, 28 bushels/acre lower than the 2011 average of 126 bushels/acre and 6 bushels/acre lower than the 2010 average of 104 bushels/acre. The CV for the average data was 11% and was lower than the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 76 to 117 bushels/acre and reflected a mostly average growing season. ‘Altigo’ and ‘Norwest 553’ were the highest yielding named varieties averaged across locations and were the named varieties in the top 10% LSD range (6 bushels/acre) of the highest yield and are shown in bold. Stripe rust levels were low and effectively controlled with fungicide application.
3. Test weight averaged 60.5 lbs/bu across locations and entries and was lower than last year’s 61.5 lbs/bu average. Grain protein averaged 12.1% and was higher than the 2011 value of 10.9%.

2012 WSU Hard Winter Wheat Trial Summary
Precipitation Zone 12”-16”

1. Hard red and white winter wheat grain yield across two locations and 24 entries in the 12”-16” precipitation zone averaged 111 bushels/acre, 14 bushels/acre higher than the 2011 average of 97 bushels/acre and 21 bushels/acre higher than the 2010 average of 90 bushels/acre. The CV for the average data was 10% and was lower than the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 89 to 129 bushels/acre and reflected a mostly average growing season. ‘Norwest 553’ ‘Azimut’ and ‘Altigo’ were the highest yielding named varieties averaged across locations and were the named varieties in the top 10% LSD range (8 bushels/acre) of the highest yield and are shown in bold. Stripe rust levels were low and effectively controlled with fungicide application.
3. Test weight averaged 61.4 lbs/bu across locations and entries and was higher than last year’s 60.1 lbs/bu average. Grain protein averaged 11.4% and was lower than the 2011 value of 12.2%.

2012 WSU Hard Winter Wheat Trial Summary
Precipitation Zone <12”

1. Hard red and white winter wheat grain yield across four locations and 24 entries in the <12” precipitation zone averaged 46 bushels/acre, 10 bushels/acre lower than the 2011 average of 56 bushels/acre but 2 bushels/acre higher than the 2010 average of 44 bushels/acre. The CV for the average data was 14% similar to the 2011 CV value. In general the 2012 trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 37 to 53 bushels/acre and reflected a mostly average growing season. ‘Boundary’ ‘Bauermeister’ and ‘Farnum’ were the highest yielding named varieties averaged across locations and were the named varieties in the top 10% LSD range (3 bushels/acre) of the highest yield and are shown in bold. Stripe rust was effectively controlled with fungicide application except for Connell, a planned non-treated site, but had little stripe rust impact.
3. Test weight averaged 60.1 lbs/bu across locations and entries and was lower than last year’s 61.5 lbs/bu average. Grain protein averaged 12.1% and was higher than last year’s 10.9% value.

Table 46. **2012 WSU Variety Testing Hard Winter Wheat Trial Summary**

Precipitation Zone >16"

Variety Name	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
	Dayton	Pullman	Reardan	Walla Walla	Average	Dayton	Pullman	Reardan	Walla Walla	Average	Dayton	Pullman	Reardan	Walla Walla	Average
Hard Red Winter															
Altigo	134	129	72	130	**116**	60.1	57.2	59.7	58.5	58.9	11.3	11.8	12.3	10.7	11.5
Norwest 553	145	117	65	122	**112**	63.4	59.7	61.9	62.6	61.9	11.9	13.4	15.0	11.6	13.0
WA 8119	121	119	86	102	107	61.2	55.9	59.3	59.3	59.0	10.1	12.2	12.1	10.2	11.2
Azimut	116	115	79	109	105	59.9	55.6	59.9	58.8	58.5	11.0	12.3	12.8	10.9	11.8
Eddy	121	118	68	93	100	63.9	62.9	62.9	62.2	**63.0**	12.0	12.2	14.2	12.4	12.7
IDO816	103	135	72	84	99	61.2	60.5	61.7	59.5	60.7	12.0	11.7	13.3	11.9	12.2
Boundary	119	119	76	62	94	62.9	59.9	61.7	60.7	61.3	11.3	11.8	13.0	10.4	11.6
WA 8156	100	128	76	68	93	62.1	61.2	60.3	58.7	60.6	11.8	12.0	13.2	11.8	12.2
Bauermeister	112	107	78	71	92	61.4	55.0	61.4	58.6	59.1	10.6	11.4	12.0	11.1	11.3
WA 8157	109	115	67	66	89	60.3	57.9	61.3	57.0	59.2	11.2	12.9	13.7	10.9	12.2
UI SRG	84	122	66	80	88	61.0	60.8	61.9	58.3	60.5	12.2	12.2	14.3	12.0	12.7
WA 8118	78	112	62	72	81	60.8	60.4	61.9	59.2	60.6	13.5	14.6	15.3	12.7	**14.0**
Finley	86	105	60	72	81	63.1	61.1	63.3	61.7	62.3	12.7	11.7	13.5	12.5	12.6
Farnum	77	104	71	62	78	61.3	57.0	60.0	58.6	59.2	12.6	12.4	13.1	12.6	12.7
Hard White Winter															
OR2080227H	135	122	77	135	**117**	63.1	60.6	62.9	61.9	62.1	10.3	11.4	12.5	9.8	11.0
OR2080236H	129	119	83	122	**114**	61.9	57.6	60.9	61.6	60.5	11.1	12.6	13.0	11.1	12.0
OR2080229H	126	129	68	130	**113**	64.4	61.4	63.0	62.2	**62.8**	10.4	11.9	13.8	9.6	11.4
OR2080156H	126	122	53	110	103	62.8	59.3	61.3	62.0	61.3	11.8	11.9	15.4	10.7	12.5
WA 8159	113	119	75	94	100	60.6	57.4	60.5	57.8	59.1	11.1	12.3	12.7	11.0	11.8
UI Silver	107	118	76	100	100	63.4	60.3	63.3	60.7	61.9	11.1	12.0	13.2	10.0	11.6
MDM	108	109	93	82	98	61.2	58.5	61.9	58.1	59.9	11.2	11.8	11.9	11.3	11.6
WA 8158	103	117	72	69	90	61.1	59.4	60.9	58.5	60.0	12.8	13.0	13.1	11.9	12.7
UICF-Grace	78	108	60	57	76	60.9	58.2	60.8	58.4	59.6	12.4	12.6	14.3	13.0	13.1
Soft White Winter															
Eltan	98	118	70	84	93	60.5	58.1	61.8	57.3	59.4	11.5	11.6	11.7	11.1	11.5
C.V. %	11	11	11	10	11	1.1	3.5	0.5	1.3	1.9	5.7	4.8	2.7	7.5	5.3
LSD (0.10)	13	14	9	9	6	0.7	2.2	0.3	0.8	0.6	0.7	0.6	0.4	0.9	0.3
Average	109	118	72	91	98	61.8	59.0	61.4	59.7	60.5	11.6	12.3	13.3	11.3	12.1
Highest	145	135	93	135	117	64.4	62.9	63.3	62.6	63.0	13.5	14.6	15.4	13.0	14.0
Lowest	77	104	53	57	76	59.9	55.0	59.3	57.0	58.5	10.1	11.4	11.7	9.6	11.0

Table 47.

2012 WSU Variety Testing Hard Winter Wheat Trial Summary

Precipitation Zone 12-16"

Variety Name	Yield (Bu/A)			Test Wt (Lbs/Bu)			Protein (%)		
	Almira	Lamont	Average	Almira	Lamont	Average	Almira	Lamont	Average
Hard Red Winter									
Norwest 553	138	119	**129**	62.6	62.6	62.6	11.4	12.3	11.9
Azimut	128	129	**129**	58.9	58.6	58.8	10.3	11.2	10.8
Altigo	122	128	**125**	59.7	59.8	59.7	10.1	11.0	10.6
WA 8157	129	117	**123**	61.0	59.4	60.2	9.9	12.7	11.3
WA 8156	129	114	**121**	62.2	61.7	61.9	10.5	12.1	11.3
WA 8119	124	116	120	60.7	58.9	59.8	10.0	11.2	10.6
Eddy	112	115	113	63.2	63.9	**63.5**	10.5	12.2	11.4
Boundary	119	108	113	62.1	61.8	62.0	11.7	11.2	11.4
Bauermeister	125	84	104	60.9	58.8	59.9	11.1	11.5	11.3
IDO816	106	98	102	61.5	62.1	61.8	11.2	11.8	11.5
WA 8118	91	105	98	62.2	62.2	62.2	11.0	12.5	11.8
Farnum	97	89	93	61.3	60.1	60.7	11.4	12.1	11.7
Finley	91	94	93	62.3	63.4	**62.9**	11.9	12.2	12.0
UI SRG	96	81	89	61.7	62.0	61.9	11.2	12.4	11.8
Hard White Winter									
OR2080236H	121	136	**129**	61.8	61.9	61.9	10.5	11.5	11.0
OR2080227H	118	127	**123**	63.0	61.3	62.1	10.5	10.5	10.5
OR2080229H	111	123	117	63.3	63.3	**63.3**	10.8	11.2	11.0
WA 8159	117	107	112	60.3	59.5	59.9	11.2	11.6	11.4
UI Silver	115	106	111	63.5	63.1	**63.3**	10.7	11.5	11.1
OR2080156H	103	118	111	62.5	62.4	62.4	11.7	12.0	11.9
MDM	134	85	109	60.3	59.2	59.7	10.6	11.2	10.9
WA 8158	101	98	99	62.5	60.5	61.5	11.7	13.0	**12.4**
UICF-Grace	81	96	89	60.9	61.2	61.0	12.6	13.1	**12.9**
Soft White Winter									
Eltan	123	88	106	60.7	58.3	59.5	10.3	11.4	10.9
C.V. %	8	11	10	1.3	1.2	1.3	7.5	6.6	7.0
LSD (0.10)	10	13	8	0.9	0.8	0.6	0.9	0.8	0.6
Average	114	108	111	61.6	61.1	61.4	10.9	11.8	11.4
Highest	138	136	129	63.5	63.9	63.5	12.6	13.1	12.9
Lowest	81	81	89	58.9	58.3	58.8	9.9	10.5	10.5

Table 48. **2012 WSU Variety Testing Hard Winter Wheat Trial Summary**

Precipitation Zone <12"

Variety Name	Yield (Bu/A)					Test Wt (Lbs/Bu)					Protein (%)				
	Connell	Lind	Ritzville	St. Andrews	Average	Connell	Lind	Ritzville	St. Andrews	Average	Connell	Lind	Ritzville	St. Andrews	Average
Hard Red Winter															
Boundary	27	42	72	70	**53**	58.0	60.2	60.1	61.8	60.0	14.7	12.5	11.5	7.6	11.6
WA 8156	39	44	70	53	**52**	58.2	58.8	59.9	59.2	59.0	13.9	12.8	10.8	7.8	11.3
Bauermeister	31	38	61	74	**51**	59.0	60.2	60.8	62.6	60.7	13.9	12.7	11.1	7.6	11.3
Farnum	36	42	61	61	**50**	58.4	58.9	60.0	60.9	59.5	14.3	13.7	12.5	8.2	12.2
Norwest 553	20	42	63	61	46	59.4	61.4	60.6	62.8	61.1	15.6	12.9	12.2	8.5	12.3
Finley	23	38	63	56	45	59.2	61.5	62.8	62.9	61.6	15.6	13.0	12.3	8.6	12.4
WA 8119	26	31	66	56	45	57.9	59.1	60.7	60.8	59.6	13.4	13.5	11.4	8.9	11.8
Eddy	14	36	67	59	44	59.5	60.4	60.9	63.5	61.1	16.6	13.8	12.9	8.9	13.0
UI SRG	20	33	63	61	44	57.5	59.9	60.6	62.2	60.1	15.9	12.8	12.6	8.6	12.5
WA 8157	25	32	69	44	43	59.9	60.5	60.7	59.1	60.1	14.7	13.7	11.9	8.7	12.3
IDO816	28	38	54	52	43	58.6	60.1	60.7	62.0	60.3	14.2	12.6	12.7	9.3	12.2
Altigo	17	23	64	59	41	54.3	57.4	56.5	58.9	56.8	13.9	13.1	11.8	7.8	11.6
Azimut	15	25	60	58	40	56.9	57.7	57.5	59.9	58.0	16.0	12.8	11.2	7.9	12.0
WA 8118	13	34	54	47	37	58.4	59.9	60.4	62.1	60.2	18.3	14.3	13.2	9.3	**13.8**
Hard White Winter															
OR2080236H	35	42	68	61	**51**	57.8	59.7	61.4	62.0	60.2	13.7	12.5	11.8	8.7	11.7
WA 8159	33	40	65	55	48	58.8	59.1	60.4	60.6	59.7	13.9	12.8	12.2	8.6	11.9
MDM	26	42	57	68	48	59.9	60.6	60.0	62.2	60.7	14.3	12.1	11.0	7.3	11.2
UI Silver	28	32	68	59	47	61.0	61.9	62.4	63.6	**62.2**	14.2	13.6	11.9	8.6	12.1
OR2080229H	28	34	69	58	47	58.7	60.6	62.3	63.1	61.2	14.6	12.7	11.2	8.1	11.7
OR2080227H	27	38	65	59	47	58.5	60.3	61.8	62.5	60.8	13.9	12.7	11.7	7.9	11.6
WA 8158	33	29	59	57	45	59.4	59.5	60.9	61.4	60.3	13.7	14.2	13.1	8.3	12.3
UICF-Grace	24	38	59	53	44	58.4	60.4	61.1	61.8	60.4	15.9	13.1	12.7	9.1	12.7
OR2080156H	24	29	56	49	39	57.6	58.9	59.8	62.2	59.6	16.2	15.1	12.5	8.6	13.1
Soft White Winter															
Eltan	28	40	65	73	**51**	59.6	60.3	59.3	62.1	60.3	13.6	12.5	10.4	7.5	11.0
C.V. %	14	14	11	14	14	1.1	1.3	0.7	1.8	1.3	4.1	3.7	4.9	8.8	5.1
LSD (0.10)	4	5	8	9	3	0.7	0.8	0.4	1.2	0.4	0.7	0.5	0.6	0.8	0.3
Average	26	36	63	59	46	58.5	59.9	60.5	61.7	60.1	14.8	13.2	11.9	8.3	12.1
Highest	39	44	72	74	53	61.0	61.9	62.8	63.6	62.2	18.3	15.1	13.2	9.3	13.8
Lowest	13	23	54	44	37	54.3	57.4	56.5	58.9	56.8	13.4	12.1	10.4	7.3	11.0

Table 49. **WSU Hard Winter Wheat Trial Multi-Year Summary**

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

Variety Name	2 Years 2011-2012, 8 loc/yrs			3 Years 2010-2012, 12 loc/yrs			5 Years 2008-2012, 20 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Winter									
Altigo	136	58.9	11.8						
Norwest 553	132	62.2	12.7	133	61.9	12.7	126	61.4	12.6
Azimut	127	58.5	12.1						
WA 8119	126	58.8	11.7	127	58.2	11.7			
UI SRG	110	60.7	12.9						
Boundary	108	61.7	11.8	113	60.8	11.8	113	60.5	11.9
Eddy	107	62.8	12.5	104	61.9	12.5	103	61.4	12.5
Bauermeister	106	59.7	11.7	106	58.9	11.9	107	59.1	12.0
WA 8118	100	61.3	14.0	101	60.7	13.9			
Finley	95	63.0	12.8	96	62.1	12.8	95	61.9	12.7
Farnum	89	60.1	13.3	89	59.5	13.3	91	59.1	13.1
Hard White Winter									
OR2080156H	125	61.5	12.3	125	61.0	12.4			
UI Silver	116	61.8	11.7	119	61.5	11.6			
MDM	110	60.2	11.4	108	59.3	11.5	109	59.5	11.6
UICF-Grace	86	60.2	13.2	90	59.7	13.0			
OR2080229H				126*	62.1*	11.4*			
Soft White Winter (Check)									
Eltan	112	59.6	11.7	109	58.7	11.7	109	58.8	11.7
C.V. %	11	1.6	5.4	10	1.7	5.0	10	1.5	4.4
LSD (.10)	4	0.4	0.2	4	0.3	0.2	2	0.2	0.1
Average	112	60.7	12.3	110	60.5	12.3	107	60.2	12.3
Highest	136	63.0	14.0	133	62.1	13.9	126	61.9	13.1
Lowest	86	58.5	11.4	89	58.2	11.4	91	58.8	11.6

* 2010 & 2012 years only (8 loc/yr)

Table 50. **WSU Hard Winter Wheat Trial Multi-Year Summary**

Precipitation Zone = 12-16"
(Almira, Lamont)

Variety Name	2 Years 2011-2012, 4 loc/yrs			3 Years 2010-2012, 6 loc/yrs			5 Years 2008-2012, 10 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Winter									
Norwest 553	123	62.4	12.1	118	61.9	12.5	104	61.6	12.3
WA 8119	118	58.6	11.8	113	57.3	12.1			
Azimut	118	57.5	11.6						
Boundary	111	61.0	11.7	109	60.3	12.1	103	60.5	11.8
Bauermeister	103	59.0	11.9	97	57.6	12.3	94	58.9	12.0
Eddy	101	63.0	11.8	97	62.3	12.2	93	62.3	11.9
UI SRG	97	60.8	12.4						
Altigo	96	58.9	11.1						
WA 8118	96	61.2	12.3	98	60.8	13.0			
Farnum	94	60.3	12.3	87	59.0	12.6	86	59.3	12.4
Finley	90	62.2	12.5	90	61.8	12.8	88	62.0	12.2
Hard White Winter									
UI Silver	109	62.3	11.5	109	61.5	11.6			
MDM	107	59.2	11.0	101	57.9	11.4	99	59.2	11.1
OR2080156H	98	61.6	12.1	95	60.5	12.6			
UICF-Grace	83	61.0	12.5	86	60.1	12.8			
OR2080229H				109*	62.0*	11.5*			
Soft White Winter (Check)									
Eltan	100	58.4	11.4	93	56.7	11.9	92	58.2	11.5
C.V. %	13	1.6	7.3	13	1.8	6.3	12	1.5	5.7
LSD (.10)	7	0.5	0.5	6	0.5	0.3	4	0.3	0.2
Average	103	60.5	11.9	100	60.0	12.2	95	60.2	11.9
Highest	123	63.0	12.5	118	62.3	13.0	104	62.3	12.4
Lowest	83	57.5	11.0	86	56.7	11.4	86	58.2	11.1

* 2010 & 2012 years only (4 loc/yr)

Table 51. **WSU Hard Winter Wheat Trial Multi-Year Summary**

Precipitation Zone = <12"

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

Variety Name	2 Years 2011-2012, 9 loc/yrs			3 Years 2010-2012, 14 loc/yrs			5 Years 2008-2012, 24 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Winter									
WA 8119	59	60.1	10.9	59	60.0	10.9			
Bauermeister	57	60.8	10.7	55	60.6	10.9	47	59.9	11.6
Farnum	56	59.9	11.6	55	59.8	11.6	46	59.4	12.2
Norwest 553	55	61.5	11.8	47	61.4	12.2	41	61.0	12.5
Boundary	54	60.7	11.1	53	60.7	11.3	44	60.4	11.9
UI SRG	53	61.0	11.9						
Azimut	51	58.8	11.6						
Finley	50	62.5	11.6	49	62.5	11.6	43	62.2	12.2
Eddy	48	62.2	12.0	45	62.1	12.3	38	61.8	12.9
WA 8118	48	60.7	12.8	45	60.9	12.8			
Altigo	45	57.7	11.2						
Hard White Winter									
MDM	55	61.2	10.1	54	60.9	10.4	46	60.6	11.0
UI Silver	53	62.3	11.4	52	62.4	11.3			
OR2080156H	46	60.5	12.2	42	60.3	12.4			
UICF-Grace	46	60.5	12.0	43	60.6	12.1			
OR2080229H				43*	61.6*	11.6*			
Soft White Winter (Check)									
Eltan	57	60.3	10.5	55	60.2	10.6	48	60.0	11.1
C.V. %	14	1.1	6.7	13	1.0	5.9	13	1.5	5.5
LSD (.10)	2	0.2	0.3	2	0.2	0.2	1	0.2	0.1
Average	52	60.7	11.5	50	61.0	11.6	44	60.7	11.9
Highest	59	62.5	12.8	59	62.5	12.8	48	62.2	12.9
Lowest	45	57.7	10.1	42	59.8	10.4	38	59.4	11.0

* 2010 & 2012 years only (9 locations)

Table 52. **2012 WSU Variety Testing Hard Winter Wheat Trial, Almira**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
Norwest 553	108	124	110	**138**	**62.6**	11.4	36	151	0
MDM	102	106	113	**134**	60.3	10.6	42	158	0
WA 8156				**129**	62.2	10.5	47	156	0
WA 8157				**129**	61.0	9.9	39	150	15
Azimut			120	**128**	58.9	10.3	35	150	0
Bauermeister	100	104	111	125	60.9	11.1	40	158	0
WA 8119		102	104	124	60.7	10.0	40	154	0
Eltan	97	97	106	123	60.7	10.3	40	158	0
Altigo			91	122	59.7	10.1	37	151	0
OR2080236H				121	61.8	10.5	40	158	0
Boundary	103	109	115	119	62.1	11.7	43	153	0
OR2080227H				118	**63.0**	10.5	39	152	0
WA 8159				117	60.3	11.2	46	156	0
UI Silver		108	106	115	**63.5**	10.7	43	154	0
Eddy	95	98	93	112	**63.2**	10.5	42	149	0
OR2080229H		118		111	**63.3**	10.8	40	155	0
IDO816				106	61.5	11.2	44	156	0
OR2080156H		93	85	103	62.5	11.7	40	155	0
WA 8158				101	62.5	11.7	40	157	0
Farnum	87	86	93	97	61.3	11.4	47	159	0
UI SRG			96	96	61.7	11.2	50	154	0
WA 8118		98	89	91	62.2	11.0	44	149	17
Finley	86	87	83	91	62.3	11.9	48	154	0
UICF-Grace		82	75	81	60.9	12.6	49	152	25
C.V. %	12	13	13	8	1.3	7.5	5	1	388
LSD (.10)	5	8	10	10	0.9	0.9	2	1	10
Average	97	101	99	114	61.6	11.0	42	154	2
Highest	108	124	120	138	63.5	12.6	50	159	25
Lowest	86	82	75	81	58.9	9.9	35	149	0

Almira Hard Winter Wheat

1. Grain yield in the 2012 Almira hard winter wheat trial averaged 114 bushels/acre, 17 bushels/acre higher than the 5-year average. The Almira nursery was located about six miles north of Almira, WA (Dan McKay, cooperator).

2. This nursery was seeded on 13 September, 2011 following spring wheat. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 85#N/acre applied pre-plant. Based on a spring soil test showing 263 lbs/acre available N, 13#N/acre additional fertilizer was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 81 bu/a to 138 bu/a. ‘Norwest 553’ was the highest yielding entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 5 of the 24 entries. Norwest 553 was also the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was controlled by fungicide applied 5 May at herbicide timing and on 11 June.

4. Test weights were very good averaging 61.6 lbs/bu and ranged from 58.9 to 63.5 lbs/bu. Grain protein averaged only 11.0% with a range of 9.9 to 12.6% and reflects the above average yields. Plant height averaged 42 inches and a few entries had lodging.

Table 53. **2012 WSU Variety Testing Hard Winter Wheat Trial, Connell**

Variety Name *Hard White Italized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8156				**39**	58.2	13.9	28	144
Farnum	44	50	46	**36**	58.4	14.3	32	142
OR2080236H				**35**	57.8	13.7	26	144
WA 8158				33	59.4	13.7	30	142
WA 8159				33	58.8	13.9	31	142
Bauermeister	46	48	44	31	59.0	13.9	29	142
Eltan (SWW Check)	47	48	44	28	59.6	13.6	29	143
UI Silver		46	43	28	**61.0**	14.2	28	140
OR2080229H		33		28	58.7	14.6	26	143
IDO816				28	58.6	14.2	28	142
Boundary	41	43	36	27	58.0	14.7	27	143
OR2080227H				27	58.5	13.9	24	141
MDM	44	48	41	26	59.9	14.3	29	143
WA 8119		54	51	26	57.9	13.4	28	145
WA 8157				25	59.9	14.7	27	140
UICF-Grace		40	39	24	58.4	15.9	34	140
OR2080156H		37	37	24	57.6	16.2	26	141
Finley	43	45	42	23	59.2	15.6	32	140
Norwest 553	44	43	48	20	59.4	15.6	25	143
UI SRG			41	20	57.5	15.9	32	140
Altigo			30	17	54.3	13.9	24	142
Azimut			41	15	56.9	16.0	20	143
Eddy	36	35	30	14	59.5	16.6	28	140
WA 8118		37	39	13	58.4	18.3	29	140
C.V. %	13	9	10	14	1.1	4.1	8	1
LSD (.10)	2	2	3	4	0.7	0.7	2	2
Average	43	43	41	26	58.5	14.8	28	142
Highest	47	54	51	39	61.0	18.3	34	145
Lowest	36	33	30	13	54.3	13.4	20	140

Connell Hard Winter Wheat

1. Grain yield in the Connell hard winter wheat trial averaged 26 bushels/acre, 17 bushels/acre lower than the 5-year average. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister, cooperator).

2. This nursery was seeded on 12 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 70#N/acre. Based on a spring soil test showing 259 lbs/acre available N, no additional N was applied for hard wheat protein based on expected yields.

3. Yields ranged from 13 bu/a to 39 bu/a. ‘Farnum’ was the highest yielding named entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 3 of the 24 entries. ‘Bauermeister’ was the top yielding hard entry across five years of results at this location. Some plants at this site experienced damaging frost at the beginning of heading. The early varieties were damaged the most and later varieties showed little or no injury. This variable frost injury increased CV values for this trial, but are important responses to evaluate. There was a low amount of stripe rust potential at this location and no fungicide was applied. This is the one site selected out of four in the <12” rainfall zone that did not receive fungicides for stripe rust control in 2012.

4. Test weights averaged 58.5 lbs/bu and ranged from 54.3 to 61.0 lbs/bu. Grain protein averaged 14.8% with a range of 13.4 to 18.3%. Plant height averaged 28 inches with no lodging. Late season water stress and the frost at heading increased protein levels and lowered test weights.

Table 54. **2012 WSU Variety Testing Hard Winter Wheat Trial, Dayton**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
Norwest 553	148	163	162	**145**	63.4	11.9	38	152	0
OR2080227H				**135**	63.1	10.3	42	154	0
Altigo			148	**134**	60.1	11.3	39	150	0
OR2080236H				129	61.9	11.1	43	156	25
OR2080156H		141	140	126	62.8	11.8	40	154	0
OR2080229H		142		126	**64.4**	10.4	44	154	0
Eddy	111	115	124	121	**63.9**	12.0	39	150	0
WA 8119		132	117	121	61.2	10.1	44	157	0
Boundary	114	119	116	119	62.9	11.3	43	155	0
Azimut			125	116	59.9	11.0	36	149	0
WA 8159				113	60.6	11.1	48	157	0
Bauermeister	110	115	111	112	61.4	10.6	43	158	33
WA 8157				109	60.3	11.2	41	150	0
MDM	109	115	111	108	61.2	11.2	43	158	65
UI Silver		132	122	107	63.4	11.1	44	154	23
WA 8158				103	61.1	12.8	46	154	25
IDO816				103	61.2	12.0	45	156	33
WA 8156				100	62.1	11.8	50	158	25
Eltan	108	114	110	98	60.5	11.5	41	156	75
Finley	98	100	94	86	63.1	12.7	47	154	83
UI SRG			95	84	61.0	12.2	46	154	58
WA 8118		104	88	78	60.8	13.5	42	148	100
UICF-Grace		86	75	78	60.9	12.4	47	155	90
Farnum	92	95	87	77	61.3	12.6	47	160	95
C.V. %	9	9	10	11	1.1	5.7	5	1	87
LSD (.10)	4	6	9	13	0.7	0.7	2	1	28
Average	111	119	114	109	61.8	11.6	43	154	30
Highest	148	163	162	145	64.4	13.5	50	160	100
Lowest	92	86	75	77	59.9	10.1	36	148	0

Dayton Hard Winter Wheat

1. Grain yield in the 2012 Dayton hard winter wheat trial averaged 109 bushels/acre, 2 bushels/acre lower than the 5-year average. The Dayton nursery was located about six miles northwest of Dayton, WA (Jay Penner, cooperator).

2. This nursery was seeded on 28 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 135#N/acre applied pre-plant. Based on a spring soil test showing 259 lbs/acre available N, 60#N/acre additional fertilizer was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 77 bu/a to 145 bu/a. ‘Norwest 553’ was the highest yielding entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 3 of the 24 entries. Norwest 553 was also the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was moderate and fungicide was applied 29 March at herbicide timing and at 29 April along with an insecticide.

4. Test weights were very good averaging 61.8 lbs/bu and ranged from 59.9 to 64.4 lbs/bu. Grain protein averaged only 11.6% with a range of 10.1 to 13.5%. Plant height averaged 43 inches and about half the entries had lodging that influenced yield potential.

Table 55. **2012 WSU Variety Testing Hard Winter Wheat Trial, Lamont**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
OR2080236H				**136**	61.9	11.5	40	0
Azimut			116	**129**	58.6	11.2	33	0
Altigo			102	**128**	59.8	11.0	34	0
OR2080227H				**127**	61.3	10.5	38	3
OR2080229H		101		**123**	**63.3**	11.2	37	0
Norwest 553	100	112	136	119	62.6	12.3	35	32
OR2080156H		96	111	118	62.4	12.0	39	3
WA 8157				117	59.4	12.7	40	67
WA 8119		125	133	116	58.9	11.2	39	27
Eddy	91	96	109	115	**63.9**	12.2	38	0
WA 8156				114	61.7	12.1	43	65
Boundary	103	109	108	108	61.8	11.2	37	10
WA 8159				107	59.5	11.6	42	17
UI Silver		110	111	107	**63.1**	11.5	40	90
WA 8118		98	102	105	62.2	12.5	42	68
WA 8158				98	60.5	13.0	41	88
IDO816				98	62.1	11.8	40	82
UICF-Grace		90	90	96	61.2	13.1	46	100
Finley	90	93	98	94	**63.4**	12.2	46	93
Farnum	85	88	94	89	60.1	12.1	45	97
Eltan	86	89	94	88	58.3	11.4	38	72
MDM	96	96	100	85	59.2	11.2	40	90
Bauermeister	88	91	95	84	58.8	11.5	41	98
UI SRG			98	81	62.0	12.4	42	65
C.V. %	12	14	13	11	1.2	6.6	6	45
LSD (.10)	6	9	11	13	0.8	0.8	3	23
Average	92	100	106	108	61.1	11.8	40	49
Highest	103	125	136	136	63.9	13.1	46	100
Lowest	85	88	90	81	58.3	10.5	33	0

Lamont Hard Winter Wheat

1. Grain yield in the 2012 Lamont hard winter wheat trial averaged 108 bushels/acre, 16 bushels/acre higher than the 5-year average. The Lamont nursery was located about five miles southeast of Lamont, WA (G. White, cooperator).

2. This nursery was seeded on 15 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a Hoe-opener plot drill set on 9-inch spacing. Base fertilizer was 80#N/acre applied pre-plant. Based on a spring soil test showing 361 lbs/acre available N, no additional fertilizer was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 81 bu/a to 136 bu/a. ‘Azimut’ was the highest yielding named entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 5 of the 24 entries. ‘Boundary’ was the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was low and fungicide was applied with the herbicide application.

4. Test weights were good averaging 61.1 lbs/bu and ranged from 58.3 to 63.9 lbs/bu. Grain protein averaged only 11.8% with a range of 10.5 to 13.1%. Plant height averaged 40 inches. Lodging averaged 49% and ranged from 0% to 100% and high lodging by some varieties contributed to lower test weights and yield.

Table 56. **2012 WSU Variety Testing Hard Winter Wheat Trial, Lind**

Variety Name *Hard White Italized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
WA 8156				**44**	58.8	12.8	30	149	0
Boundary	35	43	42	**42**	60.2	12.5	30	141	0
Farnum	41	50	50	**42**	58.9	13.7	32	148	0
Norwest 553	32	38	39	**42**	**61.4**	12.9	29	143	0
MDM	37	44	45	**42**	60.6	12.1	33	147	0
OR2080236H				**42**	59.7	12.5	30	145	0
Eltan	38	44	45	**40**	60.3	12.5	31	146	0
WA 8159				**40**	59.1	12.8	31	145	0
Finley	37	42	41	38	**61.5**	13.0	35	141	0
Bauermeister	38	45	46	38	60.2	12.7	31	149	3
UICF-Grace		35	37	38	60.4	13.1	39	140	0
IDO816				38	60.1	12.6	34	145	0
OR2080227H				38	60.3	12.7	31	143	0
Eddy	30	34	36	36	60.4	13.8	32	141	0
WA 8118		38	39	34	59.9	14.3	33	140	0
OR2080229H		33		34	60.6	12.7	32	144	0
UI SRG			40	33	59.9	12.8	36	141	0
UI Silver		38	36	32	**61.9**	13.6	32	144	0
WA 8157				32	60.5	13.7	31	144	0
WA 8119		47	45	31	59.1	13.5	29	147	0
OR2080156H		32	31	29	58.9	15.1	30	144	0
WA 8158				29	59.5	14.2	34	147	0
Azimut			31	25	57.7	12.8	28	142	0
Altigo			26	23	57.4	13.1	29	143	0
C.V. %	13	12	13	14	1.3	3.7	6	1	849
LSD (.10)	2	3	4	5	0.8	0.5	2	2	1
Average	36	40	39	36	59.9	13.2	32	144	0
Highest	41	50	50	44	61.9	15.1	39	149	3
Lowest	30	32	26	23	57.4	12.1	28	140	0

Lind Hard Winter Wheat

1. Grain yield in the Lind hard winter wheat trial averaged 36 bushels/acre, equal to the 5-year average. The Lind nursery was located on the WSU Lind Dryland Experiment Station three miles NE of the town of Lind.

2. This nursery was seeded on 12 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 50#N/acre. Based on a spring soil test showing 256 lbs/acre available N, no additional N was applied for hard wheat protein based on expected yields.

3. Yields ranged from 23 bu/a to 44 bu/a. ‘Boundary’, ‘Farnum’, and ‘Norwest 553’ were the highest yielding named entries in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 8 of the 24 entries. 'Farnum' was the top yielding hard entry across five years of results at this location. There was a low amount of stripe rust potential at this location and fungicide was applied 9 April at herbicide timing.

4. Test weights averaged 59.9 lbs/bu and ranged from 57.4 to 61.9 lbs/bu. Grain protein averaged 13.2% with a range of 12.1 to 15.1%. Plant height averaged 32 inches with slight lodging only for 'Bauermeister'.

Table 57.

2012 WSU Variety Testing Irrigated Hard Winter Wheat Trial, Moses Lake

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
OR2080229H		165		**140**	58.4	12.6	42	146	25
Genesis			164	**138**	58.5	12.1	36	141	25
Altigo			168	**137**	52.5	12.6	38	142	0
WA 8061-10				**137**	56.3	14.0	41	144	0
WA 8115			171	**136**	56.3	13.0	37	142	45
Norwest 553	163	160	161	**135**	58.3	13.4	37	145	25
Esperia		160	152	**132**	58.9	12.9	34	141	27
Finley				**131**	**62.1**	13.4	51	145	23
WA 8156				**126**	58.1	13.8	49	146	47
OR2080227H				**125**	54.3	13.5	40	145	70
Azimut			157	124	51.7	13.3	33	142	25
OR2080156H		161	158	123	57.8	13.9	41	145	0
Boundary	153	145	142	122	56.8	13.8	41	146	43
Eddy	162	158	155	118	58.8	13.4	39	143	57
UICF-Grace	151	146	145	111	59.3	14.9	50	145	52
WA 8157				110	55.7	13.6	39	142	65
WA 8119				110	53.0	13.8	43	147	68
UI SRG				109	57.1	14.0	45	144	62
WA 8158				106	55.2	13.6	43	146	62
WA 8159				105	54.4	14.6	42	147	75
UI Silver		151	143	104	58.5	12.9	43	145	85
OR2080236H				103	52.4	15.0	40	147	22
WA 8139			152	99	58.1	15.0	40	143	65
IDO816				95	58.7	13.6	40	147	70
DH02-18-69				94	**61.7**	14.0	51	147	42
MDM				92	56.0	14.9	40	147	75
Bauermeister	142	133	134	90	54.8	14.5	38	148	92
DH02-18-88				86	57.2	11.9	46	146	83
Farnum				85	56.4	16.0	39	148	67
WA 8118			145	78	57.6	15.6	39	141	62
C.V. %	8	9	9	12	2.8	5.4	4	1	58
LSD (.10)	5	8	9	15	1.7	0.8	2	1	30
Average	154	153	154	113	56.8	13.8	41	145	49
Highest	163	165	171	140	62.1	16.0	51	148	92
Lowest	142	133	134	78	51.7	11.9	33	141	0

Moses Lake Irrigated Hard Winter Wheat

1. Grain yield in the 2012 irrigated Moses Lake hard winter wheat trial averaged 113 bushels/acre, 41 bushels/acre lower than the 5-year average. The Moses Lake nursery was located about seven miles south of Moses Lake, WA (J. Heilig, cooperator).

2. This nursery was seeded on 18 September, 2011 following potatoes. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 200#N/acre applied pre-plant. Based on a spring soil test showing 347 lbs./acre available N, 48#N/acre additional fertilizer was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 78 bu/a to 140 bu/a. ‘Genesis’ was the highest yielding named entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 10 of the 30 entries. ‘Norwest 553’ was the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was low/moderate and fungicide was applied with the herbicide on 20 April and again on 24 May. Soil and water variability at this site was high. This influenced grain filling, maturity, and lodging. We also believe that heat stress affected later maturing tillers.

4. Test weights were highly variable averaging 56.8 lbs/bu and ranged from 51.7 to 62.1 lbs/bu. Grain protein also was variable averaging 13.8% with a range of 11.9 to 16.0%. Plant height averaged 41 inches. Lodging was highly variable in this trial, averaged 49%, ranged from 0% to 92%, and influenced performance.

Table 58. 2012 WSU Variety Testing Hard Winter Wheat Trial, Pullman

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
IDO816				**135**	60.5	11.7	43	158	0
Altigo			149	**129**	57.2	11.8	34	156	0
OR2080229H		130		**129**	**61.4**	11.9	40	158	0
WA 8156				**128**	**61.2**	12.0	50	161	0
OR2080156H		137	144	**123**	59.3	11.9	40	157	0
OR2080227H				**123**	60.6	11.4	40	157	0
UI SRG			148	**122**	**60.8**	12.2	47	157	0
Boundary	133	132	137	120	59.9	11.8	42	157	0
WA 8119		144	153	120	55.9	12.2	47	160	0
OR2080236H				119	57.6	12.6	39	160	0
WA 8159				119	57.4	12.3	42	160	0
Eddy	110	116	128	118	**62.9**	12.2	37	156	0
Eltan	136	126	140	118	58.1	11.6	47	162	25
UI Silver		138	142	118	60.3	12.0	43	158	0
Norwest 553	132	136	142	117	59.7	13.4	33	156	0
WA 8158				117	59.4	13.0	47	160	0
WA 8157				115	57.9	12.9	40	156	35
Azimut			136	115	55.6	12.3	34	155	0
WA 8118		126	140	112	60.4	14.6	45	155	58
MDM	132	124	138	109	58.5	11.8	47	162	0
UICF-Grace		118	123	108	58.2	12.6	40	155	73
Bauermeister	128	118	130	107	55.0	11.4	45	160	0
Finley	121	119	128	105	**61.1**	11.7	48	156	42
Farnum	110	108	116	104	57.0	12.4	46	164	68
C.V. %	9	11	10	11	3.5	4.8	8	1	59
LSD (.10)	5	8	10	14	2.2	0.6	4	1	8
Average	125	126	137	118	59.0	12.2	42	158	13
Highest	136	144	153	135	62.9	14.6	50	164	73
Lowest	110	108	116	104	55.0	11.4	33	155	0

Pullman Hard Winter Wheat

1. Grain yield in the 2012 Pullman hard winter wheat trial averaged 118 bushels/acre, 7 bushels/acre lower than the 5-year average. The Pullman nursery was located about three miles southeast of Pullman, WA (N. & R. Druffel, cooperators).

2. This nursery was seeded on 19 October, 2011 following chickpea. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 120#N/acre applied pre-plant. Based on a spring soil test showing 204 lbs/acre available N, 10#N/acre additional fertilizer was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 104 bu/a to 135 bu/a. ‘Altigo’ was the highest yielding named entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 7 of the 24 entries. ‘Boundary’ was the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was moderate and fungicide was applied with the herbicide and at flag leaf emergence.

4. Test weights were variable averaging 59.0 lbs/bu and ranged from 55.0 to 62.9 lbs/bu. High lodging by some varieties contributed to lower test weights and yield. Grain protein averaged only 12.2% with a range of 11.4 to 14.6%. Plant height averaged 42 inches and several entries had high lodging.

Table 59. **2012 WSU Variety Testing Hard Winter Wheat Trial, Reardan**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
MDM	106	118	103	**93**	61.9	11.9	36	172
WA 8119		133	122	**86**	59.3	12.1	33	173
OR2080236H				**83**	60.9	13.0	35	171
Azimut			107	80	59.9	12.8	29	165
Bauermeister	97	110	99	78	61.4	12.0	38	172
OR2080227H				77	62.9	12.5	37	166
Boundary	102	112	93	76	61.7	13.0	33	167
UI Silver		115	103	76	**63.3**	13.2	35	167
WA 8156				76	60.3	13.2	36	172
WA 8159				75	60.5	12.7	33	171
Altigo			108	72	59.7	12.3	31	164
IDO816				72	61.7	13.3	36	168
WA 8158				72	60.9	13.1	37	170
Farnum	89	98	89	71	60.0	13.1	44	174
Eltan	100	116	105	70	61.8	11.7	33	173
OR2080229H		99		68	**63.0**	13.8	36	167
Eddy	90	100	87	68	62.9	14.2	31	165
WA 8157				67	61.3	13.7	35	166
UI SRG			108	66	61.9	14.3	38	165
Norwest 553	91	100	92	65	61.9	15.0	27	165
WA 8118		95	89	62	61.9	15.3	37	165
Finley	86	96	84	60	**63.3**	13.5	41	166
UICF-Grace		89	80	60	60.8	14.3	43	165
OR2080156H		97	86	53	61.3	15.4	33	167
C.V. %	9	9	10	11	0.5	2.7	6	0
LSD (.10)	4	6	7	9	0.3	0.4	2	1
Average	95	106	97	72	61.4	13.3	35	168
Highest	106	133	122	93	63.3	15.4	44	174
Lowest	86	89	80	53	59.3	11.7	27	164

Reardan Hard Winter Wheat

1. Grain yield in the 2012 Reardan hard winter wheat trial averaged 72 bushels/acre, 23 bushels/acre lower than the 5-year average. The Reardan nursery was located about three miles northeast of Reardan, WA (H. Johnson & T. Carsten, cooperators).

2. This nursery was seeded on 23 September, 2011 following fallow. Seed was placed at an 85#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 92#N/acre applied pre-plant. Based on a spring soil test showing 179 lbs/acre available N, 139#N/acre additional fertilizer was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 53 bu/a to 93 bu/a. The hard white variety ‘MDM’ was the highest yielding named entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 3 of the 24 entries. MDM was also the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was low and fungicide was applied on 8 May with the herbicide application.

4. Test weights were good averaging 61.4 lbs/bu and ranged from 59.3 to 63.3 lbs/bu. Grain protein averaged 13.3% with a range of 11.7 to 15.4%. Plant height averaged 35 inches and there was no Lodging.

Table 60. **2012 WSU Variety Testing Hard Winter Wheat Trial, Ritzville**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
Boundary	56	67	73	**72**	60.1	7.6	35	142	0
WA 8156				**70**	59.9	7.8	37	147	0
WA 8157				**69**	60.7	8.7	35	142	0
OR2080229H		60		**69**	62.3	8.1	37	143	5
UI Silver		64	70	**68**	**62.4**	8.6	38	144	10
OR2080236H				**68**	61.4	8.7	35	147	0
Eddy	48	55	62	**67**	60.9	8.9	35	141	0
WA 8119		72	72	**66**	60.7	8.9	36	147	0
WA 8159				**65**	60.4	8.6	39	146	0
Eltan	62	70	71	**65**	59.3	7.5	37	148	2
OR2080227H				**65**	61.8	7.9	37	144	0
Altigo			73	**64**	56.5	7.8	32	142	0
Finley	52	57	59	63	**62.8**	8.6	42	141	0
Norwest 553	52	64	71	63	60.6	8.5	33	143	0
UI SRG			67	63	60.6	8.6	43	142	7
Bauermeister	55	62	62	61	60.8	7.6	38	148	3
Farnum	55	62	61	61	60.0	8.2	43	150	3
Azimut			70	60	57.5	7.9	31	141	0
WA 8158				59	60.9	8.3	39	145	2
UICF-Grace		52	57	59	61.1	9.1	45	140	12
MDM	57	64	65	57	60.0	7.3	36	148	0
OR2080156H		58	65	56	59.8	8.6	34	142	0
WA 8118		52	56	54	60.4	9.3	37	140	5
IDO816				54	60.7	9.3	39	147	0
C.V. %	11	11	11	11	0.7	8.8	4	1	219
LSD (.10)	3	4	6	8	0.4	0.8	2	1	5
Average	55	61	66	63	60.5	8.4	37	144	2
Highest	62	72	73	72	62.8	9.3	45	150	12
Lowest	48	52	56	54	56.5	7.3	31	140	0

Ritzville Hard Winter Wheat

1. Grain yield in the 2012 Ritzville hard winter wheat trial averaged 63 bushels/acre, 8 bushels/acre higher than the 5-year average. The Ritzville nursery was located about four miles west of Ritzville, WA (Ron Jirava, cooperator).

