

# WSU Extension Uniform Cereal Variety Testing Program

## Cereal Variety Performance Trials 2011

DEPARTMENT OF CROP AND SOIL SCIENCES • TECHNICAL REPORT 11-3



*Walla Walla winter wheat field tour at sunset  
Photo by S.O. Guy*

Contributing agencies: Washington State University,  
U.S. Department of Agriculture, and Department of Crop and Soil Sciences

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**WSU Extension Uniform Cereal Variety Testing Program**

**Cereal Variety Performance Trials  
2011**

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Steve Matsen	Bickleton	Klickitat		Roger/Randy Koller	Mayview	Garfield
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Jerry Krause	Creston	Lincoln		Chris Fleener	Palouse	Whitman
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Bob Morasch	Dusty	Whitman		Ryan Davis	Pullman	Whitman
Steve Camp	Dusty	Whitman		Hal Johnson	Reardan	Lincoln
Mark Richter	Endicott	Whitman		Ron Jirava	Ritzville	Adams
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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 and barley varieties across the different climatic regions and management practices in eastern Washington. A related goal is to provide WSU and USDA-ARS cereal 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 cultivar performance tested in WSU Extension variety trials in crop year 2011.

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

In addition to cereal variety trials in 2011, The WSU Variety Testing Program began evaluation of several legume varieties. Lentil, pea and chickpea trials were grown in four locations, representing various legume producing areas in Eastern Washington. The legume variety trial locations were chosen to complement the locations used by local breeders.

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 2011. The total number of varieties and locations was:

soft white winter wheat: 60 entries at 21 locations;  
hard winter wheat: 30 entries at 11 locations;  
irrigated hard winter wheat: 30 entries at 1 location;  
soft white spring wheat: 24 entries at 16 locations;  
hard white spring wheat: 8 entries at 16 locations;  
hard red spring wheat: 16 entries at 16 locations;  
spring barley: 36 entries at 11 locations;  
lentils: 24 entries at 4 locations;  
peas: 30 entries at 4 locations;  
chickpeas: 11 entries at 4 locations.

An additional 6 spring wheat entries were included in the irrigated spring wheat trial at Moses Lake, WA.

Tables 1-7 list all entries for the winter and spring trials. An alpha lattice design with three replications was used for all trials. For each crop, the seeding rate was a specific number of seeds planted per square foot. Planting rates were determined by weighing 1000 seeds (1000 kernel weight) of each cultivar (Tables 8-10). Winter and spring cereals were treated with CruiserMaxx .50 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 11 and 12). For example, a deep furrow drill with split packer openers is necessary in locations where planting depths may exceed 6 inches, compared to using a planter with double disc openers that only require placing seed 1-2 inches into moisture. All trials were maintained under grower management conditions specific to each trial location.

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.

Fertility levels were maintained under grower management practices for soft white winter wheat, soft white spring wheat and spring barley. Hard winter and hard spring wheat trials had additional nitrogen fertilizer applied, if needed, based on spring soil tests. The 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. The calculation estimate used for hard red spring wheat was 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.

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 37, 38, 54, 55, 76, 97, and 112.

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 11 and 12). 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 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.

Within two days after harvest, all processed winter wheat 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](mailto: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. 2011 Soft White Winter Wheat Entries**

Name	Originator	Class	PI Number	Old Name
03PN107#3	AgriPro	SWW <sup>1</sup>		
96-16702A	Uofl	SWW		
AP 700 CL	AgriPro	SWW		OSU POP-28-13
AP Badger	AgriPro	SWW	PI 658543	
AP Legacy	AgriPro	SWW	PI 658008	ORF2BC9800267-0
ARS970161-3L	USDA-ARS/WSU	SWW		
ARS-Amber	USDA-ARS/WSU	SWW		ARS960277L
Bitterroot	Uofl	SWW	PI 655042	ID92-22407A
Brundage 96	Uofl	SWW	PI 631486	ID-B-96
Bruneau	Uofl	SWW		ID9364901A
BZ6W02-616	WestBred LLC	SWW		BZ6W02-616
Eltan	USDA-ARS/WSU	SWW	PI 536994	WA 7431
Eltan/Tubbs 06		SWW		ELT50TUB0650
Finch	USDA-ARS/WSU	SWW	PI 628640	WA 7853
Goetze/Skiles		SWW		Goetze/Skiles
ID00-475-2DH	Uofl	SWW		ID00-475-2DH
IDO663	Uofl	SWW		
Lambert	Uofl	SWW	PI 583372	ID85-153
LCS-Artdeco	Limagrains LLC	SWW		NSA06-2153A
Legion	AgriPro	SWW	PI 658035	99X1009-23
Madsen	USDA-ARS/WSU	SWW	PI 511673	WA 7163
Madsen/Rod		SWW		MAD50ROD50
Mary	OSU	SWW		OR2040726
Masami	WSU	SWW	PI 634715	WA 7916
OR2070385	OSU	SWW		
OR2071628	OSU	SWW		
ORCF-102	OSU	SWWI <sup>2</sup>	PI 641787	OR201007
ORCF-103	OSU	SWWI	PI 658153	ORI2042037
Rod	WSU	SWW	PI 558510	WA 7662
Rod/Tubbs 06		SWW		ROD50TUB0650
Rod/WB-528		SWW		
Skiles	OSU	SWW	PI 658154	ORH010085
Stephens	OSU	SWW	Citr 17596	OR 65-116
SY Ovation	Syngenta Seeds, Inc.	SWW	PI 662047	
Tubbs 06	OSU	SWW	PI 651023	Tubbs 06
UICF-Brundage	Uofl	SWWI	PI 660543	ID02-859
WA 8092	WSU	SWW		WA 8092
WA 8094	WSU	SWW		WA 8094
WA 8114	WSU	SWW		V/W-16
WA 8116	WSU	SWW		F/E-35
WA 8134	WSU	SWW		
WA 8135	WSU	SWW		
WA 8136	WSU	SWW		
WA 8142	WSU	SWWI		
WA 8143	WSU	SWWI		
WA 8144	WSU	SWW		
WA 8145	WSU	SWW		
WB-528	WestBred LLC	SWW	PI 643142	BZ 6W98-528
Xerpha	WSU	SWW	PI 645605	WA 7973
ARS97230-6C	USDA-ARS/WSU	WC <sup>3</sup>		
ARS98X402-1C	USDA-ARS/WSU	WC		
ARS-Chrysal	USDA-ARS/WSU	WC		ARS970075-3
ARS-Crescent	USDA-ARS/WSU	WC		ARS970163-4C
Bruehl	WSU	WC	PI 606764	WA 7833
Cara	USDA-ARS/WSU	WC	PI 643435	ARS97-135-9
Cara +25%		WC	PI 643435	Cara +25%
Chukar	USDA-ARS/WSU	WC	PI 628641	WA 7855
Chukar +25%		WC		Chukar +25%
Coda	USDA-ARS/WSU	WC	PI 594372	WA 7752
Sunrise	U of Saskatchewan	SRW <sup>4</sup>		DH99-55-2

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

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

<sup>3</sup> - Winter Club

<sup>4</sup> - Soft Red Winter

**Table 2. 2011 Hard Winter Wheat Entries**

Name	Originator	Class	PI Number	Old Name
Accipiter	U of Saskatchewan	HRW <sup>1</sup>	PI 663207	DH00-18-196
AgriPro Paladin	AgriPro	HRW	PI 643094	W96-355
Altigo	Limagrain LLC.	HRW		
Azimet	Limagrain LLC.	HRW		
Bauermeister	WSU	HRW	PI 634717	WA007939
Boundary	Uofl	HRW	PI 603039	IDO467
Eddy	WestBred, LLC	HRW	PI 643423	BZ9W96-788-E
Esperia	Allstar Inc.	HRW		Esperia
Farnum	WSU	HRW	PI 638535	WA007975
Finley	WSU	HRW	PI 586757	WA 7773
Genesis	AllStar LLC.	HRW		Genesi
Hatton	WSU	HRW	Cltr 17772	WA 6364
IDO656	Uofl	HRW		
Norwest 553	OSU	HRW	PI 655030	ORN00B553
Peregrine	U of Saskatchewan	HRW	PI 663208	DH99-37-100
WA 8070	WSU	HRW		WA008070
WA 8118	WSU	HRW		KKHR05001-0-0-0-97
WA 8119	WSU	HRW		J030189-1
WA 8120	WSU	HRW		J030189-3
ML9W05-2501	WestBred, LLC	HRW	PI 664101	
WB-Tucson	WestBred, LLC	HRW	PI 664088	ML9W05-2506
Whetstone	AgriPro	HRW	PI 658009	W98-344
IDO835	Uofl	HWW <sup>2</sup>		
MDM	WSU	HWW	PI 634716	WA007936
OR2080111H	OSU	HWW		
OR2080156H	OSU	HWW		OR2080156H
UI Silver	Uofl	HWW	PI 658467	IDO658
UICF-Grace	Uofl	HWWI <sup>3</sup>	PI 658468	IDO651
WA 8096	WSU	HWW		WA008096
Eltan	USDA-ARS/WSU	SWW <sup>4</sup>	PI 536994	WA 7431

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

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

<sup>3</sup> - Hard White Winnter, Clearfield

**Table 3. 2011 Irrigated Hard Winter Wheat Entries**

Name	Originator	Class	PI Number	Old Name
Accipiter	U of Saskatchewan	HRW <sup>1</sup>	PI 663207	DH00-18-196
AgriPro Paladin	AgriPro	HRW	PI 643094	W96-355
Altigo	Limagrains LLC.	HRW		
Azimut	Limagrains LLC.	HRW		
Bauermeister	WSU	HRW	PI 634717	WA007939
Bora	Agrotera	HRW		
Boundary	Uofl	HRW	PI 603039	IDO467
Declo	Sunderman Breeding	HRW	PI 619419	215-B
Eddy	WestBred, LLC	HRW	PI 643423	BZ9W96-788-E
Esperia	Allstar Inc.	HRW		Esperia
Genesis	AllStar LLC.	HRW		Genesi
Norwest 553	OSU	HRW	PI 655030	ORN00B553
Peregrine	U of Saskatchewan	HRW	PI 663208	DH99-37-100
Tyche	Agrotera	HRW		Eliseo
WA 8118	WSU	HRW		KKHR05001-0-0-0-97
WA 8120	WSU	HRW		J030189-3
WA 8139	WSU	HRW		
WA 8140	WSU	HRW		
ML9W05-2501	WestBred, LLC	HRW	PI 664101	
WB-Tucson	WestBred, LLC	HRW	PI 664088	ML9W05-2506
Whetstone	AgriPro	HRW	PI 658009	W98-344
OR2080111H	OSU	HWW <sup>2</sup>		
OR2080156H	OSU	HWW		OR2080156H
UI Silver	Uofl	HWW	PI 658467	IDO658
UICF-Grace	Uofl	HWWI <sup>3</sup>	PI 658468	IDO651
WA 8146	WSU	HWW		
Sunrise	U of Saskatchewan	SRW <sup>4</sup>		DH99-55-2
WA 8147	WSU	SWF <sup>5</sup>		
LCS-Artdeco	Limagrains LLC	SWW <sup>6</sup>		NSA06-2153A
Stephens	OSU	SWW	Cltr 17596	OR 65-116
WA 8115	WSU	SWW		WA 8115
YS18	Wagner Seed	SWW		
YS20	Wagner Seed	SWW		
YS27	Wagner Seed	SWW		
YS29	Wagner Seed	SWW		
UI Winchester	Uofl	HRS <sup>7</sup>	PI 642362	A9356S-2

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

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

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

<sup>4</sup> - Soft Red Winter

<sup>5</sup> - Soft White Facultative

<sup>6</sup> - Soft White Winter

<sup>7</sup> - Hard Red Spring

**Table 4. 2011 Soft White Spring Wheat Entries**

Name	Originator	Class	PI Number	Old Name
Eden	WSU	SC <sup>1</sup>	PI 630983	WA007902
JD	WSU	SC	PI 656790	WA008047
WA 8131	WSU	SC		
Alpowa	WSU	SWS <sup>2</sup>	PI 566596	WA 7677
Alturas	Uofl	SWS	PI 620631	IDO526
Babe	WSU	SWS	PI 656791	WA008039
Diva	WSU	SWS	PI 660663	WA008090
IDO644	Uofl	SWS		
IDO671	Uofl	SWS		IDO671
IDO686	Uofl	SWS		
IDO687	Uofl	SWS		
Louise	WSU	SWS	PI 634865	WA007921
Louise-G2		SWS		
Nick	Westbred, LLC	SWS	PI 638697	BZ698-031
UI-Cataldo	Uofl	SWS	PI 642361	IDO642
WA 8124	WSU	SWS		WA008124
WA 8127	WSU	SWS		
WA 8128	WSU	SWS		
WA 8149	WSU	SWS		HT080125LU
WA 8150	WSU	SWS		HT080091
Wakanz	WSU	SWS	PI 506352	WA 7183
WB-1035CL2	Westbred, LLC	SWS		
Whit	WSU	SWS	PI 653841	WA008008
Zak	WSU	SWS	PI 607839	WA 7850