2. This nursery was seeded on 12 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 60#N/acre pre-plant applied. Based on a spring soil test showing 126 lbs/acre available N, 48 lbs./acre of additional N was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 54 bu/a to 72 bu/a. ‘Boundary’ was the highest yielding entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 12 of the 24 entries. The hard white variety ‘MDM’ was the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was slight and fungicide was only applied for stripe rust control 10 April at herbicide application timing.

4. Test weights averaged 60.5 lbs/bu and ranged from 56.5 to 62.8 lbs/bu. Grain protein averaged only 8.4% with a range of 7.3 to 9.3% and the trial was low in protein at least partially due to above average yields. Plant height averaged 37 inches and there was slight lodging by some entries.

Table 61. **2012 WSU Variety Testing Hard Winter Wheat Trial, St. Andrews**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Bauermeister	56	66	69	**74**	**62.6**	11.1	38	162
Eltan	53	62	66	**73**	62.1	10.4	37	162
Boundary	56	65	67	**70**	61.8	11.5	34	159
MDM	52	60	63	**68**	62.2	11.0	37	163
UI SRG			65	61	62.2	12.6	40	158
Farnum	53	60	61	61	60.9	12.5	41	164
Norwest 553	40	46	59	61	**62.8**	12.2	32	157
OR2080236H				61	62.0	11.8	35	159
UI Silver		61	60	59	**63.6**	11.9	35	158
OR2080227H				59	**62.5**	11.7	36	158
Eddy	44	55	59	59	**63.5**	12.9	35	157
Altigo			50	59	58.9	11.8	33	157
Azimut			57	58	59.9	11.2	31	156
OR2080229H		47		58	**63.1**	11.2	35	159
WA 8158				57	61.4	13.1	37	160
WA 8119		66	64	56	60.8	11.4	33	159
Finley	48	56	56	56	**62.9**	12.3	44	156
WA 8159				55	60.6	12.2	36	161
WA 8156				54	59.2	10.8	38	161
UICF-Grace		46	45	53	61.8	12.7	45	155
IDO816				52	62.0	12.7	38	160
OR2080156H		43	52	49	62.2	12.5	33	159
WA 8118		52	51	47	62.1	13.2	36	155
WA 8157				44	59.1	11.9	36	156
C.V. %	14	15	15	14	1.8	4.9	5	0
LSD (.10)	3	5	6	9	1.2	0.6	2	1
Average	50	56	59	59	61.7	11.9	36	159
Highest	56	66	69	74	63.6	13.2	45	164
Lowest	40	43	45	44	58.9	10.4	31	155

St. Andrews Hard Winter Wheat

1. Grain yield in the 2012 St. Andrews hard winter wheat trial averaged 59 bushels/acre, 9 bushels/acre higher than the 5-year average. The St. Andrews nursery was located about seven miles west of Coulee City, WA (Larry Tannenberg, cooperator).

2. This nursery was seeded on 13 September, 2011 following fallow. Seed was placed at a 45#/acre seeding rate using a deep-furrow plot drill set on 15-inch spacing. Base fertilizer was 50#N/acre applied pre-plant. Based on a spring soil test showing 236 lbs/acre available N, no additional N was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 44 bu/a to 74 bu/a. ‘Bauermeister’ was the highest yielding entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 4 of the 24 entries. Bauermeister and ‘Boundary’ were the top yielding hard entry across five years of results at this location. Stripe rust potential at this location was slight and fungicide was only applied for stripe rust control 7 May at herbicide application timing.

4. Test weights averaged 61.7 lbs/bu and ranged from 58.9 to 63.6 lbs/bu. Grain protein averaged only 11.9% with a range of 10.4 to 13.2%. Plant height averaged 36 inches and there was no lodging.

Table 62. **2012 WSU Variety Testing Hard Winter Wheat Trial, Walla Walla**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
OR2080227H				**135**	**61.9**	9.8	45	148	0
Altigo			140	**130**	58.5	10.7	38	147	0
OR2080229H		134		**130**	**62.2**	9.6	47	149	7
Norwest 553	131	133	131	122	**62.6**	11.6	39	147	0
OR2080236H				122	61.6	11.1	43	152	3
OR2080156H		126	129	110	**62.0**	10.7	43	148	0
Azimut			138	109	58.8	10.9	35	146	0
WA 8119		99	113	102	59.3	10.2	47	152	53
UI Silver		91	95	100	60.7	10.0	47	149	78
WA 8159				94	57.8	11.0	50	151	80
Eddy	102	84	88	93	**62.2**	12.4	45	147	48
IDO816				84	59.5	11.9	45	148	92
Eltan	94	81	93	84	57.3	11.1	44	152	60
MDM	90	77	87	82	58.1	11.3	43	153	62
UI SRG			88	80	58.3	12.0	50	148	90
Finley	74	69	74	72	61.7	12.5	52	148	90
WA 8118		79	82	72	59.2	12.7	51	146	87
Bauermeister	93	79	84	71	58.6	11.1	41	149	93
WA 8158				69	58.5	11.9	46	152	93
WA 8156				68	58.7	11.8	50	151	93
WA 8157				66	57.0	10.9	40	147	90
Boundary	102	88	87	62	60.7	10.4	43	147	60
Farnum	72	57	65	62	58.6	12.6	45	155	90
UICF-Grace		68	68	57	58.4	13.0	54	147	93
C.V. %	12	14	11	10	1.3	7.5	5	1	36
LSD (.10)	5	8	8	9	0.8	0.9	3	2	22
Average	95	90	98	91	59.7	11.3	45	149	57
Highest	131	134	140	135	62.6	13.0	54	155	93
Lowest	72	57	65	57	57.0	9.6	35	146	0

Walla Walla Hard Winter Wheat

1. Grain yield in the 2012 Walla Walla hard winter wheat trial averaged 91 bushels/acre, 4 bushels/acre lower than the 5-year average. The Walla Walla nursery was located about six miles north of Walla Walla, WA (Jason Beechinor, cooperator).

2. This nursery was seeded on 28 September, 2011 following chem-fallow. Seed was placed at an 85#/acre seeding rate using a Cross-Slot opener equipped no-till plot drill set on 10-inch spacing. Base fertilizer was 114#N/acre pre-plant applied. Based on a spring soil test showing 210 lbs/acre available N, 66 #/acre of additional N was applied for hard wheat protein based on expected yields. Fall seeding conditions were good as were emergence and stand establishment.

3. Yields ranged from 57 bu/a to 135 bu/a. ‘Altigo’ was the highest yielding named entry in this trial. All yield values within the 10% LSD range of the highest yield are shown in bold and this included 3 of the 24 entries. ‘Norwest 553’ was the top yielding hard entry across five years of results at this location. There were high levels of lodging for many cultivars in the trial and the lowest yielding varieties had the highest lodging ratings. There was moderate/high stripe rust potential at this location and fungicide was applied for stripe rust control in April at herbicide application timing and just before head emergence the end of May.

4. Test weights averaged 59.7 lbs/bu and ranged from 57.0 to 62.6 lbs/bu. Grain protein averaged 11.3% with a range of 9.6 to 13.0%. Plant height averaged 45 inches and lodging averaged 57% but ranged from 0% to 93%. Lodging greatly influenced yields and test weights negatively and protein positively.

Table 63.

STRIPE RUST INFECTION TYPE (IT*) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER VARIETY TRIAL NURSERY (EXP02) (COORDINATED BY STEPHEN GUY) AT SPILLMAN FARM (LOC 01), PLANT PATH FARM (LOC 03) AND WHITLOW FARM (LOC 04) NEAR PULLMAN, MT VERNON (LOC 05); WALLA WALLA (LOC 06); AND LIND (LOC 07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2012 UNDER NATURAL INFECTION

Variety	Class	Spillman Farm (Pullman)		Plant Path Farm (Pullman)		Whitlow Farm (Pullman)		Mt. Vernon				Walla Walla		Lind		Summary**	Overall rating***
		LOC 1		LOC 3		LOC 4		LOC 5				LOC 6		LOC 7			
		6/29		6/28		6/29		5/14		6/11		6/13		6/14			
		Milk		Milk		Milk		Stem elong.		Milk		Milk		Milk			
		IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%		
Bauermeister	HRW	5	70	5	20	6	50	8	40	3	5	3	15	8	5	MS	6
UI Silver	HWW	3	5	2	2	2	2	2	5	2	1	2	5	2	5	R	1
UICF-Grace	HWWI	3	10	2	10	3	20	2	10	3	10	3	15	2	10	R	2
UI SRG	HRW	2	10	2	5	2	2	2	5	3	5	2	5	2	5	R	1
IDO816	HRW	3	5	2	1	2	2	2	5	3	5	2	10	2	5	R	1
Norwest 553	HRW	2	5	2	2	2	5	2	5	2	1	2	10	2	5	R	1
OR2080156H	HWW	3	5	2	5	3	5	3	10	2	10	3	5	2	5	R	1
OR2080227H	HWW	2	5	2	2	2	2	2	5	2	5	2	10	2	5	R	1
OR2080229H	HWW	2	5	2	1	2	2	2	5	2	1	3	5	2	5	R	1
Finley	HRW	3	5	3	5	3	10	2	10	3	5	3	5	8	2	MR	4
OR2080236H	HWW	2	5	2	1	2	2	2	5	3	5	2	10	2	5	R	1
Farnum	HRW	3	10	2	1	2	1	2	2	2	1	2	10	2	5	R	2
Boundary	HRW	5	25	3	5	5	20	6	50	2	10	5	15	8	10	MR-MS	5
Eddy	HRW	8	35	2	2	7	30	8	60	2	10	8	50	8	2	MS	7
MDM	HWW	5	25	3	5	5	30	8	30	3	20	8	30	8	2	MS	6
Eltan	SWW	5	25	3	1	5	20	5	20	3	20	5	20	8	5	MR	4
Azimut	HRW	3	5	2	1	2	2	3	10	3	20	3	10	2	2	R	2
Altigo	HRW	3	10	2	1	2	2	5	30	3	10	8	20	8	2	MR-MS	5
WA 8118	HRW	3	15	2	5	2	5	2	5	3	5	2	20	3	2	R	2
WA 8119	HRW	2	2	2	1	2	1	2	5	3	5	2	10	2	5	R	1
PS279 (Susceptible Check)		**8**	**95**	**8**	**30**	**8**	**90**	**8**	**90**	**8**	**100**	**8**	**80**	**8**	**5**	**S**	**9**
WA 8156	HRW	3	2	2	1	2	5	2	10	2	5	2	10	2	5	R	1
WA 8157	HRW	3	5	2	2	2	2	2	2	2	5	2	5	2	5	R	1
WA 8158	HRW	2	2	2	2	2	1	2	10	2	1	2	10	2	5	R	1
WA 8159	HWW	3	15	3	2	8	20	2	20	2	10	3	20	2	5	MR-MS	5
DH02-18-88	HWW	5	25	8	30	8	80	8	90	8	100	8	50	8	2	S	9
DH02-18-69	HWW	5	70	3	5	5	30	8	80	3	5	5	20	3	2	MS	6
WA 8115	SWW	3	10	3	10	5	20	2	20	3	5	8	30	3	2	MS	6
WA 8139	HRW	2	2	2	5	2	5	2	10	2	5	3	20	2	5	R	2
WA 8061-10	HRW	8	90	2	1	2	1	2	10	2	5	3	20	2	5	S	9
PS279 (Susceptible Check)		**8**	**60**	**8**	**90**	**8**	**95**	**8**	**90**	**8**	**100**	**8**	**80**	**8**	**10**	**S**	**9**
Esperia	HRW	5	30	5	5	8	25	8	60	3	5	8	80	8	15	S	9
Genesi	HRW	8	90	2	2	3	10	3	10	3	5	5	30	3	2	S	9

* 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. Entries with a high IT in the first note, but a low IT in the second note at LOC 05 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

** R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

*** 1 = most resistant and 9 most susceptible.

2) The susceptible data at Loc 01 (Spillman Farm) could be an error as the other location and greenhouse adult-plant tests are good.

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

Table 64.

STRIPE RUST INFECTION TYPE (IT) ON ENTRIES IN 2012 WINTER EXTENSION DISEASE (VARIETAL TRIAL) NURSERY (EXP02) (COORDINATED BY STEPHEN GUY) TESTED WITH SELECTED STRIPE RUST RACES IN CONTROLLED GREENHOUSE TESTS FOR SEEDLING TESTS, DIURNAL TEMPERATURES GRADUALLY CHANGING FROM 4°C AT 2:00AM TO 20°C AT 2:00PM WERE USED AND IT WAS FOR 10-17 PLANTS, AND FOR ADULT-PLANT TESTS, DIURNAL TEMPERATURES GRADUALLY CHANGING FROM 10°C AT 2:00AM TO 30°C AT 2:00PM WERE USED AND IT WAS FOR INDIVIDUAL PLANTS.

Variety	Class	Infection type[a]													HTAP[c] Resustance
		Seedling test (4-20°C)[b]					Adult-plant test (10-30°C)[b]								
		PST-37	PST-45	PST-100	PST-114	PST-127	PST-100			PST-114			PST-127		
							Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	
Bauermeister	HRW	8	8	8	8	8	5,5,5	5,5,5	5,5,5	5,5,5	5,,5,5	5,5,5	5,5,5	5,5,5	5,5,5	Moderate
UI Silver	HWW	2	2	5	8	2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	3,3,3	2,2,2	2,2,2	2,2,2	High
UICF-Grace	HWWI	8	8	8	8	8	5,5,5	3,3,3	3,5,5	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	3,3,3	Moderate
UI SRG	HRW	2	2	2	8	2	2,2,2	2,2,2	2,2,2	2,3,5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
IDO816	HRW	2	2	2	8	2	2,2,2	2,2,2	2,2,2	3,3,4	3,3,3	4,4,4	2,2,2	2,2,2	2,2,2	Moderate
Norwest 553	HRW	8	2	5	5	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
OR2080156H	HWW	5	8	5,8	8	6	2,2,2	2,2,2	2,3,3	2,2,2	2,2,2	2,2,2	2,2,2	2,22,	2,2,2	High
OR2080227H	HWW	2	2	2	2	3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	Unknown
OR2080229H	HWW	2	8	2	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
Finley	HRW	2	2	2	8	8	2,2,2	2,2,2	2,2,2	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8,	No
OR2080236H	HWW	2	2	2,5	5	2,5,7	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
Farnum	HRW	8	7	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
Boundary	HRW	8	8	8	8	8	3,3,3	3,3,3	3,3,3	2,2,2	3,3,5	2,3,3	5,5,5	5,5,5	5,5,5	Moderate
Eddy	HRW	8	2,5	8	8	8	3,3,3	3,3,3	3,3,3	2,2,2	2,2,2	2,2,2	5,5,5	5,5,5	5,5,5	Moderate
MDM	HWW	2	7	8	8	8	5,5,5	5,5,5	5,5,5	2,2,3	5,5,5	5,5,5	5,5,5	5,5,5	5,5,5	Moderate
Eltan	SWW	8	8	8	8	8	5,5,6	5,5,5	5,5,5	5,5,5	5,5,5	3,3,4	5,5,5	5,5,5	5,5,5	Moderate
Azimut	HRW	2	2	5	8	3	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
Altigo	HRW	2	2	5	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8118	HRW	3	2	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	High
WA 8119	HRW	2	2	2	2	5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	High
PS279 (Susceptible Check)		**8**	**8**	**8**	**8**	**8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**No**
WA 8156	HRW	2	2	8	2	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8157	HRW	2	8,2(1)	2,8	8	8	2,2,2	2,2,2	2,3,4	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	High
WA 8158	HRW	2	2	2	8	2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	High
WA 8159	HWW	2	2,5	2	8	3	2,2,2	2,2,2	2,2,2	2,22,	2,2,2	2,2,2	2,2,3	2,2,3	2,2,3	High
DH02-18-88	HWW	2,8	8	8	8	8	5,5,5	2,2,5	8,8,8	8,8,8	8,8,8	8,8,8	5,5,5	5,5,5	3,5,5	No
DH02-18-69	HWW	8	8	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,3	5,5,5	2,2,2	2,2,2	2,2,3	Moderate
WA 8115	SWW	8	2	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	Moderate
WA 8139	HRW	8	2,8(1)	8	8	8	2,2,2	2,2,2	2,3,3	2,2,2	2,2,2	2,3,3	3,3,3	2,3	3,3,3	Moderate
WA 8061-10	HRW	2,8	2	2	8	6	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,22,	2,2,2	2,2,2	High
PS279 (Susceptible Check)		**8**	**8**	**8**	**8**	**8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**No**
Esperia	HRW	8	8	8	8	8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	No
Genesi	HRW	8	2	8	8	8	2,2,2	2,2,2	3,3,4	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	High
PS279 (Susceptible Check)		**8**	**8**	**8**	**8**	**8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**8,8,8**	**No**

[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 and the number of plants for each IT is indicated in "( )". For adult-plant tests, if the flag leaf has a IT different from the leaf below, the ITs are separated by"/" with the flag leaf IT first.

[b] The seedling tests were conducted in October to December 2009 for each race without replications. For adult-plant tests, seeds were planted in late November and seedlings of about 3-5 cm were vernalized at 2-4°C for 6 to 9 weeks and then transplanted into big pots and grown in the greenhouse (10 to 25°C diurnal temperature cycle, 16h light) from January to March. Plants at boot to flowering stages were inoculated (Jan to Feb 2010) with a mixture of urediniospores of a particular race with talc powdery at about 1:20 ratio, incubated for 20 to 24 h in a dew chamber (dark, 10°C) and then grown in a greenhouse growth chamber at the 10-30°C diurnal temperature cycle with 16 h light. IT was recorded for each plant 18 to 20 days after inoculation. The three reps for each race test were done in different time periods.

[c] Entries with a high IT in the seedling low-temperature test but with a low IT in the adult-plant tests under high temperatures have possibly high-temperature adult-plant (HTAP) resistance.

Note: All seeds were not treated with a fungicide and therefore, the data were good.

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

2012 Soft White Spring Wheat

2012 WSU Soft White Spring Wheat Trial Summary Precipitation Zone >20”

1. Soft white spring wheat grain yield across three locations and 24 entries in the >20” precipitation zone averaged 70 bushels/acre and is 11 bushels/acre higher than the 2011 average of 59 bushels/acre. The CV for the average data is 7% and is lower the 2011 CV.
2. Yields among entries averaged across locations ranged from 62 to 78 bushels/acre. ‘Louise’-G2 was the highest yielding entries averaged across locations. Louise-G2 is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment targeting wireworms, Louise is the standard seed treatment rate (0.75oz/100lbs seed), and Louise-0W is without insecticide. Average yield values within the 10% LSD range (3 bushels/acre) of the highest yield are shown in bold and this included 2 of the 24 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 60.9 lbs/bu across locations and entries and was lower than last year’s 61.3 lbs/bu average. Grain protein averaged 10.5% and was higher than last year’s 9.2% protein value.

2012 WSU Soft White Spring Wheat Trial Summary Precipitation Zone 16-20”

1. Soft white spring wheat grain yield across five locations and 24 entries in the 16-20” precipitation zone averaged 60 bushels/acre and is 10 bushels/acre lower than the 2011 average of 70 bushels/acre. The CV for the average data is 6% and is lower the 2011 CV.
2. Yields among entries averaged across locations ranged from 53 to 64 bushels/acre. ‘Diva’ and ‘Louise’ were the highest yielding entries averaged across locations. Louise-G2 is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment targeting wireworms, Louise is the standard seed treatment rate (0.75oz/100lbs seed), and Louise-0W is without insecticide and yielded 2 bushels/acre less than Louise. Average yield values within the 10% LSD range (2 bushels/acre) of the highest yield are shown in bold and this included 7 of the 24 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 60.3 lbs/bu across locations and entries and was lower than last year’s 61.6 lbs/bu average. Grain protein averaged 11.4% and was higher than last year’s 11.0% protein value.

2012 WSU Soft White Spring Wheat Trial Summary Precipitation Zone 12-16”

1. Soft white spring wheat grain yield across three locations and 24 entries in the 12-16” precipitation zone averaged 51 bushels/acre and is 14 bushels/acre lower than the 2011 average of 65 bushels/acre. The CV for the average data is 9% the same as the 2011 CV.
2. Yields among entries averaged across locations ranged from 46 to 55 bushels/acre. ‘Diva’ and ‘Louise’ were the highest yielding named entries averaged across locations. Louise-G2 is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment targeting wireworms, Louise is the standard seed treatment rate (0.75oz/100lbs seed), and Louise-0W is without insecticide and yielded 5 bushels/acre less than Louise. Average yield values within the 10% LSD range (3 bushels/acre) of the highest yield are shown in bold and this included 11 of the 24 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 59.2 lbs/bu across locations and entries and was lower than last year’s 61.5 lbs/bu average. Grain protein averaged 13.0% and was higher than last year’s 10.1% protein value.

2012 WSU Soft White Spring Wheat Trial Summary Precipitation Zone <12”

1. Soft white spring wheat grain yield across four locations and 24 entries in the 12” precipitation zone averaged 28 bushels/acre and is 3 bushels/acre lower than the 2011 average of 31 bushels/acre. The CV for the average data is 8%, lower than the 2011 CV.
2. Yields among entries averaged across locations ranged from 26 to 33 bushels/acre. ‘Louise’ and Louise-G2 were the highest yielding entries averaged across locations. Louise-G2 is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment targeting wireworms, Louise is the standard seed treatment rate (0.75oz/100lbs seed), and Louise-0W is without insecticide and was 3 bushels/acre less than Louise-G2 and Louise. Average yield values within the 10% LSD range (2 bushels/acre) of the highest yield are shown in bold and this included 2 of the 24 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 59.9 lbs/bu across locations and entries and was lower than last year’s 60.7 lbs/bu average. Grain protein averaged 13.5% and was higher than last year’s 11.5% protein value.

Table 65. **2012 WSU Variety Testing Soft White Spring Wheat Trial Summary**

Precipitation Zone >20"

Variety Name *(Club Italicized)*	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average
	Yield (Lbs/A)				Test Wt (Lbs/Bu)				Protein (%)			
Louise-G2	75	78	80	**78**	61.7	59.7	59.3	60.2	9.9	11.2	9.0	10.0
Louise-0W	77	70	77	**75**	61.8	60.0	59.3	60.4	10.4	10.7	9.3	10.1
WA 8162	70	76	77	74	62.5	61.0	60.6	61.4	10.8	11.2	9.0	10.3
Louise	79	69	75	74	62.0	60.4	59.1	60.5	10.0	10.9	9.1	10.0
WA 8161	74	66	81	73	61.7	61.0	61.5	61.4	10.9	11.6	9.6	10.7
Diva	73	71	76	73	62.3	60.8	58.9	60.7	10.4	11.1	9.7	10.4
WA 8160	70	59	86	72	62.2	61.0	60.0	61.1	10.8	12.1	9.3	10.7
Wakanz	71	71	72	71	60.6	59.5	59.3	59.8	10.7	11.0	9.7	10.5
WA 8124	68	70	77	71	62.7	62.2	60.3	61.7	10.7	11.2	9.1	10.3
JD	70	67	76	71	63.2	61.8	60.4	61.8	11.0	11.6	9.6	10.7
ARS03174CS	70	71	71	71	62.8	61.4	59.9	61.4	11.1	11.1	9.3	10.5
Whit	73	67	72	70	62.0	60.3	59.5	60.6	10.5	11.6	9.7	10.6
IDO599	62	69	79	70	62.5	61.9	59.7	61.4	10.9	11.6	8.8	10.4
Zak	63	76	71	70	60.9	61.0	60.1	60.7	10.8	11.2	9.5	10.5
IDO671	67	69	73	70	62.0	61.4	59.4	61.0	10.1	11.0	9.3	10.1
WB-1035CL+	65	72	69	69	61.3	60.2	58.0	59.8	11.9	12.0	10.9	**11.6**
ARS03173LS	66	63	76	68	60.6	60.0	59.3	60.0	10.5	11.1	9.4	10.3
Alturas	70	62	68	67	61.8	60.6	58.9	60.5	10.5	11.1	9.7	10.4
Alpowa	66	63	70	66	62.4	61.9	59.7	61.3	10.3	11.2	9.5	10.3
IDO687	65	63	70	66	63.1	62.4	62.2	**62.5**	10.9	11.8	9.7	10.8
Nick	70	59	68	65	61.3	60.9	60.2	60.8	10.6	12.1	10.0	10.9
Babe	71	57	68	65	62.6	61.5	59.8	61.3	10.0	11.3	9.2	10.2
IDO686	65	54	71	63	63.0	62.1	60.5	61.9	11.1	11.8	10.0	11.0
WA 8131	61	62	64	62	61.9	60.9	59.0	60.6	11.5	12.1	10.2	11.3
C.V. %	4	9	8	7	0.4	0.9	0.9	0.8	2.0	3.8	4.0	3.4
LSD (0.10)	3	7	6	3	0.2	0.6	0.6	0.3	0.2	0.5	0.4	0.2
Average	69	67	74	70	62.0	61.0	59.8	60.9	10.7	11.4	9.5	10.5
Highest	79	78	86	78	63.2	62.4	62.2	62.5	11.9	12.1	10.9	11.6
Lowest	61	54	64	62	60.6	59.5	58.0	59.8	9.9	10.7	8.8	10.0

Table 66. **2012 WSU Variety Testing Soft White Spring Wheat Trial Summary**

Precipitation Zone 16-20"

Variety Name *(Club Italicized)*	Yield (Lbs/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
Louise	58	44	68	78	74	**64**	59.9	60.6	59.5	60.7	59.0	60.0	11.9	10.3	13.6	9.2	11.1	11.2
Diva	57	42	68	79	77	**64**	61.2	61.6	59.1	61.1	59.4	60.5	11.4	9.7	13.8	9.6	10.9	11.1
WA 8124	59	44	56	77	83	**64**	61.6	62.4	58.6	61.0	60.5	60.8	12.1	10.6	15.3	9.0	11.0	11.6
Louise-G2	58	44	62	74	76	**63**	59.9	60.6	57.0	60.7	59.3	59.5	11.8	10.3	14.5	9.0	11.1	11.3
Louise-0W	58	43	57	79	75	**62**	60.1	60.6	57.1	60.8	59.0	59.5	11.9	9.8	14.5	8.7	11.1	11.2
Whit	58	40	61	75	78	**62**	60.2	60.5	59.4	60.3	58.8	59.8	12.2	10.2	14.4	9.1	11.5	11.5
WA 8162	57	34	63	76	78	**62**	61.8	61.5	60.1	61.3	60.1	61.0	11.4	10.6	14.0	9.4	11.3	11.3
Babe	55	32	62	74	85	61	61.6	61.4	60.4	60.6	60.5	60.9	11.6	10.3	13.9	8.6	10.9	11.1
WA 8161	56	39	58	73	81	61	61.4	61.8	57.9	62.0	60.5	60.7	11.7	10.2	14.6	8.9	11.2	11.3
ARS03174CS	61	37	60	80	69	61	61.4	61.4	60.2	61.6	59.5	60.8	12.0	11.1	15.5	9.4	11.5	11.9
IDO599	52	39	61	73	80	61	62.0	62.0	57.5	60.8	60.8	60.6	11.5	9.8	14.5	8.4	10.8	11.0
IDO671	55	35	69	71	74	61	61.3	61.1	59.5	60.7	59.9	60.5	11.5	10.1	13.5	9.0	11.0	11.0
Alpowa	57	36	64	66	81	61	61.4	62.0	59.0	61.0	61.0	60.9	11.7	10.2	14.1	9.0	10.9	11.2
Alturas	56	35	61	73	76	60	61.1	60.8	58.0	60.4	59.3	59.9	11.4	9.8	14.2	9.1	11.2	11.1
WA 8160	57	37	59	73	74	60	61.5	60.8	59.2	60.7	59.9	60.4	12.2	11.1	15.0	9.1	11.3	11.7
Zak	54	35	60	76	74	60	60.7	60.9	59.4	60.3	59.1	60.1	11.9	10.6	14.5	8.4	11.0	11.3
Wakanz	59	40	65	69	65	60	59.0	59.6	59.3	59.4	56.5	58.8	11.8	10.5	14.2	9.1	11.6	11.4
ARS03173LS	57	34	59	75	73	60	60.0	60.3	55.7	60.0	58.1	58.8	11.8	9.9	14.7	8.4	11.1	11.2
JD	53	40	54	74	75	59	61.9	61.9	59.2	61.8	60.4	61.0	12.0	10.3	15.0	9.1	11.8	11.6
Nick	57	33	57	63	80	58	60.7	61.0	58.0	59.6	59.6	59.8	12.4	10.7	15.1	9.5	11.6	11.8
IDO687	54	35	61	65	74	58	62.3	62.4	59.7	61.7	61.7	**61.5**	12.0	10.1	14.6	10.1	11.5	11.7
IDO686	49	36	62	67	72	57	62.0	62.4	60.6	61.6	60.8	**61.5**	11.8	10.5	14.1	8.9	11.0	11.3
WB-1035CL+	50	34	51	59	74	54	59.6	61.2	56.8	60.2	59.5	59.5	13.3	11.2	16.0	9.8	12.6	**12.6**
WA 8131	53	29	50	70	61	53	60.9	61.7	57.5	60.6	58.7	59.9	12.4	10.8	15.6	8.6	11.9	11.9
C.V. %	3	7	9	7	4	6	0.4	0.5	2.4	0.9	0.9	1.2	1.5	4.0	4.4	7.4	3.3	4.3
LSD (0.10)	2	3	6	5	3	2	0.3	0.3	1.5	0.6	0.6	0.3	0.2	0.4	0.7	0.7	0.4	0.2
Average	56	37	60	72	75	60	61.0	61.3	58.7	60.8	59.7	60.3	11.9	10.4	14.6	9.1	11.3	11.4
Highest	61	44	69	80	85	64	62.3	62.4	60.6	62.0	61.7	61.5	13.3	11.2	16.0	10.1	12.6	12.6
Lowest	49	29	50	59	61	53	59.0	59.6	55.7	59.4	56.5	58.8	11.4	9.7	13.5	8.4	10.8	11.0

Table 67. **2012 WSU Variety Testing Soft White Spring Wheat Trial Summary**

Precipitation Zone 12-16"

Variety Name *(Club Italicized)*	**Almira**	**Endicott**	**Lamont**	**Average**	**Almira**	**Endicott**	**Lamont**	**Average**	**Almira**	**Endicott**	**Lamont**	**Average**
	Yield (Lbs/A)				Test Wt (Lbs/Bu)				Protein (%)			
WA 8124	45	67	54	**55**	55.0	63.4	62.4	**60.2**	14.4	11.3	12.4	12.7
Diva	45	62	58	**55**	55.0	61.9	61.2	59.4	13.7	11.1	13.1	12.6
Louise	47	65	53	**55**	54.3	61.9	60.2	58.8	13.6	10.9	12.7	12.4
Louise-G2	43	60	59	**54**	53.6	61.7	60.4	58.6	14.2	10.9	12.5	12.5
ARS03174CS	51	58	53	**54**	57.8	61.8	61.9	**60.5**	15.0	11.9	13.6	13.5
Alturas	41	65	55	**54**	54.3	61.5	60.6	58.8	14.4	11.1	12.5	12.7
WA 8162	48	57	55	**53**	55.7	62.3	61.6	59.8	15.5	11.2	12.6	13.1
IDO687	48	58	51	**52**	56.8	62.8	61.9	**60.5**	13.5	11.6	13.3	12.8
Zak	45	58	54	**52**	55.2	61.5	60.8	59.2	15.6	11.9	12.6	13.4
IDO669	41	59	56	**52**	55.4	62.6	61.1	59.7	14.3	11.9	12.1	12.8
IDO599	47	57	53	**52**	55.2	61.9	62.2	59.8	13.0	11.0	12.4	12.1
Nick	45	55	54	51	53.2	62.2	60.4	58.6	14.7	12.6	13.3	13.5
ARS03173LS	42	59	51	51	54.1	61.2	60.2	58.5	15.1	11.8	12.1	13.0
WA 8161	46	55	51	50	55.0	61.7	61.0	59.2	15.3	11.0	12.1	12.8
IDO671	37	60	53	50	54.6	61.9	61.1	59.2	14.2	11.1	12.1	12.5
Alpowa	44	56	49	50	55.1	62.7	61.3	59.7	15.3	11.8	12.5	13.2
Louise-0W	39	58	52	50	53.1	61.4	60.2	58.2	14.6	11.3	13.0	13.0
Whit	43	60	45	49	52.2	61.7	60.3	58.0	15.3	12.1	13.8	13.8
Babe	47	51	49	49	54.4	62.5	61.2	59.4	13.9	11.1	12.0	12.3
IDO686	39	57	50	49	55.6	62.9	61.9	**60.1**	14.0	11.8	12.7	12.8
Wakanz	45	56	44	48	53.1	60.5	59.6	57.8	15.4	11.5	13.6	13.5
WA 8160	45	54	42	47	55.0	60.1	60.4	58.5	14.8	12.1	13.5	13.5
WB-1035CL+	45	52	43	47	52.0	62.2	60.0	58.1	16.1	13.4	14.3	**14.6**
JD	46	50	43	46	56.4	62.4	61.2	60.0	15.1	12.2	13.8	13.7
C.V. %	11	7	10	9	2.0	0.8	0.6	1.2	7.2	2.9	4.9	5.7
LSD (0.10)	5	5	6	3	1.1	0.5	0.4	0.4	1.1	0.4	0.7	0.5
Average	44	58	51	51	54.7	62.0	61.0	59.2	14.6	11.6	12.9	13.0
Highest	51	67	59	55	57.8	63.4	62.4	60.5	16.1	13.4	14.3	14.6
Lowest	37	50	42	46	52.0	60.1	59.6	57.8	13.0	10.9	12.0	12.1

Table 68. **2012 WSU Variety Testing Soft White Spring Wheat Trial Summary**

Precipitation Zone <12"

Variety Name *(Club Italicized)*	Yield (Lbs/A)					Test Wt (Lbs/Bu)					Protein (%)				
	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average
Louise	44	34	20	35	**33**	59.2	59.0	59.7	62.2	60.1	11.7	13.7	13.4	13.8	13.2
Louise-G2	40	32	22	37	**33**	58.9	59.1	59.6	62.0	59.9	11.3	13.8	13.6	13.6	13.1
WA 8124	38	30	20	33	30	60.0	57.7	59.2	62.6	59.9	10.8	14.3	14.1	14.1	13.3
Louise-0W	42	30	17	32	30	57.9	58.8	59.7	62.1	59.6	11.5	13.8	14.0	13.9	13.3
Diva	41	30	19	31	30	60.2	60.1	60.3	62.3	**60.7**	11.3	14.0	14.0	14.1	13.4
WA 8161	39	30	18	30	29	59.6	59.7	60.5	61.5	60.3	11.8	14.5	14.1	14.1	13.6
IDO599	37	27	18	34	29	60.9	59.5	61.0	62.3	**60.9**	10.6	13.2	13.3	13.0	12.5
IDO669	37	27	17	33	29	59.0	59.0	60.1	61.3	59.9	12.4	14.1	14.3	14.0	13.7
ARS03173LS	38	28	19	30	29	59.5	57.5	58.6	60.4	59.0	12.4	15.0	14.7	14.9	14.2
Whit	41	25	19	29	28	58.7	58.4	59.1	60.4	59.1	11.4	13.8	14.0	14.1	13.3
JD	39	28	16	30	28	61.1	59.9	60.7	62.8	**61.1**	11.8	14.2	14.5	14.2	13.7
WA 8162	40	28	17	28	28	60.7	59.6	60.3	62.2	**60.7**	11.9	13.8	13.3	14.4	13.4
IDO687	36	27	16	33	28	60.9	59.0	60.9	62.3	**60.8**	11.2	13.7	13.9	13.3	13.0
Nick	47	26	13	26	28	59.2	58.6	59.7	60.2	59.4	11.6	14.4	15.0	14.1	13.8
ARS03174CS	38	29	17	28	28	60.9	58.8	59.2	61.2	60.0	12.5	15.2	15.5	15.1	**14.6**
Wakanz	40	26	18	27	28	58.4	53.9	58.3	60.3	57.7	12.3	14.6	14.1	14.2	13.8
IDO686	34	27	17	33	28	59.3	59.3	61.2	62.0	60.4	11.3	13.7	13.8	13.6	13.1
WA 8160	37	24	19	29	27	59.6	55.8	58.2	60.9	58.6	12.5	14.8	14.9	14.6	14.2
IDO671	35	26	18	30	27	58.9	58.8	60.4	61.2	59.8	11.1	13.3	13.2	13.1	12.7
Alturas	34	27	16	31	27	59.0	58.5	59.7	61.4	59.6	10.8	13.3	13.5	13.1	12.7
Alpowa	38	23	17	29	27	60.2	57.6	59.3	62.0	59.8	11.3	13.6	13.9	13.5	13.1
WB-1035CL+	39	25	15	28	27	58.9	58.7	60.1	60.8	59.6	12.5	15.3	15.9	15.2	**14.7**
Zak	36	26	17	26	26	59.6	57.6	59.4	60.7	59.3	12.3	14.7	14.7	14.5	14.0
Babe	41	22	16	26	26	60.8	58.7	60.3	61.9	60.4	11.0	13.4	14.5	13.7	13.2
C.V. %	8	6	11	6	8	1.5	0.6	1.5	0.6	1.1	6.5	1.3	2.6	1.5	3.3
LSD (0.10)	3	2	2	2	1	0.9	0.4	0.9	0.4	0.4	0.8	0.2	0.4	0.2	0.2
Average	39	27	18	30	28	59.6	58.5	59.8	61.5	59.9	11.6	14.1	14.2	14.0	13.5
Highest	47	34	22	37	33	61.1	60.1	61.2	62.8	61.1	12.5	15.3	15.9	15.2	14.7
Lowest	34	22	13	26	26	57.9	53.9	58.2	60.2	57.7	10.6	13.2	13.2	13.0	12.5

Table 69. **WSU Soft White Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = >20
(Fairfield, Farmington, Pullman)

Variety Name*	2 Years 2011-2012, 6 loc/yrs			3 Years 2010-2012, 8 loc/yrs			5 Years 2008-2012, 12 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Louise-G2	73	60.8	9.5						
Louise	71	61.0	9.6	71	60.0	10.1	73	60.1	10.4
Diva	70	61.3	9.9	71	60.3	10.3	73	60.6	10.5
JD	69	62.1	10.0	75	61.8	10.5	75	61.9	10.7
Whit	67	60.9	9.7	67	59.7	10.3	69	59.9	10.6
WA 8124	67	61.6	9.6	72	60.8	10.1			
Wakanz	65	60.0	10.0	66	58.8	10.6	69	59.2	10.9
Babe	64	61.3	9.5	67	60.3	10.0	70	60.5	10.3
IDO671	64	61.0	9.5	66	60.4	9.9			
IDO687	62	62.3	9.8						
Alturas	62	60.6	9.8	65	59.9	10.1	67	60.0	10.3
Zak	62	60.9	10.1	61	59.8	10.6	65	60.0	10.9
WA 8131	61	60.9	10.6						
IDO686	61	62.1	10.0						
Alpowa	60	61.4	9.4	62	60.4	10.0	66	60.6	10.4
WB-1035CL+	58	60.3	11.0						
Nick	56	60.7	10.1	55	59.5	10.5	61	59.9	10.8
C.V. %	7	0.7	4.2	7	0.8	4.2	7	0.9	4.0
LSD (.10)	2	0.2	0.2	2	0.2	0.2	1	0.2	0.1
Average	64	61.1	9.9	67	60.1	10.3	69	60.3	10.6
Highest	73	62.3	11.0	75	61.8	11.0	75	61.9	10.9
Lowest	56	60.0	9.4	55	58.8	9.9	61	59.2	10.3

** Club Wheat Italicized*

Table 70. **WSU Soft White Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = 16-20"

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

Variety Name*	2 Years 2011-2012, 10 loc/yrs			3 Years 2010-2012, 15 loc/yrs			5 Years 2008-2012, 25 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Louise	72	60.8	10.9	67	58.8	11.4	65	59.4	11.3
Louise-G2	71	60.7	10.9						
Diva	70	61.2	11.0	68	59.6	11.3	65	60.0	11.3
Whit	67	60.3	11.2	65	58.6	11.6	64	59.0	11.6
Babe	67	61.3	10.8	66	59.8	11.2	63	60.1	11.3
WA 8124	67	61.6	11.2	65	59.7	11.8			
JD	66	62.1	11.6	65	60.6	12.0	62	60.9	11.9
Alturas	65	60.5	10.8	65	59.0	11.2	62	59.3	11.2
Wakanz	65	59.6	11.5	64	58.0	11.8	63	58.5	11.8
IDO671	64	61.0	10.8	64	59.5	11.2			
Alpowa	64	61.4	11.0	62	59.5	11.5	60	59.9	11.5
IDO686	63	62.0	11.0						
WA 8131	63	60.9	11.7						
IDO687	63	62.0	11.1						
Zak	62	60.7	11.4	58	59.0	12.0	59	59.3	12.0
Nick	62	60.3	11.4	61	58.8	11.7	59	59.4	11.8
WB-1035CL+	55	60.1	12.5						
C.V. %	7	1.1	4.5	8	1.5	4.4	8	1.3	3.9
LSD (.10)	1	0.2	0.2	1	0.3	0.1	1	0.2	0.1
Average	65	61.0	11.2	64	59.2	11.6	62	59.6	11.6
Highest	72	62.1	12.5	68	60.6	12.0	65	60.9	12.0
Lowest	55	59.6	10.8	58	58.0	11.2	59	58.5	11.2

** Club Wheat Italicized*

Table 71. **WSU Soft White Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = 12-16"
(Almira, Endicot, Lamont)

Variety Name*	2 Years 2011-2012, 6 loc/yrs			3 Years 2010-2012, 9 loc/yrs			5 Years 2008-2012, 15 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Louise-G2	64	59.8	11.4						
Diva	64	60.3	11.3	65	59.6	11.7	61	59.9	11.6
Louise	63	60.1	11.2	64	59.4	11.6	60	59.7	11.6
IDO687	60	61.6	11.3						
WA 8124	60	61.2	11.4	63	60.2	12.1			
Alturas	60	59.7	11.3	62	59.1	11.8	58	59.4	11.6
Babe	59	60.7	11.1	57	59.6	11.7	55	60.1	11.7
IDO671	59	60.3	11.1	61	59.8	11.5			
Whit	58	59.7	12.0	58	58.9	12.4	56	59.2	12.2
JD	58	61.2	12.1	62	60.9	12.7	58	61.1	12.4
IDO686	58	61.1	11.5						
Wakanz	56	59.0	12.1	57	58.0	12.6	56	58.5	12.3
Zak	56	60.2	11.9	56	59.3	12.4	54	59.5	12.3
Nick	55	59.9	11.6	54	58.8	12.1	54	59.4	12.1
Alpowa	54	60.9	11.3	56	60.3	11.7	54	60.4	11.7
WB-1035CL+	50	59.5	12.9						
C.V. %	9	1.2	5.1	11	1.8	4.8	10	1.5	4.2
LSD (.10)	2	0.3	0.3	2	0.4	0.2	2	0.3	0.1
Average	58	60.3	11.6	59	59.4	12.1	56	59.7	12.0
Highest	64	61.6	12.9	65	60.9	13.0	61	61.1	12.4
Lowest	50	59.0	11.1	54	58.0	11.5	54	58.5	11.6

** Club Wheat Italicized*

Table 72. **WSU Soft White Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = <12"

(Bickleton, Connell, Horse Heaven, Lind)

Variety Name*	2 Years 20112012, 8 loc/yrs			3 Years 2010-2012, 12 loc/yrs			5 Years 2008-2012, 20 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Louise-G2	34	60.5	12.1						
Louise	33	60.6	12.2	36	59.9	12.1	32	60.0	12.2
Diva	33	61.1	12.3	36	60.4	12.2	32	60.5	12.4
JD	33	61.7	12.7	37	61.1	12.7	32	61.2	12.7
Wakanz	31	58.6	12.7	36	58.1	12.6	31	58.5	12.8
WA 8124	31	60.4	12.4	35	59.7	12.4			
Whit	30	59.8	12.3	34	59.6	12.2	30	59.7	12.5
Babe	29	60.8	12.2	34	60.3	12.0	30	60.5	12.3
IDO687	29	61.1	12.2						
IDO686	29	60.9	12.2						
Alturas	28	59.8	12.0	32	59.6	11.9	29	59.8	12.1
Alpowa	28	60.1	12.1	32	59.6	12.0	28	60.2	12.3
Nick	28	59.7	12.8	32	59.6	12.6	30	60.0	12.8
IDO671	28	60.1	11.9	32	59.9	11.8			
Zak	27	60.0	13.2	32	59.2	13.0	29	59.7	13.1
WB-1035CL+	26	59.5	13.7						
C.V. %	11	1.1	3.2	9	1.1	3.0	10	1.0	2.8
LSD (.10)	1	0.3	0.2	1	0.2	0.1	1	0.2	0.1
Average	30	60.3	12.4	34	59.7	12.3	30	60.0	12.5
Highest	34	61.7	13.7	37	61.1	13.0	32	61.2	13.1
Lowest	26	58.6	11.9	32	58.1	11.8	28	58.5	12.1

** Club Wheat Italicized*

Table 73. **2012 WSU Variety Testing SW Spring Wheat Trial, Almira**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
ARS03174CS				**51**	**57.8**	15.0	35	0
WA 8162				**48**	55.7	15.5	35	0
IDO687			62	**48**	**56.8**	13.5	36	0
IDO599				**47**	55.2	13.0	34	0
Babe	55	51	57	**47**	54.4	13.9	35	12
Louise	57	54	58	**47**	54.3	13.6	38	0
JD	58	56	60	**46**	56.4	15.1	36	0
WA 8161				**46**	55.0	15.3	37	0
WA 8160				45	55.0	14.8	34	0
WA 8124		44	50	45	55.0	14.4	35	0
Nick	53	47	51	45	53.2	14.7	34	0
Diva	57	57	63	45	55.0	13.7	36	0
Wakanz	51	46	53	45	53.1	15.4	33	0
WB-1035CL+			49	45	52.0	16.1	33	0
Zak	51	48	53	45	55.2	15.6	35	0
Alpowa	53	50	50	44	55.1	15.3	35	0
Whit	56	53	56	43	52.2	15.3	34	25
Louise-G2			57	43	53.6	14.2	37	0
ARS03173LS				42	54.1	15.1	37	0
IDO669				41	55.4	14.3	37	0
Alturas	51	48	54	41	54.3	14.4	35	0
Louise-0W				39	53.1	14.6	37	0
IDO686			56	39	55.6	14.0	36	0
IDO671		51	55	37	54.6	14.2	34	0
C.V. %	12	15	13	11	2.0	7.2	3	628
LSD (.10)	3	5	5	5	1.1	1.1	1	10
Average	54	49	55	44	54.7	14.6	35	2
Highest	58	57	63	51	57.8	16.1	38	25
Lowest	51	42	49	37	52.0	13.0	33	0

Table 74.

2012 WSU Variety Testing SW Spring Wheat Trial (No Fungicide), Almira

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)
WA 8162	--	--	--	**56**	**58.3**	12.8
Louise-G2	--	--	--	**55**	56.5	12.6
Louise-0W	--	--	--	**54**	56.3	12.0
WA 8161	--	--	--	**52**	**57.3**	14.0
JD	--	--	--	50	**58.3**	14.9
WA 8160	--	--	--	49	**57.1**	13.3
WA 8124	--	--	--	49	56.4	14.8
Louise	--	--	--	48	55.0	12.5
Whit	--	--	--	48	55.9	13.2
Alturas	--	--	--	48	56.3	12.0
Wakanz	--	--	--	48	55.0	14.3
Nick	--	--	--	47	55.4	11.4
IDO599	--	--	--	45	54.9	15.2
ARS03174CS	--	--	--	45	**57.7**	15.6
Diva	--	--	--	45	55.0	14.1
Babe	--	--	--	44	56.3	12.2
IDO669	--	--	--	44	56.2	13.2
WB-1035CL+	--	--	--	44	54.4	13.5
Alpowa	--	--	--	43	**57.1**	12.7
IDO671	--	--	--	43	56.4	13.4
IDO686	--	--	--	42	56.7	12.6
ARS03173LS	--	--	--	42	54.4	14.4
IDO687	--	--	--	40	57.0	14.6
Zak	--	--	--	39	55.5	14.3
C.V. %	--	--	--	9	2.1	11.5
LSD (.10)	--	--	--	5	1.2	1.7
Average	--	--	--	47	56.2	13.5
Highest	--	--	--	56	58.3	15.6
Lowest	--	--	--	39	54.4	11.4

Table 75. **2012 WSU Soft White Spring Wheat Trial, Almira**

Impact of Foliar Disease on Grain Yield

Variety Name *(Club Italicized)*	Grain Yield Bu/A		Yield Difference (protected-unprotected)	
	Protected	Unprotected	Bu/A	%
ARS03174CS	51	45	6	11
WA 8162	48	56	-8	-17
IDO687	48	40	8	16
IDO599	47	45	2	4
Babe	47	44	3	6
Louise	47	48	-1	-2
JD	46	50	-4	-9
WA 8161	46	52	-6	-13
WA 8160	45	49	-4	-8
WA 8124	45	49	-4	-9
Diva	45	45	0	0
Nick	45	47	-2	-4
Wakanz	45	48	-3	-7
WB-1035CL+	45	44	1	2
Zak	45	39	6	13
Alpowa	44	43	1	1
Whit	43	48	-5	-11
Louise-G2	43	55	-11	-26
ARS03173LS	42	42	0	0
IDO669	41	44	-3	-7
Alturas	41	48	-7	-17
Louise-0W	39	54	-15	-38
IDO686	39	42	-3	-8
IDO671	37	43	-6	-16
C.V. %	11	9		
LSD (0.10)	5	5		
Average	44	47	-3	-7
Highest	51	56		
Lowest	37	39		

Almira Soft White Spring Wheat

1. This summary includes duplicate soft white spring wheat trials except one was sprayed with fungicide and the other was not sprayed. Grain yield in these 2012 Almira soft white spring wheat trials averaged 44 bushels/acre, 10 bushels/acre lower than the 5-year average in the fungicide sprayed trial, and the non-sprayed trial averaged 47 bushels/acre. The Almira trial was located about seven miles north of Almira, WA (D. McKay, cooperator).

2. The trials were seeded on 24 April , 2012 following winter wheat. Seed was placed at an 80#/ acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 75#N/acre applied pre-plant. Spring seeding conditions were good and establishment was uniform. Tilt® fungicide at 4 oz/acre was applied 24 May to the sprayed trial and stripe rust levels were low.

3. In the sprayed trial, yields ranged from 37 to 51 bu/a, while in the non-sprayed trial, yields ranged from 39 to 56 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 8 of the 24 entries are in this group in the sprayed trial and 4 of 24 in the non-sprayed trial. ‘Babe’ and ‘Louise’, were the highest yielding named varieties in the sprayed trial, and ‘Diva’ and Louise were the highest yielding over 5 years of results at this site. Louise-0W (no insecticide seed treatment) and Louise-G2 (2 oz/100# seed treatment insecticide) were the highest yielding named varieties in the non-sprayed trial. Yields in both trials and the difference in yield and percentage difference between sprayed and non-sprayed for each entry are in a separate comparison table. Average yield of the entries in the sprayed trial was 3 bu/acre less than in the non-sprayed trial.

4. Test weights were very poor indicating a stressed grain filling and averaged 54.7 lbs/bu and ranged from 52.0 to 57.8 lbs/bu in the sprayed trial. Similarly in the non-spray trial test weight averaged 56.2 lbs/bu and ranged from 54.4 to 58.3 lbs/bu. Grain protein averaged a very high 14.6% with a range of 13.0 to 16.1% in the sprayed trial, and protein averaged 13.5% with a range of 11.4 to 15.6% in the non-sprayed trial also indicating a stressed grain filling. There was no lodging in either trial.

Table 76. **2012 WSU Variety Testing SW Spring Wheat Trial, Bickleton**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Nick	34	31	32	**47**	59.2	11.6	31	178
Louise	32	30	34	**44**	59.2	11.7	32	182
Louise-0W				41	57.9	11.5	31	179
Babe	32	33	33	41	**60.8**	11.0	29	181
Diva	30	30	35	41	**60.2**	11.3	30	180
Whit	32	30	32	41	58.7	11.4	29	179
Louise-G2			34	40	58.9	11.3	31	179
Wakanz	32	32	35	40	58.4	12.3	27	183
WA 8162				40	**60.7**	11.9	27	183
JD	32	32	36	39	**61.1**	11.8	28	179
WB-1035CL+			28	39	58.9	12.5	28	177
WA 8161				39	59.6	11.8	32	182
ARS03174CS				38	**60.9**	12.5	28	184
WA 8124		27	29	38	60.0	10.8	31	183
Alpowa	29	29	31	38	**60.2**	11.3	30	185
ARS03173LS				38	59.5	12.4	29	180
IDO599				37	**60.9**	10.6	28	179
IDO669				37	59.0	12.4	32	181
WA 8160				37	59.6	12.5	29	182
IDO687			31	36	**60.9**	11.2	28	184
Zak	30	28	30	36	59.6	12.3	29	181
IDO671		24	26	35	58.9	11.1	29	182
IDO686			27	34	59.3	11.3	31	181
Alturas	27	26	30	34	59.0	10.8	28	179
C.V. %	14	15	16	8	1.5	6.5	6	1
LSD (.10)	2	3	4	3	0.9	0.8	2	2
Average	31	29	31	39	59.6	11.6	29	181
Highest	34	33	36	47	61.1	12.5	32	185
Lowest	27	24	26	34	57.9	10.6	27	177

Bickleton Soft White Spring Wheat

1. Grain yield in the 2012 Bickleton soft white spring wheat trial averaged 39 bushels/acre, 8 bushels/acre higher than the 5-year average. The Bickleton nursery was located about two miles east of Bickleton, WA (S. Matsen, cooperator).

2. This nursery was seeded on 13 April, 2012 following spring wheat. Seed was placed at a 60#/acre seeding rate using a no-till plot drill equipped with hoe openers set on 12-inch spacing. A phosphorus-sulfur starter fertilizer was applied through the drill and a soil test showed 223#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 34 bu/a to 47 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. ‘Nick’ was the highest yielding entry and also was the highest yielding over 5 years of results at this site. No fungicide or stripe rust impact influenced this trial.

4. Test weights averaged 59.6 lbs/bu and ranged from 57.9 to 61.1 lbs/bu. Grain protein averaged 11.6% with a range of 10.6 to 12.5%. The average plant height was 29 inches with no lodging.

Table 77. **2012 WSU Variety Testing SW Spring Wheat Trial, Connell**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
Louise	32	37	31	**33**	59.0	13.7	29
Louise-G2			31	**32**	59.1	13.8	28
Louise-0W				30	58.8	13.8	29
WA 8124		36	28	30	57.7	14.3	28
WA 8161				30	**59.7**	14.5	29
Diva	33	37	29	30	**60.1**	14.0	29
ARS03174CS				28	58.8	15.2	26
JD	31	35	27	28	**59.9**	14.2	26
ARS03173LS				28	57.5	15.0	29
WA 8162				28	59.6	13.8	25
Alturas	29	33	25	27	58.5	13.3	27
IDO599				27	59.5	13.2	27
IDO686			25	27	59.3	13.7	28
IDO669				27	59.0	14.1	28
IDO687			27	27	59.0	13.7	27
Wakanz	30	35	28	26	53.9	14.6	26
Zak	29	31	26	26	57.6	14.7	27
IDO671		33	25	26	58.8	13.3	26
Nick	28	31	26	26	58.6	14.4	25
WB-1035CL+			25	25	58.7	15.3	24
Whit	28	31	25	25	58.4	13.8	25
WA 8160				24	55.8	14.8	22
Alpowa	26	29	23	23	57.6	13.6	26
Babe	27	31	24	22	58.7	13.4	26
C.V. %	8	7	8	6	0.6	1.3	3
LSD (.10)	1	1	2	2	0.4	0.2	1
Average	29	34	27	27	58.5	14.1	27
Highest	33	37	31	33	60.1	15.3	29
Lowest	26	29	23	22	53.9	13.2	22

Connell Soft White Spring Wheat

1. Grain yield in the 2012 Connell soft white spring wheat trial averaged 27 bushels/acre, 2 bushels/acre lower than the 5-year average. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister, cooperator).

2. This nursery was seeded on 2 April, 2012 following fallow. Seed was placed at a 60#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 70#N/acre fall applied. Spring seeding conditions were good.

3. Yields ranged from 22 bu/a to 34 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. ‘Louise’ (with standard seed treatment rate of 0.75oz/100lbs seed) was the highest yielding entry in this trial followed by Louise-G2 with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise-0W (without insecticide) was 4 bu/a lower yielding than Louise. ‘Diva’ and Louise were the highest yielding over 5 years of results at this site. Fungicide was applied 5 May at herbicide timing for stripe rust prevention.

4. Test weights averaged 58.5 lbs/bu and ranged from 53.9 to 60.1 lbs/bu. Grain protein averaged 14.1% with a range of 13.2 to 15.3%. The average plant height was 27 inches with no lodging.

Table 78. 2012 WSU Variety Testing SW Spring Wheat Trial, Dayton

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
ARS03174CS				**61**	61.4	12.0	29
Wakanz	65	72	76	**59**	59.0	11.8	28
WA 8124		66	73	**59**	61.6	12.1	30
Whit	61	68	76	58	60.2	12.2	29
Louise-G2			77	58	59.9	11.8	32
Louise	62	68	77	58	59.9	11.9	33
Louise-0W				58	60.1	11.9	32
Nick	60	66	74	57	60.7	12.4	28
Alpowa	57	65	73	57	61.4	11.7	29
ARS03173LS				57	60.0	11.8	30
WA 8162				57	61.8	11.4	29
Diva	62	69	77	57	61.2	11.4	30
WA 8160				56	61.5	12.2	29
Alturas	58	65	71	56	61.1	11.4	27
WA 8161				56	61.4	11.7	31
Babe	61	69	76	55	61.6	11.6	29
IDO671		65	71	55	61.3	11.5	29
Zak	57	60	69	54	60.7	11.9	29
IDO687			69	54	**62.3**	12.0	28
JD	60	66	72	53	61.9	12.0	30
WA 8131			70	53	60.9	12.4	25
IDO599				52	**62.0**	11.5	28
WB-1035CL+			63	50	59.6	13.3	26
IDO686			68	49	**62.0**	11.8	30
C.V. %	5	5	4	3	0.4	1.5	4
LSD (.10)	2	2	2	2	0.3	0.2	1
Average	60	65	72	56	61.0	11.9	29
Highest	65	72	77	61	62.3	13.3	33
Lowest	57	50	63	49	59.0	11.4	25

Dayton Soft White Spring Wheat

1. Grain yield in the 2012 Dayton soft white spring wheat trial averaged 56 bushels/acre, 4 bushels/acre lower than the 5-year average. The Walla Walla nursery was located about six miles northwest of Dayton, WA (J. Penner, cooperator).

2. This nursery was seeded on 1 May, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was 142#N/acre pre-planting applied and a soil test showed 66#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 49 bu/a to 61 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. ‘Wakanz’ was the highest yielding named entry in this trial and was the highest yielding over 5 years of results at this site. Fungicide was applied 25 June for stripe rust control.

4. Test weights averaged 61.0 lbs/bu and ranged from 59.0 to 62.3 lbs/bu. Grain protein averaged 11.9% with a range of 11.4 to 13.3%. The average plant height was 29 inches with no lodging.

Table 79. **2012 WSU Variety Testing SW Spring Wheat Trial, Endicott**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8124		68	61	**67**	**63.4**	11.3	34	186
Louise	66	67	60	**65**	61.9	10.9	35	184
Alturas	65	63	57	**65**	61.5	11.1	31	186
Diva	65	66	59	62	61.9	11.1	33	184
IDO671		60	54	60	61.9	11.1	32	185
Louise-G2			60	60	61.7	10.9	34	183
Whit	62	60	57	60	61.7	12.1	33	183
IDO669				59	62.6	11.9	32	183
ARS03173LS				59	61.2	11.8	33	184
Louise-0W				58	61.4	11.3	36	184
IDO687			54	58	62.8	11.6	30	184
ARS03174CS				58	61.8	11.9	30	186
Zak	59	57	53	58	61.5	11.9	32	184
IDO686			53	57	**62.9**	11.8	34	186
WA 8162				57	62.3	11.2	30	186
IDO599				57	61.9	11.0	30	182
Alpowa	57	54	52	56	62.7	11.8	32	187
Wakanz	61	61	55	56	60.5	11.5	30	188
Nick	57	55	53	55	62.2	12.6	31	183
WA 8161				55	61.7	11.0	34	184
WA 8160				54	60.1	12.1	30	184
WB-1035CL+			48	52	62.2	13.4	31	182
Babe	56	56	53	51	62.5	11.1	31	184
JD	62	64	54	50	62.4	12.2	31	183
C.V. %	7	7	6	7	0.8	2.9	4	0
LSD (.10)	2	2	2	4	0.5	0.4	1	1
Average	61	61	55	58	62.0	11.6	32	184
Highest	66	68	61	67	63.4	13.4	36	188
Lowest	56	54	48	50	60.1	10.9	30	182

Endicott Soft White Spring Wheat

1. Grain yield in the 2012 Endicott soft white spring wheat trial averaged 58 bushels/acre, 3 bushels/acre lower than the 5-year average. The Endicott nursery was located about five miles east of Endicott, WA (M. Richter, cooperator).

2. This nursery was seeded on 7 May, 2012 following spring wheat. Seed was placed at an 80#/acre seeding rate using a no-till plot drill equipped with Cross-Slot openers set on 10-inch spacing. Base fertilizer was 20#N/acre pre-planting applied and a soil test showed 146#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 50 bu/a to 67 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. ‘Louise’ (with standard seed treatment rate of 0.75oz/100lbs seed) was the highest yielding entry in this trial. Louise was the highest yielding over 5 years of results at this site. Quilt fungicide was applied 13 June for stripe rust control.

4. Test weights averaged 62.0 lbs/bu and ranged from 60.1 to 63.4 lbs/bu. Grain protein averaged 11.6% with a range of 10.9 to 13.4%. The average plant height was 32 inches with no lodging.

Table 80. 2012 WSU Variety Testing SW Spring Wheat Trial, Fairfield

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
Louise	--	--	67	**79**	62.0	10.0	37
Louise-0W	--	--		**77**	61.8	10.4	37
Louise-G2	--	--	67	75	61.7	9.9	37
WA 8161	--	--		74	61.7	10.9	37
Diva	--	--	63	73	62.3	10.4	37
Whit	--	--	67	73	62.0	10.5	35
Wakanz	--	--	59	71	60.6	10.7	33
Babe	--	--	64	71	62.6	10.0	36
JD	--	--	64	70	**63.2**	11.0	37
ARS03174CS	--	--		70	62.8	11.1	35
WA 8160	--	--		70	62.2	10.8	37
WA 8162	--	--		70	62.5	10.8	33
Alturas	--	--	61	70	61.8	10.5	32
Nick	--	--	58	70	61.3	10.6	33
WA 8124	--	--		67	62.7	10.7	35
IDO671	--	--	58	67	62.0	10.1	34
ARS03173LS	--	--		66	60.6	10.5	35
Alpowa	--	--	56	66	62.4	10.3	35
WB-1035CL+	--	--	54	65	61.3	11.9	33
IDO686	--	--	56	65	**63.0**	11.1	36
IDO687	--	--	59	65	**63.1**	10.9	34
Zak	--	--	53	63	60.9	10.8	35
IDO599	--	--		62	62.5	10.9	33
WA 8131	--	--	56	61	61.9	11.5	30
C.V. %	--	--	6	4	0.4	2.0	4
LSD (.10)	--	--	3	3	0.2	0.2	2
Average	--	--	60	69	62.0	10.7	35
Highest	--	--	67	79	63.2	11.9	37
Lowest	--	--	53	61	60.6	9.9	30

Fairfield Soft White Spring Wheat

1. Grain yield in the 2012 Fairfield soft white spring wheat trial averaged 69 bushels/acre. This is the second year of trials for this location. The Fairfield nursery was located about three miles northwest of Fairfield, WA (L. Green, cooperator).

2. This nursery was seeded on 21 April, 2012 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till plot drill equipped with Cross-slot openers set on 10-inch spacing. Base fertilizer was 90#N/acre applied through the planter and a soil test showed 95#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 61 bu/a to 79 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. ‘Louise’ was the highest yielding entry in this trial. Fungicide was applied 4 July for stripe rust control and stripe rust had minimal impact in this trial.

4. Test weights averaged 62.0 lbs/bu and ranged from 60.6 to 63.2 lbs/bu. Grain protein averaged 10.7% with a range of 9.9 to 11.9%. The average plant height was 35 inches with no lodging.

Table 81. **2012 WSU Variety Testing SW Spring Wheat Trial, Farmington**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Louise-G2			76	**77**	59.7	11.2	35	191
Zak	74	73	68	**76**	61.0	11.2	33	193
WA 8162				**76**	61.0	11.2	31	192
WB-1035CL+			64	**72**	60.2	12.0	31	197
Wakanz	76	76	66	**71**	59.5	11.0	31	196
ARS03174CS				**71**	61.4	11.1	30	194
Diva	80	79	71	**71**	60.8	11.1	34	195
Louise-0W				70	60.0	10.7	36	191
WA 8124		79	68	69	**62.2**	11.2	33	196
IDO671		75	66	69	61.4	11.0	30	191
Louise	79	80	71	69	60.4	10.9	35	190
IDO599				69	**61.9**	11.6	28	190
Whit	74	73	66	67	60.3	11.6	31	189
JD	79	79	65	67	**61.8**	11.6	34	189
WA 8161				66	61.0	11.6	33	191
Alpowa	72	70	60	63	**61.9**	11.2	33	195
IDO687			59	63	**62.4**	11.8	29	192
ARS03173LS				63	60.0	11.1	32	192
WA 8131			61	62	60.9	12.1	26	193
Alturas	69	69	57	62	60.6	11.1	29	195
WA 8160				59	61.0	12.1	32	192
Nick	66	60	55	59	60.9	12.1	31	191
Babe	77	75	62	57	61.5	11.3	29	191
IDO686			57	54	**62.1**	11.8	33	195
C.V. %	7	7	8	9	0.9	3.8	5	1
LSD (.10)	2	3	4	6	0.6	0.5	2	2
Average	75	75	64	67	61.0	11.4	32	193
Highest	80	82	76	77	62.4	12.1	36	197
Lowest	66	60	55	54	59.5	10.7	26	189

Farmington Soft White Spring Wheat

1. Grain yield in the 2012 Farmington soft white spring wheat trial averaged 67 bushels/acre, 8 bushels/acre lower than the 5-year average at this location. The Farmington nursery was located about 7 miles south of Farmington, WA (B. Nelson, cooperator).

2. This nursery was seeded on 11 May, 2012 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no till plot drill equipped with Cross-slot openers set on 10-inch spacing. Base fertilizer was 120#N/acre and a soil test showed 94#N/acre available. Spring seeding conditions were good, but later than average.

3. Yields ranged from 54 bu/a to 77 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 7 of the 24 entries are in this group. ‘Louise’-G2 was the highest yielding named variety entry in the sprayed trial and is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise at the standard seed treatment rate (0.75oz/100lbs seed), yielded 8 bu/a less, and Louise-0W without insecticide was 7 bu/a less than Louise-G2. ‘Diva’ was the highest yielding variety over 5 years in trials at this location. Fungicide was applied 18 June for stripe rust control and stripe rust had minimal impact in this trial.

4. Test weights averaged 61.0 lbs/bu and ranged from 59.5 to 62.4 lbs/bu. Grain protein averaged 11.4% with a range of 10.7 to 12.1%. The average plant height was 32 inches with no lodging.

Table 82. **2012 WSU Variety Testing SW Spring Wheat Trial, Horse Heaven**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
Louise-G2			31	**22**	59.6	13.6	25
Louise	31	37	30	**20**	59.7	13.4	26
WA 8124		37	28	**20**	59.2	14.1	24
WA 8160				19	58.2	14.9	20
Whit	29	37	28	19	59.1	14.0	22
ARS03173LS				19	58.6	14.7	24
Diva	31	36	29	18	**60.3**	14.0	24
IDO671		33	26	18	**60.4**	13.2	22
WA 8161				18	**60.5**	14.1	25
Wakanz	29	36	27	18	58.3	14.1	23
IDO599				18	**61.0**	13.3	23
Alpowa	27	33	25	17	59.3	13.9	22
IDO686			26	17	**61.2**	13.8	25
WA 8162				17	**60.3**	13.3	22
IDO669				17	60.1	14.3	25
Louise-0W				17	59.7	14.0	26
ARS03174CS				17	59.2	15.5	22
Zak	29	33	24	17	59.4	14.7	24
Alturas	27	32	24	16	59.7	13.5	23
Babe	28	34	27	16	**60.3**	14.5	22
IDO687			24	16	**60.9**	13.9	24
JD	32	39	31	16	**60.7**	14.5	22
WB-1035CL+			21	15	60.1	15.9	21
Nick	27	32	23	13	59.7	15.0	21
C.V. %	9	8	9	11	1.5	2.6	4
LSD (.10)	1	1	2	2	0.9	0.4	1
Average	29	35	27	18	59.8	14.2	23
Highest	32	39	31	22	61.2	15.9	26
Lowest	27	30	21	13	58.2	13.2	20

Horse Heaven Soft White Spring Wheat

1. Grain yield in the 2012 Horse Heaven soft white spring wheat trial averaged 18 bushels/acre, 11 bushels/acre lower than the 5-year average. The Horse Heaven nursery was located about ten miles southwest of Prosser, WA (J. Moon, cooperator).
2. This nursery was seeded on 23 March, 2012 following fallow. Seed was placed at a 60#/acre seeding rate using a double-disk plot drill set on 6-inch spacing. Base fertilizer was 50#N/acre fall applied. Spring seeding conditions were variable and establishment was not uniform.
3. Yields ranged from 13 bu/a to 22 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. ‘Louise’-G2 was the highest yielding and is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise at the standard seed treatment rate (0.75oz/100lbs seed), was 2 bu/a less, and Louise-0W without insecticide was 5 bu/a less than Louise-G2. ‘JD’, Louise, and ‘Diva’ were the highest yielding over 5 years of results at this site. Fungicide was applied at herbicide timing for stripe rust prevention.
4. Test weights averaged 59.8 lbs/bu and ranged from 58.2 to 61.2 lbs/bu. Grain protein averaged 14.2% with a range of 13.2 to 15.9%. The average plant height was 23 inches with no lodging.

Table 83. **2012 WSU Variety Testing SW Spring Wheat Trial, Lamont**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Louise-G2			74	**59**	60.4	12.5	31	176
Diva	59	72	70	**58**	61.2	13.1	33	177
IDO669				**56**	61.1	12.1	31	177
Alturas	58	75	68	**55**	60.6	12.5	27	177
WA 8162				**55**	61.6	12.6	28	177
Zak	53	62	61	**54**	60.8	12.6	31	178
Nick	52	60	61	**54**	60.4	13.3	29	176
WA 8124		79	68	**54**	**62.4**	12.4	29	179
Louise	58	71	70	**53**	60.2	12.7	31	177
IDO671		73	67	**53**	61.1	12.1	28	179
IDO599				**53**	**62.2**	12.4	28	178
ARS03174CS				**53**	61.9	13.6	29	180
Louise-0W				52	60.2	13.0	32	177
ARS03173LS				51	60.2	12.1	32	178
IDO687			64	51	61.9	13.3	28	179
WA 8161				51	61.0	12.1	33	177
IDO686			64	50	61.9	12.7	31	178
Babe	53	64	66	49	61.2	12.0	31	177
Alpowa	52	64	60	49	61.3	12.5	26	179
Whit	49	60	61	45	60.3	13.8	29	177
Wakanz	55	66	60	44	59.6	13.6	27	178
JD	53	65	61	43	61.2	13.8	30	178
WB-1035CL+			53	43	60.0	14.3	29	177
WA 8160				42	60.4	13.5	27	179
C.V. %	11	11	8	10	0.6	4.9	8	1
LSD (.10)	3	4	4	6	0.4	0.7	2	1
Average	54	67	64	51	61.0	12.9	30	178
Highest	59	79	74	59	62.4	14.3	33	180
Lowest	49	60	53	42	59.6	12.0	26	176

Lamont Soft White Spring Wheat

1. Grain yield in the 2012 Lamont soft white spring wheat trial averaged 51 bushels/acre, 3 bushels/acre lower than the 5-year average. The Lamont nursery was located about five miles southeast of Lamont, WA (G. White, cooperator).

2. This nursery was seeded on 19 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was 80#N/acre pre-planting applied and a soil test showed 174#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 42 bu/a to 59 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 12 of the 24 entries are in this group. ‘Louise’-G2 was the highest yielding named variety entry in the sprayed trial and is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise at the standard seed treatment rate (0.75oz/100lbs seed), yielded 6 bu/acre less, and Louise-0W without insecticide was 7 bu/a less than Louise-G2. “Diva” was the highest yielding over 5 years of results at this site. Fungicide was applied 10 May for stripe rust control.

4. Test weights averaged 61.0 lbs/bu and ranged from 59.6 to 62.4 lbs/bu. Grain protein averaged 12.9% with a range of 12.0 to 14.3% and was high most likely due to the high level of soil test nitrogen. The average plant height was 30 inches with no lodging.

Table 84. **2012 WSU Variety Testing SW Spring Wheat Trial, Lind**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Louise-G2			40	**37**	62.0	13.6	29	157
Louise	34	41	38	**35**	62.2	13.8	29	157
IDO599				34	62.3	13.0	26	154
IDO669				33	61.3	14.0	28	157
IDO687			36	33	62.3	13.3	26	155
WA 8124		42	38	33	**62.6**	14.1	26	158
IDO686			37	33	62.0	13.6	28	155
Louise-0W				32	62.1	13.9	28	157
Diva	34	41	37	31	62.3	14.1	27	156
Alturas	32	38	34	30	61.4	13.1	23	155
JD	33	41	37	30	**62.8**	14.2	24	157
ARS03173LS				30	60.4	14.9	28	158
WA 8161				30	61.5	14.1	28	157
IDO671		38	34	30	61.2	13.1	24	154
WA 8160				29	60.9	14.6	22	158
Alpowa	31	38	33	29	62.0	13.5	26	156
Whit	31	37	33	28	60.4	14.1	25	155
WB-1035CL+			31	28	60.8	15.2	25	154
ARS03174CS				28	61.2	15.1	24	159
WA 8162				28	62.2	14.4	22	156
Wakanz	31	39	35	27	60.3	14.2	24	157
Zak	29	34	29	26	60.7	14.5	26	159
Nick	31	35	31	26	60.2	14.1	25	154
Babe	31	37	33	26	61.9	13.7	25	156
C.V. %	5	5	5	6	0.6	1.5	5	0
LSD (.10)	1	1	1	2	0.4	0.2	1	1
Average	32	39	35	30	61.5	14.0	26	156
Highest	34	42	40	37	62.8	15.2	29	159
Lowest	29	34	29	26	60.2	13.0	22	154

Lind Soft White Spring Wheat

1. Grain yield in the 2012 Lind soft white spring wheat trial averaged 30 bushels/acre, 2 bushels/acre lower than the 5-year average. The Lind nursery was located on the WSU Lind Dryland Experiment Station three miles NE of the town of Lind. This nursery was conducted in cooperation with the WSU spring wheat breeding program.

2. This nursery was seeded on 9 March, 2012 following fallow. Seed was placed at a 60#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 50#N/acre fall applied. Spring seeding conditions were good.

3. Yields ranged from 26 bu/a to 37 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. ‘Louise’-G2 was the highest yielding and is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise at the standard seed treatment rate (0.75oz./100lbs. seed), was 2 bu/acre less, and Louise-0W without insecticide was 5 bu/a less than Louise-G2. Louise and ‘Diva’ were the highest yielding over 5 years of results at this site. No fungicides were applied nor stripe rust impact observed in this trial.

4. Test weights were good and averaged 61.5 lbs/bu and ranged from 60.2 to 62.8 lbs/bu. Grain protein averaged 14.0% with a range of 13.0 to 15.2%. The average plant height was 26 inches with no lodging.

Table 85. **2012 WSU Variety Testing SW Spring Wheat Trial, Mayview**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)
WA 8124		44	47	**44**	**62.4**	10.6
Louise	51	46	52	**44**	60.6	10.3
Louise-G2			53	**44**	60.6	10.3
Louise-0W				**43**	60.6	9.8
Diva	51	46	50	**41**	61.6	9.7
Wakanz	51	46	48	40	59.6	10.5
JD	49	45	49	40	61.9	10.3
Whit	51	47	49	40	60.5	10.2
IDO599				39	62.0	9.8
WA 8161				39	61.8	10.2
ARS03174CS				37	61.4	11.1
WA 8160				37	60.8	11.1
IDO686			45	36	**62.4**	10.5
Alpowa	46	41	42	36	62.0	10.2
IDO671		39	43	35	61.1	10.1
IDO687			42	35	**62.4**	10.1
Zak	46	39	42	35	60.9	10.6
Alturas	47	40	43	35	60.8	9.8
WA 8162				34	61.5	10.6
WB-1035CL+			37	34	61.2	11.2
ARS03173LS				34	60.3	9.9
Nick	48	44	41	33	61.0	10.7
Babe	49	43	42	32	61.4	10.3
WA 8131			39	29	61.7	10.8
C.V. %	8	9	8	7	0.5	4.0
LSD (.10)	2	2	3	3	0.3	0.4
Average	49	43	45	37	61.3	10.4
Highest	51	47	53	44	62.4	11.2
Lowest	46	39	37	29	59.6	9.7

Table 86.

2012 WSU Variety Testing SW Spring Wheat Trial (No Fungicide), Mayview

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)
Louise-0W	--	--	--	**51**	60.7	10.5
Louise-G2	--	--	--	**51**	60.8	10.3
WA 8124	--	--	--	**48**	**62.6**	10.7
Louise	--	--	--	**47**	60.9	10.0
Whit	--	--	--	**47**	60.8	10.3
ARS03174CS	--	--	--	45	61.7	11.4
IDO599	--	--	--	44	**62.5**	10.1
WA 8161	--	--	--	44	62.1	10.5
ARS03173LS	--	--	--	44	60.6	10.5
Alturas	--	--	--	43	61.3	10.4
WA 8162	--	--	--	42	62.2	11.0
Diva	--	--	--	42	61.2	10.1
JD	--	--	--	42	61.4	10.5
IDO671	--	--	--	42	61.4	9.9
Wakanz	--	--	--	42	59.8	10.8
Zak	--	--	--	41	61.1	10.6
WA 8160	--	--	--	41	60.9	11.4
IDO686	--	--	--	40	**62.8**	10.4
IDO687	--	--	--	39	**62.6**	10.2
WB-1035CL+	--	--	--	39	61.2	11.4
Alpowa	--	--	--	36	61.4	10.0
WA 8131	--	--	--	33	61.8	11.4
Babe	--	--	--	32	60.7	9.9
Nick	--	--	--	32	60.5	10.4
C.V. %	--	--	--	11	0.8	2.8
LSD (.10)	--	--	--	5	0.5	0.3
Average	--	--	--	42	61.4	10.5
Highest	--	--	--	51	62.8	11.4
Lowest	--	--	--	32	59.8	9.9

Table 87. **2012 WSU Soft White Spring Wheat Trial, Mayview**

Impact of Foliar Disease on Grain Yield

Variety Name *(Club Italicized)*	Grain Yield Bu/A		Yield Difference (protected-unprotected)	
	Protected	Unprotected	Bu/A	%
WA 8124	44	48	-4	-9
Louise	44	47	-3	-8
Louise-G2	44	51	-7	-16
Louise-0W	43	51	-8	-18
Diva	42	42	-1	-2
Wakanz	40	42	-2	-5
JD	40	42	-2	-6
Whit	40	47	-7	-18
WA 8161	39	44	-5	-12
IDO599	39	44	-5	-13
ARS03174CS	37	45	-8	-23
WA 8160	37	41	-4	-11
IDO686	36	40	-4	-10
Alpowa	36	36	0	1
IDO671	35	42	-7	-19
IDO687	35	39	-4	-12
Zak	35	41	-6	-18
Alturas	35	43	-9	-25
WB-1035CL+	34	39	-5	-14
WA 8162	34	42	-8	-23
ARS03173LS	34	44	-9	-27
Nick	33	32	1	3
Babe	32	32	0	-2
WA 8131	29	33	-4	-15
CV	7	11		
LSD	3	5		
GRAND MEAN	37	42	-5	-12
Max. Mean	44	51		
Min. Mean	29	32		

Mayview Soft White Spring Wheat

1. This summary includes duplicate soft white spring wheat trials except one was sprayed with fungicide and the other was not sprayed. Grain yield in these 2012 Mayview soft white spring wheat trials averaged 37 bushels/acre, 12 bushels/acre lower than the 5-year average in the fungicide sprayed trial, and the non-sprayed trial averaged 42 bushels/acre. The Mayview trial was located about five miles south of Lower Granite Dam on the Snake River, or twelve miles northeast of Pomeroy, WA (R. & R. Koller, cooperators).
2. The trials were seeded on 25 April , 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 70#N/ acre applied pre-plant. Spring seeding conditions were good and establishment was uniform. Tilt® fungicide at 4 oz/a was applied 1 June and 11 July to the sprayed trial and stripe rust levels were low.
3. In the sprayed trial, yields ranged from 29 to 44 bu/a, while in the non-sprayed trial, yields ranged from 32 to 51 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 24 entries are in this group in both trials. ‘Louise’, Louise-G2, and Louise-0W were the highest yielding named varieties in the sprayed trial and they are: Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment, Louise at the standard seed treatment rate (0.75oz/100lbs seed), and Louise-0W without insecticide. ‘Diva’, ‘Wakanz’ and Louise were the highest yielding over 5 years of results at this site. Louise-0W and Louise-G2 were the highest yielding named varieties in the non-sprayed trial. Yields in both trials and the difference in yield and percentage difference between sprayed and non-sprayed for each entry are in a separate comparison table. Average yield of the sprayed trial was 5 bu/a less than non-sprayed trial.
4. Test weights averaged 61.3 lbs/bu and ranged from 59.6 to 62.4 lbs/bu in the sprayed trial, and averaged 61.4 lbs/bu and ranged from 59.8 to 62.8 lbs/bu in the non-sprayed trial. Grain protein averaged 10.4% with a range of 9.7 to 11.2% in the sprayed trial, and protein averaged 10.5% with a range of 9.9 to 11.4% in the non-sprayed trail. There was no lodging in either trial.

Table 88. **2012 WSU Variety Testing SW Spring Wheat Trial, Moses Lake**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE	2012 LODGING (%)
WA 8160	--			**107**	63.2	13.1	32	151	0
WA 8124	--	107	111	**102**	**64.3**	12.0	33	152	13
ARS03173LS	--			**98**	63.2	12.6	33	151	5
Louise-G2	--		108	**94**	**64.0**	12.7	33	151	0
WB-1035CL+	--		92	92	62.9	14.8	30	148	0
Babe	--	111	102	90	63.7	12.7	30	149	0
Louise	--	98	103	90	63.7	13.0	34	151	0
WA 8131	--		96	87	61.8	13.5	28	150	0
Louise-0W	--			87	63.8	13.3	32	151	0
Diva	--	95	100	87	63.9	12.9	33	150	0
JD	--	97	93	85	**64.3**	13.4	32	152	0
Nick	--	104	93	84	62.7	14.1	30	149	0
IDO686	--		93	84	**64.4**	13.0	31	150	0
ARS03174CS	--			84	63.4	13.8	30	154	0
Alpowa	--	97	92	81	63.3	13.0	30	152	0
Wakanz	--	96	95	81	63.0	13.6	30	153	0
Zak	--	92	93	79	63.1	12.7	31	152	0
IDO671	--	97	89	78	63.2	12.8	28	150	0
WA 8161	--			77	63.1	12.9	33	151	8
IDO687	--		91	74	**64.1**	12.6	30	150	0
Alturas	--	100	86	72	63.2	13.1	28	150	0
WA 8162	--			71	63.6	12.9	27	151	0
IDO599	--			68	63.7	12.2	31	148	0
Whit	--	96	87	68	61.6	13.9	29	149	0
C.V. %	--	10	11	16	0.6	4.0	5	0	529
LSD (.10)	--	6	8	14	0.4	0.6	2	1	6
Average	--	99	96	84	63.4	13.1	31	151	1
Highest	--	111	111	107	64.4	14.8	34	154	13
Lowest	--	92	86	68	61.6	12.0	27	148	0

Moses Lake Soft White Spring Wheat

1. Grain yield in the 2012 Moses Lake soft white spring wheat trial averaged 84 bushels/acre, 15 bushels/acre lower than the 3-year average. The Moses Lake trial was located about six miles south of Moses Lake, WA (S. Tokunaga, cooperator).

2. This nursery was seeded on 23 March, 2012 following potatoes. Seed was placed at a 90#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 250#N/acre and another 100#N/acre was applied with irrigation. Spring seeding conditions were variable and establishment was not uniform. Emergence and early growth were variable and poor. Wireworm damage was found and the trial site did not appear uniform.

3. Statistical analysis of these results show highly variable results, but still significant. Yields ranged from 68 bu/a to 107 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 24 entries are in this group. ‘Louise’-G2 was the highest yielding named variety and is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise at the standard seed treatment rate (0.75oz/100lbs seed), was 4 bu/a less, and Louise-0W without insecticide was 7 bu/a less than Louise-G2. ‘Babe’ was the highest yielding over 3 years of results at this site. Fungicide was applied and stripe rust was not a problem.

4. Test weights were very high averaging 63.4 lbs/bu and ranged from 61.6 to 64.4 lbs/bu. Grain protein was high and averaged 13.1% with a range of 12.0 to 14.8%. The average plant height was 31 inches with almost no lodging. High test weight and protein reflect the poor establishment and high fertility at this site.

Table 89. **2012 WSU Variety Testing SW Spring Wheat Trial, Pullman**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8160				**85**	60.0	9.3	30	179
WA 8161				**81**	61.5	9.6	32	181
Louise-G2			77	**80**	59.3	9.0	33	179
IDO599				**79**	59.7	8.8	29	177
WA 8162				77	60.6	9.0	28	181
Louise-0W				77	59.3	9.3	32	179
WA 8124		74	76	77	60.3	9.1	28	181
JD	76	77	78	76	60.4	9.6	30	179
ARS03173LS				76	59.3	9.4	32	181
Diva	69	68	76	76	58.9	9.7	32	178
Louise	69	66	74	75	59.1	9.1	31	179
IDO671		63	67	73	59.4	9.3	28	179
Whit	64	60	68	72	59.5	9.7	30	177
Wakanz	66	60	69	72	59.3	9.7	28	183
Zak	61	54	65	71	60.1	9.5	30	181
IDO686			69	71	60.5	10.0	29	180
ARS03174CS				71	59.9	9.3	27	182
IDO687			69	70	**62.2**	9.7	28	180
Alpowa	65	58	65	70	59.7	9.5	29	181
WB-1035CL+			57	69	58.0	10.9	28	176
Alturas	67	65	69	68	58.9	9.7	27	179
Babe	65	60	65	68	59.8	9.2	28	178
Nick	58	48	56	68	60.2	10.0	29	177
WA 8131			65	64	59.0	10.2	25	180
C.V. %	7	7	8	7	0.9	4.0	5	0
LSD (.10)	2	3	4	6	0.6	0.4	2	1
Average	66	63	69	74	59.8	9.5	29	179
Highest	76	77	78	85	62.2	10.9	33	183
Lowest	58	48	56	64	58.0	8.8	25	176

Table 90.

2012 WSU Variety Testing SW Spring Wheat Trial (No Fungicide), Pullman

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8124	--	--	--	**80**	61.2	8.9	32	181
Diva	--	--	--	**78**	60.2	8.6	32	179
JD	--	--	--	**78**	**61.5**	8.8	32	179
WA 8162	--	--	--	**77**	**61.6**	8.9	30	182
WA 8161	--	--	--	**77**	**62.1**	8.9	33	181
Louise-G2	--	--	--	75	60.3	8.6	33	179
WA 8160	--	--	--	75	60.7	9.1	30	179
ARS03174CS	--	--	--	74	60.8	9.3	29	182
ARS03173LS	--	--	--	74	60.5	8.7	32	181
Louise	--	--	--	71	60.1	8.8	31	180
IDO599	--	--	--	71	58.6	8.6	29	178
Louise-0W	--	--	--	70	59.9	8.6	32	179
Wakanz	--	--	--	70	59.6	9.2	29	183
IDO686	--	--	--	68	61.1	8.7	30	180
Zak	--	--	--	66	60.6	9.2	31	181
Alturas	--	--	--	65	59.2	9.1	28	179
IDO687	--	--	--	64	**61.9**	8.6	28	180
Whit	--	--	--	63	60.3	8.9	28	177
IDO671	--	--	--	62	59.9	9.1	27	179
WA 8131	--	--	--	62	60.5	9.7	24	179
Babe	--	--	--	60	59.4	8.7	29	178
Alpowa	--	--	--	58	59.8	8.3	30	182
WB-1035CL+	--	--	--	56	58.1	10.0	28	177
Nick	--	--	--	52	59.6	9.3	27	177
C.V. %	--	--	--	5	1.1	4.4	3	0
LSD (.10)	--	--	--	3	0.7	0.4	1	1
Average	--	--	--	69	60.3	8.9	30	180
Highest	--	--	--	80	62.1	10.0	33	183
Lowest	--	--	--	52	58.1	8.3	24	177

Table 91. **2012 WSU Soft White Spring Wheat Trial, Pullman**

Impact of Foliar Disease on Grain Yield

Variety Name *(Club Italicized)*	Grain Yield Bu/A		Yield Difference (protected-unprotected)	
	Protected	Unprotected	Bu/A	%
WA 8160	86	75	11	13
WA 8161	81	77	4	5
Louise-G2	80	75	5	6
IDO599	79	71	8	11
WA 8162	77	77	0	0
Louise-0W	77	70	7	9
WA 8124	77	80	-3	-3
JD	76	78	-2	-2
ARS03173LS	76	74	2	2
Diva	76	78	-3	-4
Louise	75	71	4	5
IDO671	73	62	11	15
Whit	72	63	9	13
Wakanz	72	70	2	3
Zak	71	66	5	8
IDO686	71	68	3	4
ARS03174CS	71	74	-4	-5
IDO687	70	64	6	9
Alpowa	70	58	11	16
WB-1035CL+	69	56	13	19
Alturas	68	65	3	5
Babe	68	60	8	12
Nick	68	52	15	23
WA 8131	64	62	3	4
C.V. %	8	5		
LSD (0.10)	6	3		
Average	74	69	5	7
Highest	86	80		
Lowest	64	52		

Pullman Soft White Spring Wheat

1. This summary includes duplicate soft white spring wheat trials except one was sprayed with fungicide and the other was not sprayed. Grain yield in these 2012 Pullman soft white spring wheat trials averaged 74 bushels/acre, 8 bushels/acre higher than the 5-year average in the fungicide sprayed trial, and the non-sprayed trial averaged 69 bushels/acre. The Pullman trial was located about two miles south of Pullman, WA on the WSU Spillman Experimental farm.