<sup>1</sup> - Spring Club

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

**Table 5. 2011 Hard Spring Wheat Entries**

Name	Originator	Class	PI Number	Old Name
10Fx Inc.1	Limagrain Inc.	HRS <sup>1</sup>		
Buck Pronto	Buck Semillas S.A.	HRS	PI 619397	T 1052
Bullseye	AgriPro	HRS	PI 658036	AP-81
Cerere	Agrotera	HRS		
Hank	WestBred, LLC	HRS	PI 613585	BZ 922-322
Hollis	WSU	HRS	PI 632857	WA007859
IDO702	Uofl	HRS		
Jefferson	Uofl	HRS	PI 603040	IDO462
Kelse	WSU	HRS	PI 653842	WA007954
Lassik	UC Davis	HRS	PI 653535	LASSIK
Scarlet	WSU	HRS	PI 601814	WA007802
Tara 2002	WSU	HRS	PI 617073	WA007824
UI Winchester	Uofl	HRS	PI 642362	IDO578
WA 8074	WSU	HRS		H0500135
WA 8148	WSU	HRS		H0800314
WB-Fuzion	WestBred, LLC	HRS	PI 661160	BZ901-717
Westbred 926	WestBred, LLC	HRS		WESTBRED 926
BR7030	General Mills	HWS <sup>2</sup>		GMBR7030
Clear White 515	UC Davis	HWS		
Macon	WSU	HWS	PI 617072	WA007899
Otis	WSU	HWS	PI 634866	WA007931
Patwin 515	UC Davis	HWS		
WA 8123	WSU	HWS		WA008123
WA 8133	WSU	HWS		

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

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

**Table 6. 2011 Irrigated Hard Spring Wheat Entries**

Name	Originator	Class	PI Number	Old Name
10Fx Inc.1	Limagrain Inc.	HRS <sup>1</sup>		
Buck Pronto	Buck Semillas S.A.	HRS	PI 619397	T 1052
Bullseye	AgriPro	HRS	PI 658036	AP-81
Cabernet	Resouce Seeds, Inc.	HRS	PI 646196	95WV10616
Cerere	Agrotera	HRS		
H0800103L	WSU	HRS		
H0800315	WSU	HRS		
H0900053	WSU	HRS		
Hank	WestBred, LLC	HRS	PI 613585	BZ 922-322
Hollis	WSU	HRS	PI 632857	WA007859
IDO702	Uofl	HRS		
Jefferson	Uofl	HRS	PI 603040	IDO462
Kelse	WSU	HRS	PI 653842	WA007954
Lassik	UC Davis	HRS	PI 653535	LASSIK
Malbec	AgriPro	HRS		RSI50603
Scarlet	WSU	HRS	PI 601814	WA007802
Tara 2002	WSU	HRS	PI 617073	WA007824
UI Winchester	Uofl	HRS	PI 642362	IDO578
WA 8074	WSU	HRS		H0500135
WA 8148	WSU	HRS		H0800314
WB-Fuzion	WestBred, LLC	HRS	PI 661160	BZ901-717
WB-Rockland	Westbred, LLC	HRS	PI 659487	
Westbred 926	WestBred, LLC	HRS		WESTBRED 926
BR7030	General Mills	HWS <sup>2</sup>		GMBR7030
Clear White 515	UC Davis	HWS		
Macon	WSU	HWS	PI 617072	WA007899
Otis	WSU	HWS	PI 634866	WA007931
Patwin 515	UC Davis	HWS		
WA 8123	WSU	HWS		WA008123
WA 8133	WSU	HWS		

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

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



**Table 7. 2011 Spring Barley Entries**

Name	Originator	Class	PI Number	Old Name
04WA-113.22	WSU	S2 <sup>1</sup>		
05WA-316.99	WSU	S2		
05WA-316.K	WSU	S2		
06WA-458.14	WSU	S2		
07MB-390	WSU	S2		
07WA-601.6	WSU	S2		
07WA-614.4	WSU	S2		
07WA-630.19	WSU	S2		
07WA-649.7	WSU	S2		
07WA-658.8	WSU	S2		
07WA-677.1	WSU	S2		
07WA-682.1	WSU	S2		
07WA-684.17	WSU	S2		
2004NZ151	WSU	S2		
2004NZ163	WSU	S2		
2004NZ170	WSU	S2		
2004NZ223	WSU	S2		
2Ab04-X01084-27	USDA-ARS, Aberdeen	S2		
2Ab17271	USDA-ARS, Aberdeen	S2		
AC Metcalfe	Ag. Canada	S2		AC METCALFE
Baronesse	Nord Saat/WestBred, LLC	S2	PI 568246	BARONESSE
Bentley	Alberta Agriculture	S2	PI 655071	BENTLEY
Bob	WSU	S2	PI 629288	WA 8682-96
CDC Copeland	U of Saskatchewan	S2		SKTR0150
CDC Meredith	U of Saskatchewan	S2		CDC MEREDITH
Champion	WestBred, LLC	S2	PI 654517	YU-501-385D
Harrington	U of Saskatchewan	S2		WA006783
Lenetah	USDA-ARS/Uofl	S2	PI 652440	01Ab11107
Newdale	Agriculture & Agri-Food Canada	S2		
Spaulding	Plant Breeders 1	S2	PI 634355	PB1-95-2R-522
Tetonia	USDA-ARS/Uofl	S2	PI 646199	98Ab11720
Radiant	WSU	S2A <sup>2</sup>	PI 633971	98NZ223
Clearwater	USDA-ARS/Uofl	S2NLp <sup>3,4</sup>	PI 647080	01ID435H
Meresse	WestBred, LLC	S2NWx <sup>5</sup>	PI 613618	BZ 594-35
WAS 4	WSU	S2NWx		X04041-T81
WAS 2	WSU	S2Wx		03WA-204.22W4

<sup>1</sup> - 2-row

<sup>2</sup> - "A" - Pro-Anthocyanidin Free

<sup>3</sup> - "N" - Hulless

<sup>4</sup> - "Lp" - Low Phytate

<sup>5</sup> - "Wx" - Waxy

**Table 8. 2011 WSU Winter Wheat Variety Trial Seed Weight**

Name	1000 KW (grams)	Seeds per Pound	Name	1000 KW (grams)	Seeds per Pound
<b>Soft White Common</b>			<b>Soft White Club</b>		
03PN107#3	31.7	14309	ARS97230-6C	32.0	14175
96-16702A	30.5	14872	ARS98X402-1C	31.1	14585
AP 700 CL	46.2	9818	ARS-Chrysal	37.7	12032
AP Badger	47.8	9489	ARS-Crescent	34.2	13263
AP Legacy	48.0	9450	Bruehl	44.8	10125
ARS970161-3L	30.0	15120	Cara	36.0	12600
ARS-Amber	32.5	13957	Chukar	34.4	13186
Botterroot	28.6	15860	Coda	34.7	13072
Brundage 96	31.8	14264			
Bruneau	34.1	13302	<b>Hard White Winter</b>		
BZ6W02-616	40.5	11200	IDO835	40.2	11283
Eltan	46.4	9776	MDM	42.9	10573
Eltan/Tubbs 06	48.9	9276	OR2080111H	33.2	13662
Finch	38.6	11751	OR2080156H	33.6	13500
Goetze/Skiles	50.5	8982	UI Silver	28.3	16028
ID00-475-2DH	29.1	15587	WA 8096	32.4	14000
IDO663	39.1	11601	UICF-Grace	37.7	12032
Lambert	28.8	15750			
LCS-Artdeco	33.7	13460	<b>Hard Red Spring</b>		
Legion	37.9	11968	UI Winchester	39.9	11368
Madsen	40.9	11090			
Madsen/Rod	42.0	10800	<b>Hard Red Winter</b>		
Mary	35.6	12741	Accipiter	31.2	14538
Masami	43.5	10427	AgriPro Palalin	40.7	11145
OR2070385	28.4	15971	Altigo	31.6	14354
OR2071628	26.4	17181	Azimut	26.7	16988
ORCF-102	52.1	8706	Bauermeister	48.0	9450
ORCF-103	45.9	9882	Bora	46.6	9734
Rod	43.1	10524	Boundary	30.8	14727
Rod/Tubbs 06	47.3	9590	Delco	37.2	12193
Rod/WB-528	43.9	10332	Eddy	43.9	10332
Skiles	52.5	8640	Esperia	36.9	12292
Stephens	45.5	9969	Farnum	42.9	10573
SY Ovation	42.9	10573	Finley	45.8	9904
Tubbs 06	51.4	8825	Genesis	38.0	11937
UICF-Brundage	25.5	17788	Hatton	35.9	12635
WA 8092	34.4	13186	IDO656	33.4	13581
WA 8094	40.3	11255	ML9W05-2501	44.5	10193
WA 8114	39.3	11542	Norwest 553	42.7	10623
WA 8115	37.5	12096	OR2080111H	33.2	13662
WA 8116	36.6	12393	OR2080156H	33.6	13500
WA 8134	38.0	11937	Peregrine	34.7	13072
WA 8135	39.0	11631	Tyche	38.2	11874
WA 8136	33.9	13380	UI Silver	28.3	16028
WA 8142	37.6	12064	UICF-Grace	37.7	12032
WA 8143	30.7	14775	WA 8070	34.9	12997
WA 8144	27.7	16375	WA 8118	45.5	9969
WA 8145	38.3	11843	WA 8119	34.4	13186
WA 8146	37.8	12000	WA 8120	37.6	12064
WA 8147	39.9	11368	WA 8139	40.9	11090
WB 528	44.6	10170	WA 8140	41.4	10956
Xerpha	39.1	11601	WB-Tucson	44.1	10285
YS18	42.2	10749	Whetstone	33.7	13460
YS20	36.1	12565			
YS27	29.7	15272	<b>Soft Red Winter</b>		
YS29	34.9	12997	Sunrise	26.4	17181

**Table 9. 2011 WSU Spring Wheat Variety Trial Seed Weight**

<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>	<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>
<b>Soft White Common</b>			<b>Hard Red Spring</b>		
Alpowa	37.6	12064	10Fx Inc.1	29.6	15324
Alturas	37.1	12226	Buck Pronto	47.3	9590
Babe	48.2	9411	Bullseye	42.0	10800
Diva	47.7	9509	Cabernet	44.0	10309
IDO644	37.5	12096	Cerere	45.5	9969
IDO671	34.5	13148	H0800103L	34.9	12997
IDO686	37.4	12128	H0800315	26.0	17446
IDO687	35.1	12923	H0900053	28.3	16028
Louise	48.1	9430	Hank	50.7	8947
Louise-G2	48.1	9430	Hollis	54.2	8369
Nick	48.7	9314	IDO702	35.0	12960
UI-Cataldo	37.4	12128	Jefferson	37.1	12226
WA 8124	28.9	15695	Kelse	45.9	9882
WA 8127	35.7	12706	Lassik	38.5	11782
WA 8128	34.7	13072	Malbec	51.9	8740
WA 8149	31.0	14632	Scarlet	40.6	11172
WA 8150	30.5	14872	Tara 2002	48.5	9352.4
Wakanz	43.6	10403	UI Winchester	39.4	11512
WB-1035CL2	42.6	10648	WA 8074	34.6	13110
Whit	49.4	9182	WB-Fuzion	44.5	10193
Zak	41.3	10983	WB-Rockland	40.5	11200
<b>Soft White Club</b>			Westbred 926	42.7	10623
Eden	35.7	12706	<b>Hard White Spring</b>		
JD	40.2	11283	BR7030	41.0	11063
WA 8131	31.5	14400	Clear White 515	35.3	12850
			Macon	44.5	10193
			Otis	42.8	10598
			Patwin 515	38.6	11751
			WA 8123	29.9	15170
			WA 8133	27.2	16676
			WA 8148	31.3	14492

**Table 10. 2011 WSU Spring Barley Variety Trial Seed Weight**

<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>	<b>Name</b>	<b>1000 KW (grams)</b>	<b>Seeds per Pound</b>
<b>2-row</b>			<b>2-row Waxy</b>		
04WA-113.22	42.0	10800	WAS 2	45.5	9969
05WA-316.99	42.7	10623	<b>2-row Waxy Hulless</b>		
05WA-316.K	47.9	9470	Meresse	39.1	11601
06WA-458.14	38.1	11905	WAS 4	41.5	10930
07MB-390	48.0	9450	<b>2-row Hulless</b>		
07WA-601.6	36.5	12427	Clearwater	38.9	11660
07WA-614.4	31.9	14219			
07WA-630.19	45.9	9882			
07WA-649.7	43.4	10451			
07WA-658.8	42.9	10573			
07WA-677.1	38.9	11660			
07WA-682.1	47.4	9569			
07WA-684.17	38.9	11660			
2004NZ151	35.4	12813			
2004NZ163	34.6	13110			
2004NZ170	45.7	9925			
2004NZ223	43.6	10403			
2Ab04-X01084-27	40.9	11090			
2Ab17271	42.4	10698			
AC Metcalfe	40.8	11117			
Baronesse	47.3	9590			
Bentley	46.3	9797			
Bob	55.6	8158			
CDC Copeland	52.5	8640			
CDC Meredith	52.2	8689			
Champion	49.4	9182			
Harrington	41.7	10877			
Lenetah	43.4	10451			
Newdale	48.2	9411			
Radiant	45.2	10035			
Spaulding	47.1	9630			
Tetonia	39.3	11542			