2. The trials were seeded on 25 April , 2012 following winter barley. Seed was placed at a 90#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 100#N/acre applied pre-plant. Spring seeding conditions were good and establishment was uniform. Quilt® fungicide at 14 oz/a was applied 11 June to the sprayed trial and stripe rust levels were low to moderate.

3. In the sprayed trial, yields ranged from 64 bu/a to 86 bu/a, while in the non-sprayed trial, yields ranged from 52 to 80 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group in the sprayed and 5 of the 24 are in the top group in the non-sprayed. ‘Louise’-G2 was the highest yielding named variety entry in the sprayed trial and is Louise with 2oz/100lbs seed of Gaucho® insecticide seed treatment. Louise at the standard seed treatment rate (0.75oz/100lbs seed), was 5 bu/a less, and Louise-0W without insecticide was 3 bu/a less than Louise-G2. ‘Diva’ and Louise were the highest yielding over 5 years of results at this site. Diva was the highest yielding named variety in the non-sprayed trial. Yields in both trials and the difference in yield and percentage difference between sprayed and non-sprayed for each entry are in a separate comparison table. Yield advantage in the sprayed trial averaged 5 bu/a and ranged from -4 to 15 bu/a.

4. Test weights averaged 59.8 lbs/bu and ranged from 58.0 to 62.2 lbs/bu in the sprayed trial, and averaged 60.3 lbs/bu and ranged from 58.1 to 62.1 lbs/bu in the non-sprayed trial. Grain protein averaged 9.5% with a range of 8.8 to 10.9% in the sprayed trial, and protein averaged 8.9% with a range of 8.3 to 10.0% in the non-sprayed trail. The average plant height was 29 inches in the sprayed and 30 inches in the non-sprayed trial and there was no lodging in either trial.

Table 92. **2012 WSU Variety Testing SW Spring Wheat Trial, Reardan**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
IDO671		82	73	**69**	**59.5**	13.5	36	186
Diva	68	83	77	**68**	**59.1**	13.8	39	186
Louise	70	84	79	**68**	**59.5**	13.6	41	186
Wakanz	67	80	72	**65**	**59.3**	14.2	36	188
Alpowa	67	80	69	**64**	59.0	14.1	38	187
WA 8162				**63**	**60.1**	14.0	35	188
Louise-G2			76	62	57.0	14.5	40	186
Babe	69	81	69	62	**60.4**	13.9	37	186
IDO686			72	62	**60.6**	14.1	40	187
IDO599				61	57.5	14.5	36	185
Whit	66	78	67	61	**59.4**	14.4	36	185
IDO687			70	61	**59.7**	14.6	36	187
Alturas	68	80	70	61	58.0	14.2	36	187
ARS03174CS				60	**60.2**	15.5	35	188
Zak	63	70	63	60	**59.4**	14.5	37	188
ARS03173LS				59	55.7	14.7	39	189
WA 8160				59	**59.2**	15.0	37	187
WA 8161				58	57.9	14.6	39	187
Louise-0W				57	57.1	14.5	41	185
Nick	60	71	61	57	58.0	15.1	37	185
WA 8124		78	70	56	58.6	15.3	37	188
JD	66	79	71	54	**59.2**	15.0	39	186
WB-1035CL+			56	51	56.8	16.0	35	184
WA 8131			68	50	57.5	15.6	32	187
C.V. %	8	7	8	9	2.4	4.4	3	0
LSD (.10)	2	3	4	6	1.5	0.7	1	1
Average	66	79	70	60	58.7	14.6	37	187
Highest	70	84	79	69	60.6	16.0	41	189
Lowest	60	70	56	50	55.7	13.5	32	184

Reardan Soft White Spring Wheat

1. Grain yield in the 2012 Reardan soft white spring wheat trial averaged 60 bushels/acre, 6 bushels/acre lower than the 5-year average at this location. The Reardan nursery was located about three miles east of Reardan, WA (H. Johnson, cooperator).

2. This nursery was seeded on 23 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a no-till plot drill equipped with Cross-slot openers set on 10-inch spacing. Base fertilizer was 77#N/acre applied through the planter and a soil test showed 103#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 50 bu/a to 69 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. ‘Diva’ and ‘Louise’ were the highest yielding entries in this trial and Louise was the highest yielding over 5 years in trials at this location. Fungicide was applied 13 June for stripe rust control and stripe rust had minimal impact in this trial.

4. Test weights averaged 58.7 lbs/bu and ranged from 55.7 to 60.6 lbs/bu. Grain protein averaged 14.6% with a range of 13.5 to 16.0%. The average plant height was 37 inches with no lodging.

Table 93. **2012 WSU Variety Testing SW Spring Wheat Trial, St. John**

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
ARS03174CS				**79**	**61.6**	9.4	37	177
Diva	68	64	75	**79**	61.1	9.6	37	174
Louise-0W				**78**	60.8	8.7	39	175
Louise	68	63	75	**78**	60.7	9.2	40	174
WA 8124		61	71	**77**	61.0	9.0	36	177
Zak	64	55	65	**76**	60.3	8.4	37	176
WA 8162				**76**	61.3	9.4	34	178
ARS03173LS				**75**	60.0	8.4	37	176
Whit	67	60	69	**75**	60.3	9.1	37	172
Louise-G2			76	**74**	60.7	9.0	39	174
JD	63	62	70	**74**	**61.8**	9.1	39	175
Babe	63	59	69	**74**	60.6	8.6	37	174
Alturas	62	59	68	73	60.4	9.1	34	177
IDO599				73	60.8	8.4	36	174
WA 8160				73	60.7	9.1	36	175
WA 8161				72	**62.0**	8.9	37	175
IDO671		56	64	71	60.7	9.0	35	176
WA 8131			69	70	60.6	8.6	33	177
Wakanz	66	57	65	69	59.4	9.1	34	179
IDO686			64	66	**61.6**	8.9	37	176
Alpowa	61	52	61	66	61.0	9.0	37	178
IDO687			63	65	**61.7**	10.1	36	176
Nick	55	48	55	63	59.6	9.5	37	172
WB-1035CL+			49	59	60.2	9.8	33	172
C.V. %	9	9	8	7	0.9	7.4	4	1
LSD (.10)	3	3	4	5	0.6	0.7	1	1
Average	64	58	66	72	60.8	9.1	36	175
Highest	68	64	76	79	62.0	10.1	40	179
Lowest	55	48	49	59	59.4	8.4	33	172

St. John Soft White Spring Wheat

1. Grain yield in the 2012 St. John soft white spring wheat trial averaged 72 bushels/acre, 8 bushels/acre higher than the 5-year average at this location. The St. John nursery was located about three miles east of St. John, WA (M. Mills, cooperator).

2. This nursery was seeded on 13 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double disc openers set on 6-inch spacing. Base fertilizer was 80#N/acre and a soil test showed 99#N/acre available. Spring seeding conditions were good.

3. Yields ranged narrowly from 59 bu/a to 79 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 12 of the 24 entries are in this group. ‘Diva’ and ‘Louise’ were the highest yielding named entries in this trial and also were the highest yielding over 5 years in trials at this location. Fungicide was applied 24 May for stripe rust control and stripe rust had minimal impact in this trial.

4. Test weights averaged 60.8 lbs/bu and ranged from 59.4 to 62.0 lbs/bu. Grain protein averaged 9.1% with a range of 8.4 to 10.1%. The average plant height was 36 inches with no lodging.

Table 94. 2012 WSU Variety Testing SW Spring Wheat Trial, Walla Walla

Variety Name *Club Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Babe	76	78	77	**85**	60.5	10.9	39	171
WA 8124		79	72	**83**	60.5	11.0	39	176
WA 8161				81	60.5	11.2	41	176
Alpowa	70	71	72	81	61.0	10.9	40	175
Nick	73	75	77	80	59.6	11.6	35	170
IDO599				80	60.8	10.8	37	171
WA 8162				78	60.1	11.3	38	177
Whit	72	74	74	78	58.8	11.5	36	170
Diva	76	79	74	77	59.4	10.9	41	175
Louise-G2			75	76	59.3	11.1	41	174
Alturas	77	83	72	76	59.3	11.2	37	175
JD	71	74	68	75	60.4	11.8	42	175
Louise-0W				75	59.0	11.1	41	173
Louise	74	76	77	74	59.0	11.1	41	175
WA 8160				74	59.9	11.3	38	174
IDO671		78	70	74	59.9	11.0	37	173
Zak	68	65	72	74	59.1	11.0	38	174
IDO687			70	74	**61.7**	11.5	37	172
WB-1035CL+			71	74	59.5	12.6	35	169
ARS03173LS				73	58.1	11.1	40	176
IDO686			69	72	60.8	11.0	40	175
ARS03174CS				69	59.5	11.5	39	175
Wakanz	68	65	64	65	56.5	11.6	36	177
WA 8131			70	61	58.7	11.9	36	174
C.V. %	8	8	5	4	0.9	3.3	3	0
LSD (.10)	3	4	3	3	0.6	0.4	1	1
Average	73	76	72	75	59.7	11.3	39	174
Highest	77	90	77	85	61.7	12.6	42	177
Lowest	68	65	64	61	56.5	10.8	35	169

Walla Walla Soft White Spring Wheat

1. Grain yield in the 2012 Walla Walla soft white spring wheat trial averaged 75 bushels/acre, 2 bushels/acre higher than the 5-year average. The Walla Walla nursery was located about eight miles northeast of Walla Walla, WA (G. Smith, cooperator).

2. This nursery was seeded on 22 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base fertilizer was 120#N/acre pre-planting applied and a soil test showed 106#N/acre available. Spring seeding conditions were good.

3. Yields ranged from 61 bu/a to 85 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. ‘Babe’ was the highest yielding entry in this trial. ‘Alturas’ was the highest yielding over 5 years of results at this site. Fungicide was applied 10 June for stripe rust control.

4. Test weights averaged 59.7 lbs/bu and ranged from 56.5 to 61.7 lbs/bu. Grain protein averaged 11.3% with a range of 10.8 to 12.6%. The average plant height was 39 inches with no lodging.

Table 95.

STRIPE RUST INFECTION TYPE (IT*) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING EXTENSION DISEASE NURSERY (EXP32) (COORDINATED BY STEVE GUY AS SPRING WHEAT VARIETY TRIAL NURSERIES) AT SPILLMAN (LOC 1), PLANT PATH (LOC 2), AND WHITLOW (LOC 4) FARMS NEAR PULLMAN, MT VERNON (LOC 5); AND WALLA WALLA (LOC 6), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2012 UNDER NATURAL INFECTION.

NAME	CLASS	Spillman Farm (Pullman)		Plant Path Farm (Pullman)		Whitlow Farm (Pullman)		Mt. Vernon				Walla Walla		Summary**	Overall rating***
		LOC 01		LOC 03		LOC 04		LOC 05				LOC 06			
		7/13		7/25		7/9		6/19		7/18		7/3			
		Flowering		S. dough		Milk		Stem elong.		Milk		Flowering			
		IT	%	IT	%	IT	%	IT	%	IT	%	IT	%		
AVS	**(S CHECK)**	**8**	**90**	**8**	**90**	**8**	**100**	**8**	**10**	**8**	**100**	**8**	**80**	**S**	**9**
Alpowa	SWS	5-3	30	3	20	5	60	8	2	3	10	3	30	MR-MS	5
Alturas	SWS	3	10	3	5	5	20	8	1	5	20	3	10	MR	3
Babe	SWS	5	20	5	15	5, 8	30	8	2	8	30	5	10	MR	4
Diva	SWS	3	10	2	2	2	10	8	2	3	15	3	10	MR	3
JD	SC	2	1	2	1	2	5	2	1	2	5	2	2	R	1
Nick	SWS	8	40	8	30	8	6	8	5	8	90	8	30	S	9
Wakanz	SWS	2	5	2	5	5	30	5	2	3	10	3	20	MR	4
WB-1035CL+	SWS	5,8	20	5	10	5, 8	30	8	2	8	40	8	10	MS	6
Whit	SWS	3	20	3	5	3	20	8	2	3	10	3	10	R	2
Zak	SWS	8-5	40	3	2	5	30	8	2	3	10	5	30	MS	6
WA 8124	SWS	3	10	2	2	3	10	2	2	2	10	2	10	R	1
Louise	SWS	3	10	2	5	3	20	8	1	2	10	3	5	R	2
Louise-G2	SWS	5	10	2	5	3, 5	15	8	10	3	10	2	10	R	2
Louise-0W	SWS	5	5	2	2	3	20	8	5	3	20	3	5	R	2
ARS03173LS	SWS	2	5	2	2	2	10	2	2	2	5	2	2	R	1
ARS03174CS	SC	5	10	2	5	5	30	8	1	2	20	2	1	MR	4
WA 8160	SC	5	10	5	5	5	20	8	1	2	10	2	2	MR	3
WA 8161	SWS	2	2	2	5	2	5	2	2	2	5	2	5	R	1
WA 8162	SWS	2	1	2	1	2	1	2	1	2	1	2	1	R	1
AVS	**(S CHECK)**	**8**	**90**	**8**	**100**	**8**	**100**	**8**	**15**	**8**	**100**	**8**	**90**	**S**	**9**
IDO671	SWS	3	10	2	2	2, 5	20	8	1	5	10	3	10	R	2
IDO686	SWS	2,5	1	2	2	5	10	8	2	3	10	5	10	R	2
IDO687	SWS	5	10	2	5	5, 8	20	8	5	5	5	2	10	MR	3
IDO599	SWS	5	10	5	10	3	20	8	2	3	5	5	10	R	2
WA 8131	SC	2	1	2	5	2	2	2	2	2	2	2	2	R	1
IDO 669	SWS	3	10	3	10	5	20	3	1	5	10	2	10	R	2
AVS	**(S CHECK)**	**8**	**90**	**8**	**100**	**8**	**100**	**8**	**20**	**8**	**100**	**8**	**90**	**S**	**9**

* 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. Entries with a high IT in the first note, but a low IT in the second note at LOC 05 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

** R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

*** 1 = most resistant and 9 most susceptible.

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

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

2012 Hard Spring Wheat

2012 WSU Hard Spring Wheat Trial Summary
Precipitation Zone >20”

1. Hard red and white spring wheat grain yield across three locations and 30 entries in the >20” precipitation zone averaged 67 bushels/acre and is higher than the 2011 average of 55 bushels/acre. The CV for the average data is 6%, lower than the 2011 CV.
2. Yields among entries averaged across locations ranged from 59 to 76 bushels/acre. The hard white ‘WB Hartline’ was the highest yielding entry averaged across locations. Average yield values within the 10% LSD range (2 bushel/acre) of the highest yield are shown in bold and this included 2 of the 30 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 61.3 lbs/bu across locations and entries and was higher than last year’s 60.9 lbs/bu average. Grain protein averaged 12.7% and was higher than last year’s 11.4% protein value.

2012 WSU Hard Spring Wheat Trial Summary
Precipitation Zone 16-20”

1. Hard red and white spring wheat grain yield across five locations and 30 entries in the 16-20” precipitation zone averaged 55 bushels/acre and is lower than the 2011 average of 65 bushels/acre. The CV for the average data is 8%, similar to the 2011 CV.
2. Yields among entries averaged across locations ranged from 47 to 63 bushels/acre. The newly released WSU variety ‘Glee’ was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (2 bushel/acre) of the highest yield are shown in bold and this included only Glee of the 30 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 60.8 lbs/bu across locations and entries and was nearly equal to last year’s 61.0 lbs/bu average. Grain protein averaged 13.0% and was higher than last year’s 12.5% protein value.

2012 WSU Hard Spring Wheat Trial Summary
Precipitation Zone 12-16”

1. Hard red and white spring wheat grain yield across three locations and 30 entries in the 12-16” precipitation zone averaged 50 bushels/acre and is lower than the 2011 average of 60 bushels/acre. The CV for the average data is 9%, higher than the 2011 CV.
2. Yields among entries averaged across locations ranged from 44 to 57 bushels/acre. ‘Scarlet’ and the hard white ‘WB Hartline’ were the highest yielding named entries averaged across locations. Average yield values within the 10% LSD range (3 bushel/acre) of the highest yield are shown in bold and this included 3 of the 30 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 59.1 lbs/bu across locations and entries and was lower than last year’s 61.0 lbs/bu average. Grain protein averaged 15.1% and was higher than last year’s 11.8% protein value.

2012 WSU Hard Spring Wheat Trial Summary
Precipitation Zone <12”

1. Hard red and white spring wheat grain yield across four locations and 30 entries in the <12” precipitation zone averaged 26 bushels/acre and is lower than the 2011 average of 30 bushels/acre. The CV for the average data is 9%, lower than the 2011 CV.
2. Yields among entries averaged across locations ranged narrowly from 23 to 29 bushels/acre. ‘Bullseye’ and ‘Otis’ were the highest yielding named entries averaged across locations. Average yield values within the 10% LSD range (1 bushel/acre) of the highest yield are shown in bold and this included 8 of the 30 entries. Stripe rust was not a factor in these trials and fungicide was applied as needed.
3. Test weight averaged 59.8 lbs/bu across locations and entries and was lower than last year’s 60.6 lbs/bu average. Grain protein averaged 15.8% and was higher than last year’s 13.5% protein value.

Table 96. **2012 WSU Variety Testing Hard Spring Wheat Trial Summary**

Precipitation Zone >20"

Variety Name	Yield (Lbs/A)				Test Wt (Lbs/Bu)				Protein (%)			
	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average
Hard Red Spring												
Scarlet	70	73	76	73	61.1	59.9	60.9	60.7	12.0	13.9	11.2	12.4
Glee (WA 8074)	70	71	78	73	61.8	61.1	61.4	61.4	11.7	13.7	11.5	12.3
WA 8167	68	72	77	72	61.3	60.2	60.4	60.7	12.1	14.0	11.5	12.5
WA 8166	64	77	76	72	62.5	61.1	62.0	61.9	11.8	13.5	11.1	12.1
WA 8165	61	69	79	70	62.9	62.1	62.5	62.5	12.7	14.5	11.7	13.0
Kelse	66	72	70	69	62.2	61.8	61.6	61.8	13.1	14.3	12.0	13.1
Bullseye	63	66	78	69	63.4	63.1	62.9	**63.1**	12.4	14.2	10.6	12.4
Tara 2002	63	66	75	68	62.0	60.8	61.1	61.3	12.8	14.5	11.7	13.0
Jefferson	61	66	74	67	60.9	60.6	60.6	60.7	13.3	14.1	11.5	13.0
LCS-Powerplay	64	65	73	67	62.8	61.5	61.6	62.0	12.7	14.3	11.1	12.7
LCS-Buck Pronto	62	62	75	66	62.1	61.1	61.3	61.5	13.3	14.6	11.7	13.2
SY605 CL	55	69	72	65	63.0	61.9	61.5	62.1	13.8	14.6	12.6	**13.7**
WA 8164	59	67	70	65	61.5	61.3	60.3	61.0	13.2	14.4	11.4	13.0
Expresso	63	64	67	65	61.7	61.2	61.5	61.5	13.9	15.4	12.7	**14.0**
WB-Fuzion	63	66	65	65	61.3	59.9	60.1	60.4	13.1	14.4	12.2	13.3
LCS-ALbany	68	58	67	64	61.3	60.4	61.0	60.9	11.9	13.9	10.8	12.2
Hollis	60	61	72	64	61.0	59.9	60.5	60.5	12.6	15.1	11.9	13.2
V272	60	55	77	64	60.9	61.0	60.4	60.8	11.8	13.3	11.0	12.0
Jedd	57	68	65	64	61.6	61.1	59.8	60.9	12.9	13.3	11.9	12.7
Lassik	59	61	68	63	62.2	61.5	60.5	61.4	12.8	13.5	11.0	12.5
Hank	58	60	61	60	59.6	59.5	58.1	59.1	12.7	14.1	11.8	12.9
Hard White Spring												
WB Hartline	72	78	76	**76**	60.8	59.3	60.9	60.4	11.4	13.5	10.8	11.9
Otis	68	81	78	**75**	62.4	62.5	61.4	62.1	10.9	12.0	10.4	11.1
Dayn (WA 8123)	63	68	81	71	62.0	62.2	62.6	62.3	12.0	13.2	10.8	12.0
WA 8163	64	69	79	71	62.7	61.4	62.0	62.1	12.4	13.3	10.9	12.2
BR7030	70	72	68	70	62.7	61.7	62.0	62.1	11.7	12.9	10.9	11.8
WA 8168	63	64	75	68	61.9	61.2	61.9	61.7	13.1	14.0	11.2	12.8
IDO694	60	62	71	65	62.8	62.1	61.9	62.3	12.7	13.2	11.1	12.3
Patwin 515	62	62	66	63	60.9	58.6	59.3	59.6	12.5	14.7	12.2	13.1
Clear White 515	62	60	55	59	60.8	58.8	59.0	59.6	13.4	13.5	12.1	13.0
C.V. %	5	8	4	6	0.3	0.6	1.3	0.8	4.3	2.7	4.7	3.9
LSD (0.10)	3	6	3	2	0.2	0.4	0.8	0.3	0.6	0.4	0.6	0.3
Average	63	67	72	67	61.8	61.0	61.0	61.3	12.6	13.9	11.4	12.7
Highest	72	81	81	76	63.4	63.1	62.9	63.1	13.9	15.4	12.7	14.0
Lowest	55	55	55	59	59.6	58.6	58.1	59.1	10.9	12.0	10.4	11.1

Table 97. **2012 WSU Variety Testing Hard Spring Wheat Trial Summary**

Precipitation Zone 16-20"

Variety Name	Yield (Lbs/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
Hard Red Spring																		
Glee (WA 8074)	58	46	65	67	78	**63**	61.0	61.4	61.0	62.1	60.3	61.1	13.6	12.1	14.0	10.2	12.8	12.6
WA 8167	57	34	63	74	73	60	60.5	60.7	59.6	61.0	59.2	60.2	13.5	11.9	14.4	10.3	13.4	12.7
Scarlet	56	39	61	67	71	59	60.2	61.0	59.2	61.1	58.5	60.0	13.4	12.0	14.1	10.5	13.1	12.6
WA 8166	52	43	54	66	73	58	61.9	62.3	58.8	61.8	59.9	60.9	13.9	12.4	14.9	10.4	13.9	13.1
Bullseye	53	37	58	66	73	57	62.7	63.3	61.7	62.4	61.8	**62.4**	13.9	12.2	14.2	9.7	13.7	12.7
Hollis	54	38	54	61	77	57	60.9	60.8	59.1	61.2	60.3	60.5	13.9	12.8	15.8	11.1	14.5	**13.6**
Jefferson	54	38	55	62	73	56	60.6	60.7	59.2	60.6	59.8	60.2	13.9	12.6	15.2	11.2	13.2	13.2
Kelse	56	39	58	64	65	56	61.4	62.4	60.4	62.0	59.1	61.1	14.3	12.7	15.3	11.4	13.6	**13.5**
WA 8165	53	37	58	58	75	56	62.7	62.8	61.3	62.5	62.3	**62.4**	14.7	13.3	15.2	10.9	14.5	**13.7**
LCS-Buck Pronto	52	37	60	59	71	56	61.4	62.2	60.8	61.4	60.4	61.2	14.3	12.6	14.5	11.0	13.5	13.2
LCS-Powerplay	54	41	52	60	71	56	62.0	63.1	60.1	62.3	60.8	61.7	14.0	12.4	14.5	10.5	13.3	12.9
WB-Fuzion	48	37	56	54	76	54	60.0	60.4	60.0	61.3	60.0	60.4	15.0	13.1	14.7	10.8	14.5	**13.6**
SY605 CL	50	37	56	56	72	54	62.1	62.4	61.9	61.9	61.6	62.0	14.6	12.5	15.3	12.0	14.4	**13.7**
WA 8164	52	34	57	60	68	54	61.1	61.5	60.5	61.7	59.4	60.8	14.2	12.9	15.0	11.3	14.2	**13.5**
Tara 2002	50	36	52	50	79	53	60.7	61.5	58.8	61.8	60.3	60.6	13.9	12.3	14.5	9.9	13.0	12.7
Lassik	57	35	53	52	66	53	61.7	61.5	59.5	62.1	59.3	60.8	12.7	12.8	14.0	10.2	12.7	12.5
LCS-ALbany	54	33	52	56	68	52	60.1	61.6	58.7	61.4	60.5	60.5	13.9	12.1	14.4	9.6	12.6	12.5
Expresso	52	33	60	55	62	52	60.8	61.5	61.2	61.6	59.2	60.9	14.5	13.7	15.3	11.9	13.4	**13.8**
V272	58	34	49	53	55	50	60.8	61.7	58.4	60.2	59.5	60.1	13.2	13.4	13.7	9.7	12.3	12.5
Hank	55	24	52	54	63	49	59.9	59.0	58.1	59.3	57.1	58.7	13.8	13.0	14.4	10.6	14.2	13.2
Jedd	50	25	52	45	62	47	61.5	61.7	59.5	62.0	59.6	60.9	13.4	12.7	14.3	10.2	13.5	12.8
Hard White Spring																		
WB Hartline	60	45	54	66	71	59	60.2	61.1	58.1	60.6	58.3	59.7	13.6	11.4	15.0	10.1	12.4	12.5
Otis	53	46	58	61	71	58	61.6	62.3	60.1	62.0	60.4	61.3	12.9	11.6	13.6	9.1	11.7	11.8
BR7030	62	31	60	64	63	56	61.6	63.0	60.3	62.2	59.3	61.3	12.8	11.8	13.6	10.2	13.1	12.3
WA 8163	54	39	63	57	64	55	62.0	62.5	61.7	63.2	61.5	**62.2**	13.4	12.4	13.6	9.6	12.7	12.4
IDO694	43	36	57	55	80	54	62.4	63.2	60.9	62.7	61.8	**62.2**	13.5	12.5	13.8	11.1	12.6	12.7
Dayn (WA 8123)	52	32	53	63	69	54	61.1	62.0	59.0	62.0	60.0	60.8	13.3	12.2	14.6	10.1	13.2	12.7
WA 8168	52	34	54	58	67	53	61.6	62.1	60.0	62.3	60.1	61.2	13.7	12.9	14.7	10.1	13.0	12.9
Clear White 515	49	29	56	47	63	49	59.5	60.1	59.7	60.7	58.1	59.6	13.8	12.4	15.1	11.5	13.1	13.2
Patwin 515	52	31	48	50	54	47	60.1	60.7	58.9	60.3	56.4	59.3	14.3	13.0	15.4	11.2	13.0	13.4
C.V. %	6	9	11	9	5	8	0.6	0.5	2.2	0.9	0.9	1.2	1.5	2.6	5.1	7.6	4.9	4.6
LSD (0.10)	3	3	7	6	4	2	0.4	0.3	1.4	0.6	0.5	0.3	0.2	0.3	0.8	0.9	0.7	0.3
Average	53	36	56	59	69	55	61.1	61.7	59.9	61.6	59.8	60.8	13.8	12.5	14.6	10.5	13.3	13.0
Highest	62	46	65	74	80	63	62.7	63.3	61.9	63.2	62.3	62.4	15.0	13.7	15.8	12.0	14.5	13.8
Lowest	43	24	48	45	54	47	59.5	59.0	58.1	59.3	56.4	58.7	12.7	11.4	13.6	9.1	11.7	11.8

Table 98. **2012 WSU Variety Testing Hard Spring Wheat Trial Summary**

Precipitation Zone 12-16"

Variety Name	Yield (Lbs/A)				Test Wt (Lbs/Bu)				Protein (%)			
	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average
Hard Red Spring												
WA 8167	52	67	53	**57**	54.9	61.7	61.2	59.3	15.7	14.1	12.9	14.2
Scarlet	46	70	51	**56**	52.8	61.7	60.5	58.4	18.0	13.9	14.2	15.4
Lassik	50	63	48	53	55.6	61.4	61.3	59.5	13.5	14.5	13.8	13.9
Glee (WA 8074)	41	66	49	52	52.4	62.5	61.2	58.7	18.3	13.9	15.1	15.8
LCS-ALbany	52	60	43	52	54.8	61.7	60.2	58.9	16.3	14.4	15.7	15.5
Jefferson	46	66	44	52	54.9	62.0	61.0	59.3	16.7	14.3	14.0	15.0
Bullseye	48	63	45	52	56.5	63.4	62.3	**60.8**	16.6	14.1	13.8	14.8
WA 8164	47	60	46	51	55.1	61.7	61.0	59.3	16.1	14.9	14.2	15.0
WA 8166	41	63	50	51	55.1	63.0	61.1	59.7	16.3	15.0	14.3	15.2
Tara 2002	51	61	42	51	56.4	61.7	60.9	59.7	14.9	14.4	14.2	14.5
SY605 CL	49	56	47	51	57.1	63.3	61.5	**60.6**	18.1	15.3	15.5	**16.3**
LCS-Powerplay	49	60	42	50	55.5	62.9	61.4	59.9	15.2	14.0	13.6	14.3
Hank	47	58	44	50	53.6	61.1	59.5	58.1	15.6	14.0	14.2	14.6
Expresso	49	59	39	49	54.6	60.5	59.9	58.3	17.5	16.1	15.3	**16.3**
WB-Fuzion	50	55	40	48	55.7	61.9	60.5	59.4	15.7	15.1	15.0	15.3
Kelse	43	60	40	48	53.8	60.9	60.6	58.4	17.9	15.4	15.1	**16.2**
WA 8165	37	60	46	48	56.4	62.0	62.1	60.1	19.5	16.1	14.7	**16.8**
Jedd	49	53	41	47	56.1	61.7	61.2	59.7	15.5	13.9	13.6	14.3
Hollis	30	63	47	47	52.5	61.4	60.8	58.2	18.3	15.1	14.1	15.8
LCS-Buck Pronto	39	60	41	46	53.1	62.5	61.2	59.0	16.1	14.9	14.0	15.0
V272	36	53	42	44	55.2	58.8	60.2	58.1	16.9	14.2	13.4	14.8
Hard White Spring												
WB Hartline	46	69	54	**56**	53.9	61.0	59.5	58.2	14.3	14.7	14.5	14.5
IDO694	55	60	42	53	56.2	62.9	61.8	**60.3**	14.5	13.6	14.2	14.1
Dayn (WA 8123)	52	67	39	52	56.7	61.6	60.7	59.7	16.9	13.7	14.4	15.0
BR7030	45	66	46	52	54.1	62.9	61.8	59.6	17.3	13.4	14.4	15.0
WA 8163	46	69	41	52	57.1	62.6	62.2	**60.6**	15.8	13.9	13.1	14.3
Otis	37	65	47	50	54.6	62.5	60.9	59.3	15.5	13.3	13.2	14.0
Patwin 515	43	59	47	50	51.1	61.0	59.4	57.2	17.4	14.6	14.8	15.6
WA 8168	49	55	43	49	54.4	61.6	60.8	59.0	15.0	14.7	14.5	14.8
Clear White 515	41	56	41	46	51.2	61.1	58.6	57.0	16.9	14.8	15.8	15.8
C.V. %	11	6	10	9	2.7	0.8	0.6	1.6	11.4	2.5	5.5	7.9
LSD (0.10)	5	4	5	3	1.6	0.5	0.4	0.6	2.0	0.4	0.8	0.7
Average	45	61	45	50	54.7	61.8	60.9	59.1	16.4	14.5	14.3	15.1
Highest	55	70	54	57	57.1	63.4	62.3	60.8	19.5	16.1	15.8	16.8
Lowest	30	53	39	44	51.1	58.8	58.6	57.0	13.5	13.3	12.9	13.9

Table 99. **2012 WSU Variety Testing Hard Spring Wheat Trial Summary**

Precipitation Zone <12"

Variety Name	Yield (Lbs/A)					Test Wt (Lbs/Bu)					Protein (%)				
	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average
Hard Red Spring															
Bullseye	44	28	18	28	**29**	62.7	60.5	61.9	62.7	**61.9**	12.4	16.1	16.3	16.6	15.3
WA 8165	39	30	16	30	**29**	61.2	60.3	61.0	62.0	61.2	14.0	16.9	16.5	17.1	16.1
WA 8166	39	31	17	29	**29**	60.0	59.2	60.6	61.7	60.4	12.9	16.6	16.0	16.7	15.5
Hollis	37	28	19	28	**28**	59.3	59.5	60.5	61.1	60.1	13.8	16.3	16.5	16.7	15.8
WA 8167	38	29	18	26	**28**	57.2	57.8	59.6	60.6	58.8	14.3	16.7	16.5	17.4	16.2
Jefferson	37	30	17	27	**28**	58.9	58.8	60.1	61.8	59.9	14.9	15.7	16.2	16.7	15.9
WA 8164	41	27	14	28	27	60.3	59.9	60.7	61.5	60.6	12.9	16.6	16.8	16.9	15.8
Lassik	39	28	15	28	27	59.4	59.5	61.2	61.6	60.4	12.5	15.7	15.7	15.7	14.9
Scarlet	39	26	15	28	27	57.8	57.3	59.5	60.3	58.7	13.7	16.3	16.5	17.0	15.9
Glee (WA 8074)	38	29	15	26	27	58.9	60.4	61.5	61.6	60.6	13.7	16.0	16.2	16.4	15.6
WB-Fuzion	39	27	16	27	27	59.5	59.6	60.1	60.7	60.0	12.7	17.1	17.6	17.9	16.3
LCS-Powerplay	37	26	13	27	26	58.1	59.5	60.4	61.2	59.8	14.1	16.0	16.9	16.4	15.9
SY605 CL	37	28	15	23	26	59.8	60.4	61.5	61.4	60.8	14.5	17.2	17.4	18.0	**16.8**
LCS-ALbany	36	28	13	25	26	59.3	56.6	59.2	60.0	58.8	12.9	15.8	16.2	16.8	15.4
Kelse	34	28	12	27	25	59.0	59.4	60.3	60.6	59.8	14.2	17.1	17.4	17.7	**16.6**
LCS-Buck Pronto	36	26	14	24	25	58.2	58.9	61.1	60.9	59.8	13.8	16.7	16.8	17.1	16.1
Expresso	38	26	13	22	25	58.6	58.6	59.4	60.2	59.2	14.6	17.3	17.6	17.8	**16.8**
Tara 2002	40	23	13	23	24	59.3	58.1	58.9	59.9	59.1	13.6	16.7	16.9	16.7	16.0
V272	34	24	15	23	24	59.3	54.9	60.7	60.8	58.9	14.2	15.9	15.9	15.7	15.4
Hank	33	24	14	22	23	57.0	57.1	60.0	60.0	58.5	13.9	15.8	16.2	16.0	15.5
Jedd	36	23	12	23	23	60.4	59.0	60.6	61.8	60.4	12.6	15.4	16.4	15.9	15.1
Hard White Spring															
Otis	38	28	17	32	**29**	59.9	59.4	60.2	61.4	60.2	12.9	15.0	15.4	15.4	14.7
WA 8163	35	31	17	29	**28**	60.3	58.6	59.6	61.0	59.9	12.7	16.2	16.5	16.5	15.5
WB Hartline	38	31	14	26	27	57.1	58.4	59.0	60.2	58.7	13.5	16.5	16.3	17.1	15.8
WA 8168	37	26	13	28	26	59.8	58.2	60.3	60.6	59.7	13.9	16.6	16.7	17.2	16.1
BR7030	38	27	14	23	25	60.0	59.6	61.3	61.0	60.5	13.5	15.8	15.9	16.5	15.4
IDO694	37	24	15	26	25	60.5	60.6	61.2	61.9	61.0	13.4	15.6	15.9	16.0	15.2
Dayn (WA 8123)	35	27	12	27	25	59.6	59.6	60.0	60.8	60.0	13.7	16.0	16.1	16.5	15.6
Clear White 515	35	26	14	23	24	58.7	58.8	58.0	59.7	58.8	12.8	16.7	16.7	17.2	15.9
Patwin 515	35	24	13	21	23	58.0	57.4	58.0	59.0	58.1	13.4	17.0	16.8	17.4	16.2
C.V. %	9	6	15	9	9	1.6	0.6	1.0	0.5	1.0	7.8	1.4	1.8	1.5	3.6
LSD (0.10)	3	2	2	3	1	1.0	0.4	0.7	0.3	0.3	1.1	0.2	0.3	0.3	0.3
Average	37	27	15	26	26	59.3	58.9	60.2	60.9	59.8	13.5	16.3	16.5	16.8	15.8
Highest	44	31	19	32	29	62.7	60.6	61.9	62.7	61.9	14.9	17.3	17.6	18.0	16.8
Lowest	33	23	12	21	23	57.0	54.9	58.0	59.0	58.1	12.4	15.0	15.4	15.4	14.7

Table 100. **WSU Hard Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = >20"
(Fairfield, Farmington, Pullman)

Variety Name	2 Years 2011-2012, 6 loc/yrs			3 Years 2010-2012, 8 loc/yrs			5 Years 2008-2012, 12 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Spring									
Glee (WA 8074)	67	61.4	11.7	68	60.0	12.5			
Scarlet	64	60.9	11.8	64	59.2	12.7	65	59.3	13.1
LCS-Buck Pronto	63	61.5	12.9	66	60.2	13.6	64	60.0	14.0
Lassik	63	61.6	11.7	63	59.9	12.5			
Kelse	62	61.7	12.9	60	59.6	13.9	61	60.0	14.0
Bullseye	62	63.0	11.6	61	61.2	12.5	62	61.6	12.8
Hollis	61	60.7	12.5	59	59.3	13.2	60	59.6	13.7
Tara 2002	61	60.4	12.2	57	58.2	13.0	61	58.9	13.3
LCS-Powerplay	60	61.6	11.8						
Jefferson	59	60.8	12.1	60	59.7	12.8	62	60.0	13.3
WB-Fuzion	54	60.3	12.4	55	58.9	13.0	55	59.1	13.1
Hank	50	58.3	12.6	48	56.1	13.3	53	57.1	13.5
Hard White Spring									
Dayn (WA 8123)	70	62.2	11.7	71	60.9	12.4			
BR7030	65	62.2	11.4	68	60.7	12.0			
Patwin 515	63	60.2	12.6						
Otis	62	61.9	10.8	58	60.4	11.6			
Clear White 515	58	59.9	12.3						
C.V. %	7	0.9	5.0	8	1.5	5.2	7	1.3	4.5
LSD (.10)	2	0.2	0.3	2	0.3	0.3	1	0.2	0.2
Average	61	61.1	12.1	61	59.6	12.8	61	59.7	13.4
Highest	70	63.0	12.9	71	61.2	13.9	65	61.6	14.0
Lowest	50	58.3	10.8	48	56.1	11.6	53	57.1	12.8

Table 101. **WSU Hard Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = 16-20"

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

Variety Name	2 Years 2011-2012, 10 loc/yrs			3 Years 2010-2012, 15 loc/yrs			5 Years 2008-2012, 25 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Spring									
Glee (WA 8074)	67	61.2	12.4	65	59.2	13.1			
Scarlet	64	60.4	12.6	63	58.4	13.2	60	58.7	13.9
Lassik	63	61.2	12.3	64	59.3	12.9			
Kelse	62	61.3	13.4	59	59.0	14.2	57	59.5	14.7
LCS-Buck Pronto	61	61.1	13.6	63	59.3	14.4	58	59.4	15.1
Bullseye	61	62.7	12.4	60	60.8	13.1	58	61.2	13.6
Jefferson	60	60.5	13.0	60	59.0	13.6	58	59.5	14.2
Hollis	59	60.6	13.5	56	58.5	14.1	54	59.1	14.6
LCS-Powerplay	59	61.7	12.7						
WB-Fuzion	58	60.4	13.4	59	58.6	13.9	55	58.9	14.3
Tara 2002	58	60.7	12.5	56	58.3	13.1	54	59.1	14.0
Hank	52	59.0	12.9	51	56.9	13.5	52	57.9	14.1
Hard White Spring									
Dayn (WA 8123)	64	61.5	12.4	64	59.8	13.0			
BR7030	63	61.6	12.2	65	59.7	12.7			
Otis	60	61.6	11.5	56	59.5	12.3			
Clear White 515	57	59.9	13.0						
Patwin 515	57	59.7	13.2						
C.V. %	8	1.0	4.4	8	1.5	4.5	8	1.3	3.8
LSD (.10)	1	0.2	0.2	1	0.3	0.2	1	0.2	0.1
Average	60	60.9	12.8	60	59.0	13.4	56	59.4	14.2
Highest	67	62.7	13.6	65	60.8	14.4	60	61.2	15.1
Lowest	52	59.0	11.5	51	56.9	12.3	51	57.9	13.6

Table 102. **WSU Hard Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = 12-16"
(Almira, Endicott, Lamont)

Variety Name	2 Years 2011-2012, 6 loc/yrs			3 Years 2010-2012, 9 loc/yrs			5 Years 2008-2012, 15 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Spring									
Lassik	60	60.7	12.8	60	60.0	13.4			
Scarlet	59	59.5	13.7	59	58.7	14.3	58	58.9	14.6
Glee (WA 8074)	58	60.0	13.6	59	59.5	14.1			
Jefferson	56	60.2	13.5	56	59.6	13.9	54	59.8	14.3
Bullseye	55	62.0	13.1	55	61.4	13.6	51	61.5	13.9
LCS-Powerplay	55	60.9	12.9						
Tara 2002	54	60.2	13.2	53	59.0	13.8	51	59.3	14.4
Kelse	54	60.0	14.2	53	59.3	14.8	52	59.7	15.1
Hollis	53	59.5	14.4	54	59.0	14.8	52	59.4	15.1
WB-Fuzion	53	60.2	13.6	53	59.3	13.9	50	59.4	14.2
LCS-Buck Pronto	52	60.1	14.0	54	59.6	14.8	50	59.5	15.4
Hank	51	58.4	13.1	49	57.5	13.6	49	58.3	14.1
Hard White Spring									
Dayn (WA 8123)	61	60.7	13.3	61	60.2	13.7			
BR7030	59	60.9	13.3	63	60.3	13.5			
Patwin 515	55	59.0	14.1						
Clear White 515	53	58.6	14.0						
Otis	53	60.6	12.3	54	60.1	12.9			
C.V. %	7	1.3	6.8	8	1.5	6.5	8	1.3	5.2
LSD (.10)	2	0.3	0.4	2	0.3	0.3	1	0.2	0.2
Average	55	60.1	13.5	56	59.5	13.9	51	59.7	14.6
Highest	61	62.0	14.4	63	61.4	14.8	58	61.5	15.4
Lowest	51	58.4	12.3	49	57.5	12.9	46	58.3	13.9

Table 103. **WSU Hard Spring Wheat Trial Multi-Year Summary**

Precipitation Zone = <12"

(Bickleton, Connell, Horse Heaven, Lind)

Variety Name	2 Years 2011-2012, 8 loc/yrs			3 Years 2010-2012, 12 loc/yrs			5 Years 2008-2012, 20 loc/yrs		
	Yield Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %	**Yield** Bu/A	**TW** Lbs/Bu	**Protein** %
Hard Red Spring									
Lassik	31	61.0	14.0	33	60.0	14.3			
Hollis	30	60.5	15.0	32	59.6	15.3	28	59.8	15.6
Scarlet	30	59.2	14.8	33	58.4	14.8	29	58.8	15.2
Bullseye	30	62.3	14.2	32	61.4	14.3	28	61.7	14.7
Glee (WA 8074)	29	61.0	14.5	32	60.5	14.8			
Jefferson	29	60.1	14.6	32	59.7	14.7	28	59.9	15.3
Kelse	28	60.5	15.5	30	59.8	15.7	27	60.0	16.1
LCS-Buck Pronto	28	60.2	15.4	30	59.7	15.8	25	59.6	16.2
WB-Fuzion	27	60.1	15.2	31	59.6	15.2	28	59.7	15.7
Tara 2002	27	59.5	14.9	29	58.8	15.0	25	59.0	15.5
LCS-Powerplay	27	60.3	14.8						
Hank	25	59.1	14.5	28	58.7	14.7	26	58.9	15.2
Hard White Spring									
BR7030	29	61.1	14.1	31	60.5	14.2			
Dayn (WA 8123)	29	60.6	14.3	31	59.8	14.5			
Otis	29	60.8	13.5	30	59.8	13.6			
Patwin 515	27	58.8	14.7						
Clear White 515	26	58.9	14.9						
C.V. %	10	1.1	3.4	9	1.1	3.0	9	1.0	2.9
LSD (.10)	1	0.2	0.2	1	0.2	0.1	1	0.2	0.1
Average	28	60.2	14.6	31	59.7	14.8	27	59.8	15.5
Highest	31	62.3	15.5	33	61.4	15.8	29	61.7	16.2
Lowest	25	58.8	13.5	28	58.4	13.6	21	58.8	14.7

Table 104. **2012 WSU Variety Testing Hard Spring Wheat Trial, Almira**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 LODGING (%)
IDO694				**55**	**56.2**	14.5	31	0
LCS-ALbany				**52**	54.8	16.3	35	0
WA 8167				**52**	54.9	15.7	36	0
Dayn (WA 8123)		59	65	**52**	**56.7**	16.9	34	0
Tara 2002	53	55	58	**51**	**56.4**	14.9	36	0
WB-Fuzion	58	59	59	**50**	**55.7**	15.7	36	0
Lassik		55	60	**50**	**55.6**	13.5	31	0
SY605 CL				49	**57.1**	18.1	39	0
LCS-Powerplay			56	49	**55.5**	15.2	35	0
Jedd				49	**56.1**	15.5	31	0
Expresso				49	54.6	17.5	32	0
WA 8168				49	54.4	15.0	35	0
Bullseye	53	54	56	48	**56.5**	16.6	32	0
WA 8164				47	55.1	16.1	34	0
Hank	53	54	54	47	53.6	15.6	34	0
Jefferson	54	55	57	46	54.9	16.7	34	0
Scarlet	53	51	55	46	52.8	18.0	36	0
WB Hartline				46	53.9	14.3	34	0
WA 8163				45	**57.1**	15.8	35	0
BR7030		54	57	45	54.1	17.3	33	0
Kelse	53	52	53	43	53.8	17.9	36	0
Patwin 515			55	43	51.1	17.4	27	0
Glee (WA 8074)		55	57	41	52.4	18.3	34	0
Clear White 515			55	41	51.2	16.9	32	0
WA 8166				41	55.1	16.3	35	0
LCS-Buck Pronto	50	53	53	38	53.1	16.1	34	0
WA 8165				37	**56.4**	19.5	43	0
Otis		47	50	36	54.6	15.5	38	0
V272				36	55.2	16.9	27	0
Hollis	49	48	49	30	52.5	18.3	43	10
C.V. %	9	9	9	10	2.7	11.4	3	949
LSD (.10)	2	3	4	5	1.6	2.0	1	3
Average	53	54	56	45	54.7	16.4	34	0
Highest	58	59	65	55	57.1	19.5	43	10
Lowest	49	47	49	30	51.1	13.5	27	0

Table 105.

2012 WSU Variety Testing Hard Spring Wheat Trial (No Fungicide), Almira

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
WB-Fuzion	--	--	--	**54**	**56.6**	14.7	35
LCS-Buck Pronto	--	--	--	**53**	**57.2**	13.9	35
Bullseye	--	--	--	**53**	**57.9**	15.2	31
Clear White 515	--	--	--	**52**	54.0	16.0	32
WA 8167	--	--	--	**51**	54.9	15.9	35
WA 8168	--	--	--	**50**	**56.1**	15.6	35
Expresso	--	--	--	**48**	**56.0**	16.0	32
WA 8164	--	--	--	**48**	55.3	16.1	34
WB Hartline	--	--	--	47	54.9	15.7	35
LCS-ALbany	--	--	--	47	**56.1**	16.1	35
Jefferson	--	--	--	47	55.3	16.4	34
SY605 CL	--	--	--	46	**56.2**	18.2	39
Lassik	--	--	--	46	55.9	14.7	31
IDO694	--	--	--	46	54.4	15.5	31
Kelse	--	--	--	45	55.0	16.7	37
WA 8163	--	--	--	45	**57.4**	15.2	35
Dayn (WA 8123)	--	--	--	44	55.6	16.6	35
WA 8166	--	--	--	43	55.5	15.7	36
Patwin 515	--	--	--	43	52.3	16.8	26
Glee (WA 8074)	--	--	--	42	53.6	17.5	34
Scarlet	--	--	--	42	55.3	15.4	36
Tara 2002	--	--	--	41	55.4	15.2	35
Hank	--	--	--	40	52.9	15.2	33
BR7030	--	--	--	40	52.8	17.5	33
Otis	--	--	--	39	55.4	16.1	38
WA 8165	--	--	--	37	**57.1**	17.8	43
V272	--	--	--	36	55.9	16.1	28
Hollis	--	--	--	34	53.4	18.0	43
Jedd	--	--	--	34	53.8	15.8	31
LCS-Powerplay	--	--	--	33	51.9	17.1	35
C.V. %	--	--	--	13	3.3	9.7	4
LSD (.10)	--	--	--	6	1.9	1.7	1
Average	--	--	--	44	55.1	16.1	34
Highest	--	--	--	54	57.9	18.2	43
Lowest	--	--	--	33	51.9	13.9	26

Table 106. **2012 WSU Hard Spring Wheat Trial, Almira**

Impact of Foliar Disease on Grain Yield

Variety Name *(Hard White Italicized)*	Grain Yield Bu/A		Yield Difference (protected-unprotected)	
	Protected	Unprotected	Bu/A	%
V272	36	36	1	2
LCS-ALbany	52	47	5	10
WA 8164	47	48	0	0
WA 8165	37	37	0	0
WA 8166	41	43	-2	-5
WA 8167	52	51	1	2
LCS-Buck Pronto	39	53	-14	-36
LCS-Powerplay	49	33	16	33
Jefferson	46	47	-1	-2
Glee (WA 8074)	41	42	-1	-2
Lassik	50	46	4	8
Bullseye	48	53	-5	-11
Hank	47	40	7	14
Hollis	30	34	-4	-12
Kelse	43	45	-2	-4
Scarlet	46	42	4	8
Tara 2002	51	41	10	19
WB-Fuzion	50	54	-4	-7
Jedd	49	34	15	31
Expresso	49	48	1	2
SY605 CL	49	46	3	5
WA 8163	46	45	1	2
IDO694	55	46	9	17
Dayn (WA 8123)	52	44	8	15
Clear White 515	41	52	-11	-27
Patwin 515	43	43	0	0
BR7030	45	40	5	12
Otis	37	39	-2	-5
WA 8168	49	50	-1	-3
WB Hartline	46	47	-1	-2
C.V. %	11	13		
LSD (0.10)	5	6		
Average	45	44	1	3
Highest	55	54		
Lowest	30	33		

Almira Hard Spring Wheat

1. This summary includes duplicate hard spring wheat trials except one was sprayed with fungicide and the other was not sprayed. Grain yield in these 2012 Almira hard spring wheat trials averaged 45 bushels/acre, 8 bushels/acre lower than the 5-year average in the fungicide sprayed trial, and the non-sprayed trial averaged 44 bushels/acre. The Almira trial was located about seven miles north of Almira, WA (D. McKay, cooperator).

2. These trials were seeded on 24 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 75#N/acre applied pre-plant and a soil test showed 307#N/acre available, no additional fertilizer was applied for protein in these hard trials based on projected yield. Spring seeding conditions were good and establishment was uniform. Tilt® fungicide at 4 oz/a was applied 24 May to the sprayed trial and stripe rust levels were low.

3. In the sprayed trial, yields ranged from 30 to 55 bu/a, while in the non-sprayed trial, yields ranged from 33 to 54 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 7 of the 30 entries are in this group in the sprayed and 8 of the 30 are in the top group in the non-sprayed. ‘LCS-Albany’ was the highest yielding named variety entry in the sprayed trial and ‘WB Fusion’ was the highest yielding over 5 years of results at this site. WB Fusion was the highest yielding named variety in the non-sprayed trial. Yields in both trials and the difference in yield and percentage difference between sprayed and non-sprayed for each entry are in a separate comparison table. Yield advantage in the sprayed trial averaged only 1 bu/a.

4. Test weights were very low indicating poor grain filling averaging 54.7 lbs/bu and ranged from 51.1 to 57.1 lbs/bu in the sprayed trial, and averaged 55.1 lbs/bu and ranged from 51.9 to 57.9 lbs/bu in the non-sprayed trial. Grain protein averaged 16.4% with a range of 13.5 to 19.5% in the sprayed trial, and protein averaged 16.1% with a range of 13.9 to 18.2% in the non-sprayed trial also indicating stress during grain fill and high residual N. There was minor lodging by ‘Hollis’ in the sprayed trial.

Table 107. **2012 WSU Variety Testing Hard Spring Wheat Trial, Bickleton**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Bullseye	29	30	33	**44**	**62.7**	12.4	26	175
WA 8164				**41**	60.3	12.9	29	177
Tara 2002	29	31	32	40	59.3	13.6	31	176
Scarlet	27	26	28	39	57.8	13.7	30	179
WA 8165				39	61.2	14.0	34	179
Lassik		28	32	39	59.4	12.5	26	180
WA 8166				39	60.0	12.9	29	180
WB-Fuzion	31	30	28	39	59.5	12.7	32	175
WB Hartline				38	57.1	13.5	29	178
WA 8167				38	57.2	14.3	31	179
Expresso				38	58.6	14.6	28	178
Glee (WA 8074)		29	29	38	58.9	13.7	30	176
BR7030		26	27	38	60.0	13.5	30	178
Otis		25	30	38	59.9	12.9	31	181
IDO694				37	60.5	13.4	26	174
Hollis	28	28	31	37	59.3	13.8	36	177
LCS-Powerplay			28	37	58.1	14.1	31	177
WA 8168				37	59.8	13.9	29	179
SY605 CL				37	59.8	14.5	32	175
Jefferson	26	26	28	36	58.9	14.9	29	177
LCS-ALbany				36	59.3	12.9	29	183
LCS-Buck Pronto	26	28	29	36	58.2	13.8	29	176
Jedd				36	60.4	12.6	25	177
Clear White 515			28	35	58.7	12.8	27	176
WA 8163				35	60.3	12.7	30	181
Patwin 515			28	35	58.0	13.4	23	177
Dayn (WA 8123)		25	28	35	59.6	13.7	30	178
V272				34	59.3	14.2	23	183
Kelse	26	26	27	34	59.0	14.2	32	178
Hank	28	27	26	33	57.0	13.9	28	177
C.V. %	12	13	14	9	1.6	7.8	5	1
LSD (.10)	2	2	3	3	1.0	1.1	2	1
Average	28	28	29	37	59.3	13.5	29	178
Highest	31	31	33	44	62.7	14.9	36	183
Lowest	26	25	26	33	57.0	12.4	23	174

Bickleton Hard Spring Wheat

1. Grain yield in the 2012 Bickleton hard spring wheat trial averaged 37 bushels/acre, 9 bushels/acre higher than the 5-year average. The Bickleton nursery was located about two miles east of Bickleton, WA (S. Matsen, cooperator).

2. This nursery was seeded on 13 April, 2012 following spring wheat. Seed was placed at a 60#/acre seeding rate using a no-till plot drill equipped with hoe openers set on 12-inch spacing. A phosphorus-sulfur starter fertilizer was applied through the drill and a soil test showed 223#N/acre available. Available N should be adequate for expected yield and protein for hard spring wheat and no supplemental fertilizer was applied. Spring seeding conditions were good.

3. Yields ranged from 33 bu/a to 44 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 30 entries are in this group. ‘Bullseye’ was the highest yielding entry in this trial. ‘WB-Fuzion’ was the highest yielding over 5 years of results at this site. No fungicide was applied nor stripe rust observed in this trial.

4. Test weights averaged 59.3 lbs/bu and ranged from 57.0 to 62.7 lbs/bu. Grain protein averaged 13.5% with a range of 12.4 to 14.9%. The average plant height was 29 inches with no lodging.

Table 108. **2012 WSU Variety Testing Hard Spring Wheat Trial, Connell**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
WA 8166				**31**	59.2	16.6	25
WB Hartline				**31**	58.4	16.5	26
WA 8163				**31**	58.6	16.2	29
Jefferson	27	31	26	**30**	58.8	15.7	25
WA 8165				**30**	**60.3**	16.9	30
WA 8167				**29**	57.8	16.7	28
Glee (WA 8074)		30	25	**29**	**60.4**	16.0	27
Hollis	27	30	27	28	59.5	16.3	30
Bullseye	26	29	24	28	**60.5**	16.1	24
Kelse	26	29	26	28	59.4	17.1	30
Otis		29	26	28	59.4	15.0	30
Lassik		30	24	28	59.5	15.7	25
LCS-ALbany				28	56.6	15.8	27
SY605 CL				28	**60.4**	17.2	28
BR7030		31	27	27	59.6	15.8	28
WA 8164				27	59.9	16.6	27
WB-Fuzion	24	27	23	27	59.6	17.1	27
Dayn (WA 8123)		29	25	27	59.6	16.0	27
LCS-Buck Pronto	24	27	22	26	58.9	16.7	26
Scarlet	29	31	26	26	57.3	16.3	28
Clear White 515			21	26	58.8	16.7	25
WA 8168				26	58.2	16.6	28
LCS-Powerplay			24	26	59.5	16.0	27
Expresso				26	58.6	17.3	26
Hank	24	26	24	24	57.1	15.8	25
Patwin 515			22	24	57.4	17.0	21
V272				24	54.9	15.9	24
IDO694				24	**60.6**	15.6	23
Tara 2002	22	24	22	23	58.1	16.7	26
Jedd				23	59.0	15.4	23
C.V. %	7	6	7	6	0.6	1.4	4
LSD (.10)	1	1	1	2	0.4	0.2	1
Average	25	29	24	27	58.9	16.3	27
Highest	29	31	27	31	60.6	17.3	30
Lowest	19	24	21	23	54.9	15.0	21

Connell Hard Spring Wheat

1. Grain yield in the 2012 Connell hard spring wheat trial averaged 27 bushels/acre, 2 bushels/acre higher than the 5-year average. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister, cooperator).

2. This nursery was seeded on 2 April, 2012 following fallow. Seed was placed at a 60#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 70#N/acre and soil test analysis showed ample N available to meet the hard protein target at projected yield levels. Spring seeding and establishment conditions were good.

3. Yields ranged from 23 bu/acre to 31 bu/acre. Yield values within the LSD range of the highest yield are shown in bold and 7 of the 30 entries are in this group. The hard white variety ‘WB Hartline’ was the highest yielding named entry in 2012 and ‘Scarlet’ was the highest yielding over 5 years at this location. Fungicide was applied 5 May at herbicide timing for stripe rust prevention.

4. Test weights averaged 58.9 lbs/bu and ranged from 54.9 to 60.6 lbs/bu. Grain protein averaged 16.3% with a range of 15.0 to 17.3%. The average plant height was 27 inches with no lodging.

Table 109. **2012 WSU Variety Testing Hard Spring Wheat Trial, Dayton**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
BR7030		74	79	**62**	61.6	12.8	29
WB Hartline				**60**	60.2	13.6	30
V272				58	60.8	13.2	24
Glee (WA 8074)		69	73	58	61.0	13.6	28
Lassik		71	75	57	61.7	12.7	27
WA 8167				57	60.5	13.5	30
Scarlet	60	67	73	56	60.2	13.4	31
Kelse	60	66	73	56	61.4	14.3	31
Hank	56	61	67	55	59.9	13.8	26
LCS-Powerplay			69	54	62.0	14.0	28
WA 8163				54	62.0	13.4	29
Jefferson	58	64	68	54	60.6	13.9	29
LCS-ALbany				54	60.1	13.9	32
Hollis	54	60	67	54	60.9	13.9	35
Otis		61	73	53	61.6	12.9	31
WA 8165				53	**62.7**	14.7	35
Bullseye	59	64	70	53	**62.7**	13.9	26
LCS-Buck Pronto	57	67	68	52	61.4	14.3	29
Expresso				52	60.8	14.5	27
Dayn (WA 8123)		70	74	52	61.1	13.3	28
WA 8164				52	61.1	14.2	29
WA 8168				52	61.6	13.7	29
WA 8166				52	61.9	13.9	28
Patwin 515			68	52	60.1	14.3	22
SY605 CL				50	62.1	14.6	31
Jedd				50	61.5	13.4	25
Tara 2002	52	58	64	50	60.7	13.9	31
Clear White 515			65	49	59.5	13.8	26
WB-Fuzion	61	62	66	48	60.0	15.0	29
IDO694				43	**62.4**	13.5	24
C.V. %	6	6	6	6	0.6	1.5	5
LSD (.10)	2	2	3	3	0.4	0.2	2
Average	56	65	70	53	61.1	13.8	29
Highest	61	74	79	62	62.7	15.0	35
Lowest	47	58	64	43	59.5	12.7	22

Dayton Hard Spring Wheat

1. Grain yield in the 2012 Dayton hard spring wheat trial averaged 53 bushels/acre, 3 bushels/acre lower than the 5-year average. The Dayton nursery was located about six miles northwest of Dayton, WA (J. Penner, cooperator).

2. This nursery was seeded on 1 May, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Fertilizer was applied pre-plant at 146#N/acre and a soil test showed 66#N/acre available. To meet N needs for expected yield and protein for hard spring wheat, 10#N/acre additional fertilizer was applied. Spring seeding conditions were good.

3. Yields ranged from 43 bu/a to 62 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 30 entries are in this group. The hard white 'BR7030' was the highest yielding entry in this trial. 'WB-Fuzion' was the highest yielding over 5 years of results at this site. Fungicide was applied 25 June for stripe rust control.

4. Test weights averaged 61.1 lbs/bu and ranged from 59.5 to 62.7 lbs/bu. Grain protein averaged 13.8% with a range of 12.7 to 15.0%. The average plant height was 29 inches with no lodging.

Table 110. **2012 WSU Variety Testing Hard Spring Wheat Trial, Endicott**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Scarlet	65	63	60	**70**	61.7	13.9	35	183
WB Hartline				**69**	61.0	14.7	33	184
WA 8163				**69**	62.6	13.9	33	185
WA 8167				**67**	61.7	14.1	33	183
Dayn (WA 8123)		64	60	**67**	61.6	13.7	32	182
Jefferson	58	56	57	**66**	62.0	14.3	34	184
Glee (WA 8074)		60	58	**66**	62.5	13.9	35	182
BR7030		64	60	**66**	**62.9**	13.4	31	184
Otis		57	55	65	62.5	13.3	38	185
WA 8166				63	**63.0**	15.0	32	184
Hollis	58	57	56	63	61.4	15.1	41	182
Bullseye	53	53	54	63	**63.4**	14.1	30	183
Lassik		62	58	62	61.4	14.5	29	185
Tara 2002	56	53	52	61	61.7	14.4	36	181
LCS-ALbany				60	61.7	14.4	30	188
LCS-Powerplay			55	60	**62.9**	14.0	33	182
WA 8164				60	61.7	14.9	32	182
IDO694				60	**62.9**	13.6	30	182
Kelse	58	55	55	60	60.9	15.4	34	183
LCS-Buck Pronto	52	54	52	60	62.5	14.9	32	181
WA 8165				59	62.0	16.1	40	184
Patwin 515			52	59	61.0	14.6	24	186
Expresso				59	60.5	16.1	31	186
Hank	53	48	49	58	61.1	14.0	31	182
SY605 CL				56	**63.3**	15.3	35	181
Clear White 515			51	56	61.1	14.8	32	182
WB-Fuzion	47	49	49	55	61.9	15.1	33	180
WA 8168				55	61.6	14.7	32	185
V272				53	58.8	14.2	28	190
Jedd				53	61.7	13.9	27	183
C.V. %	7	7	6	6	0.8	2.5	4	0
LSD (.10)	2	2	2	4	0.5	0.4	1	1
Average	55	57	55	61	61.8	14.5	33	183
Highest	65	64	60	70	63.4	16.1	41	190
Lowest	47	48	49	53	58.8	13.3	24	180

Endicott Hard Spring Wheat

1. Grain yield in the 2012 Endicott hard spring wheat trial averaged 61 bushels/acre, 6 bushels/acre higher than the 5-year average. The Endicott nursery was located about five miles east of Endicott, WA (M. Richter, cooperator).

2. This nursery was seeded on 7 May, 2012 following spring wheat. Seed was placed at an 80#/acre seeding rate using a no-till plot drill equipped with Cross-Slot openers set on 10-inch spacing. Fertilizer was applied pre-plant at 60#N/acre and a soil test showed 146#N/acre available. Total fertilizer should be adequate for hard protein levels based on expected yield. Spring seeding conditions were good.

3. Yields ranged from 53 bu/a to 70 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 8 of the 30 entries are in this group. ‘Scarlet’ was the highest yielding entry in this trial and the highest yielding over 5 years of results at this site. Quilt fungicide was applied 13 June for stripe rust control.

4. Test weights averaged 61.8 lbs/bu and ranged from 58.8 to 63.4 lbs/bu. Grain protein averaged 14.5% with a range of 13.3 to 16.4%. The average plant height was 33 inches with no lodging.

Table 111. **2012 WSU Variety Testing Hard Spring Wheat Trial, Fairfield**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
WB Hartline	--	--		**72**	60.8	11.4	34
Scarlet	--	--	56	**70**	61.1	12.0	35
Glee (WA 8074)	--	--	59	**70**	61.8	11.7	34
BR7030	--	--	59	**70**	62.7	11.7	32
Otis	--	--	56	68	62.4	10.9	38
WA 8167	--	--		68	61.3	12.1	34
LCS-ALbany	--	--		68	61.3	11.9	34
Kelse	--	--	57	66	62.2	13.1	35
LCS-Powerplay	--	--	58	64	62.8	12.7	33
WA 8163	--	--		64	62.7	12.4	33
WA 8166	--	--		64	62.5	11.8	33
WA 8168	--	--		63	61.9	13.1	34
Expresso	--	--		63	61.7	13.9	31
WB-Fuzion	--	--	53	63	61.3	13.1	34
Dayn (WA 8123)	--	--	59	63	62.0	12.0	32
Bullseye	--	--	51	63	**63.4**	12.4	29
Tara 2002	--	--	59	63	62.0	12.8	36
LCS-Buck Pronto	--	--	55	62	62.1	13.3	34
Patwin 515	--	--	57	62	60.9	12.5	25
Clear White 515	--	--	59	62	60.8	13.4	32
WA 8165	--	--		61	62.9	12.7	45
Jefferson	--	--	50	61	60.9	13.3	33
V272	--	--		60	60.9	11.8	28
IDO694	--	--		60	62.8	12.7	29
Hollis	--	--	55	60	61.0	12.6	44
WA 8164	--	--		59	61.5	13.2	34
Lassik	--	--	56	59	62.2	12.8	29
Hank	--	--	47	58	59.6	12.7	31
Jedd	--	--		57	61.6	12.9	29
SY605 CL	--	--		55	63.0	13.8	35
C.V. %	--	--	7	5	0.3	4.3	4
LSD (.10)	--	--	3	3	0.2	0.6	1
Average	--	--	56	63	61.8	12.6	33
Highest	--	--	59	72	63.4	13.9	45
Lowest	--	--	47	55	59.6	10.9	25

Fairfield Hard Spring Wheat

1. Grain yield in the 2012 Fairfield hard spring wheat trial averaged 63 bushels/acre. This was the second year of spring trials at Fairfield. The Fairfield nursery was located about three miles northwest of Fairfield, WA (L. Green, cooperator).
2. This nursery was seeded on 21 April, 2012 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till plot drill equipped with Cross-slot openers set on 10-inch spacing. Fertilizer was applied through the drill at 90#N/acre and a soil test showed 95#N/acre available. Available N should be adequate for expected yield and protein for hard spring wheat, and no supplemental fertilizer was applied. Spring seeding conditions were good.
3. Yields ranged from 55 bu/a to 72 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 30 entries are in this group. The hard white ‘WB Hartline’ was the highest yielding entry in this trial. Fungicide was applied 4 July for stripe rust control and there was minimal stripe rust impact in this trial.
4. Test weights averaged 61.8 lbs/bu and ranged from 59.6 to 63.4 lbs/bu. Grain protein averaged 12.6% with a range of 10.9 to 13.9%. The average plant height was 33 inches with no lodging.

Table 112. **2012 WSU Variety Testing Hard Spring Wheat Trial, Farmington**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Otis		63	67	**81**	62.5	12.0	37	190
WB Hartline				**78**	59.3	13.5	33	189
WA 8166				**77**	61.1	13.5	32	192
Scarlet	64	63	65	73	59.9	13.9	32	188
Kelse	61	63	63	72	61.8	14.3	32	189
WA 8167				72	60.2	14.0	31	190
BR7030		70	66	72	61.7	12.9	31	189
Glee (WA 8074)		69	66	71	61.1	13.7	32	186
SY605 CL				69	61.9	14.6	32	185
WA 8165				69	62.1	14.5	42	190
WA 8163				69	61.4	13.3	32	194
Jedd				68	61.1	13.3	28	188
Dayn (WA 8123)		70	68	68	62.2	13.2	29	187
WA 8164				67	61.3	14.4	30	187
Jefferson	63	63	59	66	60.6	14.1	29	189
WB-Fuzion	55	58	54	66	59.9	14.4	29	186
Bullseye	64	65	62	66	**63.1**	14.2	27	189
Tara 2002	63	59	59	66	60.8	14.5	31	186
LCS-Powerplay			56	65	61.5	14.3	31	188
Expresso				64	61.2	15.4	28	190
WA 8168				64	61.2	14.0	32	191
Patwin 515			61	62	58.6	14.7	23	191
IDO694				62	62.1	13.2	26	186
LCS-Buck Pronto	62	64	60	62	61.1	14.6	31	187
Hollis	62	62	61	61	59.9	15.1	36	188
Lassik		61	60	61	61.5	13.5	27	189
Hank	57	53	54	60	59.5	14.1	28	188
Clear White 515			53	60	58.8	13.5	29	185
LCS-ALbany				58	60.4	13.9	30	195
V272				55	61.0	13.3	26	198
C.V. %	9	10	9	8	0.6	2.7	5	1
LSD (.10)	3	4	4	6	0.4	0.4	2	2
Average	62	63	61	67	61.0	13.9	31	189
Highest	68	70	68	81	63.1	15.4	42	198
Lowest	55	53	53	55	58.6	12.0	23	185

Farmington Hard Spring Wheat

1. Grain yield in the 2012 Farmington hard spring wheat trial averaged 67 bushels/acre, 5 bushels/acre higher than the 5-year average for this location. The Farmington nursery was located about seven miles south of Farmington, WA (B. Nelson, cooperator).

2. This nursery was seeded on 11 May, 2012 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till plot drill equipped with Cross-slot openers set on 10-inch spacing. Fertilizer was applied pre-plant at 120#N/acre and a soil test showed 94#N/acre available. Additionally, 30 #N/acre was applied for hard spring wheat protein. Spring seeding conditions were good, but later than normal.

3. Yields ranged from 55 bu/a to 81 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 30 entries are in this group. The hard white variety ‘Otis’ was the highest yielding named entry in this trial, and ‘Scarlet’ and ‘Bullseye’ were the highest yielding over 5 years at this location. Fungicide was applied 18 June for stripe rust control and there was minimal stripe rust impact in this trial.

4. Test weights averaged 61.0 lbs/bu and ranged from 58.6 to 63.1 lbs/bu. Grain protein averaged 13.9% with a range of 12.0 to 15.4%. The average plant height was 31 inches with no lodging.

Table 113.
2012 WSU Variety Testing Hard Spring Wheat Trial, Horse Heaven

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT
Hollis	27	32	27	**19**	60.5	16.5	27
WA 8167				**18**	59.6	16.5	24
Bullseye	27	32	25	**18**	**61.9**	16.3	21
WA 8163				**17**	59.6	16.5	25
WA 8166				**17**	60.6	16.0	24
Otis		29	21	**17**	60.2	15.4	26
Jefferson	26	31	24	16	60.1	16.2	23
WA 8165				16	61.0	16.5	25
WB-Fuzion	28	30	23	16	60.1	17.6	23
Scarlet	29	33	27	15	59.5	16.5	24
V272				15	60.7	15.9	21
IDO694				15	**61.2**	15.9	23
Glee (WA 8074)		30	25	15	**61.5**	16.2	21
SY605 CL				15	**61.5**	17.4	23
Lassik		32	26	15	**61.2**	15.7	23
WB Hartline				14	59.0	16.3	23
Hank	24	28	21	14	60.0	16.2	24
WA 8164				14	60.7	16.8	24
LCS-Buck Pronto	24	29	25	14	61.1	16.8	23
BR7030		30	25	14	**61.3**	15.9	25
Clear White 515			22	14	58.0	16.7	23
Patwin 515			24	13	58.0	16.8	18
WA 8168				13	60.3	16.7	24
LCS-ALbany				13	59.2	16.2	22
LCS-Powerplay			20	13	60.4	16.9	23
Expresso				12	59.4	17.6	21
Tara 2002	24	27	23	12	58.9	16.9	23
Kelse	25	29	24	12	60.3	17.4	27
Jedd				12	60.6	16.4	21
Dayn (WA 8123)		31	25	12	60.0	16.1	23
C.V. %	10	9	11	15	1.0	1.8	5
LSD (.10)	1	1	2	2	0.7	0.3	1
Average	25	30	24	15	60.2	16.5	23
Highest	29	33	27	19	61.9	17.6	27
Lowest	16	27	20	12	58.0	15.4	18

Horse Heaven Hard Spring Wheat

1. Grain yield in the 2012 Horse Heaven hard spring wheat trial averaged 15 bushels/acre, 10 bushels/acre lower than the 5-year average. The Horse Heaven nursery was located about ten miles southwest of Prosser, WA (J. Moon, cooperator).

2. This nursery was seeded on 23 March, 2012 following fallow. Seed was placed at a 60#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 50#N/acre and soil test analysis showed ample N available to meet the hard protein target at projected yield levels. Spring seeding conditions were variable and establishment was not uniform.

3. Yields ranged from 12 bu/a to 19 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 30 entries are in this group. ‘Hollis’ was the highest yielding in 2012 and ‘Scarlet’ was the highest yielding over 5 years at this location. Fungicide was applied at herbicide timing for stripe rust prevention.

4. Test weights averaged 60.2 lbs/bu and ranged from 58.0 to 61.9 lbs/bu. Grain protein averaged 16.5% with a range of 15.4 to 17.6%. The average plant height was 23 inches with no lodging.

Table 114. **2012 WSU Variety Testing Hard Spring Wheat Trial, Lamont**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WB Hartline				**54**	59.5	14.5	30	177
WA 8167				**53**	61.2	12.9	31	176
Scarlet	57	64	61	**51**	60.5	14.2	31	177
WA 8166				**50**	61.1	14.3	29	177
Glee (WA 8074)		62	59	**49**	61.2	15.1	31	176
Lassik		64	62	48	61.3	13.8	25	178
SY605 CL				47	61.5	15.5	31	175
Hollis	49	56	55	47	60.8	14.1	36	176
Patwin 515			57	47	59.4	14.8	23	178
Otis		58	56	47	60.9	13.2	33	177
WA 8164				46	61.0	14.2	32	175
WA 8165				46	**62.1**	14.7	36	177
BR7030		70	61	46	61.8	14.4	29	176
Bullseye	47	56	55	45	**62.3**	13.8	27	177
Hank	42	46	49	44	59.5	14.2	29	176
Jefferson	49	58	54	44	61.0	14.0	29	176
LCS-ALbany				43	60.2	15.7	30	180
WA 8168				43	60.8	14.5	30	178
IDO694				42	61.8	14.2	25	176
V272				42	60.2	13.4	24	182
Tara 2002	44	51	53	42	60.9	14.2	32	176
LCS-Powerplay			53	41	61.4	13.6	29	178
LCS-Buck Pronto	47	55	53	41	61.2	14.0	29	176
WA 8163				41	**62.2**	13.1	30	178
Jedd				41	61.2	13.6	26	176
Clear White 515			55	40	58.6	15.8	27	177
Kelse	46	53	54	40	60.6	15.1	32	177
WB-Fuzion	44	50	49	40	60.5	15.0	30	175
Expresso				39	59.9	15.3	26	177
Dayn (WA 8123)		62	58	39	60.7	14.4	29	176
C.V. %	9	9	7	10	0.6	5.5	4	0
LSD (.10)	2	3	3	5	0.4	0.8	1	1
Average	46	57	56	45	60.8	14.3	29	177
Highest	57	70	62	54	62.3	15.8	36	182
Lowest	34	46	49	39	58.6	12.9	23	175

Lamont Hard Spring Wheat

1. Grain yield in the 2012 Lamont hard spring wheat trial averaged 45 bushels/acre, 1 bushel/acre lower than the 5-year average. The Lamont nursery was located about five miles southeast of Lamont, WA (G. White, cooperator).

2. This nursery was seeded on 19 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Fertilizer was applied pre-plant at 80#N/acre and a soil test showed 174#N/acre available. Available N should be adequate for expected yield and protein for hard spring wheat, and no supplemental fertilizer was applied. Spring seeding conditions were good.

3. Yields ranged from 39 bu/a to 54 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 30 entries are in this group. The hard white 'WB Hartline' was the highest yielding entry in this trial. 'Scarlet' was the highest yielding over 5 years of results at this site. Fungicide was applied 10 May for stripe rust control.

4. Test weights averaged 60.8 lbs/bu and ranged from 58.6 to 62.3 lbs/bu. Grain protein averaged 14.3% with a range of 12.9 to 15.8%. The average plant height was 29 inches with no lodging.

Table 115. **2012 WSU Variety Testing Hard Spring Wheat Trial, Lind**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Otis		38	38	**32**	61.4	15.4	31	157
WA 8165				**30**	62.0	17.1	29	156
WA 8163				29	61.0	16.5	29	157
WA 8166				29	61.7	16.7	24	156
Lassik		43	41	28	61.6	15.7	25	155
Hollis	29	36	36	28	61.1	16.7	30	155
WA 8164				28	61.5	16.9	26	154
Scarlet	32	39	38	28	60.3	17.0	26	157
WA 8168				28	60.6	17.2	26	156
Bullseye	30	38	37	28	**62.7**	16.6	24	155
LCS-Powerplay			35	27	61.2	16.4	25	155
Kelse	31	37	35	27	60.6	17.7	29	156
WB-Fuzion	31	36	35	27	60.7	17.9	29	153
Jefferson	31	40	38	27	61.8	16.7	26	153
Dayn (WA 8123)		40	39	27	60.8	16.5	25	155
Glee (WA 8074)		38	38	26	61.6	16.4	27	152
IDO694				26	61.9	16.0	24	151
WA 8167				26	60.6	17.4	27	156
WB Hartline				26	60.2	17.1	25	154
LCS-ALbany				25	60.0	16.8	25	157
LCS-Buck Pronto	28	36	35	24	60.9	17.1	25	153
V272				23	60.8	15.7	22	159
BR7030		37	38	23	61.0	16.5	26	155
SY605 CL				23	61.4	18.0	26	153
Clear White 515			33	23	59.7	17.2	29	151
Tara 2002	27	33	32	23	59.9	16.7	27	153
Jedd				23	61.8	15.9	24	154
Hank	27	32	31	22	60.0	16.0	27	155
Expresso				22	60.2	17.8	23	154
Patwin 515			34	21	59.0	17.4	19	155
C.V. %	7	7	7	9	0.5	1.5	6	0
LSD (.10)	1	1	2	2	0.3	0.3	2	1
Average	29	37	36	26	60.9	16.8	26	155
Highest	32	43	41	32	62.7	18.0	31	159
Lowest	20	32	31	21	59.0	15.4	19	151

Lind Hard Spring Wheat

1. Grain yield in the 2012 Lind hard spring wheat trial averaged 26 bushels/acre, 3 bushels/acre lower than the 5-year average. The Lind nursery was located on the WSU Lind Dryland Experiment Station three miles NE of Lind, WA. This nursery was conducted in cooperation with the WSU spring wheat breeding program.

2. This nursery was seeded on 9 March, 2012 following fallow. Seed was placed at a 60#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 50#N/acre and soil test analysis showed ample N available to meet the hard protein target at projected yield levels. Spring seeding and establishment conditions were good.

3. Yields ranged from 21 bu/a to 32 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 30 entries are in this group. The hard white variety ‘Otis’ was the highest yielding in 2012 and 'Scarlet‘ was the highest yielding over 5 years at this location. No fungicides were applied nor stripe rust impact observed in this trial.

4. Test weights were good with an average of 60.9 lbs/bu and ranged from 59.0 to 62.7 lbs/bu. Grain protein averaged 16.8% with a range of 15.4 to 18.0%. The average plant height was 26 inches with no lodging.

Table 116. **2012 WSU Variety Testing Hard Spring Wheat Trial, Mayview**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)
Glee (WA 8074)		45	50	**46**	61.4	12.1
Otis		39	46	**46**	62.3	11.6
WB Hartline				**45**	61.1	11.4
WA 8166				**43**	62.3	12.4
LCS-Powerplay			45	41	**63.1**	12.4
Scarlet	47	41	45	39	61.0	12.0
Kelse	45	42	45	39	62.4	12.7
WA 8163				39	62.5	12.4
Jefferson	45	40	43	38	60.7	12.6
Hollis	43	39	42	38	60.8	12.8
WB-Fuzion	43	41	42	37	60.4	13.1
WA 8165				37	62.8	13.3
SY605 CL				37	62.4	12.5
LCS-Buck Pronto	45	41	45	37	62.2	12.6
Bullseye	46	42	41	36	**63.3**	12.2
Tara 2002	45	41	43	36	61.5	12.3
IDO694				36	**63.2**	12.5
Lassik		43	45	35	61.5	12.8
V272				34	61.7	13.4
WA 8167				34	60.7	11.9
WA 8168				34	62.1	12.9
WA 8164				34	61.5	12.9
Expresso				33	61.5	13.7
LCS-ALbany				33	61.6	12.1
Dayn (WA 8123)		38	41	32	62.0	12.2
BR7030		43	43	31	**63.0**	11.8
Patwin 515			42	31	60.7	13.0
Clear White 515			40	29	60.1	12.4
Jedd				25	61.7	12.7
Hank	41	35	33	24	59.0	13.0
C.V. %	8	9	8	9	0.5	2.6
LSD (.10)	2	2	2	3	0.3	0.3
Average	44	41	43	36	61.7	12.5
Highest	47	45	50	46	63.3	13.7
Lowest	41	35	33	24	59.0	11.4

Table 117.

2012 WSU Variety Testing Hard Spring Wheat Trial (No Fungicide), Mayview

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)
WB Hartline	--	--	--	**52**	61.2	11.4
Glee (WA 8074)	--	--	--	**50**	61.6	11.9
Kelse	--	--	--	46	62.3	13.2
Scarlet	--	--	--	45	61.1	12.0
LCS-Powerplay	--	--	--	45	63.0	12.3
Otis	--	--	--	45	62.0	11.0
Tara 2002	--	--	--	43	61.4	12.0
WA 8165	--	--	--	43	62.9	13.4
SY605 CL	--	--	--	42	62.2	12.9
Dayn (WA 8123)	--	--	--	41	62.2	12.0
Hollis	--	--	--	41	60.8	12.9
IDO694	--	--	--	41	**63.4**	12.2
Bullseye	--	--	--	41	**63.2**	12.0
WA 8163	--	--	--	40	62.3	12.6
V272	--	--	--	40	62.0	12.6
WA 8166	--	--	--	39	62.1	12.7
Jefferson	--	--	--	39	60.7	12.5
WA 8167	--	--	--	39	60.9	12.2
BR7030	--	--	--	39	62.7	11.7
LCS-Buck Pronto	--	--	--	39	62.0	12.9
WA 8164	--	--	--	38	61.4	13.0
WB-Fuzion	--	--	--	36	60.6	12.6
WA 8168	--	--	--	36	62.0	12.8
Expresso	--	--	--	35	61.4	14.1
Clear White 515	--	--	--	35	60.0	12.2
Patwin 515	--	--	--	35	60.8	13.0
LCS-ALbany	--	--	--	33	61.8	11.4
Lassik	--	--	--	32	61.4	12.8
Jedd	--	--	--	28	61.3	11.9
Hank	--	--	--	27	59.0	12.4
C.V. %	--	--	--	8	0.5	2.4
LSD (.10)	--	--	--	4	0.3	0.3
Average	--	--	--	39	61.7	12.4
Highest	--	--	--	52	63.4	14.1
Lowest	--	--	--	27	59.0	11.0

Table 118. **2012 WSU Hard Spring Wheat Trial, Mayview**

Impact of Foliar Disease on Grain Yield

Variety Name *(Hard White Italicized)*	Grain Yield Bu/A		Yield Difference (protected-unprotected)	
	Protected	Unprotected	Bu/A	%
Glee (WA 8074)	46	50	-3	-7
Otis	46	45	2	3
WB Hartline	45	52	-8	-17
WA 8166	43	39	4	9
LCS-Powerplay	41	45	-3	-8
Kelse	39	46	-7	-17
Scarlet	39	45	-6	-14
WA 8163	39	40	-2	-4
Jefferson	38	39	-1	-2
Hollis	38	41	-3	-7
WB-Fuzion	37	36	1	3
WA 8165	37	43	-6	-15
SY605 CL	37	42	-5	-14
LCS-Buck Pronto	37	39	-2	-5
Bullseye	37	41	-4	-11
Tara 2002	36	43	-7	-21
IDO694	36	41	-5	-14
Lassik	35	32	3	9
V272	34	40	-6	-16
WA 8167	34	39	-5	-14
WA 8168	34	36	-2	-6
WA 8164	34	38	-4	-13
Expresso	33	35	-2	-6
LCS-ALbany	33	33	-1	-2
Dayn (WA 8123)	32	41	-9	-28
Patwin 515	31	35	-4	-12
BR7030	31	39	-8	-25
Clear White 515	29	35	-6	-21
Jedd	25	28	-3	-14
Hank	24	27	-2	-10
CV	9	8		
LSD	3	4		
GRAND MEAN	36	39	-3	-9
Max. Mean	46	52		
Min. Mean	24	27		

Mayview Hard Spring Wheat

1. This summary includes duplicate hard spring wheat trials except one was sprayed with fungicide and the other was not sprayed. Grain yield in these 2012 Mayview hard spring wheat trials averaged 36 bushels/acre, 8 bushels/acre lower than the 5-year average in the fungicide sprayed trial, and the non-sprayed trial averaged 39 bushels/acre. The Mayview trial was located about 5 miles south of Lower Granite Dam on the Snake River, or 12 miles northeast of Pomeroy, WA (R. & R. Koller, cooperators).

2. These trials were seeded on 25 April, 2012 following winter wheat. Seed was placed at an 80#/ acre seeding rate using a double-disk plot drill set on 6-inch spacing. Base fertilizer was 70#N/acre applied pre-plant and a soil test showed 81#N/acre available, no additional fertilizer was applied to make protein in these hard trials based on yield projection. Spring seeding conditions were good and establishment was uniform. Tilt® fungicide at 4 oz/acre was applied 1 June and 11 July to the sprayed trial and stripe rust levels were low.

3. In the sprayed trial, yields ranged from 24 to 46 bu/a, while in the non-sprayed trial, yields ranged from 27 to 52 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 30 entries are in this group in the sprayed and 2 of the 30 are in the top group in the non-sprayed. The newly released hard red ‘Glee’, previously designated as WA8074, was the highest yielding named variety entry in the sprayed trial and ‘Scarlet’ was the highest yielding over 5 years of results at this site. The hard white ‘WB Hartline’ was the highest yielding named variety in the non-sprayed trial. Yields in both trials and the difference in yield and percentage difference between sprayed and non-sprayed for each entry are in a separate comparison table. Average yield of the sprayed trial was 3 bu/a lower than non-sprayed trial.

4. Test weights averaged 61.7 lbs/bu and ranged from 59.0 to 63.3 lbs/bu in the sprayed trial, and averaged 61.7 lbs/bu and ranged from 59.0 to 63.4 lbs/bu in the non-sprayed trial. Grain protein averaged 12.5% with a range of 11.4 to 13.7% in the sprayed trial, and protein averaged 12.4% with a range of 11.0 to 14.1% in the non-sprayed trail. There was no lodging in either trial.

Table 119. **2012 WSU Variety Testing Hard Spring Wheat Trial, Moses Lake**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Lassik	--	107	101	**101**	63.1	14.4	30	150
Otis	--	104	101	**90**	64.3	14.2	33	152
WB-Fuzion	--	103	90	**88**	63.5	16.2	33	146
Bullseye	--	100	93	85	**65.0**	14.9	29	150
WA 8123	--	109	98	83	63.0	16.0	29	148
WA 8167	--			81	63.2	15.8	34	150
Jefferson	--	97	90	80	63.6	15.3	30	149
LCS-Buck Pronto	--	94	84	80	62.6	16.7	33	148
Hollis	--	93	88	79	63.8	16.5	36	149
WA 8166	--			77	64.1	16.2	30	150
UI Winchester	--	97	87	76	63.5	15.3	29	148
WA 8165	--			75	**64.6**	15.9	36	150
WA 8164	--			75	63.4	16.5	31	147
BR7030	--	100	86	75	63.7	15.9	31	149
Scarlet	--	88	85	74	62.9	16.8	32	151
LCS-Powerplay	--		80	72	63.6	15.2	30	149
WA 8163	--			72	63.2	15.8	31	152
Tara 2002	--	95	83	72	61.5	17.0	29	147
Kelse	--	90	82	71	62.9	16.2	33	150
Expresso	--	99		70	62.3	16.7	27	149
Glee (WA 8074)	--	97	86	70	63.4	17.3	29	147
Solano	--	98		69	62.6	16.7	25	149
Patwin 515	--		75	69	61.3	16.3	21	150
V272	--			69	63.5	14.9	25	156
Hank	--	96	83	69	62.8	16.9	29	149
Volt	--			68	64.0	15.7	29	151
WB Hartline	--			66	61.2	17.0	29	147
LCS-ALbany	--			63	63.0	16.3	28	153
Jedd	--			62	64.2	15.5	27	149
Cabernet	--	94	77	62	62.7	16.8	21	149
WA 8168	--			60	63.0	16.2	31	150
Clear White 515	--		74	60	61.0	17.0	28	147
SY605 CL	--			60	63.0	17.6	30	146
IDO694	--			58	62.8	16.1	25	147
WB-Rockland	--		69	57	61.4	17.3	24	149
Malbec	--	92	79	57	62.1	17.0	25	148
C.V. %	--	9	11	16	0.7	6.4	5	0
LSD (.10)	--	5	7	13	0.5	1.1	2	1
Average	--	98	85	72	63.1	16.2	29	149
Highest	--	109	101	101	65.0	17.6	36	156
Lowest	--	88	69	57	61.0	14.2	21	146

Moses Lake Hard Spring Wheat

1. Grain yield in the 2012 Moses Lake hard spring wheat trial averaged 72 bushels/acre, 26 bushels/acre lower than the 3-year average. The Moses Lake trial was located about six miles south of Moses Lake, WA (S. Tokunaga, cooperator).

2. This nursery was seeded on 23 March, 2012 following potatoes. Seed was placed at a 90#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 250#N/acre plus 100#N/acre with irrigation and along with the 126#N from the soil test analysis, there was ample N available to meet the hard protein target at projected yield levels. Spring seeding conditions were variable and establishment was not uniform. Emergence and early growth were variable and poor. Wireworm damage was found and the trial site did not appear uniform. .