**Table 11. Cultural data for 2011 WSU Winter Wheat Variety Trial Locations.**

Average Annual Rainfall (in)	Nursery Location	Previous Crop	Base Fertilizer lbs			Hard nursery Additional Fertilizer			Planting			Harvest Area (ft. <sup>2</sup> )	Harvest Date	Crop Year Pptn. (in.)	Soil Type	Elevation	Latitude	Longitude
			N	P	S	N	P	S	Date	Seeding Rate (lb/A)	Planter Type <sup>1</sup>	Row Space (in)						
< 12	Connell	Fallow	58	0	0	0	0	0	30-Oct	45	DF	15	78	1-Aug	12.25	Ritzville Silt Loam	1267	W118 43.629
	Harrington	Fallow	60	0	0	--	--	--	15-Sep	45	DF	15	72	17-Aug	12.79	Renslow Silt Loam	---	---
	Horse Heaven	Fallow	50	0	0	0	0	0	7-Sep	45	DF	15	60	3-Aug	9.46	Shano Silt Loam	1163	W119 38.155
	Lind	Fallow	50	0	10	0	0	0	3-Sep	45	DF	15	72	2-Aug	9.48	Ritzville Silt Loam	1659	W118 34.029
	Ritzville	Fallow	60	0	10	0	0	0	3-Sep	45	DF	15	72	5-Aug	13.13	Ritzville Silt Loam	1827	W118 28.401
	St. Andrews	Fallow	90	0	0	0	0	0	1-Sep	45	DF	15	72	20-Aug	11.19	Siweeka	2360	W119 26.104
12-16	Almira	Fallow	75	0	0	25	0	4	9-Sep	85	DD	6	48	31-Aug	12.02	Bagdad Silt Loam	2670	W118 52.486
	Anatone	Fallow	75	0	10	--	--	--	5-Oct	85	DD	6	48	15-Aug	15.05	Neconda Silt Loam	3225	W117 06.731
	Creston	Fallow	80	10	10	--	--	--	9-Sep	85	DD	6	48	25-Aug	15.90	Bagdad Silt Loam	2548	W118 31.910
	Dusty	Fallow	75	0	10	--	--	--	29-Sep	85	DD	6	48	8-Aug	18.85	Onyx Silt Loam	1584	W117 48.381
	Lamont	Fallow	70	0	10	100	0	15	13-Sep	85	DD	6	48	22-Aug	18.59	Athens Silt Loam	1860	W117 49.541
	Dayton	Fallow	110	0	0	150	0	22	28-Sep	85	DD	6	48	19-Aug	20.09	Mondovi	2039	W118 03.323
16-20	Mayview	Fallow	90	0	0	--	--	--	12-Oct	85	DD	6	48	18-Aug	24.91	Athens Silt Loam	2449	W117 24.057
	Reardan	Fallow	80	0	0	0	0	0	21-Sep	85	DD	6	48	30-Aug	16.76	Hanning Silt Loam	2531	W118 02.060
	St. John	Fallow	90	0	0	--	--	--	27-Sep	85	DD	6	48	12-Aug	18.10	Athens Silt Loam	2206	W117 31.198
	Walla Walla	Fallow	115	15	15	42	0	6	28-Sep	85	DD	6	48	9-Aug	24.82	Walla Walla Silt Loam	1028	W118 17.836
	Colton	Lentils	114	20	20	--	--	--	1-Oct	85	NT	10	60	30-Aug	24.47	Latah Silt Loam	2589	W111 07.476
	Fairfield	Lentils	114	20	20	--	--	--	30-Sep	85	NT	10	60	29-Aug	18.02	Palouse Silt Loam	2567	W117 10.515
> 20	Farmington	Peas	114	20	20	--	--	--	30-Sep	85	NT	10	60	1-Sep	24.69	Thattuna Silt Loam	2621	W117 02.773
	Pullman	Chickpeas	120	0	32	24	0	4	20-Oct	85	DD	6	48	26-Aug	25.13	Latah Silt Loam	2466	W117 21.562
	Moses Lake	Potatoes	150	0	0	200	0	30	26-Oct	85	DD	6	48	2-Sep	25 <sup>1</sup> -Irr.	Timmerman Sandy Loam	1245	W119 48.619

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

45# = 11.25 Seeds/Ft

57# = 14.25 Seeds/Ft

60# = 15 Seeds/Ft

85# = 21.5 Seeds/Ft

**Table 12. Cultural data for the 2011 WSU spring wheat and barley variety trial locations.**

Annual Rainfall (in)	Nursery Location	Previous Crop	Base Fertilizer		Hard nursery				Planting						Harvest Area (ft. <sup>3</sup> )	Precipitation		Harvest Date	Soil Type	Elevation	Latitude	Longitude
			lbs		Fertilizer				Seeding		Planter Type <sup>1</sup>	Row Space (in)	Soil Moisture (in)	Rainfall (in)								
			N	P	S	N	P	S	Date	Wheat						Barley						
< 12	Bickleton	Spring Wheat	30	5	5	25	4	4	12-May	60	80	NT	10	80	5.23	n.d. <sup>2</sup>	21-Sep	Broadax Silt Loam	2781	N45 58.927	W120 13.981	
	Cornell	Fallow	58	0	0	0	0	0	18-Mar	60	--	DD	6	64	6.05	4.34	10-Aug	Ritzville Silt Loam	1290	N46 37.187	W118 43.558	
	Horse Heaven	Chem Fallow	35	0	0	0	0	0	23-Mar	60	--	DD	6	64	4.94	3.63	3-Aug	Warden Silt Loam	1068	N46 07.893	W119 37.071	
	Lind	Fallow	50	10	10	0	0	0	18-May	60	--	DD	6	80	4.88	3.81	4-Aug	Ritzville Silt Loam				
12-16	Almira	Spring Wheat	65	0	10	0	0	0	22-Apr	80	80	DD	6	64	9.52	6.14	31-Aug	Bagdad Silt loam	2609	N41 53.318	W118 53.661	
	Endicott	Winter Wheat	70	12	12	0	0	0	8-Apr	80	--	NT	10	80	7.94	8.43	15-Aug	Onyx Silt Loam				
	Lamont	Winter Wheat	70	10	10	0	0	0	18-Apr	80	80	DD	6	64	7.45	8.19	6-Sep	Athens Silt Loam	1905	N47 08.297	W117 49.889	
	Dayton	Winter Wheat	160	10	15	0	0	0	18-Apr	80	90	DD	6	64	6.51	8.08	8-Sep	Athens Silt Loam	2013	N46 23.604	W118 03.404	
16-20	Mayview	Winter Wheat	90	20	20	0	0	0	29-Apr	80	90	DD	6	64	9.20	10.77	9-Sep	Athens Silt Loam	2427	N46 36.434	W117 24.510	
	Reardan	Winter Wheat	70	12	12	30	5	5	20-Apr	80	90	NT	10	80	9.90	7.86	13-Sep	Hanning Silt Loam				
	St. John	Winter Wheat	80	0	12	0	0	0	20-Apr	80	90	DD	6	80	10.27	7.84	7-Sep	Athens Silt Loam	2211	N47 04.888	W117 31.190	
	Walla Walla	Spring Wheat	100	0	0	0	0	0	25-May	80	90	DD	6	64	13.07	9.87	8-Sep	Walla Walla Silt Loam	1282	N46 16.413	W118 07.842	
> 20	Fairfield	Winter Wheat	70	12	12	44	8	8	15-Apr	90	90	NT	10	80	8.54	8.64	19-Sep	Thatuna Silt Loam	2445	N47 25.298	W117 15.215	
	Farmington	Winter Wheat	70	12	12	44	8	8	11-May	90	90	NT	10	80	9.20	10.83	22-Sep	Naft Palouse silt loam	2576	N47 02.441	W117 02.846	
	Pullman Sp Wht	Winter Wheat	70	30	20	50	0	7	24-Apr	90	--	DD	6	80	9.52	10.85	3-Sep	Palouse Silt Loam				
	Pullman Sp Bly	Winter Wheat	70	30	20	--	--	--	27-Apr	--	90	DD	6	80	9.52	10.85	13-Sep	Palouse Silt Loam				
Irrigated	Moses Lake Sp Wht	Edamame	100	1		50	1	0	7	17-Mar	90	--	DD	6	80	--	24"-Irr.	25-Aug	Timmerman Sandy Loam			

<sup>1</sup> - DD = double disc drill; H = Hoe openers; NT = Cross Slot; DF = Deep Furrow

<sup>2</sup> - no data

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

70# = 17.5 Seeds/Ft (wheat)/21 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)



Figure 1.

# 2011 WSU Cereal Variety Testing Program PNW Crop Tour Schedule

The 2011 crop tour season will soon be starting and provides opportunities during June and July 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, and assure 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 at our trials.

– Stephen Guy, WSU Extension Agronomist

<i>Date</i>	<i>Time</i>	<i>Location</i>	<i>Contact</i>
1-Jun	9:00 AM	Horse Heaven	Tim Waters, 509-545-3511
2-Jun	6:00 PM	Connell	Aaron Esser, 509-659-3210
8-Jun		Almira - WA Legislature Tour	
9-Jun	8:00 AM	Western Whitman County Research Tour	Steve Van Vleet, 509-397-6290
10-Jun	9:30 AM	Moses Lake - irrigated grain	Andy McGuire, 509-754-2011
14-Jun	8:30 AM	Pendleton Field Day	Don Wysocki, 541-278-4396
14-Jun	5:00 PM	Ritzville	Aaron Esser, 509-659-3210
15-Jun	7:30 AM	Moro Field Day	Don Wysocki, 541-278-4396
15-Jun	6:00 PM	Harrington	Diana Roberts, 509-477-2167
16-Jun	8:30 AM	Lind Field Day	Bill Schillinger, 509-235-1933
16-Jun	4:00 PM	Almira	Diana Roberts, 509-477-2167
17-Jun	12:00 PM	Bickelton	Susan Kerr, 509-773-5817
17-Jun	6:00 PM	St. Andrews	Dale Whaley, 509-745-8531
21-Jun	7:00 AM	Fairfield	Diana Roberts, 509-477-2167
21-Jun	8:00 AM	N.Lincoln Co. - Creston	Aaron Esser, 509-659-3210
22-Jun	7:00 AM	Reardan	Diana Roberts, 509-477-2167
23-Jun	7:30 AM	Cook Farm Field Day	Scot Hulbert, 509-335-3722
23-Jun	9:00 AM	Mayview	Dave Bragg, 509-843-3701
23-Jun	2:30 PM	Anatone	Mark Heitstuman, 509-243-2009
28-Jun	6:00 PM	Walla Walla	Paul Carter, 509-382-4741
29-Jun	8:30 AM	Dayton	Paul Carter, 509-382-4741
29-Jun	6:00 PM	Pullman	Steve Van Vleet, 509-397-6290
6-Jul	8:00 AM	Crop Diagnostic Clinic - Pullman	Steve Van Vleet, 509-397-6290
7-Jul	8:00 AM	Spillman Field Day - Pullman	Stephen Guy, 509-335-5831
12-Jul	6:00 PM	Colton (PNW Farmers Cooperative)	Steve Van Vleet, 509-397-6290
13-Jul	10:30 AM	Farmington	Steve Van Vleet, 509-397-6290
13-Jul	3:00 PM	St. John	Steve Van Vleet, 509-397-6290
13-Jul	6:00 PM	Lamont	Steve Van Vleet, 509-397-6290

<http://variety.wsu.edu>

## 2011 Soft White Winter Wheat

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## **2011 WSU Soft White Winter Wheat Trial Summary**

### **Precipitation Zone >20"**

1. Soft white winter wheat grain yield across five locations and 60 entries in the >20" precipitation zone averaged 139 bushels/acre the same as the average in the 16-20" zone, and is 6 bushels/acre higher than the 2010 average of 133 bushels/acre and 10 bushels/acre higher than the 2009 average of 129 bushels/acre. The C.V. for the average data was 6, similar to the 2010 C.V. In general the trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 111 to 156 bushels/acre and reflected the favorable precipitation and temperature for most of the growing season. Legion was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (4 bushels/acre) of the highest yield are shown in bold and this included 3 of the 60 entries. Stripe rust significantly reduced yields in most of these locations and influenced yield rankings based on susceptibility. Fungicide applications and yield impacts in percent for these locations were: no fungicide and 40% impact at Farmington, none and 20% at Fairfield, three and 20% at Pullman, two and 10% at Colton, and two and none at Moses Lake Irrigated.
3. Test weight averaged 61.7 lbs/bu across locations and entries and was higher than last year's 58.7 lbs/bu average. Grain protein averaged 10.1% and was lower than last year's 10.4% protein value.

## **2011 WSU Soft White Winter Wheat Trial Summary**

### **Precipitation Zone 16-20"**

1. Soft white winter wheat grain yield across five locations and 60 entries in the 16-20" precipitation zone averaged 139 bushels/acre and is 20 bushels/acre higher than the 2010 average of 119 bushels/acre, and 18 bushels/acre higher than the 2009 average of 121 bushels/acre. The C.V. for the average data was 8, lower than the 2010 C.V. In general the trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 110 to 160 bushels/acre and reflected the favorable precipitation and temperature through most of the growing season. Cara was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (5 bushels/acre) of the highest yield are shown in bold and this included 4 of the 60 entries. Stripe rust significantly reduced yields in most of these locations and influenced yield rankings based on susceptibility. Fungicide applications and yield impacts in percent for these locations were: no fungicide and 35% impact at St. John, one and 20% at Walla Walla, three and 15% at Dayton, one and 10% at Mayview, and one and low at Reardan.
3. Test weight averaged 60.6 lbs/bu across locations and entries and was higher than last year's 59.4 lbs/bu average. Grain protein averaged 10.2% and was lower than last year's 10.8% protein value.

## **2011 WSU Soft White Winter Wheat Trial Summary**

### **Precipitation Zone 12-16"**

1. Soft white winter wheat grain yield across five locations and 60 entries in the 12-16" precipitation zone averaged 109 bushels/acre and is 6 bushels/acre lower than the 2010 average of 115 bushels/acre and 14 bushels/acre higher than the 2009 average of 95 bushels/acre. The C.V. for the average data was 10, similar to the 2010 C.V. In general the trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 84 to 129 bushels/acre and reflected the favorable precipitation and temperature for most of the growing season. Xerpha was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (5 bushels/acre) of the highest yield are shown in bold and this included 3 of the 60 entries. Stripe rust influenced yields in some locations and changed yield rankings due to susceptibility. Fungicide applications and yield impacts in percent for these locations were: no fungicide and 10% impact at Almira, none and 10% at Dusty, two and 10% at Lamont, two and no impact at Anatone, and two and no impact at Creston.
3. Test weight averaged 60.5 lbs/bu across locations and entries and was higher than last year's 58.0 lbs/bu average. Grain protein averaged 10.4% and was lower than last year's 11.1% protein value.