3. Statistical analysis of these results show highly variable results, but still significant. Yields ranged from 57 bu/a to 101 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 30 entries are in this group. ‘Lassik’ was the highest yielding in 2012 and also the highest yielding named variety over 3 years at this location. Fungicide was applied and stripe rust was not a problem.

4. Test weights averaged 63.1 lbs/bu and ranged from 61.0 to 65.0 lbs/bu. Grain protein averaged 16.2% with a range of 14.2 to 17.6%. The average plant height was 29 inches with no lodging. High test weight and protein reflect the poor establishment and high fertility at this site

Table 120. **2012 WSU Variety Testing Hard Spring Wheat Trial, Pullman**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8123		81	83	**81**	**62.6**	10.8	30	177
WA 8163				**79**	62.0	10.9	31	181
WA 8165				**79**	**62.5**	11.7	38	179
Otis		55	64	**78**	61.4	10.4	33	179
Glee (WA 8074)		73	76	**78**	61.4	11.5	32	176
Bullseye	65	63	72	**78**	**62.9**	10.6	27	177
WA 8167				77	60.4	11.5	31	178
V272				77	60.4	11.0	26	184
WB Hartline				76	60.9	10.8	30	177
Scarlet	69	70	72	76	60.9	11.2	31	178
WA 8166				76	62.0	11.1	31	179
Tara 2002	59	54	64	75	61.1	11.7	31	175
WA 8168				75	61.9	11.2	30	180
LCS-Buck Pronto	71	75	73	75	61.3	11.7	29	176
Jefferson	65	65	68	74	60.6	11.5	29	177
LCS-Powerplay			65	73	61.6	11.1	29	177
SY605 CL				72	61.5	12.6	35	176
Hollis	61	60	68	72	60.5	11.9	37	177
IDO694				71	61.9	11.1	26	174
Kelse	61	57	65	70	61.6	12.0	32	178
WA 8164				70	60.3	11.4	30	177
Lassik		71	71	68	60.5	11.0	27	178
BR7030		71	71	68	62.0	10.9	29	178
LCS-ALbany				67	61.0	10.8	30	183
Expresso				67	61.5	12.7	27	178
Patwin 515			72	66	59.3	12.2	22	179
Jedd	65			65	59.8	11.9	26	177
WB-Fuzion	56	53	56	65	60.1	12.2	30	175
Hank	52	43	51	61	58.1	11.8	28	177
Clear White 515			60	55	59.0	12.1	30	174
C.V. %	6	4	5	4	1.3	4.7	5	0
LSD (.10)	2	2	2	3	0.8	0.6	2	1
Average	62	64	68	72	61.0	11.4	30	178
Highest	71	81	83	81	62.9	12.7	38	184
Lowest	52	43	51	55	58.1	10.4	22	174

Table 121.

2012 WSU Variety Testing Hard Spring Wheat Trial (No Fungicide), Pullman

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8167	--	--	--	**79**	61.0	10.8	31	178
WA 8123	--	--	--	**78**	**62.7**	10.2	30	177
WA 8163	--	--	--	**77**	61.4	10.7	32	181
WA 8165	--	--	--	**77**	**62.9**	11.4	39	179
WB Hartline	--	--	--	**77**	60.7	10.2	30	177
Scarlet	--	--	--	74	60.8	10.5	32	178
Glee (WA 8074)	--	--	--	73	60.9	10.7	31	175
WA 8166	--	--	--	72	61.8	11.0	32	180
WA 8168	--	--	--	71	**62.2**	10.9	31	180
SY605 CL	--	--	--	70	60.9	11.4	34	175
Bullseye	--	--	--	70	**62.3**	10.3	28	177
LCS-Powerplay	--	--	--	69	61.8	10.9	29	177
V272	--	--	--	68	60.4	10.6	25	184
WA 8164	--	--	--	68	61.0	11.3	29	178
IDO694	--	--	--	68	62.1	10.6	26	174
LCS-Buck Pronto	--	--	--	68	60.4	11.3	30	176
Tara 2002	--	--	--	68	60.0	11.2	32	176
Jefferson	--	--	--	67	60.5	11.0	31	177
Kelse	--	--	--	67	61.3	11.9	32	178
Otis	--	--	--	66	61.4	10.4	33	179
BR7030	--	--	--	66	61.4	10.4	28	178
Hollis	--	--	--	66	60.3	11.3	36	177
Expresso	--	--	--	65	61.1	11.8	27	178
Lassik	--	--	--	63	61.0	10.6	26	178
Patwin 515	--	--	--	63	59.7	11.1	22	179
LCS-ALbany	--	--	--	61	60.4	10.8	30	183
WB-Fuzion	--	--	--	56	58.8	11.8	30	175
Clear White 515	--	--	--	52	58.6	12.2	27	174
Jedd	--	--	--	51	57.1	11.2	27	177
Hank	--	--	--	49	56.3	11.6	29	177
C.V. %	--	--	--	4	1.1	3.8	4	0
LSD (.10)	--	--	--	3	0.7	0.4	1	1
Average	--	--	--	67	60.7	11.0	30	178
Highest	--	--	--	79	62.9	12.2	39	184
Lowest	--	--	--	49	56.3	10.2	22	174

Table 122. **2012 WSU Hard Spring Wheat Trial, Pullman**

Impact of Foliar Disease on Grain Yield

Variety Name *(Hard White Italicized)*	Grain Yield Bu/A		Yield Difference (protected-unprotected)	
	Protected	Unprotected	Bu/A	%
WA 8123	81	78	3	4
WA 8163	79	77	2	2
WA 8165	79	77	2	2
Glee (WA 8074)	78	73	5	7
Otis	78	66	12	15
Bullseye	78	70	8	10
WA 8167	77	79	-2	-3
V272	77	68	9	11
WB Hartline	76	77	-1	-1
WA 8166	76	72	3	4
Scarlet	76	74	2	3
Tara 2002	75	68	8	10
WA 8168	75	71	5	6
LCS-Buck Pronto	75	68	7	9
Jefferson	74	67	8	10
LCS-Powerplay	73	69	4	5
SY605 CL	72	70	2	2
Hollis	72	66	6	8
IDO694	71	68	3	5
Kelse	70	67	4	5
WA 8164	70	68	2	3
Lassik	68	63	5	8
BR7030	68	66	2	3
LCS-ALbany	67	61	7	10
Expresso	67	65	2	3
Patwin 515	66	63	3	5
Jedd	65	51	14	22
WB-Fuzion	65	56	8	13
Hank	61	49	12	20
Clear White 515	55	52	4	6
C.V. %	4	4		
LSD (0.10)	3	3		
Average	72	67	5	7
Highest	81	79		
Lowest	55	49		

Pullman Hard Spring Wheat

1. This summary includes duplicate hard spring wheat trials except one was sprayed with fungicide and the other was not sprayed. Grain yield in these 2012 Pullman hard spring wheat trials averaged 72 bushels/acre, 10 bushels/acre higher than the 5-year average in the fungicide sprayed trial, and the non-sprayed trial averaged 67 bushels/acre. The Pullman trial was located about two miles south of Pullman, WA on the WSU Spillman Experimental farm.

2. These trials were seeded on 25 April, 2012 following winter barley. Seed was placed at a 90#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 100#N/acre applied pre-plant and a soil test showed 72#N/acre available, an additional 46#N/acre was applied to make protein in these hard trials based on yield projection. Spring seeding conditions were good and establishment was uniform. Quilt® fungicide at 14 oz/acre was applied 11 June to the sprayed trial and stripe rust levels were low to moderate.

3. In the sprayed trial, yields ranged from 55 bu/a to 81 bu/a, while in the non-sprayed trial, yields ranged from 49 to 79 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 30 entries are in this group in the sprayed and 5 of the 30 are in the top group in the non-sprayed. ‘Otis’, 'Glee' and 'Bullseye' were the highest yielding named entries in the sprayed trial and ‘LCS-Buck Pronto’ was the highest yielding over 5 years of results at this site. The hard white ‘WB Hartline’ was the highest yielding named variety in the non-sprayed trial. Yields in both trials and the difference in yield and percentage difference between sprayed and non-sprayed for each entry are in a separate comparison table. Yield advantage in the sprayed trial averaged 5 bu/acre and ranged from -2 to 14 bu/a.

4. Test weights averaged 61.0 lbs/bu and ranged from 58.1 to 62.9 lbs/bu in the sprayed trial, and averaged 60.7 lbs/bu and ranged from 56.3 to 62.9 lbs/bu in the non-sprayed trial. Grain protein averaged 11.4% with a range of 10.4 to 12.7% in the sprayed trial, and protein averaged 11.0% with a range of 10.2 to 12.2% in the non-sprayed trail. The average plant height was 30 inches in both trials and there was no lodging in either trial.

Table 123. **2012 WSU Variety Testing Hard Spring Wheat Trial, Reardan**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
Glee (WA 8074)		74	72	**65**	**61.0**	14.0	38	183
WA 8163				**63**	**61.7**	13.6	37	186
WA 8167				**63**	59.6	14.4	38	186
Scarlet	61	74	66	**61**	59.2	14.1	38	185
BR7030		79	70	**60**	60.3	13.6	36	186
LCS-Buck Pronto	59	71	63	**60**	**60.8**	14.5	36	182
Expresso				**60**	**61.2**	15.3	33	184
Kelse	59	70	63	**58**	60.4	15.3	37	185
Otis		69	62	**58**	60.1	13.6	41	187
Bullseye	60	72	62	**58**	**61.7**	14.2	33	186
WA 8165				**58**	**61.3**	15.2	47	186
WA 8164				57	**60.5**	15.0	38	185
IDO694				57	**60.9**	13.8	31	182
Clear White 515			62	56	59.7	15.1	33	182
WB-Fuzion	60	69	60	56	60.0	14.7	38	183
SY605 CL				56	**61.9**	15.3	40	183
Jefferson	58	68	62	55	59.2	15.2	37	186
WA 8166				54	58.8	14.9	37	187
WB Hartline				54	58.1	15.0	37	186
Hollis	52	62	61	54	59.1	15.8	47	186
WA 8168				54	60.0	14.7	36	187
Dayn (WA 8123)		75	68	53	59.0	14.6	35	184
Lassik		76	69	53	59.5	14.0	31	187
LCS-ALbany				52	58.7	14.4	35	188
Jedd				52	59.5	14.3	32	184
Hank	54	63	54	52	58.1	14.4	36	185
LCS-Powerplay			61	52	60.1	14.5	36	184
Tara 2002	52	63	58	52	58.8	14.5	38	183
V272				49	58.4	13.7	30	190
Patwin 515			60	48	58.9	15.4	27	186
C.V. %	8	8	8	11	2.2	5.1	2	0
LSD (.10)	2	3	4	7	1.4	0.8	1	1
Average	56	70	63	56	59.9	14.6	36	185
Highest	61	79	72	65	61.9	15.8	47	190
Lowest	45	62	54	48	58.1	13.6	27	182

Reardan Hard Spring Wheat

1. Grain yield in the 2012 Reardan hard spring wheat trial averaged 56 bushels/acre, equal to the 5-year average for this location. The Reardan nursery was located about three miles east of Reardan, WA (H. Johnson, cooperator).

2. This nursery was seeded on 23 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a no-till plot drill equipped with Cross-slot openers set on 10-inch spacing. Fertilizer was applied through the drill at 111#N/acre and a soil test showed 103#N/acre available. Available N should be adequate for expected yield and protein for hard spring wheat and no supplemental fertilizer was applied. Spring seeding conditions were good.

3. Yields ranged from 48 bu/a to 65 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 11 of the 30 entries are in this group. The newly released variety ‘Glee’ was the highest yielding entry in this trial and ‘Scarlet’ was the highest yielding over 5 years at this location. Fungicide was applied 13 June for stripe rust control and there was minimal stripe rust impact in this trial.

4. Test weights averaged 59.9 lbs/bu and ranged from 58.1 to 61.9 lbs/bu. Grain protein averaged 14.6% with a range of 13.6 to 15.8%. The average plant height was 36 inches with no lodging.

Table 124. **2012 WSU Variety Testing Hard Spring Wheat Trial, St. John**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
WA 8167				**74**	61.0	10.3	38	175
Glee (WA 8074)		57	65	67	62.1	10.2	35	171
Scarlet	62	58	67	67	61.1	10.5	38	174
WB Hartline				66	60.6	10.1	35	174
WA 8166				66	61.8	10.4	35	175
Bullseye	58	52	61	66	62.4	9.7	31	172
BR7030		54	59	64	62.2	10.2	33	175
Kelse	57	52	61	64	62.0	11.4	37	173
Dayn (WA 8123)		56	65	63	62.0	10.1	33	171
Jefferson	57	52	58	62	60.6	11.2	36	173
Hollis	57	50	59	61	61.2	11.1	46	173
Otis		45	54	61	62.0	9.1	38	173
WA 8164				60	61.7	11.3	34	171
LCS-Powerplay			56	60	62.3	10.5	33	172
LCS-Buck Pronto	57	54	61	59	61.4	11.0	34	171
WA 8168				58	62.3	10.1	33	176
WA 8165				58	62.5	10.9	44	174
WA 8163				57	**63.2**	9.6	37	176
SY605 CL				56	61.9	12.0	37	170
LCS-ALbany				56	61.4	9.6	34	178
IDO694				55	**62.7**	11.1	29	170
Expresso				55	61.6	11.9	31	174
WB-Fuzion	46	47	53	54	61.3	10.8	34	171
Hank	49	39	45	54	59.3	10.6	33	172
V272				53	60.2	9.7	34	182
Lassik		56	60	52	62.1	10.2	29	173
Patwin 515			56	50	60.3	11.2	25	176
Tara 2002	53	46	51	50	61.8	9.9	35	170
Clear White 515			55	47	60.7	11.5	31	169
Jedd				45	62.0	10.2	28	171
C.V. %	10	11	10	9	0.9	7.6	5	1
LSD (.10)	3	4	4	6	0.6	0.9	2	1
Average	55	51	58	59	61.6	10.6	34	173
Highest	62	58	67	74	63.2	12.0	46	182
Lowest	46	39	45	45	59.3	9.1	25	169

St. John Hard Spring Wheat

1. Grain yield in the 2012 St. John hard spring wheat trial averaged 59 bushels/acre, four bushels/acre higher than the 5-year average for this location. The St. John nursery was located about three miles east of St. John, WA (M. Mills, cooperator).

2. This nursery was seeded on 13 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Fertilizer was applied pre-plant at 80#N/acre and a soil test showed 99#N/acre available. Additionally, 36 #N/acre was applied for hard spring wheat protein. Spring seeding conditions were good.

3. Yields ranged from 45 bu/a to 74 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 1 of the 30 entries is in this group. The newly released variety ‘Glee’ and ‘Scarlet’ were the highest yielding named entries in this trial and ‘Scarlet’ was the highest yielding over 5 years at this location. Fungicide was applied 24 May for stripe rust control and there was minimal stripe rust impact in this trial.

4. Test weights averaged 61.6 lbs/bu and ranged from 59.3 to 63.2 lbs/bu. Grain protein averaged 10.6% with a range of 9.1 to 12.0%. The average plant height was 34 inches with no lodging.

Table 125. **2012 WSU Variety Testing Hard Spring Wheat Trial, Walla Walla**

Variety Name *Hard White Italicized	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2012 YIELD (BU/A)	2012 TEST WT (LBS/BU)	2012 PROTEIN (%)	2012 PLANT HT	2012 HEAD DATE
IDO694				**80**	**61.8**	12.6	32	166
Tara 2002	68	73	72	**79**	60.3	13.0	38	167
Glee (WA 8074)		81	73	**78**	60.3	12.8	38	169
Hollis	66	71	68	**77**	60.3	14.5	46	168
WB-Fuzion	64	73	69	**76**	60.0	14.5	38	167
WA 8165				75	**62.3**	14.5	46	171
Jefferson	71	74	68	73	59.8	13.2	37	170
WA 8167				73	59.2	13.4	38	172
Bullseye	68	71	71	73	**61.8**	13.7	34	170
WA 8166				73	59.9	13.9	38	171
SY605 CL				72	61.6	14.4	40	168
LCS-Buck Pronto	72	80	68	71	60.4	13.5	38	168
WB Hartline				71	58.3	12.4	37	171
Scarlet	72	73	69	71	58.5	13.1	38	172
Otis		67	68	71	60.4	11.7	41	172
LCS-Powerplay			66	71	60.8	13.3	37	170
Dayn (WA 8123)		81	70	69	60.0	13.2	34	168
WA 8164				68	59.4	14.2	37	169
LCS-ALbany				67	60.5	12.6	35	177
WA 8168				67	60.1	13.0	38	175
Lassik		73	66	66	59.3	12.7	32	170
Kelse	66	65	66	65	59.1	13.6	38	170
WA 8163				64	61.5	12.7	39	175
BR7030		75	66	63	59.3	13.1	34	168
Clear White 515			63	63	58.1	13.1	35	167
Hank	61	59	61	63	57.1	14.2	35	168
Jedd				62	59.6	13.5	32	169
Expresso				62	59.2	13.4	33	170
V272				55	59.5	12.3	31	176
Patwin 515			58	54	56.4	13.0	27	174
C.V. %	7	7	6	5	0.9	4.9	3	0
LSD (.10)	2	3	3	4	0.5	0.7	1	1
Average	67	73	67	69	59.8	13.3	37	170
Highest	72	81	73	80	62.3	14.5	46	177
Lowest	61	59	58	54	56.4	11.7	27	166

Walla Walla Hard Spring Wheat

1. Grain yield in the 2012 Walla Walla hard spring wheat trial averaged 69 bushels/acre, 2 bushels/acre higher than the 5-year average. The Walla Walla nursery was located about eight miles northeast of Walla Walla, WA (G. Smith, cooperator).
2. This nursery was seeded on 22 April, 2012 following winter wheat. Seed was placed at an 80#/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Fertilizer was applied pre-plant at 120#N/acre and a soil test showed 106#N/acre available. Total fertilizer should be adequate for hard protein levels based on expected yield. Spring seeding conditions were good.
3. Yields ranged from 54 bu/a to 80 bu/a. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 30 entries are in this group. ‘Tara 2002’ was the highest yielding named entry in this trial. ‘Scarlet’ and ‘LCS-Buck Pronto’ were the highest yielding over 5 years of results at this site. Fungicide was applied 10 June for stripe rust control.
4. Test weights averaged 59.8 lbs/bu and ranged from 56.4 to 62.3 lbs/bu. Grain protein averaged 13.3% with a range of 11.7 to 14.5%. The average plant height was 37 inches with no lodging.

Table 126.

STRIPE RUST INFECTION TYPE (IT*) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING EXTENSION DISEASE NURSERY (EXP32) (COORDINATED BY STEVE GUY AS SPRING WHEAT VARIETY TRIAL NURSERIES) AT SPILLMAN (LOC 1), PLANT PATH (LOC 2), AND WHITLOW (LOC 4) FARMS NEAR PULLMAN, MT VERNON (LOC 5); AND WALLA WALLA (LOC 6), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2012 UNDER NATURAL INFECTION.

NAME	CLASS	Spillman Farm (Pullman)		Plant Path Farm (Pullman)		Whitlow Farm (Pullman)		Mt. Vernon				Walla Walla		Summary**	Overall rating***
		LOC 01		LOC 03		LOC 04		LOC 05				LOC 06			
		7/13		7/25		7/9		6/19		7/18		7/3			
		Flowering		S. dough		Milk		Stem elong.		Milk		Flowering			
		IT	%	IT	%	IT	%	IT	%	IT	%	IT	%		
V272	HRS	5-2	30	3	10	5, 8	30	8	5	8-2	10	8	90	S	9
LCS-ALbany	HRS	8-3	20	2	5	8	100	8	1	5-2	20	8	60	S	9
WA 8163	HWS	2	2	2	2	3	10	8	2	2	10	2	5	R	1
WA 8164	HRS	3	5	2	2	3	30	8	1	3	10	2	2	MR	3
WA 8165	HRS	3	5	2	2	3	10	8	2	2	5	3	5	R	1
WA 8166	HRS	3	5	2	2	3	10	8	1	2	5	3	5	R	1
WA 8167	HRS	2	1	2	2	2	2	2	2	2	2	3	10	R	1
LCS-Buck Pronto	HRS	8	10	5	10	3, 5	30	8	5	5	20	5	10	MR	4
LCS-Powerplay	HRS	8	20	5	15	8	30	8	1	5	20	8	5	MS	6
Jefferson	HRS	8	30	5	5	5, 8	30	5	2	5, 8	20	2, 8	10	MS	6
IDO694	HWS	5	20	5	10	5	30	8	1	3	20	5	10	MR	4
Dayn (WA 8123)	HWS	2	1	2	2	2	2	8	2	2	2	2	1	R	1
AVS	**(S CHECK)**	**8**	**90**	**8**	**100**	**8**	**100**	**8**	**10**	**8**	**100**	**8**	**70**	**S**	**9**
Glee (WA 8074)	HRS	5	5	2	5	2	20	8	1	2	10	2	5	R	2
Lassik	HRS	2	1	2	2	2	1	5	1	2	2	2	1	R	1
Clear White 515	HWS	2	2	2	2	2	1	2	1	2	2	2	5	R	1
Patwin 515	HWS	2	1	2	1	2	1	2	1	2	2	2	1	R	1
BR7030	HWS	5	10	3	5	3	20	2	1	3	10	2	2	R	2
Bullseye	HRS	5	20	2	2	5, 8	20	8	2	3	10	5	10	MR	3
Hank	HRS	8	90	8	40	8	100	8	5	8	90	8	90	S	9
Hollis	HRS	8	20	5	10	5	30	8	5	2	10	3	5	MR-MS	5
Kelse	HRS	8	40	3	5	5	20	8	1	2	5	8	10	MS	6
Otis	HWS	8	30	5	10	5	70	8	2	3	5	5	20	MS	6
Scarlet	HRS	5	10	2	2	3	20	8	2	2	5	2	10	R	2
Tara 2002	HRS	8	60	8	10	8	70	8	2	3	20	8	20	S	8
WB-Fuzion	HRS	8	90	8	30	8	90	8	2	8	80	8	20	S	9
WA 8168	HWS	2	5	2	1	3	10	8	2	2	5	3	5	R	1
Jedd	HRS	8	90	8	80	8	100	8	1	8	100	8	40	S	9
Expresso	HRS	2	1	2	1	2	1	2	1	2	2	2	1	R	1
WB Hartline	HWS	5	20	5	2	5	20	8	1	2	5	5	5	MR	3
SY605 CL	HRS	8	20	5	15	8	80	8	1	8	60	3	10	S	8
UI-Winchester	HRS	5	10	8	10	5	20	8	1	5	10	2	5	MR	4
AVS	**(S CHECK)**	**8**	**90**	**8**	**100**	**8**	**100**	**8**	**10**	**8**	**100**	**8**	**70**	**S**	**9**
Cabernet	HRS	5	10	2	5	5, 8	20	8	2	2	5	5	20	MR	3
Malbec	HRS	3	5	3	5	5	20	8	1	2	5	3	10	MR	3
WB-Rockland	HRS	2	1	2	2	2	1	2	2	2	2	2	1	R	1
Solano	HRS	5	5	2	5	3, 5	20	5	2	2	10	3	5	R	2
Volt	HRS	2	1	2	1	2	1	2	2	2	2	2	1	R	1
AVS	**(S CHECK)**	**8**	**90**	**8**	**100**	**8**	**100**	**8**	**10**	**8**	**100**	**8**	**90**	**S**	**9**

* 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. Entries with a high IT in the first note, but a low IT in the second note at LOC 05 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

** R = resistant, MR = moderately resistant, MS = moderately susceptible, and S =susceptible.

*** 1 = most resistant and 9 most susceptible.

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

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

2012 Spring Barley

2012 WSU Spring Barley Trial Summary
Precipitation Zone >20”

1. Hulled and hulless spring barley grain yield across three locations and 30 entries in the >20” precipitation zone averaged 3710 lbs/acre, and that is lower than the 2011 average of 3890 lbs/acre.
2. Yields among entries averaged across locations ranged from 2720 to 4220 lbs/acre. ‘Champion’ was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (140 lbs/acre) of the highest yield are shown in bold and included 12 of the 30 entries.
3. Test weight averaged 53.3 lbs/bu across locations and was similar to the 2011 average of 53.2 lbs/bu. Grain protein in 2012 averaged 12.5% and was also similar to last year’s 12.6% protein value. Plump, date head, plant height, and lodging results can be found on individual final site summaries.

2012 WSU Spring Barley Trial Summary
Precipitation Zone 16-20”

1. Hulled and hulless spring barley grain yield across five locations and 30 entries in the 16-20” precipitation zone averaged 3900 lbs/acre, lower than the 2011 average of 4830 lbs/acre.
2. Yields among entries averaged across locations ranged from 2740 to 4450 lbs/acre. ‘Lenetah’ was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (140 lbs/acre) of the highest yield are shown in bold and this only included Lenetah of the 30 entries.
3. Test weight averaged 54.4 lbs/bu across locations and was similar to the 2011 average of 54.1 lbs/bu. Grain protein in 2012 averaged 12.1% and was also similar to last year’s 12.0% protein average. Plump, date head, plant height, and lodging results can be found on individual final site summaries.

2012 WSU Spring Barley Trial Summary
Precipitation Zone <16”

1. Hulled and hulless spring barley grain yield across two locations and 30 entries in the <16” precipitation zone averaged 3000 lbs/acre, lower than the 2011 average of 3900 lbs/acre. Bickleton was previously in this zone, but was not in 2012 leaving two locations for this zone.
2. Yields among entries averaged across locations ranged from 1870 to 3670 lbs/acre. ‘Champion’ was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (260 lbs/acre) of the highest yield are shown in bold and this included 4 of the 30 entries.
3. Test weight averaged 46.9 lbs/bu across locations due to low test weights at Almira and were lower than the 2011 53.2 lbs/bu average. Grain protein in 2012 averaged 17.0% and was much higher than last year’s 11.6% protein average. Plump, date head, plant height, and lodging results can be found on individual final site summaries.

Table 127. **2012 WSU Variety Testing Barley Trial Summary**

Precipitation Zone >20"

Variety Name	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average
	Yield (Lbs/A)				Test Wt (Lbs/Bu)				Protein (%)			
2004NZ163	4170	4820	3670	**4220**	54.2	53.8	53.9	54.0	13.3	13.0	10.2	12.2
05WA-316.K	4030	4770	3770	**4190**	53.7	51.8	51.5	52.3	12.8	13.1	9.4	11.8
Champion	4040	4490	4010	**4180**	54.3	53.0	54.1	53.8	12.6	12.1	9.3	11.3
LSC LN09-0920	3820	4380	4150	**4120**	52.9	52.8	51.7	52.5	13.6	13.0	10.2	12.3
CDC Meredith	4270	3550	4430	**4090**	52.7	50.0	51.1	51.3	12.1	13.2	10.5	12.0
07WA-601.6	3480	4580	4150	**4070**	53.4	52.0	53.1	52.9	14.1	13.0	9.1	12.1
07WA-682.1	4160	3970	3960	**4030**	54.2	52.9	52.4	53.2	12.8	12.3	10.4	11.8
Lenetah	3990	3850	4180	**4010**	53.6	53.0	53.3	53.3	13.1	13.2	9.1	11.8
2Ab04-X01084-27	4290	3680	4030	**4000**	53.1	50.5	48.9	50.8	12.6	13.5	11.4	12.5
05WA-316.99	4010	4190	3760	**3990**	53.1	51.9	50.8	51.9	13.2	12.4	9.9	11.8
2004NZ151	3970	4370	3620	**3980**	54.0	53.5	51.0	52.8	13.0	12.3	10.7	12.0
CDC Copeland	4190	3840	3920	**3980**	52.6	50.2	50.6	51.1	12.1	13.5	10.2	11.9
07WA-614.4	3860	4050	3920	3940	52.9	51.7	50.2	51.6	13.7	13.6	9.0	12.1
Bob	3840	3670	3880	3790	53.4	52.7	53.9	53.4	14.6	13.4	9.4	12.5
08WA-137.6	4040	3650	3680	3790	53.7	51.5	49.9	51.7	13.0	12.8	9.7	11.8
08WA-140.11	3880	3730	3720	3780	54.0	52.4	52.2	52.9	12.7	12.6	10.0	11.8
2004NZ170	3690	4200	3440	3770	53.4	52.9	51.8	52.7	13.6	11.9	10.8	12.1
08WA-109.17	4080	3260	3970	3770	53.5	51.1	51.2	51.9	13.2	14.4	10.9	12.8
Radiant	3940	3710	3630	3760	52.8	51.2	51.8	51.9	12.7	12.9	9.2	11.6
06WA-412.4	3600	3890	3700	3730	54.2	52.9	53.3	53.5	13.5	12.7	9.6	12.0
Harrington	3780	3680	3520	3660	53.7	51.8	52.2	52.6	13.5	13.5	9.9	12.3
Baronesse	3350	3780	3750	3620	52.7	51.5	51.4	51.9	13.6	14.1	9.7	12.5
X05013-T267 [1]	3420	2910	3460	3260	52.0	50.5	51.8	51.5	15.8	15.1	10.6	13.8
08WA-107.8	3660	2370	3610	3210	54.2	51.9	52.5	52.9	13.1	14.9	10.6	12.9
08WA-118.12	3230	3490	2810	3180	52.3	51.8	49.5	51.2	14.0	14.2	10.5	12.9
Bentley	4010	2300	3170	3160	52.5	50.0	50.1	50.9	12.5	15.2	10.9	12.9
Hulless												
X05056-T211 [1]	3420	2750	3560	3240	59.4	59.7	59.8	59.6	15.2	15.4	11.2	13.9
09WA-265.14 [1]	3330	2770	3060	3050	61.8	61.8	61.7	**61.8**	13.6	14.5	12.1	13.4
Meresse [1]	2730	2840	3060	2880	58.8	58.7	57.8	58.4	16.9	16.6	12.2	**15.2**
2Ab09-X06F058HL-23 [1]	2750	2520	2880	2720	57.3	60.7	59.3	59.1	15.9	16.7	11.4	**14.7**
C.V. %	8	10	15	11	1.2	1.2	2.3	1.7	3.6	5.6	12.1	7.1
LSD (.10)	300	380	600	250	0.7	0.7	1.3	0.5	0.5	0.8	1.3	0.5
Average	3770	3670	3680	3710	54.2	53.0	52.8	53.3	13.6	13.6	10.3	12.5
Highest	4290	4820	4430	4220	61.8	61.8	61.7	61.8	16.9	16.7	12.2	15.2
Lowest	2730	2300	2810	2720	52.0	50.0	48.9	50.8	12.1	11.9	9.0	11.3

[1] Waxy, High Beta-Glucan

Table 128. **2012 WSU Variety Testing Barley Trial Summary**

Precipitation Zone 16-20"

Variety Name	Yield (Lbs/A)						Test Wt (Lbs/Bu)						Protein (%)					
	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
Lenetah	4750	3760	3410	4500	5830	**4450**	53.5	54.9	54.1	55.4	55.4	54.7	12.4	10.9	11.7	9.3	12.2	11.3
LSC LN09-0920	4810	3010	3400	4200	6090	4300	52.6	54.9	51.8	53.5	54.2	53.4	13.1	11.9	11.9	8.9	10.9	11.3
2004NZ170	4590	2970	3430	4590	5800	4280	51.5	54.2	53.4	53.9	52.9	53.2	13.1	12.2	12.1	8.9	10.9	11.4
Champion	4430	3310	3410	4160	5780	4220	53.2	55.5	54.6	55.8	55.1	54.9	12.6	11.1	12.0	9.0	12.0	11.4
05WA-316.K	4600	3280	3340	4420	5430	4210	52.0	54.0	53.1	54.4	53.6	53.4	13.3	11.6	12.5	9.4	12.0	11.8
08WA-140.11	4200	3210	3520	4190	5560	4140	52.0	54.7	54.2	55.0	54.7	54.1	13.2	11.4	12.0	8.7	13.1	11.7
2004NZ163	4050	2920	3600	4440	5680	4140	52.3	55.6	54.2	54.7	54.2	54.2	13.7	11.9	12.5	9.2	11.4	11.7
05WA-316.99	4400	2900	3400	4580	5390	4130	50.7	52.5	53.6	54.0	53.0	52.8	13.0	12.7	12.3	9.1	12.3	11.9
2004NZ151	4240	3030	3150	4490	5740	4130	50.6	55.1	53.6	54.2	53.0	53.3	13.2	11.5	12.0	8.9	11.3	11.4
Radiant	4240	3210	3450	4280	5240	4090	51.8	54.3	53.6	53.7	54.1	53.5	12.8	11.2	11.9	9.1	11.3	11.3
08WA-107.8	4290	3230	3450	4060	5320	4070	53.1	55.0	53.9	54.7	52.4	53.8	12.7	11.3	11.9	8.9	12.6	11.5
Baronesse	4290	3350	3070	4470	5060	4050	51.0	54.3	53.5	54.8	54.2	53.6	13.4	11.2	12.3	9.0	11.9	11.5
CDC Copeland	3920	3070	3270	4240	5650	4030	51.2	52.8	52.2	53.3	51.8	52.3	13.0	11.4	11.8	8.9	11.5	11.3
08WA-137.6	4100	2890	3420	4460	5270	4030	51.4	54.3	52.9	54.5	53.4	53.3	13.2	12.5	11.7	8.8	12.8	11.8
06WA-412.4	4240	2980	2960	4190	5720	4020	52.3	54.6	54.3	55.0	54.5	54.1	13.6	12.1	13.3	9.5	11.8	12.1
CDC Meredith	4360	3100	3070	4210	5270	4000	51.3	53.2	51.9	53.7	52.0	52.4	13.5	11.6	11.9	8.9	12.8	11.7
07WA-601.6	4270	3300	3110	3870	5230	3960	50.9	54.5	52.7	54.1	54.3	53.3	13.4	12.0	12.7	9.2	11.9	11.8
07WA-682.1	4530	2180	3340	4200	5550	3960	52.7	54.0	54.2	55.1	54.5	54.1	12.8	12.7	12.2	8.5	11.9	11.6
08WA-109.17	3970	2760	3030	4410	5510	3930	51.2	53.7	53.3	54.6	52.9	53.1	13.5	11.9	12.7	8.9	12.2	11.9
Bob	4290	3140	3110	3930	5050	3900	52.8	54.8	53.5	55.3	54.7	54.2	13.6	12.1	13.1	10.5	12.7	12.4
08WA-118.12	4190	2560	2900	3980	5710	3870	52.6	53.7	52.8	54.4	55.2	53.7	13.7	12.5	13.3	9.1	11.7	12.1
Bentley	3880	3040	3350	3980	4890	3830	49.6	52.7	52.0	53.4	53.0	52.2	13.8	11.9	11.9	9.5	12.3	11.9
2Ab04-X01084-27	4030	2840	3070	4170	4920	3800	48.2	52.2	51.5	53.3	51.2	51.3	13.8	11.7	12.4	9.0	13.1	12.0
07WA-614.4	4400	2090	2950	3950	5400	3760	51.0	52.1	52.0	53.1	52.5	52.2	13.6	13.6	13.1	8.7	12.2	12.3
Harrington	3740	2460	3170	4050	5050	3690	51.9	53.5	53.5	54.0	52.2	53.0	13.3	12.9	12.6	9.7	12.9	12.3
X05013-T267 [1]	3920	2680	2890	3260	5010	3550	51.8	53.4	52.7	53.4	52.6	52.8	14.9	13.7	14.3	11.3	14.0	13.6
Hulless																		
X05056-T211 [1]	3690	2400	2820	3590	4430	3390	58.4	61.3	61.8	61.2	58.4	60.2	15.2	14.3	14.3	11.6	14.7	14.0
09WA-265.14 [1]	3380	1980	2310	3450	4900	3200	61.0	62.8	63.5	62.9	62.4	**62.5**	13.6	13.2	13.8	10.3	13.2	12.8
Meresse [1]	3540	1600	2180	3350	4870	3110	59.8	61.1	61.1	60.6	61.7	60.9	16.0	15.3	16.4	12.0	14.7	**14.9**
2Ab09-X06F058HL-23 [1]	2940	1320	2450	3170	3840	2740	59.6	61.1	63.0	58.1	57.9	60.0	15.7	16.3	15.6	11.7	13.6	**14.6**
C.V. %	7	8	8	9	6	8	1.4	1.4	1.1	1.2	1.7	1.4	2.4	4.5	2.7	6.5	6.9	4.7
LSD (0.10)	320	250	280	390	350	140	0.8	0.8	0.6	0.7	1.0	0.4	0.4	0.6	0.4	0.7	0.9	0.3
Average	4140	2820	3130	4090	5310	3900	52.7	55.0	54.4	55.1	54.4	54.4	13.6	12.3	12.7	9.5	12.4	12.1
Highest	4800	3750	3600	4590	6090	4450	61.0	62.8	63.5	62.9	62.4	62.5	16.0	16.3	16.4	12.0	14.7	14.9
Lowest	2940	1320	2180	3170	3840	2740	48.2	52.1	51.5	53.1	51.2	51.3	12.4	10.9	11.7	8.5	10.9	11.3

[1] Waxy, High Beta-Glucan

Table 129. **2012 WSU Variety Testing Barley Trial Summary**

Precipitation Zone <16"

Variety Name	Yield (Lbs/A)			Test Wt (Lbs/Bu)			Protein (%)		
	Almira	Lamont	Average	Almira	Lamont	Average	Almira	Lamont	Average
Champion	3800	3550	**3670**	48.0	51.1	49.5	15.8	13.9	14.9
08WA-107.8	3710	3420	**3560**	46.7	50.8	48.8	15.5	13.7	14.6
Lenetah	3510	3540	**3530**	45.5	51.5	48.5	18.6	12.8	15.7
07WA-601.6	3230	3710	**3470**	42.5	49.9	46.2	18.7	14.0	16.4
05WA-316.K	2970	3760	3360	42.1	49.5	45.8	18.1	14.1	16.1
08WA-140.11	3120	3490	3310	42.9	50.8	46.9	19.7	13.9	16.8
2004NZ151	2980	3500	3240	40.9	51.4	46.2	17.8	14.0	15.9
2004NZ163	3260	3220	3240	43.7	51.6	47.6	19.1	14.2	16.7
08WA-137.6	2620	3780	3200	41.3	49.4	45.4	19.7	14.7	17.2
2004NZ170	3040	3370	3200	40.3	50.8	45.6	19.6	14.9	17.2
07WA-682.1	3090	3300	3190	43.7	50.7	47.2	19.4	13.7	16.6
Radiant	2380	3910	3140	43.3	50.9	47.1	19.3	13.1	16.2
Baronesse	3070	3190	3130	42.8	48.9	45.8	17.8	14.7	16.2
08WA-118.12	3150	3100	3130	43.3	48.5	45.9	19.6	14.7	17.1
08WA-109.17	3040	3120	3080	43.8	49.1	46.5	17.7	13.6	15.7
2Ab04-X01084-27	2550	3420	2980	39.6	49.2	44.4	20.7	13.7	17.2
Bentley	2790	3160	2970	40.7	50.2	45.4	21.3	14.6	17.9
06WA-412.4	3220	2710	2970	44.3	47.9	46.1	18.2	15.2	16.7
LSC LN09-0920	3050	2900	2970	41.9	50.4	46.2	19.8	13.6	16.7
X05013-T267 [1]	3140	2670	2900	43.2	50.5	46.9	20.1	15.3	17.7
Bob	2810	3000	2900	43.9	50.3	47.1	20.2	14.9	17.6
07WA-614.4	2590	3050	2820	40.1	48.7	44.4	20.7	14.5	17.6
CDC Copeland	2250	3380	2810	40.4	50.1	45.3	21.9	14.2	18.1
05WA-316.99	2580	3030	2800	39.4	49.8	44.6	17.4	14.2	15.8
CDC Meredith	2350	3090	2720	39.3	49.9	44.6	19.8	14.4	17.1
Harrington	2470	2600	2530	40.1	50.4	45.3	20.5	14.9	17.7
Hulless									
Meresse [1]	2970	2200	2590	47.9	56.2	**52.1**	20.7	17.4	19.1
X05056-T211 [1]	2410	2580	2490	42.8	55.7	49.3	21.6	16.6	19.1
09WA-265.14 [1]	2030	2320	2170	44.2	59.7	**51.9**	21.0	15.9	18.5
2Ab09-X06F058HL-23 [1]	2050	1690	1870	46.9	52.9	49.9	21.6	19.7	**20.6**
C.V. %	13	11	12	4.2	1.9	3.0	10.0	7.1	9.2
LSD (0.10)	380	350	260	1.9	1.0	1.1	2.1	1.1	1.2
Average	2870	3120	3000	42.9	50.9	46.9	19.4	14.6	17.0
Highest	3800	3910	3670	48.0	59.7	52.1	21.9	19.7	20.6
Lowest	2030	1690	1870	39.3	47.9	44.4	15.5	12.8	14.6

[1] Waxy, High Beta-Glucan

Table 130. **WSU Spring Barley Trial Multi-Year Summary**

Precipitation Zone = >20"
(Fairfield, Farmington, Pullman)

Variety Name	2 Years 2011-2012, 6 loc/yrs			3 Years 2010-2012, 8 loc/yrs			5 Years 2008-2012, 12 loc/yrs		
	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %
07WA-682.1	4260	53.3	11.1						
05WA-316.K	4240	52.6	11.0	4830	52.1	11.4			
Champion	4170	53.7	11.1	4710	53.3	11.5	4950	52.8	11.8
CDC Meredith	4160	51.4	11.4	4550	50.4	11.8			
2004NZ163	4130	54.1	11.6	4840	53.6	12.0	4800	52.9	12.2
2Ab04-X01084-27	4130	51.3	11.5						
2004NZ151	4090	53.2	11.7	4740	52.3	11.8	4750	51.8	11.9
07WA-614.4	4080	51.3	11.6						
Radiant	4010	52.5	11.1	4480	51.7	11.5	4570	50.9	11.9
07WA-601.6	3970	52.9	11.4						
CDC Copeland	3950	51.2	11.3	4390	50.4	11.8	4450	50.1	12.1
Lenetah	3930	53.4	11.3	4660	53.5	11.6	4760	52.8	12.0
05WA-316.99	3910	52.5	11.6	4550	51.7	11.7			
Baronesse	3890	52.1	11.5	4460	51.9	11.9	4630	51.2	12.2
2004NZ170	3890	52.6	11.6						
Bob	3830	53.3	11.8	4460	53.1	12.2	4550	52.2	12.5
Harrington	3820	52.4	11.8	4220	51.2	12.3	4440	50.6	12.5
Bentley	3420	51.0	11.7	3860	50.3	12.1			
Hulless									
Meresse [1]	2820	57.8	13.9	3590	57.7	14.1	3630	56.7	14.3
C.V. %	11	1.9	6.4	11	2.0	6.1	10	1.9	5.4
LSD (.10)	180	0.4	0.3	170	0.4	0.3	140	0.3	0.2
Average	3930	52.8	11.6	4480	52.4	12.0	4550	52.2	12.3
Highest	4260	57.8	13.9	4940	57.7	14.1	4950	56.7	14.3
Lowest	2820	51.0	11.0	3590	50.3	11.4	3630	50.1	11.8

[1] Waxy, High Beta-Glucan

Table 131. **WSU Spring Barley Trial Multi-Year Summary**

Precipitation Zone = 16-20"

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

Variety Name	2 Years 2011-2012, 10 loc/yrs			3 Years 2010-2012, 15 loc/yrs			5 Years 2008-2012, 25 loc/yrs		
	Yield	TW	Protein	Yield	TW	Protein	Yield	TW	Protein
Lenetah	4870	54.5	11.5	4990	53.4	11.8	4700	52.1	12.3
05WA-316.K	4810	53.3	11.8	4820	51.8	12.0			
Champion	4750	54.9	11.5	4820	54.0	11.6	4620	52.8	12.1
2004NZ170	4620	53.5	11.6						
Baronesse	4610	53.6	11.6	4650	51.9	12.1	4370	50.8	12.6
07WA-682.1	4580	54.2	11.6						
2004NZ163	4560	54.3	11.9	4770	52.8	12.4	4440	51.9	12.8
2004NZ151	4550	53.8	11.9	4640	51.6	12.3	4230	50.7	12.5
07WA-601.6	4520	53.3	11.9						
05WA-316.99	4500	52.8	11.8	4580	51.2	11.9			
07WA-614.4	4450	52.4	12.3						
Radiant	4350	53.1	11.5	4390	51.7	11.9	4260	50.6	12.3
CDC Copeland	4350	52.1	11.7	4190	50.4	12.2	4040	49.4	12.6
CDC Meredith	4310	52.1	11.8	4240	50.0	12.2			
2Ab04-X01084-27	4220	51.5	11.9						
Bentley	4210	52.1	11.9	4020	50.6	12.2			
Harrington	4180	53.0	12.1	4140	51.1	12.6	3930	49.8	13.0
Bob	4130	54.2	12.5	4230	53.2	12.7	4170	52.0	13.0
Hulless									
Meresse [1]	3380	60.3	14.3	3660	60.1	14.1	3320	58.6	14.6
C.V. %	9	1.3	5.3	9	1.8	5.4	9	1.7	4.7
LSD (.10)	130	0.2	0.2	110	0.3	0.2	80	0.2	0.1
Average	4420	53.6	12.0	4460	52.4	12.3	4210	51.9	12.8
Highest	4870	60.3	14.3	4990	60.1	14.1	4700	58.6	14.6
Lowest	3380	51.5	11.5	3660	50.0	11.6	3320	49.4	12.1

[1] Waxy, High Beta-Glucan

Table 132. **WSU Spring Barley Trial Multi-Year Summary**

Precipitation Zone = <16"
(Almira, Lamont)

Variety Name	2 Years 2011-2012, 4 loc/yrs			3 Years 2010-2012, 6 loc/yrs			5 Years 2008-2012, 9 loc/yrs		
	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %	Yield Lbs/A	TW Lbs/Bu	Protein %
07WA-601.6	4670	49.7	13.9						
Champion	4560	52.3	12.7	4930	51.6	13.1	4580	51.1	13.2
Lenetah	4540	51.4	13.4	4880	51.1	13.6	4510	50.3	13.4
2004NZ151	4500	50.4	13.6	4670	49.5	13.8	4450	49.1	13.5
05WA-316.K	4500	49.5	13.4	4690	48.7	13.4			
2004NZ170	4370	49.8	13.8						
07WA-682.1	4370	51.0	13.3						
05WA-316.99	4310	49.0	12.8	4900	49.1	12.9			
2004NZ163	4260	51.6	13.6	4660	50.8	13.9	4480	50.5	13.6
Baronesse	4220	49.7	13.6	4570	49.4	13.8	4260	48.9	13.7
Radiant	4220	50.6	12.7	4710	49.9	13.2	4360	49.1	13.1
Bob	4200	50.9	14.2	4540	50.9	14.3	4230	50.3	14.0
2Ab04-X01084-27	4140	48.6	13.7						
CDC Meredith	4130	48.3	13.3	4240	47.1	13.6			
07WA-614.4	4100	47.8	14.8						
Bentley	4050	49.2	14.0	4280	48.8	14.2			
CDC Copeland	3970	48.6	15.3	4340	48.2	14.9	3870	47.3	14.5
Harrington	3720	49.6	14.7	4240	49.0	14.5	3920	48.3	14.1
Hulless									
Meresse [1]	3220	56.3	15.0	3570	57.0	15.4	3230	56.0	15.3
C.V. %	9	2.4	10.5	9	2.5	9.0	10	2.3	7.7
LSD (.10)	190	0.6	0.8	160	0.5	0.6	140	0.4	0.4
Average	4210	50.2	13.8	4500	50.0	14.0	4190	50.1	13.8
Highest	4670	56.3	15.3	4930	57.0	15.5	4580	56.0	15.3
Lowest	3220	47.8	12.7	3570	47.1	12.9	3230	47.3	13.1

[1] Waxy, High Beta-Glucan

Table 132. **2012 WSU Variety Testing Barley Trial, Almira**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plant Ht.
Champion	4330	4630	4530	**3800**	**48.0**	15.8	41
08WA-107.8				**3710**	**46.7**	15.5	40
Lenetah	4400	4660	4550	**3510**	45.5	18.6	38
2004NZ163	4070	4290	4090	3260	43.7	19.1	29
07WA-601.6			4560	3230	42.5	18.7	39
06WA-412.4		4020		3220	44.3	18.2	35
08WA-118.12				3150	43.3	19.6	39
X05013-T267				3140	43.2	20.1	33
08WA-140.11				3120	42.9	19.7	41
07WA-682.1			4150	3090	43.7	19.4	40
Baronesse	3950	4120	4000	3070	42.8	17.8	38
LSC LN09-0920				3050	41.9	19.8	32
08WA-109.17				3040	43.8	17.7	39
2004NZ170			4200	3040	40.3	19.6	31
2004NZ151	3940	4200	4280	2980	40.9	17.8	36
Meresse	3250	3560	3380	2970	**47.9**	20.7	37
05WA-316.K		4150	4250	2970	42.1	18.1	36
Bob	4120	4290	4240	2810	43.9	20.2	41
Bentley		3910	3870	2790	40.7	21.3	43
08WA-137.6				2620	41.3	19.7	41
07WA-614.4			3840	2590	40.1	20.7	38
05WA-316.99		4590	4310	2580	39.4	17.4	41
2Ab04-X01084-27			3870	2550	39.6	20.7	37
Harrington	3640	3860	3600	2470	40.1	20.5	38
X05056-T211				2410	42.8	21.6	38
Radiant	3900	4020	3690	2380	43.3	19.3	38
CDC Meredith		3590	3770	2350	39.3	19.8	38
CDC Copeland	3340	3650	3590	2250	40.4	21.9	42
2Ab09-X06F058HL-23				2050	**46.9**	21.6	38
09WA-265.14				2030	44.2	21.0	40
C.V. %	10	11	11	13	4.2	10.0	4
LSD (.10)	190	260	300	380	1.9	2.1	2
Average	3890	4100	4040	2870	42.9	19.4	38
Highest	4400	4660	4560	3800	48.0	21.9	43
Lowest	3250	3560	3380	2030	39.3	15.5	29

Almira Spring Barley

1. Grain yield in the Almira spring barley trial averaged 2870 lbs/acre, 1020 lbs/acre lower than the 5-year average at this location. The Almira nursery was located about seven miles north of Almira, WA (D. Mckay, cooperator).