## **2011 WSU Soft White Winter Wheat Trial Summary**

### **Precipitation Zone <12"**

1. Soft white winter wheat grain yield across six locations and 60 entries in the <12" precipitation zone averaged 62 bushels/acre, 12 bushels/acre higher than the 2010 average of 50 bushels/acre, and 30 bushels/acre higher than the 2009 average of 32 bushels/acre. The C.V. for the average data was 10, lower than the 2010 C.V. which was 13. In general the trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 46 to 70 bushels/acre and reflected the favorable precipitation and temperature through most of the growing season. Skiles was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (3 bushels/acre) of the highest yield are shown in bold and this included 9 of the 60 entries. Stripe rust significantly reduced yields in the 20-30% or more range for susceptible entries at Connell and Harrington, despite a fungicide application at each location. At the Horse Heaven and Ritzville sites, there were two applications of fungicide that effectively controlled stripe rust. At Lind and St. Andrews, no fungicides were applied but stripe rust was not a significant factor.
3. Test weight averaged 61.0 lbs/bu across locations and entries and was higher than last year's 60.2 lbs/bu average. Grain protein averaged 10.5% and was lower than last year's 11.4% value.

**Table 13. 2011 WSU Variety Testing Soft White Winter Wheat Trial Summary**

**Precipitation Zone >20"**

Variety Name (Club Italicized)	Colton	Fairfield	Farmington	Moses Lake (Irrigated)	Pullman	Average	Colton	Fairfield	Farmington	Moses Lake (Irrigated)	Pullman	Average	Colton	Fairfield	Farmington	Moses Lake (Irrigated)	Pullman	Average
Yield (Bu/A)							Test Wt (Lbs/Bu)						Protein (%)					
Legion	149	87	160	194	192	156	61.4	59.8	60.5	62.3	61.7	61.1	9.2	9.1	9.6	11.6	10.8	10.1
Bruneau	153	94	143	182	196	154	62.4	61.5	61.7	63.5	63.0	62.4	9.1	9.1	9.5	12.0	10.4	10.0
OR2070385	137	106	151	197	178	154	61.5	60.8	61.4	62.5	62.0	61.6	9.5	8.8	9.9	11.6	11.0	10.2
WA 8143	140	110	138	177	187	150	62.4	62.2	61.1	62.5	60.5	61.7	9.2	8.4	9.8	11.3	10.5	9.8
SY Ovation	144	88	136	191	180	148	62.5	61.2	60.6	62.6	62.5	61.9	9.8	8.7	9.4	11.8	11.3	10.2
Cara +25%	141	97	141	166	188	147	61.7	61.0	61.3	61.8	62.0	61.6	9.2	9.0	9.9	11.7	11.0	10.2
BZ6W02-616	140	95	132	192	169	146	63.2	61.8	61.6	63.3	63.7	62.7	9.2	8.7	9.5	11.1	11.3	10.0
Cara	138	97	151	160	183	146	61.6	60.5	61.3	61.8	62.1	61.4	9.5	8.4	9.9	12.4	11.4	10.3
Bruehl	147	100	132	168	183	146	60.1	59.7	59.2	60.6	59.3	59.8	9.6	8.9	9.6	12.4	10.8	10.3
WA 8092	143	96	135	176	177	145	62.2	62.2	61.5	62.5	60.3	61.7	9.7	8.4	9.8	11.8	10.3	10.0
WA 8134	146	85	131	186	178	145	62.0	60.7	60.4	62.5	62.1	61.5	9.1	8.6	9.6	11.7	10.6	9.9
ARS970161-3L	137	85	154	170	177	144	63.2	62.3	63.1	63.6	63.4	63.1	9.6	9.4	10.1	12.4	10.8	10.5
Madsen	133	101	131	175	179	144	61.9	61.5	61.2	62.3	62.0	61.8	9.8	9.3	10.0	12.2	11.1	10.5
ARS960277L (ARS-Amber)	137	99	132	170	180	144	62.3	61.5	60.2	62.3	62.4	61.8	9.2	8.7	9.1	11.2	10.4	9.7
Skiles	138	94	140	169	175	143	63.7	62.9	62.5	62.6	63.2	63.0	10.2	9.8	10.4	12.5	11.4	10.9
WA 8116	144	94	126	177	173	143	62.6	62.3	61.5	62.3	62.0	62.1	9.4	8.3	9.6	11.9	10.3	9.9
Chukar	145	102	135	152	183	143	61.8	60.5	61.0	62.6	61.8	61.5	9.3	7.8	9.9	12.8	10.9	10.1
Rod	147	90	121	189	170	143	61.9	60.7	59.3	62.0	60.9	60.9	9.3	9.1	9.8	11.1	10.9	10.0
OR2071628	136	85	124	194	174	143	60.5	60.2	59.8	61.4	60.7	60.5	8.9	8.8	9.2	11.3	10.7	9.8
WA 8144	130	94	144	168	174	142	62.9	62.6	62.1	62.7	62.6	62.6	10.0	9.0	10.0	12.8	10.9	10.5
ARS970075-3C (ARS-Chrysal)	138	96	113	179	181	142	63.0	61.5	59.3	63.6	63.3	62.1	8.7	8.0	9.8	12.1	10.8	9.9
Madsen/Rod	139	86	129	186	173	142	62.0	60.9	60.3	62.4	61.5	61.4	10.0	8.7	10.1	11.4	11.0	10.2
96-16702A	132	88	123	185	176	141	63.5	62.3	62.1	63.5	63.7	63.0	8.8	8.5	9.6	11.5	10.4	9.7
03PN107#3	143	93	123	179	167	141	63.0	62.4	60.8	63.6	62.6	62.5	9.3	9.7	9.5	11.4	9.9	10.0
ARS970163-4C (ARS-Crescent)	139	100	128	162	174	141	62.4	62.6	61.8	62.6	62.5	62.4	8.5	8.2	9.4	11.7	10.2	9.6
Bitterroot	137	85	130	179	174	141	62.4	62.4	61.4	62.8	62.5	62.3	9.6	10.0	9.8	12.0	10.7	10.4
ARS97230-6C	142	95	131	169	168	141	62.1	61.9	60.8	61.9	63.0	61.9	9.0	8.0	9.0	11.2	10.1	9.5
Eltan	146	94	120	161	184	141	62.4	61.6	60.3	62.3	61.8	61.7	9.5	7.8	9.2	11.8	10.1	9.7
Stephens	130	70	137	193	176	141	62.0	58.5	60.6	62.5	62.3	61.2	9.7	10.2	9.8	11.3	10.8	10.4
WB-528	135	92	123	179	172	140	63.3	61.7	61.9	63.7	63.5	62.8	10.0	9.0	9.8	12.3	11.1	10.4
AP 700 CL	128	72	133	185	179	139	62.6	61.2	61.3	62.2	62.3	61.9	9.6	9.9	9.7	12.1	10.9	10.4
Chukar +25%	137	96	135	152	176	139	61.7	61.5	60.8	62.3	61.7	61.6	9.1	8.8	9.1	12.8	10.4	10.0
WA 8145	124	89	149	175	158	139	61.8	60.8	60.7	61.8	62.1	61.5	10.3	9.9	10.0	11.9	11.4	10.7
LCS-Artdeco (NSA06-2153A)	137	80	129	180	170	139	61.7	59.5	59.8	61.7	61.9	60.9	9.1	9.1	9.8	11.1	10.7	10.0
AP Badger	138	86	121	185	164	139	60.8	58.8	59.0	61.6	60.4	60.1	9.8	9.3	9.8	11.4	11.1	10.3
Rod/WB-528	135	94	118	181	164	138	63.1	61.1	60.5	62.8	62.3	62.0	9.9	8.9	10.0	11.3	11.1	10.2
ARS98X402-1C	134	94	118	173	170	138	62.2	61.4	60.3	62.7	62.3	61.8	8.9	8.0	8.9	12.1	10.5	9.7
Brundage 96	141	95	124	175	156	138	62.0	60.9	60.9	61.7	61.4	61.4	9.7	9.0	9.5	11.5	10.5	10.0
ID00-475-2DH	135	92	112	172	172	137	64.1	63.0	60.5	63.7	63.4	62.9	9.3	9.3	9.4	11.2	10.4	9.9
OR2040726 (Mary)	131	87	118	186	162	137	63.0	61.1	60.5	62.5	62.7	62.0	9.6	8.4	9.4	11.2	10.7	9.9
Xerpha	142	96	91	193	164	137	62.5	61.2	59.7	62.2	61.7	61.5	9.7	8.8	10.5	12.4	10.4	10.3
ORCF-102	140	93	105	181	164	136	62.5	61.0	58.0	62.5	61.8	61.2	10.1	8.5	10.3	11.5	10.6	10.2
ORCF-103	136	94	116	181	154	136	61.7	60.6	60.1	61.8	61.4	61.1	9.0	8.7	9.4	11.4	10.7	9.8
Rod/Tubbs 06	138	82	97	200	163	136	61.9	59.6	57.4	62.4	61.1	60.5	9.1	8.7	10.3	11.3	10.2	9.9
WA 8136	130	76	135	172	168	136	60.2	60.5	60.3	59.9	59.6	60.1	9.3	8.7	9.4	11.6	10.2	9.9
WA 8135	124	94	120	170	165	135	63.2	62.8	62.4	63.3	62.8	62.9	9.9	9.1	10.5	11.6	11.2	10.5
Finch	130	83	124	169	165	134	63.1	62.0	62.3	63.0	63.3	62.8	9.2	9.0	9.2	12.1	10.2	9.9
WA 8142	126	88	135	164	160	134	63.0	62.4	62.0	63.0	63.1	62.7	10.3	10.0	10.3	12.4	11.3	10.9
IDO663	121	72	112	191	171	134	62.6	60.3	61.2	63.5	63.1	62.1	9.2	9.7	9.5	11.5	10.8	10.1
UICF-Brundage	134	87	119	167	162	134	62.0	61.3	60.2	60.8	61.4	61.1	9.1	9.2	9.4	12.1	10.5	10.1
Coda	124	81	133	160	169	133	64.0	63.6	63.5	63.9	64.3	63.9	9.8	9.4	10.6	12.7	11.4	10.8
WA 8114	130	85	124	178	151	133	63.0	62.2	60.4	62.6	62.2	62.1	9.2	9.1	9.7	11.6	10.3	10.0
Goetze/Skiles	132	88	113	182	148	133	63.1	61.8	60.8	61.9	62.4	62.0	10.6	9.7	10.8	12.3	11.6	11.0
Eltan/Tubbs 06	144	81	95	175	170	133	62.0	60.1	58.9	62.4	61.0	60.9	9.1	8.9	9.7	12.0	10.7	10.1
Masami	133	88	106	183	149	132	61.0	60.3	59.4	62.0	60.2	60.6	8.7	8.2	9.5	10.8	10.3	9.5
Tubbs 06	139	77	83	190	160	130	62.0	58.5	57.3	62.5	60.9	60.2	9.2	9.1	9.8	11.6	10.4	10.0
WA 8094	135	90	104	167	150	129	63.2	61.9	61.5	63.0	62.6	62.4	9.5	9.0	9.9	12.4	10.5	10.3
Sunrise	124	84	91	163	160	125	60.3	59.8	58.5	61.3	61.1	60.2	8.8	8.2	9.6	11.8	10.9	9.9
Lambert	125	74	90	175	149	123	62.1	60.0	60.0	63.3	61.4	61.4	9.0	9.0	10.3	11.6	11.0	10.2
AP Legacy	117	69	53	184	134	111	60.7	57.3	53.8	62.2	59.6	58.7	9.6	8.2	9.9	11.5	10.1	9.9
C.V. %	6	9	7	5	7	6	0.3	0.9	0.8	0.6	0.9	0.8	3.5	7.0	3.5	4.6	3.7	4.5
LSD (0.10)	8	8	9	9	12	4	0.2	0.6	0.5	0.4	0.6	0.2	0.4	0.7	0.4	0.6	0.4	0.2
Average	136	89	124	177	170	139	62.3	61.1	60.5	62.5	62.0	61.7	9.4	8.9	9.7	11.8	10.7	10.1
Highest	153	110	160	200	196	156	64.1	63.6	63.5	63.9	64.3	63.9	10.6	10.2	10.8	12.8	11.6	11.0
Lowest	117	69	53	152	134	111	60.1	57.3	53.8	59.9	59.3	58.7	8.5	7.8	8.9	10.8	9.9	9.5

**Table 14. 2011 WSU Variety Testing Soft White Winter Wheat Trial Summary**

**Precipitation Zone 16-20"**

Variety Name (Club <i>Italicized</i> )	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
Yield (Bu/A)							Test Wt (Lbs/Bu)						Protein (%)					
ARS970161-3L	166	143	160	182	149	160	62.4	62.0	62.9	62.3	62.2	62.3	11.8	10.6	11.5	9.7	9.1	10.5
<i>Cara</i>	167	141	158	178	144	157	60.4	59.6	60.6	60.9	59.9	60.3	11.3	10.1	12.0	9.3	9.1	10.4
WA 8134	148	143	174	167	143	155	60.6	60.6	61.3	60.7	60.6	60.8	11.4	10.2	11.4	9.1	9.7	10.4
<i>Cara +25%</i>	159	140	162	183	134	155	60.3	59.9	60.9	61.1	59.8	60.4	11.2	9.7	11.8	9.4	9.2	10.3
Skiles	172	148	139	165	143	153	62.1	62.5	61.7	62.2	61.9	62.1	11.6	10.4	11.9	9.7	9.3	10.6
SY Ovation	185	141	170	143	124	153	63.0	61.4	61.7	61.3	60.2	61.5	10.9	9.8	10.8	9.3	9.5	10.0
ARS97230-6C	166	140	142	167	149	153	60.9	61.2	61.8	61.1	61.1	61.2	11.2	9.6	11.0	8.5	8.1	9.7
OR2070385	166	140	146	164	149	153	59.4	61.3	60.7	61.3	59.8	60.5	12.3	10.5	11.2	9.5	8.8	10.5
WA 8116	150	153	154	171	125	151	61.3	61.3	61.6	58.0	60.9	60.6	11.5	10.0	10.8	9.5	8.7	10.1
03PN107#3	158	134	154	170	135	150	60.9	61.4	61.8	61.5	61.1	61.3	10.8	9.9	10.1	9.0	8.8	9.7
ARS960277L (ARS-Amber)	147	149	158	171	124	150	60.3	60.8	61.6	60.5	59.8	60.6	10.9	9.8	10.7	8.3	8.0	9.5
<i>ARS970075-3C (ARS-Chrysal)</i>	142	145	151	168	140	149	61.2	61.1	62.6	61.9	61.7	61.7	11.8	9.9	11.1	8.8	9.2	10.2
<i>Chukar</i>	158	131	160	170	125	149	60.1	60.0	61.2	60.8	59.4	60.3	11.1	10.1	11.5	9.6	8.9	10.2
<i>Chukar +25%</i>	155	132	157	167	136	149	59.9	59.7	61.6	60.3	59.6	60.2	11.3	9.9	11.0	8.7	7.8	9.7
Madsen	160	137	142	158	143	148	61.4	61.5	61.4	61.3	60.9	61.3	11.9	11.0	11.4	9.9	9.2	10.7
Bruneau	159	153	139	155	134	148	61.4	61.9	61.6	61.3	60.4	61.3	10.6	10.3	10.9	8.6	8.2	9.7
OR2071628	153	136	144	160	139	147	59.2	59.9	60.0	59.6	58.8	59.5	11.7	9.7	10.7	9.1	8.4	9.9
OR2040726 (Mary)	158	134	143	147	147	146	61.5	61.5	61.5	61.5	60.9	61.4	11.7	10.1	11.4	9.1	8.1	10.1
Brundage 96	158	126	152	151	140	146	61.2	60.7	61.1	60.6	60.1	60.7	11.4	9.8	11.1	9.5	9.3	10.2
LCS-Artdeco (NSA06-2153A)	181	139	129	154	128	146	60.9	60.5	59.1	60.2	61.3	60.4	11.2	10.1	10.7	9.2	9.6	10.1
<i>ARS98X402-1C</i>	146	133	157	158	134	145	60.8	60.8	62.1	60.7	60.6	61.0	11.3	9.2	11.2	8.9	8.4	9.8
WA 8136	139	141	141	173	133	145	57.4	59.3	59.3	56.6	58.6	58.2	11.9	9.9	10.6	9.6	9.0	10.2
WA 8142	159	123	138	152	135	141	62.2	62.3	62.0	61.5	61.7	61.9	11.6	10.6	11.4	9.6	9.3	10.5
<i>ARS970163-4C (ARS-Crescent)</i>	151	129	146	159	121	141	61.1	60.5	62.1	61.7	60.0	61.1	10.7	9.7	10.2	8.7	8.6	9.6
WA 8092	153	151	135	156	109	141	60.5	58.6	61.0	54.7	60.2	59.0	11.8	10.2	10.9	10.0	10.0	10.6
Legion	151	145	132	162	116	141	58.1	59.9	59.8	58.7	57.7	58.8	12.0	10.8	10.6	8.9	10.3	10.5
Goetze/Skiles	169	134	140	145	114	140	61.9	61.3	61.1	61.3	60.7	61.3	11.4	11.1	11.8	10.2	9.8	10.9
AP 700 CL	156	130	113	158	141	140	60.5	61.5	59.9	60.6	60.4	60.6	11.5	10.6	11.1	9.5	8.8	10.3
Madsen/Rod	154	133	143	148	122	140	60.3	60.5	60.9	60.5	59.1	60.3	11.6	10.6	11.4	9.9	10.7	10.8
WA 8135	146	124	140	158	129	139	62.6	62.7	62.4	61.3	61.8	62.2	11.8	10.8	11.8	10.1	10.1	10.9
96-16702A	144	126	162	153	112	139	61.4	62.7	62.6	62.0	60.3	61.8	11.1	9.9	10.2	9.3	10.1	10.1
Bitterroot	154	142	143	144	112	139	62.3	61.9	62.3	61.3	60.2	61.6	11.4	10.1	11.9	9.3	8.5	10.2
Finch	136	134	143	153	130	139	61.1	62.1	62.6	60.7	61.7	61.6	11.6	10.2	10.8	8.9	8.6	10.0
ORCF-102	151	138	133	141	132	139	61.6	61.5	60.6	60.2	61.1	61.0	11.4	10.0	10.8	9.1	9.2	10.1
WB-528	164	136	127	144	117	137	62.5	62.9	62.2	61.8	60.7	62.0	11.3	10.7	12.2	9.0	8.3	10.3
BZ6W02-616	157	142	132	149	106	137	61.3	62.8	62.3	61.8	60.5	61.7	11.5	10.1	11.1	9.0	7.9	9.9
<i>Bruehl</i>	156	147	152	125	107	137	57.6	59.2	58.9	56.9	56.7	57.9	11.2	10.3	11.7	9.2	8.7	10.2
Rod/WB-528	151	138	142	146	104	136	61.6	61.6	61.4	61.3	58.9	60.9	11.0	10.3	11.1	9.0	9.3	10.1
UICF-Brundage	156	120	146	129	126	136	61.1	60.8	60.9	60.2	60.0	60.6	11.4	9.8	11.2	9.5	8.3	10.0
AP Badger	164	135	115	123	143	136	60.4	59.5	58.9	59.5	58.4	59.3	11.2	10.1	11.6	9.8	8.3	10.2
<i>Coda</i>	130	135	148	143	116	135	61.2	62.9	63.7	62.9	62.4	62.6	13.3	10.3	12.1	9.5	9.6	11.0
WA 8145	148	131	122	143	133	135	59.8	60.8	60.2	60.2	60.0	60.2	11.8	10.4	11.7	10.0	8.7	10.5
IDO663	152	137	100	144	136	134	61.2	62.1	59.7	61.2	60.6	61.0	11.4	10.3	10.8	9.4	8.4	10.1
Eltan/Tubbs 06	157	133	125	133	118	133	60.5	59.8	60.4	58.9	59.1	59.8	11.1	10.1	10.8	8.6	8.6	9.8
Rod	139	135	140	145	103	133	59.2	59.7	60.8	59.9	57.8	59.5	11.2	9.4	10.0	8.4	9.7	9.7
Rod/Tubbs 06	147	130	140	125	114	131	60.2	59.8	60.3	60.3	58.7	59.9	11.3	9.7	10.9	9.1	9.2	10.0
Masami	129	123	132	129	141	131	59.5	59.4	60.4	58.3	58.9	59.3	10.9	10.1	9.9	9.2	8.9	9.8
WA 8144	142	139	105	148	113	129	61.7	61.5	62.0	56.9	60.9	60.6	12.2	10.2	11.8	8.8	9.1	10.4
Xerpha	150	142	131	120	98	128	61.4	61.7	61.8	61.6	59.9	61.3	11.1	10.3	11.6	9.7	9.1	10.4
WA 8114	138	129	141	128	104	128	60.2	62.2	60.5	60.3	59.1	60.5	11.5	10.1	10.6	9.5	9.4	10.2
Stephens	152	125	99	133	130	128	60.0	61.4	59.7	60.3	60.1	60.3	12.3	10.6	11.3	9.8	8.9	10.6
ORCF-103	139	134	125	126	115	128	60.3	60.7	60.9	59.1	59.6	60.1	11.4	10.2	11.0	9.8	8.3	10.1
WA 8143	137	145	145	137	78	128	60.2	60.8	61.2	57.3	58.5	59.6	11.8	10.5	10.8	9.9	9.1	10.4
WA 8094	128	130	127	134	108	126	61.2	60.9	62.0	57.7	60.6	60.5	11.6	10.8	11.3	8.8	9.0	10.3
Tubbs 06	152	127	110	120	121	126	60.1	59.9	59.6	59.7	59.5	59.8	10.9	9.4	10.3	9.0	8.5	9.6
Lambert	143	119	121	121	118	124	60.8	59.7	60.5	60.8	59.5	60.3	11.5	10.7	10.6	9.7	8.9	10.3
ID00-475-2DH	136	133	127	122	95	123	61.7	62.0	62.1	61.8	59.0	61.3	11.3	10.2	10.3	9.4	9.6	10.2
Sunrise	133	124	140	128	82	121	59.7	60.8	60.6	59.4	57.9	59.7	11.7	10.0	10.0	9.3	8.6	9.9
Eltan	133	140	117	144	70	121	60.4	61.0	61.0	56.3	57.7	59.3	11.8	10.2	10.4	9.7	10.2	10.5
AP Legacy	118	109	126	91	108	110	59.6	57.6	60.3	58.3	58.1	58.8	10.7	9.3	10.4	9.1	8.9	9.7
C.V. %	6	4	9	8	13	8	0.8	0.8	0.9	1.0	1.0	0.9	3.8	4.3	6.9	6.4	9.4	6.2
LSD (0.10)	9	6	14	12	17	5	0.5	0.5	0.6	0.6	0.6	0.3	0.5	0.5	0.8	0.6	0.9	0.3
Average	151	135	139	148	123	139	60.7	60.9	61.1	60.2	60.0	60.6	11.5	10.2	11.1	9.3	9.0	10.2
Highest	185	153	174	183	149	160	63.0	62.9	63.7	62.9	62.4	62.6	13.3	11.1	12.2	10.2	10.7	11.0
Lowest	118	109	100	91	70	110	57.4	57.6	58.9	54.7	56.7	57.9	10.6	9.2	9.9	8.3	7.8	9.5