2. This nursery was seeded on 24 April, 2012 following winter wheat. Seed was placed at a 80 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 75 lbs N/acre and a soil test showed 307 lbs N/acre available. Spring seeding and establishment conditions were favorable.

3. Yields ranged from 2030 lbs/acre to 3800 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 30 entries are in this top group. ‘Champion’ was the highest yielding named variety and ‘Lenetah’ was the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.

4. Test weights were very low reflecting poor grain filling with an average of 42.9 lbs/bu and ranged from 39.3 to 48.0 lbs/bu. Grain protein was very high and averaged 19.4% also due to poor grain filling and high residual N at this site. Average plant height was 38 inches.

Table 133. **2012 WSU Variety Testing Barley Trial, Dayton**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.
LSC LN09-0920				**4800**	52.6	13.1	84	27
Lenetah	4400	5210	5090	**4750**	53.5	12.4	83	31
05WA-316.K		5260	5130	**4600**	52.0	13.3	74	28
2004NZ170			4860	**4590**	51.5	13.1	66	25
07WA-682.1			5020	**4530**	52.7	12.8	76	31
Champion	4150	4820	4630	4430	53.2	12.6	76	30
05WA-316.99		4650	4360	4400	50.7	13.0	77	30
07WA-614.4			4930	4400	51.0	13.6	72	30
CDC Meredith		4520	4730	4360	51.3	13.5	74	27
08WA-107.8				4290	53.1	12.7	86	31
Baronesse	4050	4680	4750	4290	51.0	13.4	70	31
Bob	3820	4280	4250	4290	52.8	13.6	80	28
07WA-601.6			4720	4270	50.9	13.4	74	30
06WA-412.4		5010		4240	52.3	13.6	72	27
Radiant	4070	4650	4600	4240	51.8	12.8	62	31
2004NZ151	4300	4780	4580	4240	50.6	13.2	68	27
08WA-140.11				4200	52.0	13.2	72	28
08WA-118.12				4190	52.6	13.7	85	28
08WA-137.6				4100	51.4	13.2	77	27
2004NZ163	4560	5000	4530	4050	52.3	13.7	74	26
2Ab04-X01084-27			4430	4030	48.2	13.8	72	29
08WA-109.17				3970	51.2	13.5	80	30
CDC Copeland	3380	4030	4460	3920	51.2	13.0	75	34
X05013-T267				3920	51.8	14.9	86	27
Bentley		4110	4380	3880	49.6	13.8	77	34
Harrington	3400	3950	4070	3740	51.9	13.3	78	29
X05056-T211				3690	58.4	15.2	59	27
Meresse	3270	4020	3660	3540	59.8	16.0	55	27
09WA-265.14				3380	**61.0**	13.6	40	29
2Ab09-X06F058HL-23				2940	59.6	15.7	60	30
C.V. %	8	8	8	7	1.4	2.4	6	7
LSD (.10)	150	210	250	320	0.8	0.4	5	2
Average	3940	4600	4590	4140	52.7	13.6	73	29
Highest	4560	5260	5130	4800	61.0	16.0	86	34
Lowest	3270	3950	3660	2940	48.2	12.4	40	25

Dayton Spring Barley

1. Grain yield in the Dayton spring barley trial averaged 4140 lbs/acre, 200 lbs/acre higher than the 5-year average at this location. The Dayton nursery was located about six miles northwest of Dayton, WA (J. Penner, cooperator).
2. This nursery was seeded on 1 May, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 142 lbs N/acre and a soil test showed 66 lbs N/acre available. Spring seeding and establishment conditions were favorable.
3. Yields ranged from 2940 lbs/acre to 4800 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 30 entries are in this top group. ‘Lenetah’ was the highest yielding named variety and was also the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.
4. Test weights were good with an average of 52.7 lbs/bu and ranged from 48.2 to 61.0 lbs/bu with the highest values produced by hulless cultivars. Grain protein was very high and averaged 13.6%. Average plant height was 29 inches.

Table 134. **2012 WSU Variety Testing BarleyTrial, Fairfield**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.
2Ab04-X01084-27	--	--	3860	**4290**	53.1	12.6	96	29
CDC Meredith	--	--	3830	**4270**	52.7	12.1	97	33
CDC Copeland	--	--	3740	**4180**	52.6	12.1	96	35
2004NZ163	--	--	3650	**4170**	54.2	13.3	97	27
07WA-682.1	--	--	3790	**4160**	54.2	12.8	97	33
08WA-109.17	--	--		**4080**	53.5	13.2	97	31
08WA-137.6	--	--		**4040**	53.7	13.0	97	29
Champion	--	--	3660	**4040**	54.3	12.6	97	31
05WA-316.K	--	--	3750	**4030**	53.7	12.8	98	28
05WA-316.99	--	--	3380	**4010**	53.1	13.2	98	31
Bentley	--	--	3530	**4010**	52.5	12.5	97	31
Lenetah	--	--	3670	**3990**	53.6	13.1	97	27
2004NZ151	--	--	3460	3960	54.0	13.0	98	27
Radiant	--	--	3530	3940	52.8	12.7	96	30
08WA-140.11	--	--		3870	54.0	12.7	97	31
07WA-614.4	--	--	3350	3860	52.9	13.7	97	29
Bob	--	--	3320	3830	53.4	14.6	97	27
LSC LN09-0920	--	--		3820	52.9	13.6	97	26
Harrington	--	--	3440	3780	53.7	13.5	97	32
2004NZ170	--	--	3230	3690	53.4	13.6	97	26
08WA-107.8	--	--		3660	54.2	13.1	98	30
06WA-412.4	--	--		3600	54.2	13.5	97	28
07WA-601.6	--	--	3090	3480	53.4	14.1	98	28
X05056-T211	--	--		3420	59.4	15.2	91	30
X05013-T267	--	--		3420	52.0	15.8	97	27
Baronesse	--	--	3090	3350	52.7	13.6	97	28
09WA-265.14	--	--		3330	**61.8**	13.6	89	33
08WA-118.12	--	--		3230	52.3	14.0	97	29
2Ab09-X06F058HL-23	--	--		2750	57.3	15.9	95	29
Meresse	--	--	2220	2730	58.8	16.9	92	29
C.V. %	--	--	8	8	1.2	3.6	1	8
LSD (.10)	--	--	210	300	0.7	0.5	1	2
Average	--	--	3450	3770	54.2	13.6	96	29
Highest	--	--	3860	4290	61.8	16.9	98	35
Lowest	--	--	2220	2730	52.0	12.1	89	26

Fairfield Spring Barley

1. Grain yield in the Fairfield spring barley trial averaged 37780 lbs/acre. The Fairfield nursery was located about three miles northwest of Fairfield, WA (L. Green, cooperator).

2. This nursery was seeded on 21 April, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a no-till drill equipped with Cross-Slot openers set on 10-inch spacing. Base applied fertilizer was 95 lbs N/acre and a soil test showed 90 lbs N/acre available. Spring seeding and establishment conditions were favorable.

3. Yields ranged from 2730 lbs/acre to 4290 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 12 of the 30 entries are in this top group. ‘CDC Meredith’ was the highest yielding named variety and was also the highest yielding over 2 years at this location. All entries were 2-row and hulless entries are listed in italics.

4. Test weights were very good with an average of 54.2 lbs/bu and ranged from 52.0 to 61.8 lbs/bu with the highest values produced by hulless cultivars. Grain protein was very high and averaged 13.6%. Average plant height was 29 inches.

Table 135. **2012 WSU Variety Testing Barley Trial, Farmington**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.	2012 Head Date
2004NZ163	5130	5410	4320	**4820**	53.8	13.0	93	27	192
05WA-316.K		5520	4500	**4770**	51.8	13.1	94	28	189
07WA-601.6			4290	**4580**	52.0	13.0	94	26	190
Champion	5440	5300	4170	**4490**	53.0	12.1	95	30	188
LSC LN09-0920				4380	52.8	13.0	94	26	189
2004NZ151	4940	5240	4140	4370	53.5	12.3	96	25	189
2004NZ170			4080	4200	52.9	11.9	95	24	190
05WA-316.99		5510	4370	4190	51.9	12.4	94	28	191
07WA-614.4			4060	4050	51.7	13.6	96	30	193
07WA-682.1			4390	3970	52.9	12.3	93	27	193
06WA-412.4		5720		3890	52.9	12.7	96	27	190
Lenetah	4810	4900	3820	3850	53.0	13.2	94	26	193
CDC Copeland	4760	4830	3970	3840	50.2	13.5	91	29	195
Baronesse	5050	5120	4290	3780	51.5	14.1	94	27	191
08WA-140.11				3730	52.4	12.6	93	27	189
Radiant	4910	5030	3960	3710	51.2	12.9	90	26	190
Harrington	4770	4610	3870	3680	51.8	13.5	93	29	191
2Ab04-X01084-27			4120	3680	50.5	13.5	94	26	192
Bob	4660	4770	3790	3670	52.7	13.4	94	26	188
08WA-137.6				3650	51.5	12.8	95	29	190
CDC Meredith		4800	3900	3550	50.0	13.2	92	28	191
08WA-118.12				3490	51.8	14.2	94	27	189
08WA-109.17				3260	51.1	14.4	92	27	192
X05013-T267				2910	50.5	15.1	94	26	190
Meresse	3620	3830	2730	2840	58.7	16.6	80	27	189
09WA-265.14				2770	**61.8**	14.5	75	25	193
X05056-T211				2750	59.7	15.4	73	23	189
2Ab09-X06F058HL-23				2520	60.7	16.7	82	29	195
08WA-107.8				2370	51.9	14.9	93	28	191
Bentley		3610	2660	2300	50.0	15.2	90	24	192
C.V. %	9	10	10	10	1.2	5.6	2	6	1
LSD (.10)	200	270	300	380	0.7	0.8	2	2	1
Average	4810	4950	3970	3670	53.0	13.6	91	27	191
Highest	5440	5720	4500	4820	61.8	16.7	96	30	195
Lowest	3620	3610	2660	2300	50.0	11.9	73	23	188

Farmington Spring Barley

1. Grain yield in the Farmington spring barley trial averaged 3670 lbs/acre, 1140 lbs/acre less than the 5 year average at this location. The Farmington trial was located about seven miles south Farmington, WA (B. Nelson, cooperator).

2. This nursery was seeded on 11 May, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a no-till drill equipped with Cross-Slot openers set on 10-inch spacing. Base applied fertilizer was 120 lbs N/acre and a soil test showed 94 lbs N/acre available. Spring seeding and establishment conditions were favorable. Fungicide was applied on 18 June for rust control and there were notable late season stem rust symptoms on barley in this trial.

3. Yields ranged from 2300 lbs/acre to 4820 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 30 entries are in this top group. ‘Champion’ was the highest yielding named variety and was also the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.

4. Test weights averaged 53.0 lbs/bu and ranged from 50.0 to 61.8 lbs/bu with the highest values produced by hulless cultivars. Grain protein was very high and averaged 13.6%. Average plant height was 27 inches with no lodging.

Table 136. **2012 WSU Variety Testing Barley Trial, Lamont**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.	2012 Head Date
Radiant	--	5400	4760	**3910**	50.9	13.1	89	27	176
08WA-137.6	--			**3780**	49.4	14.7	91	26	177
05WA-316.K	--	5220	4760	**3760**	49.5	14.1	94	27	176
07WA-601.6	--		4780	**3710**	49.9	14.0	92	27	177
Champion	--	5230	4590	3550	51.1	13.9	91	29	176
Lenetah	--	5100	4530	3540	51.5	12.8	93	28	177
2004NZ151	--	5140	4720	3500	51.4	14.0	94	27	177
08WA-140.11	--			3490	50.8	13.9	92	28	175
2Ab04-X01084-27	--		4410	3420	49.2	13.7	93	26	177
08WA-107.8	--			3420	50.8	13.7	94	31	176
CDC Copeland	--	5040	4340	3380	50.1	14.2	92	34	179
2004NZ170	--		4550	3370	50.8	14.9	90	26	177
07WA-682.1	--		4600	3300	50.7	13.7	92	29	179
2004NZ163	--	5020	4430	3220	51.6	14.2	92	23	178
Baronesse	--	5030	4440	3190	48.9	14.7	93	26	177
Bentley	--	4660	4220	3160	50.2	14.6	94	29	176
08WA-109.17	--			3120	49.1	13.6	92	28	176
08WA-118.12	--			3100	48.5	14.7	89	28	177
CDC Meredith	--	4890	4480	3090	49.9	14.4	92	27	178
07WA-614.4	--		4360	3050	48.7	14.5	92	27	178
05WA-316.99	--	5220	4310	3030	49.8	14.2	93	27	176
Bob	--	4790	4160	3000	50.3	14.9	89	26	176
LSC LN09-0920	--			2900	50.4	13.6	92	24	178
06WA-412.4	--	4560		2710	47.9	15.2	89	25	177
X05013-T267	--			2670	50.5	15.3	92	26	176
Harrington	--	4610	3830	2600	50.4	14.9	92	28	179
X05056-T211	--			2580	55.7	16.6	72	28	175
09WA-265.14	--			2320	**59.7**	15.9	64	28	178
Meresse	--	3590	3070	2200	56.2	17.4	66	27	177
2Ab09-X06F058HL-23	--			1690	52.9	19.7	70	29	181
C.V. %	--	7	7	11	1.9	7.1	3	9	1
LSD (.10)	--	200	220	350	1.0	1.1	3	3	1
Average	--	4900	4390	3120	50.9	14.6	89	27	177
Highest	--	5400	4780	3910	59.7	19.7	94	34	181
Lowest	--	3590	3070	1690	47.9	12.8	64	23	175

Lamont Spring Barley

1. Grain yield in the Lamont spring barley trial averaged 3120 lbs/acre, 1780 lbs/acre less than the 3 year average at this location. The Lamont trial was located about five miles southeast Lamont, WA (G. White, cooperator).

2. This nursery was seeded on 19 April, 2012 following winter wheat. Seed was placed at 80 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 80 lbs N/acre and a soil test showed 174 lbs N/acre available. Spring seeding and establishment conditions were favorable.

3. Yields ranged from 1690 lbs/acre to 3910 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 30 entries are in this top group. 'Radiant' was the highest yielding named variety and was also the highest yielding over 3 years at this location. All entries were 2-row and hulless entries are listed in italics.

4. Test weights averaged 50.9 lbs/bu and ranged from 47.9 to 59.7 lbs/bu with the highest values produced by hulless cultivars. Grain protein was very high and averaged 14.6%. Average plant height was 27 inches with no lodging.

Table 137. **2012 WSU Variety Testing Barley Trial, Mayview**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Head Date
Lenetah	4070	4030	3920	**3750**	54.9	10.9	93	192
Baronesse	3690	3530	3810	3350	54.3	11.2	93	193
Champion	4110	3890	3730	3310	55.5	11.1	92	192
07WA-601.6			3680	3300	54.5	12.0	94	193
05WA-316.K		3880	3860	3280	54.0	11.6	93	193
08WA-107.8				3230	55.0	11.3	95	192
08WA-140.11				3210	54.7	11.4	92	193
Radiant	3660	3390	3420	3210	54.3	11.2	91	192
Bob	3480	3320	3260	3140	54.8	12.1	93	192
CDC Meredith		3230	3320	3100	53.2	11.6	93	192
CDC Copeland	3190	2860	3310	3070	52.8	11.4	94	192
Bentley		3080	3270	3040	52.7	11.9	92	190
2004NZ151	3410	3320	3520	3030	55.1	11.5	95	193
LSC LN09-0920				3010	54.9	11.9	96	194
06WA-412.4		3570		2980	54.6	12.1	90	194
2004NZ170			3380	2970	54.2	12.2	91	195
2004NZ163	3540	3450	3350	2920	55.6	11.9	89	194
05WA-316.99		3550	3470	2900	52.5	12.7	91	194
08WA-137.6				2890	54.3	12.5	93	194
2Ab04-X01084-27			3180	2840	52.2	11.7	89	193
08WA-109.17				2760	53.7	11.9	94	193
X05013-T267				2680	53.4	13.7	96	193
08WA-118.12				2560	53.7	12.5	93	193
Harrington	3320	3000	2970	2460	53.5	12.9	91	193
X05056-T211				2400	61.3	14.3	81	193
07WA-682.1			3040	2180	54.0	12.7	88	192
07WA-614.4			3200	2090	52.1	13.6	88	193
09WA-265.14				1980	**62.8**	13.2	78	194
Meresse	2760	2700	2250	1600	61.1	15.3	72	193
2Ab09-X06F058HL-23				1320	61.1	16.3	67	195
C.V. %	10	11	9	8	1.4	4.5	3	0
LSD (.10)	150	220	220	250	0.8	0.6	3	1
Average	3520	3390	3370	2820	55.0	12.4	90	193
Highest	4110	4030	3920	3750	62.8	16.3	96	195
Lowest	2760	2700	2250	1320	52.1	10.9	67	190

Mayview Spring Barley

1. Grain yield in the Mayview spring barley trial averaged 2820 lbs/acre, 700 lbs/acre less than the 5 year average at this location. The Mayview trial was located about 5 miles south of Lower Granite Dam on the Snake River, or 12 miles northeast of Pomeroy, WA (R. & R. Koller, cooperators).
2. This nursery was seeded on 25 April, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 70 lbs N/acre and a soil test showed 81 lbs N/acre available. Spring seeding and establishment conditions were favorable.
3. Yields ranged from 1320 lbs/acre to 3750 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 1 of the 30 entries are in this top group. ‘Lenetah’ was the highest yielding named variety and ‘Champion’ was the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.
4. Test weights averaged 55.0 lbs/bu and ranged from 52.1 to 62.8 lbs/bu with the highest values produced by hulless cultivars. Grain protein was high and averaged 12.4%.

Table 138. **2012 WSU Variety Testing Barley Trial, Pullman**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Head Date
CDC Meredith		4780	4740	**4430**	51.1	10.5	92	188
Lenetah	5140	5080	4290	**4180**	53.3	9.1	88	188
LSC LN09-0920				**4150**	51.7	10.2	86	189
07WA-601.6			4540	**4140**	53.1	9.1	90	188
2Ab04-X01084-27			4420	**4030**	48.9	11.4	76	189
Champion	4990	4810	4690	**4010**	54.1	9.3	85	187
08WA-109.17				**3970**	51.2	10.9	84	189
07WA-682.1			4600	**3960**	52.4	10.4	79	191
CDC Copeland	4420	4370	4150	**3920**	50.6	10.2	88	191
07WA-614.4			4830	**3910**	50.2	9.0	88	191
Bob	4930	4910	4370	**3880**	53.9	9.4	93	189
05WA-316.K		4850	4450	3770	51.5	9.4	90	189
05WA-316.99		4370	3960	3760	50.8	9.9	87	189
Baronesse	4820	4710	4310	3750	51.4	9.7	75	188
08WA-140.11				3720	52.2	10.0	84	189
06WA-412.4		4830		3700	53.3	9.6	90	191
08WA-137.6				3680	49.9	9.7	76	189
2004NZ163	5040	5070	4430	3670	53.9	10.2	75	192
Radiant	4640	4560	4550	3630	51.8	9.2	75	191
2004NZ151	5200	5100	4670	3620	51.0	10.7	74	191
08WA-107.8				3610	52.5	10.6	85	188
X05056-T211				3560	59.8	11.2	58	187
Harrington	4500	4350	4150	3520	52.2	9.9	91	191
X05013-T267				3460	51.8	10.6	92	189
2004NZ170			4350	3440	51.8	10.8	73	191
Bentley		4330	4080	3170	50.1	10.9	77	187
09WA-265.14				3060	**61.7**	12.1	75	190
Meresse	4210	4260	3530	3060	57.8	12.2	49	188
2Ab09-X06F058HL-23				2880	59.3	11.4	69	192
08WA-118.12				2810	49.5	10.5	80	188
C.V. %	11	12	13	15	2.3	12.1	12	1
LSD (.10)	240	340	410	600	1.3	1.3	11	1
Average	4790	4690	4370	3680	52.8	10.3	81	189
Highest	5200	5100	4830	4430	61.7	12.2	93	192
Lowest	4210	4260	3530	2810	48.9	9.0	49	187

Pullman Spring Barley

1. Grain yield in the Pullman spring barley trial averaged 3680 lbs/acre, 1110 lbs/acre less than the 5 year average at this location. The Pullman trial was located about two miles south of Pullman, WA on the WSU Spillman Agronomy farm. This trial was managed by the WSU barley breeding program.
2. This trial was seeded on 9 May, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 100 lbs N/acre and a soil test showed 72 lbs N/acre available. Spring seeding and establishment conditions were favorable. However, there was a high degree of variability across this trial that included differences in moisture, wireworm, and soil type. Although this variability resulted in high CVs, the analysis showed significant differences among entries and the results are reported but should be used with limited emphasis.
3. Yields ranged from 2810 lbs/acre to 4430 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 11 of the 30 entries are in this top group. ‘CDC Meredith’ was the highest yielding named variety and ‘Lenetah’ was the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.
4. Test weights averaged 52.8 lbs/bu and ranged from 48.9 to 61.7 lbs/bu with the highest values produced by hulless cultivars. Grain protein averaged 10.3% and plumpness averaged 81%.

Table 139. **2012 WSU Variety Testing Barley Trial, Reardan**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.	2012 Head Date
2004NZ163	4490	5200	4690	**3600**	54.2	12.5	95	27	186
08WA-140.11				**3520**	54.2	12.0	96	30	184
Radiant	4090	4610	4390	**3450**	53.6	11.9	93	32	184
08WA-107.8				**3450**	53.9	11.9	96	30	184
2004NZ170			4770	**3430**	53.4	12.1	95	28	186
08WA-137.6				**3420**	52.9	11.7	94	31	184
Lenetah	4710	5200	4750	**3410**	54.1	11.7	95	33	184
Champion	4650	5200	4820	**3410**	54.6	12.0	92	32	183
05WA-316.99		4810	4580	**3400**	53.6	12.3	96	33	184
LSC LN09-0920				**3400**	51.8	11.9	90	27	184
Bentley		4240	4480	**3350**	52.0	11.9	94	36	183
05WA-316.K		4940	4730	**3340**	53.1	12.5	94	29	183
07WA-682.1			4710	**3340**	54.2	12.2	94	34	185
CDC Copeland	3980	4460	4200	3270	52.2	11.8	94	35	186
Harrington	3890	4350	4340	3170	53.5	12.6	95	33	185
2004NZ151	4140	4820	4400	3150	53.6	12.0	94	30	185
Bob	4050	4340	4110	3110	53.5	13.1	96	32	183
07WA-601.6			4480	3110	52.7	12.7	92	29	183
CDC Meredith		4530	4420	3070	51.9	11.9	93	34	185
Baronesse	4390	4980	4640	3070	53.5	12.3	93	31	184
2Ab04-X01084-27			4370	3070	51.5	12.4	93	30	184
08WA-109.17				3030	53.3	12.7	96	34	184
06WA-412.4		4300		2960	54.3	13.3	95	30	185
07WA-614.4			4380	2950	52.0	13.1	93	32	186
08WA-118.12				2900	52.8	13.3	94	31	184
X05013-T267				2890	52.7	14.3	96	30	183
X05056-T211				2820	61.8	14.3	81	32	184
2Ab09-X06F058HL-23				2450	**63.0**	15.6	90	33	187
09WA-265.14				2310	**63.5**	13.8	80	34	186
Meresse	2930	3310	3100	2180	61.1	16.4	82	31	184
C.V. %	7	6	5	8	1.1	2.7	3	4	0
LSD (.10)	140	160	150	280	0.6	0.4	3	1	1
Average	4130	4620	4440	3130	54.4	12.7	93	31	184
Highest	4710	5200	4820	3600	63.5	16.4	96	36	187
Lowest	2930	3310	3100	2180	51.5	11.7	80	27	183

Reardan Spring Barley

1. Grain yield in the Reardan spring barley trial averaged 3130 lbs/acre, 1000 lbs/acre lower than the 5-year average at this location. The Reardan nursery was located about three miles east of Reardan, WA (H. Johnson, cooperator).
2. This nursery was seeded on 20 April, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a no-till plot drill equipped with hoe type openers set on 15-inch spacing. Base applied fertilizer was 77 lbs N/acre and a soil test showed 103 lbs N/acre available.
3. Yields ranged from 2180 lbs/acre to 3600 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 13 of the 30 entries are in this top group. ‘Radiant’ was the highest yielding named variety and ‘Lenetah’ was the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.
4. Test weights were very good averaging 54.4 lbs/bu and ranged from 51.5 to 63.5 lbs/bu with the hulless cultivars producing the highest values. Grain protein averaged 12.7% and average plant height was 31 inches.

Table 140. **2012 WSU Variety Testing Barley Trial, St. John**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.	2012 Head Date
2004NZ170			5090	**4590**	53.9	8.9	96	28	176
05WA-316.99		5000	5380	**4580**	54.0	9.1	95	33	174
Lenetah	5120	5130	5340	**4500**	55.4	9.3	96	33	173
2004NZ151	4460	4680	4910	**4490**	54.2	8.9	94	30	177
Baronesse	4860	4890	5240	**4470**	54.8	9.0	93	32	175
08WA-137.6				**4460**	54.5	8.8	93	31	174
2004NZ163	4950	4890	5330	**4440**	54.7	9.2	94	29	175
05WA-316.K		5060	5340	**4420**	54.4	9.4	95	32	171
08WA-109.17				**4400**	54.6	8.9	96	34	174
Radiant	4700	4500	4620	**4280**	53.7	9.1	82	33	174
CDC Copeland	4650	4590	4930	**4230**	53.3	8.9	95	38	175
CDC Meredith		4540	4870	**4210**	53.7	8.9	96	35	176
LSC LN09-0920				**4200**	53.5	8.9	96	28	176
07WA-682.1			5300	4190	55.1	8.5	95	34	175
08WA-140.11				4190	55.0	8.7	91	33	173
06WA-412.4		4340		4190	55.0	9.5	96	31	175
2Ab04-X01084-27			4730	4170	53.3	9.0	94	31	173
Champion	5060	4920	5380	4160	55.8	9.0	86	32	172
08WA-107.8				4060	54.7	8.9	95	33	173
Harrington	4510	4540	4850	4040	54.0	9.7	96	35	174
Bentley		4500	4830	3980	53.4	9.5	96	36	172
08WA-118.12				3980	54.4	9.1	95	32	174
07WA-614.4			4730	3950	53.1	8.7	95	33	175
Bob	4690	4450	4490	3930	55.3	10.5	96	33	172
07WA-601.6			5030	3870	54.1	9.2	94	33	173
X05056-T211				3590	61.2	11.6	76	33	171
09WA-265.14				3450	**62.9**	10.3	68	33	175
Meresse	3440	3630	3660	3350	60.6	12.0	73	31	172
X05013-T267				3260	53.4	11.3	96	30	172
2Ab09-X06F058HL-23				3170	58.1	11.7	87	35	177
C.V. %	10	10	11	9	1.2	6.5	3	5	1
LSD (.10)	210	270	370	390	0.7	0.7	3	2	1
Average	4640	4640	4950	4090	55.1	9.5	92	32	174
Highest	5120	5130	5380	4590	62.9	12.0	96	38	177
Lowest	3440	3630	3660	3170	53.1	8.5	68	28	171

St. John Spring Barley

1. Grain yield in the St. John spring barley trial averaged 4090 lbs/acre, 550 lbs/acre lower than the 5-year average at this location. The St. John nursery was located about three miles east of St. John, WA (Mac Mills, cooperator).

2. This nursery was seeded on 13 April, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 80 lbs N/acre and a soil test showed 99 lbs N/acre available. Spring seeding and establishment conditions were favorable.

3. Yields ranged from 3170 lbs/acre to 4590 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 13 of the 30 entries are in this top group. ‘Lenetah’ was the highest yielding named variety and was also the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.

4. Test weights were very good with an average of 55.1 lbs/bu and ranged from 53.1 to 62.9 lbs/bu with the highest values produced by hulless cultivars. Grain protein averaged 9.5% and average plant height was 32 inches.

Table 141. **2012 WSU Variety Testing Barley Trial, Walla Walla**

Variety Name *Hulless Italicized	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 Test Wt (Lbs/Bu)	2012 Protein (%)	2012 Plump (%)	2012 Plant Ht.	2012 Head Date
LSC LN09-0920				**6090**	54.2	10.9	83	32	170
Lenetah	5190	5390	5240	**5830**	55.4	12.2	86	36	168
2004NZ170			4990	**5800**	52.9	10.9	80	32	171
Champion	5140	5260	5200	**5780**	55.1	12.0	81	37	168
2004NZ151	4810	5610	5360	**5740**	53.0	11.3	82	33	170
06WA-412.4		6370		5720	54.5	11.8	87	33	168
08WA-118.12				5710	55.2	11.7	91	35	169
2004NZ163	4650	5280	4920	5680	54.2	11.4	74	30	171
CDC Copeland	4990	5000	4880	5650	51.8	11.5	83	42	171
08WA-140.11				5560	54.7	13.1	79	35	168
07WA-682.1			4850	5550	54.5	11.9	81	38	170
08WA-109.17				5510	52.9	12.2	85	38	168
05WA-316.K		4960	4990	5430	53.6	12.0	79	34	167
07WA-614.4			4990	5400	52.5	12.2	83	38	171
05WA-316.99		4880	4700	5390	53.0	12.3	81	37	169
08WA-107.8				5320	52.4	12.6	82	36	167
CDC Meredith		4390	4210	5270	52.0	12.8	81	36	170
08WA-137.6				5270	53.4	12.8	80	36	169
Radiant	4800	4780	4700	5240	54.1	11.3	74	36	169
07WA-601.6			4700	5230	54.3	11.9	81	36	168
Baronesse	4850	5150	4610	5060	54.2	11.9	84	36	168
Bob	4790	4780	4540	5050	54.7	12.7	83	36	168
Harrington	4540	4860	4690	5040	52.2	12.9	80	38	171
X05013-T267				5010	52.6	14.0	92	32	169
2Ab04-X01084-27			4390	4920	51.2	13.1	77	35	168
09WA-265.14				4900	**62.4**	13.2	70	38	169
Bentley		4190	4100	4890	53.0	12.3	90	40	168
Meresse	4190	4650	4250	4870	**61.7**	14.7	75	32	167
X05056-T211				4430	58.4	14.7	72	35	169
2Ab09-X06F058HL-23				3840	57.9	13.6	73	39	173
C.V. %	10	11	11	6	1.7	6.9	7	4	0
LSD (.10)	230	330	380	350	1.0	0.9	6	2	0
Average	4800	5040	4750	5310	54.4	12.4	81	36	169
Highest	5190	6370	5360	6090	62.4	14.7	92	42	173
Lowest	4190	4190	4100	3840	51.2	10.9	70	30	167

Walla Walla Spring Barley

1. Grain yield in the Walla Walla spring barley trial averaged 5310 lbs/acre, 510 lbs/acre higher than the 5 year average at this location. The Walla Walla trial was located about eight miles northeast of Walla Walla, WA (G. Smith, cooperator).
2. This nursery was seeded on 22 April, 2012 following winter wheat. Seed was placed at a 90 lbs/acre seeding rate using a plot drill equipped with double-disc openers set on 6-inch spacing. Base applied fertilizer was 120 lbs N/acre and a soil test showed 106 lbs N/acre available. Spring seeding and establishment conditions were favorable.
3. Yields ranged from 3840 lbs/acre to 6090 lbs/acre. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 30 entries are in this top group. ‘Lenetah’ was the highest yielding named variety and also the highest yielding over 5 years at this location. All entries were 2-row and hulless entries are listed in italics.
4. Test weights averaged 54.4 lbs/bu and ranged from 51.2 to 62.4 lbs/bu with the highest values produced by hulless cultivars. Grain protein was high averaging 12.4% and plant height averaged 36 inches.

Table 142.

STRIPE RUST INFECTION TYPE (IT*) AND PERCENT (%) ON CULTIVARS AND LINES IN THE SPRING BARLEY EXTENSION NURSERY (EXP52) AT SPILLMAN (LOC01), Plant path Farm (LOC2) AND WHITLOW FARM (LOC04) NEAR PULLMAN, MT VERNON (LOC05), AND WALLA WALLA (LOC06), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH, 2012 UNDER NATURAL INFECTION.

NOTE: STRIPE RUST WAS LOW AND NOT UNIFORM AT ALL LOCATIONS. ENTRIES WITH IT 8 SHOULD BE CONSIDERED SUCEPTIBLE NO MATTER OF SEVERITY, WHILE ENTRIES WITH IT 0 SHOULD NOT BE NECESSARILY CONSIDERED RESISTANT.

Variety	Type	Spillman Farm (Pullman)		Plant Path Farm (Pullman)		Whitlow Farm (Pullman		Mt. Vernon				Walla Walla	
		LOC1		LOC2		LOC4		LOC5				LOC 6	
		7/16		7/25		7/10		6/20		7/19		7/3	
		Flowering		S. dough		Flowering		Stem elong		Milk		S. dough	
		IT	%	IT	%	IT	%	IT	%	IT	%	IT	%
Bentley	S2	0	0	0	0	0	0	8	20	8	5	0	0
CDC Copeland	S2	0	0	0	0	0	0	0	0	0	0	0	0
CDC Meredith	S2	0	0	0	0	0	0	0	0	0	0	0	0
08WA-137.6	S2	0	0	8	10	0	0	0	0	8	5	0	0
2Ab04-X01084-27	S2	0	0	0	0	0	0	0	0	0	0	0	0
Lenetah	S2	0	0	0	0	0	0	0	0	0	0	0	0
2Ab09-X06F058HL-23	S2NWx	0	0	0	0	0	0	8	20	0	0	0	0
2004NZ151	S2	0	0	0	0	0	0	0	0	0	0	0	0
2004NZ163	S2	0	0	0	0	0	0	0	0	0	0	0	0
2004NZ170	S2	0	0	0	0	0	0	0	0	0	0	0	0
LSC LN09-0920	S2	0	0	0	0	0	0	5	20	0	0	0	0
Baronesse	S2	0	0	0	0	0	0	5	10	0	0	0	0
Bob	S2	0	0	0	0	0	0	0	0	0	0	0	0
Champion	S2	0	0	0	0	0	0	0	0	0	0	0	0
Harrington	S2	0	0	0	0	0	0	0	0	0	0	0	0
Meresse	S2NWx	0	0	0	0	0	0	5	20	0	0	0	0
Radiant	S2A	0	0	0	0	0	0	0	0	8	10	0	0
07WA-601.6	S2	0	0	0	0	0	0	0	0	0	0	0	0
07WA-614.4	S2	0	0	0	0	0	0	0	0	8	5	0	0
07WA-682.1	S2	0	0	0	0	0	0	0	0	8	10	0	0
Morex		**8**	**20**	**8**	**10**	**8**	**1**	**0**	**0**	**8**	**10**	**8**	**1**
05WA-316.99	S2	8	5	8	5	0	0	0	0	8	5	0	0
05WA-316.K	S2	8	5	8	10	0	0	5	20	0	0	0	0
08WA-109.17	S2	0	0	0	0	0	0	0	0	0	0	0	0
09WA-265.14	S2NWx	8	5	8	2	0	0	0	0	8	10	0	0
08WA-140.11	S2	0	0	8	2	0	0	8	30	8	10	0	0
08WA-118.12	S2	0	0	8	2	0	0	0	0	8	5	0	0
X05056-T211	S2NWx	8	5	0	0	0	0	0	0	0	0	0	0
08WA-107.8	S2	8	1	0	0	0	0	0	0	0	0	0	0
X05013-T267	S2Wx	0	0	0	0	0	0	0	0	0	0	0	0
06WA-412.4	S2	8	5	0	0	0	0	0	0	0	0	0	0
Morex		**8**	**30**	**8**	**10**	**0**	**0**	**5**	**30**	**8**	**5**	**8**	**1**

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

Table 143.

WSU Variety Testing 2012 Soft White Winter Wheat Nursery at WSU-Mount Vernon NWREC

Variety Name	mkt cl	Yield (bu/a)	Test wt (lbs/bu)	Protein (%)	Plant ht (in)	Head date (Julian)	Lodging (%)	Stripe Rust (infection type/%)
OR08047P94	SWW	**174.3**	**60.4**	8.8	43	147	0	0
OR2701071	SWW	**171.0**	58.4	8.8	42	148	0	0
WA 8153	SWW	149.2	**59.8**	8.6	46	147	0	0
Skiles	SWW	146.8	**60.3**	9.9	40	146	10	0
Cara	WC	144.3	**60.2**	10.4	48	147	10	1/10
WA 8092	SWW	135.9	58.4	9.2	49	151	60	0
OR2070870	SWW	125.5	**59.8**	9.3	40	146	0	3/20
Madsen	SWW	123.6	58.0	9.6	46	148	0	1/20
Madsen/Rod	SWW	123.6	**58.8**	9.2	46	148	0	3/20
Chukar	WC	118.2	**59.0**	9.6	47	148	5	3/20
OR2071628	SWW	112.3	58.5	8.9	40	145	0	5/20
WA 8136	SWW	111.7	56.7	7.8	39	151	0	0
ARS970163-4C	WC	108.5	57.2	8.6	43	149	5	1/10
WA 8135	SWW	107.9	**60.4**	8.9	49	150	0	3/20
Rod	SWW	107.4	57.9	9.4	42	149	10	3/80
WA 8116	SWW	107.2	54.9	9.3	41	150	0	8/60
ARS990077-1C	WC	106.7	57.5	9.2	46	149	60	3/20
NSA06-2153A	SWW	106.4	54.9	10.3	33	138	0	5/40
ARS970161-3L	SWW	106.2	**60.1**	9.4	40	148	0	0
ARS970161-2L	SWW	104.4	**61.0**	9.4	42	148	0	0
WA 8142	SWWI	103.6	58.5	9.3	44	146	0	3/40
ARS970277L reselect	SWW	97.3	58.5	9.2	42	149	10	5/40
IDO663	SWW	97.1	**59.8**	9.5	39	147	5	3/20
ARS010780-3C	WC	96.0	**60.0**	9.6	38	150	60	3/20
Bruehl	WC	95.6	55.1	11.0	44	150	95	0
WA 8151	SWW	94.3	56.7	8.2	42	148	0	5/40
WB-528	SWW	94.0	56.0	9.3	42	146	25	5/40
LWW-04-4009	SWW	93.8	**60.5**	8.2	41	151	90	0
WA 8152	SWW	92.6	55.3	9.4	47	147	0	5/40
OR2040726 (Mary)	SWW	92.4	53.7	10.6	42	146	5	8/60
ARS010762-2C	WC	90.6	58.4	10.4	47	148	20	3/10
Coda	WC	90.1	**60.5**	11.4	47	148	99	3/10
Masami	SWW	89.7	56.5	9.7	46	151	0	3/60
ARS960277L (Amber)	SWW	85.3	**58.8**	8.8	43	148	90	3/10
Goetze/Skiles	SWW	84.9	**58.0**	10.8	39	146	0	ls
WA 8134	SWW	84.6	55.9	8.8	45	148	0	5/30
Eltan/Tubbs 06	SWW	84.3	53.4	9.6	46	148	5	8/50
Stephens	SWW	79.2	56.8	10.5	42	147	75	3/20
WA 8154	SWW	78.9	56.5	9.5	44	148	75	8/60
WA 8143	SWWI	74.9	54.3	8.2	44	150	95	1/20
WA 8137	SWW	69.9	**58.6**	8.7	39	152	0	3/40
ORCF-103	SWWI	62.5	52.6	10.0	39	150	50	5/80
Tubbs 06	SWW	62.4	51.9	10.9	46	148	0	8/90
WA 8155	SWWI	61.2	53.9	10.7	45	151	99	3/20
Xerpha	SWW	58.2	49.5	11.7	39	148	0	5/80
ORCF-102	SWWI	57.4	51.7	11.5	45	147	0	8/60
ARS970075-3C	WC	55.3	55.5	10.5	40	148	0	5/90
Eltan	SWW	47.1	50.2	7.1	44	150	90	5/40
C.V.%		12.5	2.7					
LSD (.10)		20.1	2.4					
Average		99.2	57.1	9.5	43	148	24	
Highest		174.3	61.0	11.7	49	152	99	
Lowest		42.3	49.5	7.1	33	138	0	

All values within the 10% LSD range of the highest are shown in bold.

The SWW Nursery was seeded on 12 October, 2011. Seed was placed at 100#/ac seeding rate with a double disc plot drill set on 7-inch spacing.

No fertilizer was applied in the Fall. Spring soil test showed approximately 100 lbs/ac of N available.

Based on an expected yields an additional 60 lbs of N/ac was applied on 23 March and again on 26 April 2012.

There were high levels of lodging for many of the varieties in the trial due to their susceptibility to soil-borne diseases which resulted in greatly reduced grain yield and test weight. Also effecting grain quality and production was the high level of stripe rust infection in susceptible varieties. No fungicides were applied for stripe rust control.

The nursery was harvested on 14 August 2012, averaging 99.2 bu/ac.

Data was collected, analyzed and reported Dr. S. Jones, WSU-Mt Vernon NWREC.

Table 144.

WSU Variety Testing 2012 Hard Winter Wheat Nursery at WSU-Mount Vernon NWREC.