**Table 15. 2011 WSU Variety Testing Soft White Winter Wheat Trial Summary**

**Precipitation Zone 12-16"**

Variety Name (Club Italicized)	Almira	Anatone	Creston	Dusty	Lamont	Average	Almira	Anatone	Creston	Dusty	Lamont	Average	Almira	Anatone	Creston	Dusty	Lamont	Average
Yield (Bu/A)							Test Wt (Lbs/Bu)						Protein (%)					
Xerpha	116	138	152	121	119	<b>129</b>	60.0	60.6	61.8	61.9	60.2	60.9	10.8	9.1	10.0	11.1	11.0	10.4
Skiles	105	116	144	131	124	<b>124</b>	60.5	61.7	62.1	62.0	61.4	61.5	10.6	9.6	10.9	12.2	11.2	<b>10.9</b>
<i>Bruehl</i>	119	118	140	137	103	<b>124</b>	57.9	58.0	57.3	59.9	58.8	58.4	9.6	9.1	10.1	11.6	10.4	10.1
<i>ARS970075-3C (ARS-Chrysal)</i>	104	124	137	117	134	123	59.4	61.6	61.5	62.9	61.3	61.3	9.6	8.8	10.3	11.8	11.1	10.3
WA 8143	139	121	145	107	105	123	59.8	58.3	59.7	62.0	60.3	60.0	9.9	9.5	9.4	11.2	10.3	10.1
<i>ARS97230-6C</i>	126	107	142	126	112	122	61.0	61.8	60.6	62.2	60.7	61.3	9.0	8.3	9.4	10.1	9.4	9.2
<i>Cara +25%</i>	95	104	147	121	136	121	59.0	59.4	60.9	61.4	60.1	60.2	11.7	9.3	9.8	11.1	10.9	10.6
<i>Coda</i>	114	109	143	116	118	120	61.2	62.2	63.7	63.6	62.6	<b>62.7</b>	11.0	8.7	9.6	11.9	12.1	10.7
WA 8114	106	118	134	124	108	118	61.4	61.3	61.0	62.1	61.4	61.5	9.8	8.8	10.2	11.0	11.3	10.2
<i>Chukar +25%</i>	98	108	138	127	120	118	57.4	59.7	60.5	61.5	59.7	59.7	11.4	8.5	9.4	10.4	10.3	10.0
03PN107#3	84	113	139	115	133	117	59.7	61.0	60.8	61.9	61.3	60.9	10.7	9.0	9.6	11.3	10.9	10.3
96-16702A	114	104	140	101	120	116	61.4	61.3	61.3	62.7	62.6	61.9	9.6	8.6	9.8	11.6	10.5	10.0
<i>ARS98X402-1C</i>	100	103	140	127	113	116	60.3	60.4	60.5	62.6	61.0	60.9	8.9	8.4	10.0	10.8	11.2	9.9
OR2070385	104	102	154	113	106	116	57.8	59.8	60.7	61.9	60.1	60.0	11.2	9.1	10.4	11.3	10.5	10.5
Eltan	121	120	123	117	99	116	60.2	56.8	59.5	62.2	60.8	59.9	10.0	9.4	9.9	10.4	10.4	10.0
WA 8134	86	109	150	107	124	115	60.5	59.9	61.9	62.0	60.5	61.0	10.0	8.7	10.4	11.6	11.8	10.5
<i>ARS960277L (ARS-Amber)</i>	110	100	143	111	112	115	59.0	60.0	60.8	61.8	60.7	60.4	10.3	8.1	9.0	11.0	11.0	9.9
<i>Cara</i>	81	105	133	118	139	115	59.5	59.2	59.9	61.1	59.8	59.9	11.5	9.2	8.8	10.7	12.5	10.6
OR2071628	125	109	137	97	109	115	59.1	59.1	59.4	61.9	59.5	59.8	10.8	8.6	8.7	10.8	10.3	9.8
Rod	114	115	139	112	95	115	57.5	59.9	59.3	60.8	59.4	59.4	10.8	8.7	10.2	11.0	11.0	10.3
ORCF-102	95	115	133	109	118	114	59.0	60.7	61.7	61.7	60.9	60.8	10.5	8.9	9.6	11.4	10.9	10.3
<i>Chukar</i>	101	102	129	118	116	113	58.6	59.9	59.7	61.6	60.0	60.0	10.0	9.2	9.5	10.9	11.1	10.1
Rod/Tubbs 06	108	109	137	105	106	113	58.6	60.6	59.0	60.5	60.2	59.8	10.2	9.0	11.6	11.3	10.8	10.6
Brundage 96	117	113	135	98	98	112	59.6	60.3	61.2	61.2	60.2	60.5	9.9	8.8	9.8	11.2	11.8	10.3
AP Badger	91	108	137	102	121	112	59.3	58.8	60.2	60.8	58.7	59.6	11.6	8.7	10.1	11.2	11.0	10.5
<i>ARS970161-3L</i>	84	98	143	108	119	110	60.4	60.9	62.9	62.5	61.7	61.7	11.4	8.8	10.4	12.1	11.6	<b>10.9</b>
Finch	82	100	134	118	117	110	59.7	60.6	61.2	62.8	61.6	61.2	11.3	9.1	9.4	11.2	11.0	10.4
WA 8094	115	102	128	108	94	110	61.7	58.1	60.8	62.5	60.8	60.8	9.7	9.2	9.4	11.5	11.5	10.2
WA 8116	95	103	145	115	91	110	58.6	58.1	61.4	62.6	61.1	60.3	11.3	9.3	10.7	10.9	11.1	10.7
Madsen/Rod	100	107	130	103	110	110	59.3	59.6	60.6	60.8	60.1	60.1	9.8	9.0	9.8	11.7	11.7	10.4
Eltan/Tubbs 06	122	114	119	96	98	110	60.6	58.2	59.5	61.1	60.0	59.9	9.4	9.2	10.2	11.0	10.1	10.0
OR2040726 (Mary)	103	109	154	96	83	109	59.7	61.4	63.0	61.3	60.9	61.3	10.8	9.0	9.8	11.5	11.6	10.5
UICF-Brundage	111	115	130	97	95	109	59.5	61.2	60.6	61.2	59.5	60.4	11.0	9.3	8.9	11.0	10.9	10.2
WA 8135	112	107	121	104	98	108	61.4	60.9	61.3	62.5	61.5	61.5	9.8	9.4	10.1	11.8	11.1	10.4
<i>ARS970163-4C (ARS-Crescent)</i>	80	108	116	128	109	108	60.0	60.9	59.2	62.2	60.9	60.7	11.5	8.3	11.1	10.6	10.4	10.4
Rod/WB-528	109	106	136	103	86	108	58.3	60.0	60.5	61.6	60.3	60.1	9.8	8.8	10.6	11.6	10.6	10.3
Masami	100	109	136	97	97	108	59.2	59.2	58.8	61.0	59.7	59.6	9.4	9.2	11.0	10.9	10.6	10.2
WA 8092	86	95	140	118	100	108	59.5	56.9	60.1	61.1	60.0	59.5	10.7	8.8	11.2	11.1	11.3	10.6
Madsen	112	119	119	88	97	107	59.7	61.3	60.6	61.4	60.0	60.6	11.4	9.5	8.9	12.3	11.1	10.6
AP Legacy	110	119	129	82	96	107	59.1	59.8	60.1	57.9	59.1	59.2	10.4	8.6	10.4	10.0	9.8	9.8
Sunrise	132	111	126	90	70	106	60.0	59.6	59.4	61.4	59.8	60.1	9.7	8.6	8.9	10.8	10.6	9.7
Tubbs 06	105	103	128	89	106	106	59.7	60.1	59.3	59.6	59.5	59.6	9.8	8.8	11.1	10.9	9.6	10.1
WA 8144	108	100	130	98	91	105	60.9	59.1	61.9	62.5	60.9	61.1	9.6	9.4	11.1	12.0	11.8	<b>10.8</b>
SY Ovation	66	98	129	110	122	105	60.2	60.5	61.6	62.1	60.8	61.0	10.6	9.4	9.6	11.2	10.8	10.3
ORCF-103	92	106	128	101	97	105	58.1	59.8	60.2	61.0	59.7	59.8	10.6	9.4	11.4	11.1	10.1	10.5
BZ6W02-616	103	111	130	87	91	104	61.6	61.8	62.6	62.1	61.8	62.0	10.3	8.7	8.9	11.7	11.3	10.2
ID00-475-2DH	85	111	129	102	95	104	60.3	62.0	62.0	62.7	61.9	61.8	11.3	9.2	10.7	11.7	11.7	<b>10.9</b>
WA 8142	100	113	123	88	91	103	60.9	61.9	61.7	61.8	61.0	61.5	10.4	9.4	11.8	12.0	12.4	<b>11.2</b>
Goetze/Skiles	88	106	113	101	107	103	61.5	60.0	61.8	61.0	60.8	61.0	10.5	10.2	10.0	12.3	10.8	10.7
Bruneau	105	118	144	77	70	103	59.0	60.7	61.7	61.9	60.1	60.7	10.9	8.7	8.4	12.4	11.7	10.4
WA 8136	97	91	140	97	87	102	56.5	57.5	59.1	59.8	58.8	58.3	11.5	9.2	10.5	11.6	11.0	<b>10.8</b>
Legion	94	99	119	89	100	100	58.3	59.3	59.5	59.0	59.7	59.2	10.6	8.9	8.5	12.2	10.8	10.2
WB-528	58	118	136	85	96	99	62.7	62.2	63.0	62.3	61.0	62.2	11.3	9.2	9.7	12.4	11.1	10.7
Bitterroot	92	106	124	84	75	96	59.4	61.0	61.8	62.1	60.7	61.0	11.3	8.4	10.4	11.9	12.6	<b>10.9</b>
IDO663	108	88	122	73	82	95	60.8	61.0	60.7	59.5	60.3	60.4	10.4	9.2	9.7	11.9	10.9	10.4
AP 700 CL	116	88	115	84	74	95	59.3	60.9	59.7	60.1	59.5	59.9	11.1	9.3	10.7	12.0	11.2	<b>10.9</b>
Stephens	93	90	131	71	80	93	59.6	60.8	60.0	60.5	59.7	60.1	11.6	9.8	10.1	12.0	11.0	<b>10.9</b>
Lambert	81	95	129	83	67	91	58.7	60.4	60.4	61.2	60.4	60.2	10.9	9.0	9.8	11.2	11.1	10.4
WA 8145	63	105	100	88	86	89	60.1	59.7	61.4	60.2	59.6	60.2	11.4	8.9	11.0	12.1	12.4	<b>11.2</b>
<i>LCS-Artdeco (NSA06-2153A)</i>	---	116	38	94	86	84	---	59.6	59.9	59.4	57.9	59.2	---	8.7	12.3	11.1	11.0	<b>10.8</b>
C.V. %	14	7	8	9	13	10	1.9	1.2	1.6	0.7	0.9	1.3	10.1	5.4	13.3	3.3	7.4	8.6
LSD (0.10)	14	8	11	10	14	5	1.2	0.8	1.0	0.4	0.6	0.4	1.1	0.9	1.4	0.4	0.9	0.4
Average	100	108	132	104	103	109	59.6	60.1	60.7	61.4	60.4	60.5	10.5	9.0	10.1	11.4	11.0	10.4
Highest	139	138	154	137	139	129	62.7	62.2	63.7	63.6	62.6	62.7	11.7	10.2	12.3	12.4	12.6	11.2
Lowest	58	88	38	71	67	84	56.5	56.8	57.3	57.9	57.9	58.3	8.9	8.1	8.4	10.0	9.4	9.2

<sup>1</sup> - Variety Lost, No Data

**Table 16. 2011 WSU Variety Testing Soft White Winter Wheat Trial Summary**

**Precipitation Zone <12"**

Variety Name (Club <i>Italicized</i> )	Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average
Yield (Bu/A)							
Skiles	81	71	70	49	78	73	70
<i>Bruehl</i>	73	69	68	53	79	68	68
ARS970161-3L	76	69	71	52	78	59	68
BZ6W02-616	73	65	69	38	92	61	67
Eltan/Tubbs 06	62	62	65	47	83	81	67
WA 8116	65	65	71	44	83	74	67
WA 8092	70	59	64	47	81	80	67
OR2070385	80	66	69	44	80	64	67
Madsen/Rod	75	67	63	44	79	72	67
<i>Xerpha</i>	56	64	69	53	88	68	66
Rod	70	68	62	45	85	68	66
WA 8143	64	66	65	48	83	70	66
ORCF-102	71	74	67	43	77	63	66
<i>Chukar</i>	68	71	71	49	76	61	66
<i>Coda</i>	73	63	66	50	77	62	65
ARS960277L (ARS-Amber)	61	65	70	45	83	63	64
Finch	58	67	66	47	81	63	64
ARS98X402-1C	70	64	65	45	80	60	64
WA 8136	69	62	61	50	79	65	64
Eltan	56	61	62	48	77	82	64
ARS970163-4C (ARS-Crescent)	66	60	66	45	76	67	64
Brundage 96	70	63	65	44	76	64	64
ARS970075-3C (ARS-Chrysal)	73	69	67	45	75	54	64
Legion	72	60	68	51	73	59	64
<i>Cara</i>	70	68	61	44	83	50	63
Rod/Tubbs 06	62	58	64	43	81	68	63
WA 8134	74	65	59	39	81	59	63
SY Ovation	73	63	62	30	79	70	63
OR2071628	70	66	67	43	78	53	63
<i>Cara +25%</i>	72	67	68	48	76	49	63
Masami	65	58	65	44	75	69	63
ARS97230-6C	70	56	69	43	74	68	63
96-16702A	71	61	61	39	73	70	63
<i>Chukar +25%</i>	62	72	69	46	73	56	63
OR2040726 (Mary)	72	63	56	40	84	56	62
Tubbs 06	56	55	68	48	80	65	62
WA 8135	62	57	68	50	79	57	62
IDO663	67	57	67	40	76	63	62
Rod/WB-528	69	58	63	43	83	52	61
WA 8114	67	60	61	37	81	63	61
UICF-Brundage	68	65	59	41	77	55	61
03PN107#3	65	71	66	30	76	60	61
Goetze/Skiles	73	63	62	44	72	52	61
Madsen	72	68	57	44	71	52	61
AP Legacy	56	54	68	39	78	62	60
WB-528	67	63	64	39	75	50	60
Stephens	69	57	59	41	73	59	60
WA 8142	73	68	62	35	72	48	60
Bruneau	64	64	65	36	70	61	60
AP Badger	58	62	65	44	68	63	60
AP 700 CL	69	58	55	38	75	57	59
WA 8094	53	56	65	43	74	63	59
WA 8144	59	61	59	48	70	57	59
ORCF-103	52	55	66	42	75	59	58
ID00-475-2DH	51	55	61	40	73	67	58
Bitterroot	62	63	60	39	66	57	58
Sunrise	42	50	58	31	74	62	53
Lambert	50	46	57	30	69	56	51
WA 8145	61	56	54	29	73	24	49
LCS-Artdeco (NSA06-2153A)	40	46	54	26	62	---	46
C.V. %	8	8	8	14	8	17	10
LSD (0.10)	5	5	5	6	6	11	3
Average	66	62	64	43	77	61	62
Highest	81	74	72	53	92	82	70
Lowest	40	46	54	26	62	24	46

Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average
Test Wt (Lbs/Bu)						
61.8	61.4	61.1	60.8	60.6	62.0	61.3
59.6	58.9	59.1	61.0	58.2	58.9	59.3
62.8	62.4	61.6	63.1	61.2	62.9	62.3
62.6	62.6	62.6	62.4	61.2	63.1	62.4
61.0	60.8	60.8	61.5	60.0	61.1	60.9
61.7	61.5	61.1	61.7	60.9	62.2	61.5
60.6	60.8	60.9	61.7	59.3	61.2	60.7
60.7	60.9	59.6	61.0	59.8	61.1	60.5
61.1	61.1	60.1	61.1	59.5	61.3	60.7
61.4	61.6	60.9	61.5	60.8	61.4	61.2
60.6	60.0	60.2	61.3	59.8	61.3	60.5
60.6	61.2	61.4	62.1	60.3	61.0	61.1
61.8	61.5	61.2	61.4	60.9	61.5	61.4
60.7	60.5	59.6	61.3	58.3	60.3	60.1
62.5	63.0	61.5	62.7	62.6	62.4	62.5
59.2	61.0	60.1	61.4	59.6	61.3	60.4
62.0	60.9	62.4	62.2	61.9	62.4	62.0
61.2	61.2	60.5	61.8	60.4	62.2	61.2
60.4	60.3	59.2	60.4	58.8	61.3	60.1
61.1	61.3	61.3	62.0	58.2	61.3	60.8
61.2	62.0	60.9	62.0	59.7	62.1	61.3
61.4	61.0	60.6	61.0	60.3	61.5	61.0
62.6	62.0	60.8	61.7	60.8	61.8	61.6
60.7	60.2	59.8	60.5	57.1	60.1	59.7
60.7	60.3	60.5	61.1	58.7	60.3	60.2
60.8	60.6	60.2	60.6	59.5	60.9	60.4
61.7	60.8	60.9	61.4	59.0	62.1	61.0
61.6	61.7	61.7	61.7	61.2	61.9	61.6
61.7	60.7	60.2	61.5	59.8	60.4	60.7
61.1	60.4	59.5	61.3	58.9	60.0	60.2
61.2	60.6	60.3	60.4	58.6	60.8	60.3
61.0	61.0	61.1	62.1	58.1	61.8	60.8
62.9	62.1	61.8	62.6	60.7	62.4	62.1
60.5	60.4	59.2	61.3	58.6	60.9	60.2
62.5	61.2	60.4	60.8	60.7	61.5	61.2
60.5	60.5	59.9	59.9	59.6	60.2	60.1
62.2	62.2	62.3	62.2	60.9	62.3	62.0
61.7	61.2	60.8	61.5	60.2	61.6	61.2
62.2	61.5	61.1	61.8	60.5	61.3	61.4
62.3	62.0	61.7	61.4	60.6	63.4	61.9
61.5	60.6	60.2	60.6	60.0	61.1	60.7
61.0	61.4	60.6	60.2	59.9	61.8	60.8
60.8	60.9	61.5	61.1	60.6	61.1	61.0
61.8	61.0	61.0	61.7	61.0	61.0	61.2
60.5	61.3	61.4	61.0	60.2	60.8	60.9
63.0	62.5	61.4	62.5	61.0	62.7	62.2
61.7	60.8	60.1	61.1	60.4	60.4	60.7
62.3	61.8	61.6	61.5	61.7	62.1	61.8
61.8	61.3	60.8	61.8	60.3	62.2	61.4
61.5	60.1	59.3	60.9	58.8	59.6	60.0
61.8	61.0	60.6	61.4	60.9	60.8	61.1
61.9	62.1	61.8	62.1	60.3	62.3	61.7
60.9	62.1	61.6	62.0	59.5	61.5	61.3
61.8	61.0	61.1	61.7	59.8	60.4	61.0
62.9	62.5	62.7	61.6	61.3	62.9	62.3
61.6	62.2	61.3	62.1	61.4	62.4	61.8
61.0	61.6	61.3	60.3	59.6	61.2	60.9
61.9	61.6	60.5	60.3	59.8	61.1	60.9
61.2	61.0	61.0	61.2	60.8	60.8	61.0
60.1	60.0	61.7	59.5	59.4	---	60.1
0.9	0.7	0.9	0.7	1.3	0.8	0.9
0.6	0.4	0.6	0.5	0.8	0.5	0.2
61.4	61.2	60.8	61.4	60.0	61.4	61.0
63.0	63.0	62.7	63.1	62.6	63.4	62.5
59.2	58.9	59.1	59.5	57.1	58.9	59.3

Connell	Harrington	Horse Heaven	Lind	Ritzville	St. Andrews	Average
Protein (%)						
11.2	11.0	8.5	13.8	10.7	10.5	10.9
11.2	10.6	7.9	12.0	9.1	9.0	10.0
11.9	11.7	9.9	12.3	10.9	9.2	11.0
11.4	11.6	9.2	13.2	9.8	9.9	10.9
11.6	10.3	8.7	11.3	8.5	9.0	9.9
10.8	10.9	8.6	12.1	8.6	9.2	10.0
11.7	11.0	10.2	12.6	10.1	10.4	11.0
11.7	11.4	9.0	12.1	8.5	9.1	10.3
12.2	11.0	8.2	11.7	10.2	10.1	10.6
10.3	10.4	8.3	11.7	9.2	9.5	9.9
10.4	11.4	9.1	12.1	8.9	10.0	10.3
11.5	10.9	9.3	11.7	9.6	8.3	10.2
11.5	11.1	9.6	11.9	10.8	10.0	10.8
11.3	10.2	9.1	11.2	10.1	8.9	10.1
12.5	11.2	8.5	11.7	9.2	9.1	10.4
11.2	10.5	8.5	11.4	9.3	9.2	10.0
11.8	11.9	8.8	11.1	8.8	8.7	10.2
10.2	9.8	8.5	11.2	9.2	9.9	9.8
10.6	10.6	9.4	12.1	9.3	10.0	10.4
12.2	11.2	8.9	11.4	11.5	8.8	10.7
11.1	11.3	8.7	11.7	9.7	9.7	10.4
10.6	11.1	10.0	11.7	8.2	10.5	10.3
10.8	12.3	9.2	11.9	9.3	9.1	10.4
12.2	11.1	8.9	11.5	11.2		

**Table 17. WSU Soft White Winter Wheat Trial Multi-Year Summary**

**Precipitation Zone = >20"**  
**(Colton, Fairfield, Farmington, Moses Lake, Pullman)**

Variety Name*	2 Years			3 Years			5 Years		
	2010-2011, 9 loc/yr			2009-2011, 14 loc/yr			2007-2011, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Legion	153	59.6	10.1	149	59.4	10.2			
Bruneau	151	61.1	9.9	146	60.8	10.0	138	60.0	10.5
BZ6W02-616	145	62.2	10.1	138	61.7	10.2			
AP 700 CL	141	60.7	10.6	138	60.4	10.6	134	59.5	11.0
ARS960277L (ARS-Amber)	141	60.5	9.8						
ARS970075-3C (ARS-Chrysal)	140	61.4	10.1						
Bruehl	140	58.4	10.4	137	58.4	10.4	129	57.8	11.0
Cara	140	60.2	10.4	134	59.4	10.5	123	58.4	11.2
Cara +25%	140	60.3	10.4						
Chukar +25%	140	60.5	10.1						
Rod	140	59.6	10.0	138	59.3	10.1	132	58.6	10.6
Chukar	139	60.3	10.2	136	59.6	10.3	124	58.8	10.9
Madsen	139	60.5	10.6	133	60.2	10.7	125	59.3	11.2
Madsen/Rod	139	60.0	10.4	136	59.7	10.4	129	59.1	10.9
WA 8092	139	60.1	10.3	133	59.8	10.5			
WA 8116	139	60.7	10.1						
OR2040726 (Mary)	138	61.0	10.1	138	60.5	10.2			
ORCF-102	138	60.4	10.3	138	60.4	10.4	135	59.9	10.9
Stephens	138	60.3	10.5	136	59.9	10.5	130	59.4	10.9
WB-528	138	61.9	10.4	135	61.6	10.5	130	61.0	10.9
ARS970163-4C (ARS-Crescent)	137	60.7	9.8						
Bitterroot	137	60.8	10.3	134	60.5	10.3	126	60.0	10.7
Eltan	137	60.3	9.9	134	60.2	10.1	130	59.7	10.6
ID00-475-2DH	137	61.6	10.0						
Rod/Tubbs 06	137	59.1	10.1	135	59.0	10.2			
Brundage 96	136	60.0	10.3	133	59.6	10.3	128	59.0	10.8
Eltan/Tubbs 06	136	59.9	10.0	135	59.7	10.1			
UICF-Brundage	136	60.0	10.2	133	59.5	10.2	128	58.7	10.8
ORCF-103	135	59.8	10.1	133	59.5	10.3	130	59.2	10.8
Skiles	135	61.6	11.1	132	61.0	11.1			
Xerpha	134	59.9	10.4	138	59.7	10.4	136	59.3	10.7
Coda	133	63.0	10.9	128	62.1	10.9	123	61.3	11.3
WA 8114	132	61.0	10.1						
Finch	130	61.0	10.2	128	60.7	10.3	125	60.3	10.6
Tubbs 06	130	58.8	10.1	130	58.9	10.2	127	58.4	10.6
Goetze/Skiles	128	60.6	11.0						
Masami	127	58.8	9.8	129	58.8	9.9	126	58.4	10.4
WA 8094	127	60.9	10.4	125	60.6	10.6			
Lambert	125	60.0	10.3	127	60.0	10.3	127	59.7	10.8
Sunrise	125	59.1	9.8						
AP Legacy	121	58.5	10.0	127	59.1	10.1			
C.V. %	6	1.0	4.1	7	1.1	3.9	7	1.3	4.3
LSD (.10)	3	0.2	0.1	3	0.2	0.1	2	0.2	0.1
Average	136	60.4	10.2	134	60.0	10.3	129	59.4	10.8
Highest	153	63.0	11.1	149	62.1	11.1	138	61.3	11.3
Lowest	121	58.4	9.8	125	58.4	9.9	123	57.8	10.4

\* Club Wheat Italicized

**Table 18. WSU Soft White Winter Wheat Trial Multi-Year Summary**

**Precipitation Zone = 16-20"**  
**(Dayton, Mayview, Reardan, St. John, Walla Walla)**

Variety Name*	2 Years			3 Years			5 Years		
	2010-2011, 10 loc/yr			2009-2011, 15 loc/yr			2007-2011, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<i>Cara +25%</i>	152	60.3	10.5						
<i>Cara</i>	150	60.2	10.5	143	59.8	10.5	131	59.3	10.9
<i>Chukar</i>	144	60.1	10.2	139	59.9	10.3	128	59.4	10.8
Skiles	143	61.8	11.1	137	61.4	11.3	130	61.0	11.6
<i>ARS970075-3C (ARS-Chrysal)</i>	143	61.6	10.3				131	60.9	10.8
<i>Chukar +25%</i>	143	60.1	10.0						
ARS960277L (ARS-Amber)	139	60.3	10.0				129	59.8	10.4
Bruneau	138	61.1	10.1	132	60.9	10.3	124	60.7	10.8
<i>ARS970163-4C (ARS-Crescent)</i>	138	60.8	9.9						
Madsen	137	60.9	11.0	131	60.7	11.2	121	60.3	11.5
Brundage 96	136	60.2	10.5	130	59.9	10.7	124	59.6	11.1
Goetze/Skiles	136	60.9	11.2						
ORCF-102	136	60.7	10.3	133	60.8	10.7	126	60.7	11.1
OR2040726 (Mary)	135	61.1	10.5	132	61.0	10.7			
WA 8116	135	60.5	10.3						
Legion	134	58.8	10.6	132	58.8	10.7	126	58.5	11.0
<i>Coda</i>	133	62.6	11.1	128	62.2	11.2	120	61.8	11.6
WA 8092	132	59.4	10.7	124	59.5	11.0			
<i>Bruehl</i>	132	57.7	10.6	127	57.9	10.8	120	57.9	11.3
AP 700 CL	131	60.0	10.8	128	60.0	10.9	119	59.6	11.4
Madsen/Rod	130	59.9	10.9	128	59.8	11.0	122	59.6	11.3
UICF-Brundage	130	59.8	10.3	126	59.7	10.6	121	59.2	11.0
Bitterroot	129	60.7	10.5	124	60.7	10.6	117	60.6	11.1
Finch	127	60.8	10.3	127	61.1	10.5	121	60.9	11.1
Rod	127	59.3	10.2	125	59.1	10.3	121	58.8	10.7
BZ6W02-616	125	61.5	10.5	123	61.4	10.6			
WB-528	124	61.4	10.6	124	61.4	10.8	119	61.4	11.3
Masami	123	58.3	10.3	121	58.5	10.5	117	58.6	10.9
Stephens	122	60.1	10.9	122	59.8	11.0	116	59.4	11.4
Rod/Tubbs 06	121	58.8	10.4	123	59.0	10.5	119	58.8	10.8
ORCF-103	120	59.4	10.4	122	59.5	10.7	116	59.5	11.2
Xerpha	119	59.5	10.8	123	59.6	10.9	123	59.7	11.2
Eltan/Tubbs 06	118	58.8	10.3	120	59.2	10.5	116	59.1	10.8
WA 8114	118	60.0	10.6						
Tubbs 06	117	58.3	10.1	122	58.7	10.3	118	58.7	10.8
WA 8094	116	60.0	10.5	114	60.3	10.8			
ID00-475-2DH	114	60.4	10.5						
Eltan	112	58.8	10.6	115	59.3	10.8	112	59.6	11.1
AP Legacy	111	58.5	10.0	118	59.2	10.2	117	59.2	10.5
Lambert	109	58.2	10.7	112	58.7	10.7	112	59.0	11.0
Sunrise	106	58.5	10.3						
C.V. %	8	1.1	5.2	8	1.0	5.2	8	1.1	5.1
LSD (.10)	4	0.2	0.2	3	0.2	0.1	2	0.1	0.1
Average	129	60.0	10.5	126	59.9	10.7	121	59.7	11.0
Highest	152	62.6	11.2	143	62.2	11.3	131	61.8	11.6
Lowest	106	57.7	9.9	112	57.9	10.2	112	57.9	10.4