Variety Name	mkt cl	Yield (bu/a)	Test wt (lbs/bu)	Protein (%)	Plant ht (in)	Head date (Julian)	Lodging (%)	Stripe Rust (infection type/%)
Norwest 553	HRW	**167.1**	**61.3**	11.0	40	145	0	0
OR2080236H	HWW	**163.1**	**59.8**	10.2	45	150	25	0
OR2080227H	HWW	139.2	**61.5**	9.9	45	146	30	0
OR2080229H	HWW	138.4	**62.4**	10.2	49	147	45	0
Azimut	HRW	123.7	56.7	10.6	35	144	0	3/20
Altigo	HRW	111.6	56.1	10.1	39	143	0	5/20
OR2080156H	HWW	109.8	**60.6**	11.9	42	145	0	3/20
WA 8156	HRW	103.9	**59.7**	12.1	51	149	45	0
WA 8119	HRW	97.7	57.3	10.3	46	150	50	0
WA 8157	HRW	86.9	54.1	11.9	37	143	25	0
Boundary	HRW	83.8	56.2	11.8	44	146	25	3/20
IDO816	HRW	77.8	55.2	11.8	46	146	80	3/10
WA 8159	HWW	73.7	47.7	12.7	50	149	85	3/40
WA 8158	HRW	71.6	54.8	12.0	45	150	55	0
Farnum	HRW	68.7	55.6	13.2	52	153	98	5/10
WA 8118	HRW	65.9	55.2	**14.2**	47	138	93	0
UI Silver	HWW	65.5	53.9	11.9	49	147	99	5/40
UI SRG	HRW	61.2	51.9	12.9	44	146	62	3/10
UICF-Grace	HWWI	53.5	54.4	**14.6**	50	145	87	3/60
Eddy	HRW	48.1	48.9	11.9	39	145	5	8/90
Finley	HRW	45.9	45.8	12.6	49	146	38	5/80
Eltan	SWW	38.4	38.8	12.2	41	150	40	5/60
Bauermeister	HRW	37.8	39.1	12.8	41	147	55	5/80
MDM	HWW	37.3	39.4	12.3	41	151	40	5/40
C.V.%		19	3.6	5.2				
LSD (.10)		26.9	3.2	1.0				
Average		86.3	54.1	11.8	44.5	147	45	
Highest		167.1	62.4	14.6			99	
Lowest		37.3	39	9.9			0	

All values within the 10% LSD range of the highest are shown in bold.

The Hard Winter Wheat Nursery was seeded on 12 October, 2011. Seed was placed at 100#/ac seeding rate with a double disc drill set on 6-inch spacing.

No fertilizer was applied in the Fall. Spring soil test showed approximately 100 lbs/ac of N available. Based on an expected yields an additional 60 lbs of N/ac was applied on 23 March, 26 April, and again on 18 May.

There were high levels of lodging for many of the varieties in the trial due to their susceptibility to soil-borne diseases which resulted in greatly reduced grain yield and test wt.

Also effecting grain quality and production was the high levels of stripe rust infection in susceptible varieties. No fungicides were applied for stripe rust control.

The nursery was harvested on 14 August 2012, averaging 86.3 bu/ac.

Data was collected, analyzed and reported Dr. S. Jones, WSU-Mt Vernon NWREC.

Table 145. Aluminum/Acid Soil Tolerance Trials

2012 Rockford Soft VT

Name	YIELD % Mean	YIELD (BU/A)	PLANT HT
Babe	185	40	28
Whit	184	40	27
WB-1035CL+	184	40	25
WA 8162	178	39	27
IDO687	170	37	26
IDO671	165	36	27
Nick	163	36	26
IDO686	153	33	29
Alturas	146	32	26
Alpowa	141	31	29
ARS03173LS	110	24	26
ARS03174CS	79	17	25
Louise-0W	58	13	25
WA 8131	54	12	19
JD	54	12	23
Zak	51	11	23
Wakanz	50	11	21
WA 8160	50	11	22
WA 8124	48	11	23
Diva	39	9	23
Louise	37	8	23
Louise-G2	36	8	23
WA 8161	34	7	24
IDO599	32	7	22
CV		15	7
LSD		4	3
GRAND MEAN		22	25
Max. Mean		40	29
Min. Mean		7	19

2012 Rockford Hard VT

Name	YIELD % Mean	YIELD (BU/A)	PLANT HT
WA 8166	221	45	30
WA 8165	214	43	33
WA 8163	194	39	31
Tara 2002	190	39	31
IDO694	186	38	24
WB Hartline	175	36	28
Clear White 515	171	35	27
LCS-ALbany	171	35	26
Otis	167	34	32
LCS-Powerplay	150	30	27
V272	135	27	22
Expresso	128	26	25
Patwin 515	104	21	24
Hank	98	20	23
LCS-Buck Pronto	88	18	24
WA 8123	69	14	22
BR7030	53	11	21
Scarlet	51	10	22
Glee (WA 8074)	50	10	24
WA 8168	46	9	21
Jedd	43	9	19
WA 8164	40	8	21
Bullseye	37	8	17
WB-Fuzion	36	7	20
Kelse	35	7	23
Jefferson	33	7	22
Hollis	31	6	22
Lassik	28	6	20
WA 8167	27	5	21
SY605 CL	27	5	19
CV		25	10
LSD		7	3
GRAND MEAN		20	24
Max. Mean		45	33
Min. Mean		5	17

Rockford Spring Wheat

Spring wheat trials at Rockford were conducted in order to evaluate effects of low pH soil and high aluminum content on variety performance. Grain yield averaged 22 bushels/acre for Soft and 20 bushels/acre for Hard wheat trials.

Rockford trial was managed by WSU Spring Wheat Program. Data courtesy Dr. M.Pumphrey.

2012 Legume Trials

2012 WSU Spring Pea Variety Trial Summary and 2-Year Summary

1. Pea seed yield across four 2012 locations and 24 entries in Eastern Washington averaged 2330 pounds/acre and was 140 pounds/acre less than the 2011 average yield. Yields in 2012 ranged from 2110 to 2590 pounds/acre among four locations across entries.
2. Yields among entries averaged across 2012 locations ranged from 1820 to 2680 pounds/acre. Average yield values within the 10% LSD range (90 pounds/acre) of the highest yield are shown in bold and this included 3 of the 24 entries.
3. Seed weight averaged 21.3 grams/100 seed across 2012 locations and entries, slightly higher than the 2011 seed weight average, and ranged from 17.5 to 26.5 grams/100 seed among entries.

2012 WSU Lentil Variety Trial Summary and 2-Year Summary

1. Lentil seed yield across four 2012 locations and 24 entries in Eastern Washington averaged 1020 pounds/acre and was 670 pounds/acre less than the 2011 average yield. Yields in 2012 ranged from 710 to 1540 pounds/acre among four locations across entries.
2. Yields among entries averaged across locations ranged from 340 to 1270 pounds/acre. ‘Morena’ and ‘Pardina’ were the highest yielding named entries averaged across 2012 locations and in the 2-year average. Average yield values within the 10% LSD range (80 pounds/acre) of the highest yield are shown in bold and this included 4 of the 24 entries.
3. Seed weight averaged 4.8 grams/100 seed across 2012 locations and entries, similar to the 2011 average seed weight, and ranged from 3.0 to 8.4 grams/100 seed among entries.

2012 WSU Chickpea Variety Trial Summary and 2-Year Summary

1. Chickpea seed yield across four 2012 locations and 13 entries in Eastern Washington averaged 1970 pounds/acre and was 560 pounds/acre less than the 2011 average yield. Yields in 2012 ranged from 1550 to 2470 pounds/acre among four locations across entries.
2. Yields among entries averaged across 2012 locations ranged from 1540 to 2320 pounds/acre. ‘CDC Frontier’ was the highest yielding named entry averaged across locations and was also highest for the 2-year average. 2012 average yield values within the 10% LSD range (110 pounds/acre) of the highest yield are shown in bold and this included 2 of the 13 entries.
3. Seed weight averaged 47.2 grams/100 seed across locations and entries, compared to 2011 average of 49.7 grams/100 seed, and ranged from 37.0 to 59.5 grams/100 seed among entries.

Table 146.

2012 WSU SPRING PEA TRIAL SUMMARY and 2-YEAR SUMMARY

VARIETY NAME	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	2012 AVERAGE	2011-2012 AVERAGE, 8 loc/yrs	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	2012 AVERAGE	2011-2012 AVERAGE, 8 loc/yrs
Green pea	**YIELD (LBS/A)**						**100 SEED WEIGHT (g)**					
PS07100471	2490	2640	2660	2420	**2550**	2650	20.9	22.1	21.9	16.2	20.3	20.7
PS05100736	2940	2400	2760	1980	**2520**	2600	21.0	22.9	22.6	17.8	21.0	20.9
Pro 7040	2760	2480	2650	2190	**2520**		20.1	20.4	20.1	17.1	19.4	
PS07100470	2540	2510	2500	2230	2440	2510	22.4	23.4	22.9	18.6	21.8	21.6
Pro 091-7137	2510	2430	2620	2160	2430	2430	20.2	23.2	21.0	18.1	20.0	20.3
PS03101445	2310	2580	2620	2180	2420	2540	21.0	21.8	21.3	18.1	20.6	20.8
PS05100735	2510	2520	2570	2000	2400		20.7	22.9	22.5	17.4	20.9	
Pacifica	2620	2190	2820	1780	2350	2470	21.5	23.5	23.5	15.8	21.1	21.4
Banner	2390	2270	2410	2220	2320	2510	20.0	22.1	20.4	18.4	20.3	19.7
Ariel	2400	2200	2390	2170	2290	2360	18.2	19.4	18.5	15.1	17.8	18.0
PS05100840	2130	2240	2600	2180	2290	2480	18.9	21.0	21.5	16.4	19.4	20.0
Aragorn	2450	2100	2400	2080	2260	2290	20.4	22.9	21.0	16.6	20.7	20.4
PS07ND0190	2290	2210	2470	1460	2110		18.2	20.7	22.3	15.0	19.0	
NDP080111	2090	2020	2630	1650	2100	2340	16.3	19.5	20.2	13.9	17.5	18.5
Pro 081-7116	1880	1950	2530	1880	2060	2250	22.5	24.1	22.3	19.5	22.1	21.8
Columbian	1630	1550	2260	1720	1790	1820	18.6	19.0	18.2	16.2	18.0	17.8
Yellow pea												
PS08101004	2430	2360	2870	2290	**2490**		23.4	23.8	24.2	18.8	22.6	
PS03101822	2510	2510	2690	2160	**2470**	2680	24.9	24.6	25.1	20.6	23.8	23.3
PS07100925	2660	2090	2670	2230	2410		24.9	23.7	25.2	20.4	23.5	
Pro 793	2360	2090	2840	2330	2410		26.8	29.1	27.5	22.6	**26.5**	
PS08101108	2210	2300	2590	2460	2390		25.1	25.2	25.6	23.0	24.7	
Pro 822	2640	1960	2620	2250	2370	2550	25.6	27.0	25.4	22.3	25.2	24.4
Universal	2430	1880	2540	2340	2300	2500	22.4	24.6	22.6	19.2	22.2	21.7
Carousel	2190	2170	2520	2210	2270	2490	22.7	23.3	24.9	19.4	22.6	23.0
C.V. (%)	11	6	5	7	8	9	2.8	3.6	2.1	6.7	3.9	3.9
LSD (0.10)	280	150	130	150	90	81	0.7	0.9	0.5	1.3	0.4	0.3
Average	2390	2240	2590	2110	2330	2440	21.5	22.8	22.5	18.3	21.3	20.8
Highest	2940	2640	2860	2460	2550	2680	26.8	29.0	27.5	23.0	26.5	24.4
Lowest	1630	1550	2260	1460	1790	1820	16.3	18.9	18.2	13.9	17.5	17.8

Table 147. **2012 WSU LENTIL TRIAL SUMMARY and 2-YEAR SUMMARY**

VARIETY NAME	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	2012 AVERAGE	2011-2012 AVERAGE, 8 loc/yrs	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	2012 AVERAGE	2011-2012 AVERAGE, 8 loc/yrs
	YIELD (LBS/A)						100 SEED WEIGHT (g)					
LC016022273E	680	1160	1950	1290	**1270**		3.1	3.7	3.5	3.1	3.3	
Morena	730	1270	1860	1230	**1270**	1640	3.6	4.2	4.1	3.4	3.8	3.9
Pardina	920	900	1820	1410	**1260**	1660	3.5	4.1	4.2	3.8	3.9	3.9
LC01602300R	800	940	1790	1300	**1210**	1680	4.6	4.9	5.0	4.5	4.7	5.0
LC07ND055E	850	970	1560	1250	1160		3.2	3.8	3.8	3.1	3.5	
LC08600113P	760	1020	1750	1110	1160	1540	4.3	4.7	4.8	4.4	4.5	4.7
LC05600043T	770	1310	1790	790	1160		4.1	5.0	4.8	3.9	4.5	
Richlea	1040	980	1700	870	1150		4.7	5.3	5.1	4.5	4.9	
Merrit	790	960	1480	1350	1140	1480	5.9	6.5	6.4	5.6	6.1	6.4
Riveland	700	1050	1670	1080	1120		6.4	7.5	7.5	6.4	6.9	
LC08600116P	760	1020	1840	870	1120		4.6	5.3	5.0	4.6	4.9	
LC08600005E	860	870	1530	1130	1100	1440	4.3	4.8	4.7	4.1	4.5	4.8
LC01602062T	800	910	1540	1150	1100	1450	4.1	4.5	4.7	5.2	4.3	4.5
LC07ND068E	970	710	1400	1280	1090		3.4	3.9	4.0	3.5	3.7	
Brewer	650	910	1600	1210	1090	1470	5.4	5.9	5.9	5.5	5.7	5.9
LC06601734L	570	990	1640	1020	1060	1430	6.2	7.1	7.1	5.9	6.6	6.9
LC05600812E	700	850	1730	470	940	1370	3.7	4.6	4.7	3.8	4.2	4.3
Eston	660	810	1240	1000	930	1250	3.1	3.4	3.3	3.1	3.2	3.4
LC0860B123L	470	760	1480	850	890		7.5	8.8	9.3	6.3	**8.4**	
LC0700376L	770	930	1580	140	860		6.9	7.5	7.2	5.9	6.9	
LC07600536L	550	1000	1350	530	860		6.4	7.1	6.7	5.7	6.5	
Crimson	670	810	1010	380	720	1170	3.2	3.5	3.5	3.6	3.5	3.5
LC07ND202T	380	610	980	140	530		3.0	3.0	3.1	2.9	3.0	
LC07ND176T	300	130	800	140	340		3.1	3.4	3.4	3.3	3.3	
C.V.(%)	21	19	10	13	15	13	4.0	2.5	3.7	5.4	3.9	3.7
LSD (0.10)	160	180	170	130	80	63	0.2	0.1	0.2	0.3	0.1	0.1
Average	710	910	1540	910	1020	1460	4.5	5.1	5.1	4.4	4.8	4.8
Highest	1040	1310	1950	1400	1270	1680	7.5	8.8	9.3	7.8	8.4	6.9
Lowest	300	130	800	140	340	1170	3.0	3.0	3.1	3.0	3.0	3.4

Table 148.

2012 WSU CHICKPEA TRIAL SUMMARY and 2-YEAR SUMMARY

VARIETY NAME	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	2012 AVERAGE	2011-2012 AVERAGE, 8 loc/yrs	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	2012 AVERAGE	2011-2012 AVERAGE, 8 loc/yrs
	YIELD (LBS/A)						100 SEED WEIGHT (g)					
CDC Frontier	1800	2430	2690	2030	**2230**	2570	33.5	35.9	38.9	30.2	34.6	37.4
Billy beans	1910	2280	2630	1850	**2170**		27.5	30.0	30.5	26.7	28.7	
CA0690B0250C	1800	2230	2590	1690	2080	2300	47.5	49.3	53.7	45.0	50.6	51.4
CA0790B0043C	1430	2300	2790	1800	2080		47.5	51.7	56.7	46.6	48.9	
CDC Orion	1580	2340	2650	1700	2070	2480	41.0	42.2	45.9	38.4	41.9	44.5
CA04900843C	1680	2450	2560	1560	2060	2330	57.1	58.7	60.9	51.9	**57.2**	59.5
CA0390B007C	1490	2410	2720	1550	2040	2270	45.2	49.1	52.4	44.9	47.9	49.7
CA04900421C	1680	2250	2420	1630	1990	2340	43.4	47.2	50.9	41.4	45.7	48.1
Sawyer	1480	2330	2320	1700	1950	2280	38.8	41.6	44.4	37.8	40.6	42.9
Sierra	1430	2370	2260	1450	1880	2120	50.0	50.6	52.8	46.0	49.8	51.3
CDC Alma	1610	2200	2200	1410	1860	2190	32.7	36.6	37.5	30.9	34.4	37.0
Dwelley	1190	2040	2210	1300	1680	1810	43.9	51.7	53.2	47.3	49.0	50.4
Evans	1120	1770	2030	1220	1540		37.9	45.3	46.7	38.2	42.0	
C.V. (%)	15	11	7	9	10	11	4.2	3.3	1.9	5.8	3.9	4.5
LSD (.10)	250	270	180	160	110	90	1.9	1.6	1.0	2.5	0.9	0.8
Average	1550	2260	2470	1610	1970	2270	42.0	45.4	48.1	40.4	43.9	47.2
Highest	1910	2450	2790	2030	2230	2570	57.1	58.7	60.9	51.9	57.2	59.5
Lowest	1120	1770	2030	1220	1540	1810	27.5	30.0	30.5	26.7	28.7	37.0

Table 149. **2012 WSU Variety Testing Pea Trial Summary, Dusty**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)	2012 Canopy Height (In)	2012 Erect Index
PS05100736	*Green*	2830	**2940**	21.0	21	17	0.81
Pro 7040	*Green*		**2760**	20.1	23	17	0.69
PS07100925	*Yellow*		**2660**	24.9	20	14	0.71
Pro 822	*Yellow*	2450	2640	25.6	25	21	0.83
Pacifica	*Green*	2540	2620	21.5	25	16	0.63
PS07100470	*Green*	2300	2540	22.4	22	21	0.93
Pro 091-7137	*Green*	2280	2510	20.2	25	21	0.84
PS03101822	*Yellow*	2450	2510	24.9	21	13	0.63
PS05100735	*Green*		2510	20.7	20	17	0.84
PS07100471	*Green*	2530	2490	20.9	25	21	0.85
Aragorn	*Green*	2260	2450	20.4	24	16	0.67
PS08101004	*Yellow*		2430	23.4	23	11	0.46
Universal	*Yellow*	2330	2430	22.4	24	23	0.94
Ariel	*Green*	2280	2400	18.2	25	20	0.80
Banner	*Green*	2340	2390	20.0	24	14	0.59
Pro 793	*Yellow*		2360	**26.8**	25	13	0.52
PS03101445	*Green*	2290	2310	21.0	23	17	0.73
PS07ND0190	*Green*		2290	18.2	30	14	0.47
PS08101108	*Yellow*		2210	25.1	21	15	0.71
Carousel	*Yellow*	2100	2190	22.7	25	19	0.76
PS05100840	*Green*	2300	2130	18.9	25	14	0.57
NDP080111	*Green*	2280	2090	16.3	26	18	0.71
Pro 081-7116	*Green*	1950	1880	22.5	24	14	0.55
Columbian	*Green*	1480	1630	18.6	33	8	0.24
C.V. %		11	11	2.8	10	26	22.30
LSD (.10)		230	360	0.7	3	5	0.16
Average		2290	2390	21.5	24	16	0.69
Highest		2830	2940	26.8	33	23	0.94
Lowest		1480	1630	16.3	20	8	0.24

Dusty Spring Dry Pea

1. Seed yield in 2012 the Dusty spring dry pea variety trial averaged 2390 pounds/acre, 280 pounds/ acre higher than the 2011 average yield. The Dusty nursery was located about six miles west of Dusty, WA (Steve Camp, cooperator).
2. This nursery was seeded on 10 April, 2012. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lb/acre for average seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than desirable and seeding conditions caused shallow seed placement that reduced some establishment.
3. Yields ranged from 1630 pounds/acre to 2940 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 30 entries are in this group. ‘Pacifica’ was the highest yielding green variety and ‘Universal’ was the highest yielding named yellow variety in this trial.
4. Seed weights were high and averaged 21.5 grams/100 seed and ranged from 16.3 to 26.8 grams/100 seed. The average plant height was 24 inches and the plant erect index (0-1.0) averaged 0.69.

Table 150. **2012 WSU Variety Testing Pea Trial Summary, Farmington**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)	2012 Canopy Height (In)	2012 Erect Index
PS07100471	*Green*	2860	**2640**	22.1	28	28	1.00
PS03101445	*Green*	2980	**2580**	21.8	24	22	0.94
PS05100735	*Green*		**2520**	22.8	23	22	0.97
PS07100470	*Green*	2800	**2510**	23.3	25	25	0.97
PS03101822	*Yellow*	2930	**2510**	24.7	19	19	1.00
Pro 7040	*Green*		2480	20.4	22	22	1.00
Pro 091-7137	*Green*	2770	2430	20.8	22	22	1.00
PS05100736	*Green*	2680	2400	22.9	24	21	0.89
PS08101004	*Yellow*		2360	23.8	23	19	0.86
PS08101108	*Yellow*		2300	25.1	19	18	0.94
Banner	*Green*	2610	2270	22.1	24	24	1.00
PS05100840	*Green*	2630	2240	20.8	27	27	1.00
PS07ND0190	*Green*		2210	20.7	32	32	1.00
Ariel	*Green*	2550	2200	19.4	23	23	1.00
Pacifica	*Green*	2610	2190	23.5	27	25	0.97
Carousel	*Yellow*	2720	2170	23.3	29	29	1.00
Aragorn	*Green*	2360	2100	22.9	24	24	1.00
Pro 793	*Yellow*		2090	**29.0**	27	27	1.00
PS07100925	*Yellow*		2090	23.7	24	24	1.00
NDP080111	*Green*	2380	2010	19.5	33	33	1.00
Pro 822	*Yellow*	2710	1960	27.4	24	24	1.00
Pro 081-7116	*Green*	2480	1950	24.0	23	23	1.00
Universal	*Yellow*	2600	1880	24.9	26	27	1.00
Columbian	*Green*	2100	1550	18.9	37	9	0.25
C.V. %		7	6	3.6	7	9	6.19
LSD (.10)		180	200	0.9	2	2	0.06
Average		2630	2240	22.8	25	24	0.95
Highest		2980	2640	29.0	37	33	1.00
Lowest		2100	1550	18.9	19	9	0.25

Farmington Spring Dry Pea

1. Seed yield in 2012 the Farmington spring dry pea variety trial averaged 2240 pounds/acre, 740 pounds/acre lower than the 2011 average yield. The Farmington nursery was located about three miles south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 17 May, 2012. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lb/acre for average seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than desirable.
3. Yields ranged from 1550 pounds/acre to 2640 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 30 entries are in this group. ‘Banner’ was the highest yielding green variety and ‘Carousel’ was the highest yielding named yellow variety in this trial.
4. Seed weights were high and averaged 22.8 grams/100 seed and ranged from 18.9 to 29.0 grams/100 seed. The average plant height was 25 inches and the plant erect index (0-1.0) averaged 0.95.

Table 151. **2012 WSU Variety Testing Pea Trial Summary, Palouse**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)	2012 Canopy Height (In)	2012 Erect Index
PS08101004	*Yellow*		**2860**	24.2	23	21	0.91
Pro 793	*Yellow*		**2840**	**27.5**	24	23	0.93
Pacifica	*Green*	2780	**2820**	23.5	27	21	0.80
PS05100736	*Green*	2800	**2750**	22.6	23	20	0.88
PS03101822	*Yellow*	3090	2690	25.1	19	16	0.85
PS07100925	*Yellow*		2670	25.2	23	20	0.90
PS07100471	*Green*	2750	2660	21.9	24	24	1.00
Pro 7040	*Green*		2650	20.1	23	22	0.95
NDP080111	*Green*	2720	2630	20.2	31	27	0.89
PS03101445	*Green*	2560	2620	21.3	23	23	1.00
Pro 091-7137	*Green*	2520	2620	21.0	23	23	1.00
Pro 822	*Yellow*	2780	2620	25.4	26	26	1.00
PS05100840	*Green*	2700	2600	21.5	25	24	1.00
PS08101108	*Yellow*		2590	25.6	19	18	1.00
PS05100735	*Green*		2570	22.5	21	12	0.56
Universal	*Yellow*	2820	2540	22.6	23	23	1.00
Pro 081-7116	*Green*	2750	2530	22.3	23	24	1.00
Carousel	*Yellow*	2780	2520	24.9	25	25	1.00
PS07100470	*Green*	2670	2500	22.9	22	21	0.94
PS07ND0190	*Green*		2470	22.3	30	30	1.00
Banner	*Green*	2790	2410	20.4	22	23	1.00
Aragorn	*Green*	2400	2390	21.0	22	22	1.00
Ariel	*Green*	2370	2390	18.5	23	22	1.00
Columbian	*Green*	2130	2260	18.2	33	10	0.32
C.V. %		10	5	2.1	9	11	10.20
LSD (.10)		250	160	0.5	2	2	0.10
Average		2670	2590	22.5	24	22	0.91
Highest		3090	2860	27.5	33	30	1.00
Lowest		2130	2260	18.2	19	10	0.32

Palouse Spring Dry Pea

1. Seed yield in 2012 the Palouse spring dry pea variety trial averaged 2590 pounds/acre, nearly equal to the 2011 average yield. The Palouse nursery was located about eight miles south of Palouse, WA (Chris Fleener, cooperator).

2. This nursery was seeded on 15 May, 2012. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lb/acre for average seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than desirable and seeding conditions caused shallow seed placement that reduced some establishment.

3. Yields ranged from 2260 pounds/acre to 2860 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 30 entries are in this group. ‘Pacifica’ was the highest yielding green variety and ‘Universal’ was the highest yielding named yellow variety in this trial.

4. Seed weights were high averaging 22.5 grams/100 seed and ranged from 18.2 to 27.5 grams/100 seed. The average plant height was 24 inches and the plant erect index (0-1.0) averaged 0.91.

Table 152. **2012 WSU Variety Testing Pea Trial Summary, Walla Walla**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)	2012 Canopy Height (In)	2012 Erect Index
PS08101108	*Yellow*		**2460**	**23.0**	25	21	0.83
PS07100471	*Green*	2470	**2420**	16.2	31	22	0.72
Universal	*Yellow*	2250	**2340**	19.0	31	30	0.95
Pro 793	*Yellow*		**2330**	**22.6**	30	21	0.68
PS08101004	*Yellow*		2290	18.9	30	19	0.62
Pro 822	*Yellow*	2280	2250	**22.3**	32	20	0.65
PS07100925	*Yellow*		2230	20.4	28	25	0.89
PS07100470	*Green*	2260	2230	18.6	29	25	0.88
Banner	*Green*	2290	2220	18.6	34	24	0.66
Carousel	*Yellow*	2380	2210	19.4	31	28	0.93
Pro 7040	*Green*		2190	17.2	28	26	0.88
PS05100840	*Green*	2290	2180	16.5	31	25	0.84
PS03101445	*Green*	2340	2180	18.1	29	23	0.79
Ariel	*Green*	2250	2170	15.1	30	23	0.80
Pro 091-7137	*Green*	2150	2160	18.0	29	27	0.92
PS03101822	*Yellow*	2260	2160	20.6	26	22	0.85
Aragorn	*Green*	2160	2080	18.4	28	23	0.80
PS05100735	*Green*		2000	17.4	26	18	0.74
PS05100736	*Green*	2080	1980	17.6	28	16	0.62
Pro 081-7116	*Green*	1830	1880	19.5	31	24	0.78
Pacifica	*Green*	1940	1780	15.8	28	17	0.65
Columbian	*Green*	1580	1720	16.2	43	14	0.32
NDP080111	*Green*	1990	1650	13.9	37	24	0.68
PS07ND0190	*Green*		1460	15.0	34	27	0.80
C.V. %		8	7	6.7	12	14	17.80
LSD (.10)		160	200	1.3	4	3	0.15
Average		2160	2110	18.3	30	23	0.76
Highest		2470	2460	23.0	43	30	0.95
Lowest		1580	1460	13.9	25	14	0.32

Walla Walla Spring Dry Pea

1. Seed yield in 2012 the Walla Walla spring dry pea variety trial averaged 2110 pounds/acre, about equal to the 2011 average yield. The Walla Walla nursery was located about one mile southeast of Walla Walla, WA (Dwelley Jones, cooperator).
2. This nursery was seeded on 23 April, 2012. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lb/acre for average seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than normal and might have had some limitation on yield. In mid-June a hail event caused damage to foliage, late flowers, and developing pods with seed. There was indication of root disease pressure at this site including Aphanomyces and Fusarium wilt.
3. Yields ranged from 1460 pounds/acre to 2460 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 30 entries are in this group. ‘Universal’ was the highest yielding yellow variety and ‘Banner’ was the highest yielding named green variety in this trial.
4. Seed weights averaged 18.3 grams/100 seed and ranged from 13.9 to 23.0 grams/100 seed. The average plant height was 30 inches and the plant erect index (0-1.0) averaged 0.76.

Table 153. **2012 WSU Variety Testing Lentil Trial Summary, Dusty**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)
Richlea	*Richlea*		**1040**	4.7	15
LC07ND068E	*Eston*		**960**	3.4	13
Pardina	*Pardina*	1220	**920**	3.5	12
LC08600005E	*Eston*	1040	860	4.3	14
LC07ND055E	*Eston*		850	3.2	13
LC01602300R	*Laird*	1130	800	4.6	14
LC01602062T	*Turkish Red*	940	800	4.1	13
Merrit	*Laird*	940	790	5.9	14
LC0700376L	*Laird*		770	6.9	15
LC05600043T	*Turkish Red*		770	4.1	13
LC08600113P	*Pardina*	940	760	4.3	14
LC08600116P	*Pardina*		760	4.6	13
Morena	*Pardina*	1230	720	3.6	14
LC05600812E	*Eston*	1030	700	3.7	12
Riveland	*Laird*		700	6.4	13
LC016022273E	*Eston*		680	3.1	12
Crimson	*Turkish Red*	1060	670	3.2	10
Eston	*Eston*	790	660	3.1	14
Brewer	*Laird*	680	650	5.4	15
LC06601734L	*Laird*	700	570	6.2	14
LC07600536L	*Laird*		550	6.4	16
LC0860B123L	*Laird*		470	**7.5**	14
LC07ND202T	*Turkish Red*		380	3.0	11
LC07ND176T	*Turkish Red*		300	3.1	13
C.V. %		17	21	4.0	9
LSD (.10)		140	200	0.2	1
Average		970	710	4.5	13
Highest		1230	1040	7.5	16
Lowest		680	300	3.0	10

Dusty Spring Lentil

1. Seed yield in the 2012 Dusty spring lentil variety trial averaged 710 pounds/acre, 330 pounds/acre less than the 2011 average. The Dusty nursery was located about six miles west of Dusty, WA (Steve Camp, cooperator).
2. This nursery was seeded on 10 April, 2012. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lb/acre for average ‘Laird’ seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than normal and might have had some limitation on yield. Seeding conditions caused shallow seed placement and reduced some establishment.
3. Yields ranged from 300 pounds/acre to 1040 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. ‘Richlea’ was the highest yielding variety in this trial. Class type is listed after variety name.
4. Seed weights averaged 4.5 grams/100 seed and ranged widely due to class seed size differences from 3.0 to 7.5 grams/100 seed. The average plant height was 13 inches.

Table 154. **2012 WSU Variety Testing Lentil Trial Summary, Farmington**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)
LC05600043T	*Turkish Red*		**1310**	5.0	11
Morena	*Pardina*	1760	**1270**	4.2	12
LC016022273E	*Eston*		**1160**	3.7	11
Riveland	*Laird*		1050	7.5	13
LC08600116P	*Pardina*		1020	5.3	11
LC08600113P	*Pardina*	1810	1020	4.7	12
LC07600536L	*Laird*		1000	7.1	13
LC06601734L	*Laird*	1760	990	7.1	12
Richlea	*Richlea*		980	5.3	12
LC07ND055E	*Eston*		970	3.8	9
Merrit	*Laird*	1600	960	6.5	12
LC01602300R	*Laird*	1810	940	4.9	13
LC0700376L	*Laird*		930	7.5	13
LC01602062T	*Turkish Red*	1520	910	4.5	11
Brewer	*Laird*	1680	910	5.9	11
Pardina	*Pardina*	1700	900	4.1	10
LC08600005E	*Eston*	1450	870	4.8	12
LC05600812E	*Eston*	1570	850	4.6	10
Eston	*Eston*	1420	810	3.4	11
Crimson	*Turkish Red*	1190	810	3.5	8
LC0860B123L	*Laird*		760	**8.8**	13
LC07ND068E	*Eston*		710	3.9	10
LC07ND202T	*Turkish Red*		610	3.0	9
LC07ND176T	*Turkish Red*		130	3.4	12
C.V. %		13	19	2.5	7
LSD (.10)		170	240	0.1	1
Average		1610	910	5.1	11
Highest		1810	1310	8.8	13
Lowest		1190	130	3.0	8

Farmington Spring Lentil

1. Seed yield in the 2012 Farmington spring lentil variety trial averaged 1310 pounds/acre, 810 pounds/acre less than the 2011 average. The Farmington nursery was located about three miles south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 17 May, 2012. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lb/acre for average ‘Laird’ seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than normal and might have had some limitation on yield. The trial area was not uniform and some plot areas were excluded.
3. Yields ranged from 130 pounds/acre to 1310 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. The recently released Spanish Brown ‘Morena’ was the highest yielding variety in this trial. Class type is listed after variety name.
4. Seed weights averaged 5.1 grams/100 seed and ranged widely due to class seed size differences from 3.0 to 8.8 grams/100 seed. The average plant height was 11 inches.

Table 155. **2012 WSU Variety Testing Lentil Trial Summary, Palouse**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)
LC016022273E	*Eston*		**1950**	3.5	10
Morena	*Pardina*	2230	**1860**	4.1	12
LC08600116P	*Pardina*		**1840**	5.0	12
Pardina	*Pardina*	2180	**1820**	4.2	11
LC05600043T	*Turkish Red*		**1790**	4.8	12
LC01602300R	*Laird*	2290	**1790**	5.0	13
LC08600113P	*Pardina*	2150	1750	4.8	11
LC05600812E	*Eston*	2100	1730	4.7	11
Richlea	*Richlea*		1690	5.1	13
Riveland	*Laird*		1670	7.5	13
LC06601734L	*Laird*	2110	1640	7.1	14
Brewer	*Laird*	2130	1600	5.9	12
LC0700376L	*Laird*		1580	7.2	13
LC07ND055E	*Eston*		1560	3.8	11
LC01602062T	*Turkish Red*	2050	1540	4.7	12
LC08600005E	*Eston*	1990	1530	4.7	12
LC0860B123L	*Laird*		1480	**9.3**	12
Merrit	*Laird*	1970	1480	6.4	12
LC07ND068E	*Eston*		1400	4.0	11
LC07600536L	*Laird*		1350	6.7	13
Eston	*Eston*	1770	1240	3.3	11
Crimson	*Turkish Red*	1680	1010	3.5	10
LC07ND202T	*Turkish Red*		980	3.1	11
LC07ND176T	*Turkish Red*		800	3.4	12
C.V. %		10	10	3.7	7
LSD (.10)		170	220	0.2	1
Average		2050	1540	5.1	12
Highest		2290	1950	9.3	14
Lowest		1680	800	3.1	10

Palouse Spring Lentil

1. Seed yield in the 2012 Palouse spring lentil variety trial averaged 1540 pounds/acre, 820 pounds/acre less than the 2011 average. The Palouse nursery was located about eight miles south of Palouse, WA (Chris Fleener, cooperator).
2. This nursery was seeded on 15 May, 2012. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lb/acre for average ‘Laird’ seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than normal and might have had some limitation on yield. Seeding conditions resulted in shallow seed placement and reduced some establishment.
3. Yields ranged from 800 pounds/acre to 1950 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. The recently released Spanish Brown ‘Morena’ was the highest yielding variety in this trial. Class type is listed after variety name.
4. Seed weights averaged 5.1 grams/100 seed and ranged widely due to class seed size differences from 3.1 to 9.3 grams/100 seed. The average plant height was 12 inches.

Table 153. **2012 WSU Variety Testing Lentil Trial Summary, Walla Walla**

Variety Name	Type	2 Year Average (Lbs/A)	2012 Yield (Lbs/A)	2012 100 Seed Weight (Grams)	2012 Plant Height (In)
Pardina	*Pardina*	1550	**1400**	3.7	12
Merrit	*Laird*	1410	**1350**	5.6	14
LC01602300R	*Laird*	1500	**1300**	4.5	14
LC016022273E	*Eston*		**1290**	3.1	13
LC07ND068E	*Eston*		**1270**	3.6	13
LC07ND055E	*Eston*		1250	3.2	14
Morena	*Pardina*	1340	1230	3.5	12
Brewer	*Laird*	1400	1210	5.4	13
LC01602062T	*Turkish Red*	1290	1150	4.0	13
LC08600005E	*Eston*	1260	1130	4.1	15
LC08600113P	*Pardina*	1240	1110	4.3	13
Riveland	*Laird*		1080	6.4	14
LC06601734L	*Laird*	1140	1020	5.9	14
Eston	*Eston*	1010	1000	3.1	13
Richlea	*Richlea*		870	4.5	14
LC08600116P	*Pardina*		870	4.7	15
LC0860B123L	*Laird*		850	**7.8**	13
LC05600043T	*Turkish Red*		790	3.9	13
LC07600536L	*Laird*		530	5.8	15
LC05600812E	*Eston*	790	470	3.7	11
Crimson	*Turkish Red*	760	380	3.6	12
LC07ND202T	*Turkish Red*		140	3.0	12
LC0700376L	*Laird*		140	5.9	14
LC07ND176T	*Turkish Red*		140	3.3	13
C.V. %		16	13	5.4	10
LSD (.10)		160	160	0.3	1
Average		1220	910	4.4	13
Highest		1550	1400	7.8	15
Lowest		760	140	3.0	11

Walla Walla Spring Lentil

1. Seed yield in the 2012 Walla Walla spring lentil variety trial averaged 910 pounds/acre, 320 pounds/acre less than the 2011 average. The Walla Walla nursery was located about one mile southeast of Walla Walla, WA (Dwelley Jones, cooperator).
2. This nursery was seeded on 23 April, 2012. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lb/acre for average ‘Laird’ seed weight) using a double-disk plot drill set on 6-inch spacing. Seeding was later than normal and might have had some limitation on yield. In mid-June a hail event caused some damage to foliage, flowers, and developing pods, but damage should have been minor at that stage.
3. Yields ranged from 140 pounds/acre to 1400 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 24 entries are in this group. ‘Pardina’ was the highest yielding variety in this trial. Class type is listed after variety name.
4. Seed weights averaged 4.4 grams/100 seed and ranged widely due to class seed size differences from 3.0 to 7.8 grams/100 seed. The average plant height was 13 inches.

Table 154. **2012 WSU Variety Testing Chickpea Trial Summary, Dusty**

Variety Name	2 Year Average (Lbs/A)	2012		
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
Billy beans		**1910**	27.5	20
CA0690B0250C	1940	**1800**	47.5	19
CDC Frontier	2200	**1800**	33.5	16
CA04900843C	2040	**1680**	**57.1**	16
CA04900421C	2070	**1680**	43.4	14
CDC Alma	2030	1610	32.7	13
CDC Orion	2040	1580	41.0	13
CA0390B007C	1830	1490	45.2	17
Sawyer	1870	1480	38.8	16
CA0790B0043C		1430	47.5	19
Sierra	1730	1430	50.0	16
Dwelley	1560	1190	43.9	15
Evans		1120	37.9	17
C.V. %	13	15	4.2	8
LSD (.10)	180	250	1.9	1
Average	1930	1550	42.0	16
Highest	2200	1910	57.1	20
Lowest	1560	1120	27.5	13

Dusty Chickpea

1. Seed yield in the 2012 Dusty Chickpea variety trial averaged 1550 pounds/acre, 710 pounds/acre less than the 2011 average yield. The Dusty nursery was located about six miles west of Dusty, WA (Steve Camp, cooperator).
2. This nursery was seeded on 10 April, 2012. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lb/acre for average seed weight) using a double-disk drill set on 6-inch spacing. Seeding conditions caused shallow seed placement that reduced some establishment.
3. Yields ranged from 1120 pounds/acre to 1910 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 13 entries are in this group. ‘Billy beans’ was the highest yielding named entry in this trial.
4. Seed weights were lower than last year averaging 42.0 grams/100 seed and ranged from 27.5 to 57.1 grams/100 seed. The average plant height was 16 inches.

Table 155.

2012 WSU Variety Testing Chickpea Trial Summary, Farmington

Variety Name	2 Year Average (Lbs/A)	2012		
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
CA04900843C	2400	**2450**	**58.7**	19
CDC Frontier	2450	**2430**	35.9	18
CA0390B007C	2180	**2410**	49.1	21
Sierra	2150	**2370**	50.6	19
CDC Orion	2490	**2340**	42.2	17
Sawyer	2360	**2330**	41.6	21
CA0790B0043C		**2300**	51.7	21
Billy beans		**2280**	30.0	22
CA04900421C	2290	**2250**	47.2	18
CA0690B0250C	2200	**2230**	49.3	22
CDC Alma	2550	**2200**	36.6	16
Dwelley	1660	2040	51.7	18
Evans		1770	45.3	23
C.V. %	12	11	3.4	10
LSD (.10)	200	260	1.6	2
Average	2270	2260	45.4	20
Highest	2550	2450	58.7	23
Lowest	1660	1770	30.0	16

Farmington Chickpea

1. Seed yield in the 2012 Farmington Chickpea variety trial averaged 2260 pounds/acre, slightly more than the 2011 average yield. The Farmington nursery was located about three miles south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 17 May, 2012. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lb/acre for average seed weight) using a double-disk drill set on 6-inch spacing. Seeding, establishment, and growth were normal.
3. Yields ranged narrowly from 1770 pounds/acre to 2450 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 11 of the 13 entries are in this group. ‘CDC Frontier’ was the highest yielding named entry in this trial.
4. Seed weights were lower than last year averaging 45.4 grams/100 seed and ranged from 30.0 to 58.7 grams/100 seed. The average plant height was 20 inches.

Table 156. **2012 WSU Variety Testing Chickpea Trial Summary, Palouse**

Variety Name	2 Year Average (Lbs/A)	2012		
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
CA0790B0043C		**2790**	56.7	17
CA0390B007C	2720	**2720**	52.4	14
CDC Frontier	2930	**2690**	38.9	14
CDC Orion	3010	**2650**	45.9	12
Billy beans		**2630**	30.5	14
CA0690B0250C	2910	2590	53.7	17
CA04900843C	2590	2560	**60.9**	14
CA04900421C	2680	2420	50.9	12
Sawyer	2610	2320	44.4	15
Sierra	2550	2260	52.8	15
Dwelley	2270	2210	53.2	16
CDC Alma	2500	2200	37.5	12
Evans		2030	46.7	17
C.V. %	7	7	1.9	7
LSD (.10)	140	180	1.0	1
Average	2680	2470	48.0	15
Highest	3010	2790	60.9	17
Lowest	2270	2030	30.5	12

Palouse Chickpea

1. Seed yield in the 2012 Palouse Chickpea variety trial averaged 2470 pounds/acre, 400 pounds/acre less than the 2011 average yield. The Palouse nursery was located about eight miles south of Palouse, WA (Chris Fleener, cooperator).
2. This nursery was seeded on 15 May, 2012. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lb/acre for average seed weight) using a double-disk drill set on 6-inch spacing. Seeding conditions caused shallow seed placement that reduced some establishment.
3. Yields ranged narrowly from 2030 pounds/acre to 2790 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 13 entries are in this group. ‘CDC Frontier’ was the highest yielding named entry in this trial.
4. Seed weights were slightly lower than last year averaging 48.0 grams/100 seed and ranged from 30.5 to 60.9 grams/100 seed. The average plant height was 15 inches.

Table 157.

2012 WSU Variety Testing Chickpea Trial Summary, Walla Walla

Variety Name	2 Year Average (Lbs/A)	2012		
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
CDC Frontier	2720	**2030**	30.2	18
Billy beans		1850	26.7	21
CA0790B0043C		1790	46.6	19
Sawyer	2270	1700	37.8	18
CDC Orion	2360	1690	38.4	16
CA0690B0250C	2160	1690	45.0	20
CA04900421C	2320	1630	41.4	17
CA04900843C	2300	1560	**51.9**	17
CA0390B007C	2340	1550	44.9	17
Sierra	2050	1450	46.0	19
CDC Alma	1680	1410	30.9	15
Dwelley	1760	1300	47.3	19
Evans		1220	38.2	19
C.V. %	13	9	5.8	4
LSD (.10)	210	160	2.5	1
Average	2200	1610	40.4	18
Highest	2720	2030	51.9	21
Lowest	1680	1220	26.7	15

Walla Walla Chickpea

1. Seed yield in the 2012 Walla Walla Chickpea variety trial averaged 1610 pounds/acre, 1160 pounds/acre less than the 2011 average yield. The Walla Walla nursery was located about one mile southeast of Walla Walla, WA (Dwelley Jones, cooperator).
2. This nursery was seeded on 23 April, 2012. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lb/acre for average seed weight) using a double-disk drill set on 6-inch spacing. Seeding was normal, and plants established and grew well. In mid-June a hail event caused minor damage to foliage, flowers, and early developing pods.
3. Yields ranged from 1220 pounds/acre to 2030 pounds/acre. Yield values within the LSD range of the highest yield are shown in bold and 1 of the 13 entries are in this group. ‘CDC Frontier’ was the highest yielding named variety in this trial.
4. Seed weights were lower than last year averaging 40.4 grams/100 seed and ranged from 26.7 to 51.9 grams/100 seed. The average plant height was 18 inches.