\* Club Wheat Italicized

**Table 19. WSU Soft White Winter Wheat Trial Multi-Year Summary**

**Precipitation Zone = 12-16"**  
**(Almira, Anatone, Creston, Dusty, Lamont)**

Variety Name*	2 Years			3 Years			5 Years		
	2010-2011, 10 loc/yr			2009-2011, 15 loc/yr			2007-2011, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Skiles	125	60.4	11.4	116	60.2	11.4			
Xerpha	124	59.1	10.5	121	59.3	10.3	115	58.8	10.5
<i>ARS970075-3C (ARS-Chrysal)</i>	124	60.7	10.8						
<i>Cara</i>	123	59.2	10.9	114	58.6	10.7	105	57.8	11.0
<i>Cara +25%</i>	122	59.4	10.8						
Brundage 96	121	59.7	10.6	112	59.5	10.6	105	58.7	10.9
<i>Bruehl</i>	121	56.6	10.7	112	57.5	10.8	103	56.9	11.1
<i>Chukar +25%</i>	121	59.0	10.3						
ARS960277L (ARS-Amber)	120	59.3	10.1						
WA 8114	118	60.2	10.7						
ORCF-102	118	59.9	10.8	111	60.0	10.8	105	59.5	10.8
WA 8116	117	59.3	10.7						
<i>Chukar</i>	117	59.0	10.5	110	58.7	10.4	100	57.9	10.8
<i>Coda</i>	117	61.8	11.3	108	61.5	11.0	101	60.9	11.1
Rod/Tubbs 06	115	58.5	10.6	110	58.6	10.4			
AP Legacy	114	58.8	10.0	112	59.1	10.1			
Bruneau	114	59.8	10.4	109	59.9	10.4	103	59.4	10.7
Goetze/Skiles	114	60.2	11.0						
OR2040726 (Mary)	114	60.6	10.9	108	60.3	10.8			
Rod	114	58.0	10.6	109	58.1	10.5	105	57.7	10.5
<i>ARS970163-4C (ARS-Crescent)</i>	114	59.4	10.7						
Finch	113	59.8	10.8	110	60.2	10.6	103	59.8	10.8
Madsen/Rod	113	58.9	10.6	107	59.0	10.7	101	58.4	10.8
Masami	113	57.7	10.5	109	58.1	10.4	102	57.6	10.7
Madsen	112	59.6	11.0	105	59.7	11.0	100	59.2	11.2
UICF-Brundage	112	59.2	10.7	107	59.1	10.8	102	58.3	10.9
Eltan	111	58.1	10.5	108	58.8	10.5	102	58.6	10.6
BZ6W02-616	110	61.5	10.7	102	61.2	10.7			
Tubbs 06	110	58.3	10.4	106	58.6	10.5	101	58.1	10.7
WA 8094	110	59.3	10.6	105	59.8	10.8			
Eltan/Tubbs 06	109	58.3	10.4	107	58.8	10.5			
Legion	108	58.1	10.6	103	58.3	10.5			
WA 8092	108	57.7	11.1	107	58.4	11.0			
WB-528	108	61.3	11.0	101	61.1	11.0	97	60.8	11.1
Bitterroot	107	59.8	10.9	100	59.8	11.0	94	59.6	11.1
ORCF-103	106	58.2	10.8	104	58.6	10.8	98	58.2	11.0
ID00-475-2DH	105	60.1	11.1						
AP 700 CL	102	58.9	11.3	100	59.1	11.2	97	58.7	11.2
Sunrise	101	58.7	10.0						
Stephens	100	59.3	11.1	96	59.1	11.1	93	58.4	11.2
Lambert	99	59.2	10.6	95	59.4	10.6	95	58.9	10.8
C.V. %	10	1.5	7.3	10	1.4	6.9	10	1.5	7.0
LSD (.10)	4	0.3	0.3	3	0.2	0.2	2	0.2	0.2
Average	113	59.3	10.7	107	59.3	10.7	101	58.7	10.9
Highest	125	61.8	11.4	121	61.5	11.4	115	60.9	11.2
Lowest	99	56.6	10.0	95	57.5	10.1	93	56.9	10.5

\* Club Wheat Italicized

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

**Precipitation Zone = <12"**

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

Variety Name*	2 Years			3 Years			5 Years		
	2010-2011, 12 loc/yr			2009-2011, 17 loc/yr			2007-2011, 26 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
Xerpha	63	60.8	10.4	54	60.3	10.9	52	60.1	11.0
<i>Chukar</i>	62	60.0	10.4	51	59.1	11.2	48	58.6	11.4
<i>Bruehl</i>	61	59.5	10.6	52	59.2	11.4	49	59.1	11.6
WA 8092	61	60.4	11.2	53	60.1	11.6			
<i>Chukar +25%</i>	60	60.1	10.2						
Masami	60	60.2	10.5	51	59.5	11.2	50	59.4	11.3
<i>Coda</i>	59	62.1	10.9	49	61.4	11.7	47	61.2	12.0
<i>Cara +25%</i>	59	60.0	10.2						
<i>ARS970163-4C (ARS-Crescent)</i>	59	60.7	10.6						
WA 8116	59	61.0	10.7						
Skiles	59	60.7	11.9	50	60.2	12.3			
Finch	59	61.5	10.6	50	60.8	11.3	49	60.6	11.3
Eltan	59	60.6	10.8	52	60.2	11.2	50	60.1	11.5
<i>ARS960277L (ARS-Amber)</i>	59	60.3	10.4						
<i>ARS970075-3C (ARS-Chrysal)</i>	58	61.3	10.9						
ORCF-102	58	60.9	11.2	49	60.5	11.8	48	60.4	11.8
Eltan/Tubbs 06	58	60.5	10.5	50	60.0	11.2			
Brundage 96	58	60.3	10.9	48	59.6	11.6	47	59.5	11.5
<i>Cara</i>	57	59.9	10.7	48	58.9	11.6	45	58.5	11.7
Tubbs 06	57	60.0	10.8	48	59.4	11.4	46	59.2	11.5
Rod	57	59.8	10.6	48	59.0	11.3	47	58.9	11.4
Madsen/Rod	57	60.2	11.0	48	59.6	11.6	46	59.5	11.7
Legion	57	59.7	11.0	50	59.2	11.6			
UICF-Brundage	56	59.9	10.8	47	59.3	11.5	46	59.2	11.5
WA 8094	56	61.3	10.8	50	60.9	11.3			
Rod/Tubbs 06	56	60.0	10.8	47	59.2	11.4			
AP Legacy	56	60.6	10.3	49	60.0	11.0			
ORCF-103	55	60.5	11.0	48	60.1	11.6	47	60.0	11.6
ID00-475-2DH	55	61.7	11.5						
Sunrise	55	60.6	10.7						
OR2040726 (Mary)	54	60.7	11.1	48	60.0	11.6			
Madsen	54	60.6	11.3	46	60.1	11.9	44	59.9	12.0
Goetze/Skiles	54	60.6	11.9						
BZ6W02-616	54	61.9	11.7	47	61.5	12.0			
WB-528	53	61.8	11.3	46	61.2	11.7	44	61.1	11.9
Bitterroot	53	61.0	11.0	45	60.6	11.6	43	60.4	11.7
Bruneau	52	60.8	10.9	44	60.2	11.4	42	60.1	11.5
WA 8114	51	61.5	11.4						
AP 700 CL	51	60.4	11.4	43	59.8	12.1	42	59.7	12.0
Stephens	50	60.4	11.2	43	59.6	11.9	41	59.4	11.9
Lambert	47	60.4	11.2	40	59.9	11.7	41	59.8	11.7
C.V. %	11	1.0	7.2	11	1.2	6.6	12	1.3	6.4
LSD (.10)	2	0.2	0.2	1	0.2	0.2	1	0.2	0.1
Average	56	60.6	10.9	48	60.0	11.5	46	59.8	11.6
Highest	63	62.1	11.9	54	61.5	12.3	52	61.2	12.0
Lowest	47	59.5	10.2	40	58.9	10.9	41	58.5	11.0

\* Club Wheat Italicized

**Table 21. 2011 WSU Variety Testing SW Winter Wheat Trial, Almira**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	S.MOLD (%)
<b>WA 8143</b>				<b>139</b>	59.8	9.9	46	172	0
<b>Sunrise (Soft Red)</b>			117	<b>132</b>	60.0	9.7	51	167	22
<i>ARS97230-6C</i>				<b>126</b>	61.0	9.0	42	168	32
<b>OR2071628</b>				<b>125</b>	59.1	10.8	41	167	47
<b>Eltan/Tubbs 06</b>		111	108	122	60.6	9.4	45	168	8
<b>Eltan</b>	103	109	108	121	60.2	10.0	43	171	0
<i>Bruehl</i>	109	117	122	119	57.9	9.6	44	168	15
<b>Brundage 96</b>	117	128	133	117	59.6	9.9	41	165	15
<b>Xerpha</b>	114	113	109	116	60.0	10.8	42	170	23
<b>AP 700 CL</b>	111	115	114	116	59.3	11.1	43	167	42
<b>WA 8094</b>		112	116	115	<b>61.7</b>	9.7	43	170	23
<i>Coda</i>	104	114	121	114	61.2	11.0	45	171	48
<b>Rod</b>	112	116	121	114	57.5	10.8	42	170	37
<b>ID96-16702A</b>				114	61.4	9.6	46	165	42
<b>Madsen</b>	110	117	120	112	59.7	11.4	41	170	30
<b>WA 8135</b>				112	61.4	9.8	45	168	43
<b>UICF-Brundage</b>	108	113	117	111	59.5	11.0	40	167	22
<b>ARS960277L (ARS-Amber)</b>			121	110	59.0	10.3	41	168	23
<b>AP Legacy</b>		121	123	110	59.1	10.4	42	168	48
<b>Rod/WB-528</b>				109	58.3	9.8	40	167	52
<b>Rod/Tubbs 06</b>		116	116	108	58.6	10.2	43	168	37
<b>IDO663</b>				108	60.8	10.4	41	166	55
<b>WA 8144</b>				108	60.9	9.6	48	172	5
<b>WA 8114</b>			117	106	61.4	9.8	41	165	38
<b>Tubbs 06</b>	108	112	113	105	59.7	9.8	43	167	62
<b>Bruneau</b>	116	125	124	105	59.0	10.9	41	168	17
<b>Skiles</b>		121	125	105	60.5	10.6	38	168	78
<i>ARS970075-3C (ARS-Chrysal)</i>			119	104	59.4	9.6	43	167	45
<b>OR2070385</b>				104	57.8	11.2	42	166	50
<b>OR2040726 (Mary)</b>		122	127	103	59.7	10.8	39	165	32
<b>BZ6W02-616</b>		119	122	103	<b>61.6</b>	10.3	39	165	63
<i>Chukar</i>	105	113	121	101	58.6	10.0	39	165	82
<b>Masami</b>	101	107	102	100	59.2	9.4	39	171	35
<b>Madsen/Rod</b>	105	108	110	100	59.3	9.8	41	167	42
<i>ARS98X402-1C</i>				100	60.3	8.9	40	168	82
<b>WA 8142</b>				100	60.9	10.4	41	166	40
<i>Chukar +25%</i>			116	98	57.4	11.4	39	173	65
<b>WA 8136</b>				97	56.5	11.5	40	172	48
<b>ORCF-102</b>	105	109	109	95	59.0	10.5	44	168	62
<b>WA 8116</b>			111	95	58.6	11.3	38	171	23
<i>Cara +25%</i>			119	95	59.0	11.7	37	170	73
<b>Legion</b>		113	108	94	58.3	10.6	40	167	77
<b>Stephens</b>	105	112	113	93	59.6	11.6	39	166	70
<b>Bitterroot</b>	99	104	105	92	59.4	11.3	41	168	57
<b>ORCF-103</b>	99	103	101	92	58.1	10.6	40	169	22
<b>AP Badger</b>				91	59.3	11.6	36	166	62

## 2011 WSU Variety Testing SW Winter Wheat Trial, Almira

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	S.MOLD (%)
Goetze/Skiles			115	88	<b>61.5</b>	10.5	36	168	95
WA 8092		102	98	86	59.5	10.7	44	175	8
WA 8134				86	60.5	10.0	41	169	82
ID00-475-2DH			95	85	60.3	11.3	40	168	43
ARS970161-3L				84	60.4	11.4	39	168	70
03PN107#3				84	59.7	10.7	39	167	73
Finch	102	108	103	82	59.7	11.3	41	170	55
Cara	106	110	112	81	59.5	11.5	37	168	85
Lambert	105	103	102	81	58.7	10.9	43	166	60
ARS970163-4C (ARS-Crescent)			106	80	60.0	11.5	40	168	93
SY Ovation				66	60.2	10.6	38	167	97
WA 8145				63	60.1	11.4	37	166	97
WB-528	104	104	99	58	<b>62.7</b>	11.3	35	166	95
LCS-Artdeco (NSA06-2153A)	-	-	-	-	-	-	-	-	-
Variety Lost, No Data									
C.V. %	10	10	11	14	1.9	10.1	5	1	33
LSD (.10)	5	7	9	14	1.2	1.1	2	1	17
Average	107	113	114	100	59.6	10.5	41	168	49
Highest	117	128	133	139	62.7	11.7	51	175	100
Lowest	99	102	95	58	56.5	8.9	35	166	0

1. Grain yield in the Almira soft white winter wheat trial averaged 100 bushels/acre, 7 bushels/acre lower 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 9 September, 2010 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 58 to 139 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Sunrise (a soft red) was the highest yielding named entry in the trial, and 4 of the 60 entries in the trial were within the top LSD range. Brundage 96 was the top yielding entry across five years of results at this location. This site had high potential for snow mold and symptoms were evident after the snow left in the spring. Entries were rated for stand about 3 weeks after the snow came off and provide a good differential for snow mold tolerance/resistance for the trial. There was little or no snow mold effect on Eltan and one entry was wiped out, with everything else in between. Snow mold was not uniform across the trial and contributed to an increased C.V. for yield. There was moderate stripe rust potential at this location and no fungicide was applied. There was an estimated 10% or more yield loss due to stripe rust for susceptible varieties.
4. Test weights averaged 59.6 lbs/bu, and ranged from 56.5 to 62.7 lbs/bu. Grain protein averaged 10.5% with a range of 8.9 to 11.7%. Plant height averaged 41 inches and there was no lodging.



**Table 22. 2011 WSU Variety Testing SW Winter Wheat Trial, Anatone**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>Xerpha</b>	105	119	131	<b>138</b>	60.6	9.1	40
<i>ARS970075-3C (ARS-Chrysal)</i>			120	124	<b>61.6</b>	8.8	40
<b>WA 8143</b>				121	58.3	9.5	40
<b>Eltan</b>	94	107	119	120	56.8	9.4	40
<b>Madsen</b>	88	99	109	119	61.3	9.5	40
<b>AP Legacy</b>		109	119	119	59.8	8.6	40
<i>Bruehl</i>	86	99	113	118	58.0	9.1	42
<b>WB-528</b>	85	100	112	118	<b>62.2</b>	9.2	41
<b>Bruneau</b>	86	101	112	118	60.7	8.7	41
<b>WA 8114</b>			115	118	61.3	8.8	39
<b>Skiles</b>		100	109	116	<b>61.7</b>	9.6	36
<b>LCS-Artdeco (NSA06-2153A)</b>				116	59.6	8.7	38
<b>Rod</b>	89	98	109	115	59.9	8.7	38
<b>ORCF-102</b>	91	103	110	115	60.7	8.9	41
<b>UICF-Brundage</b>	90	100	109	115	61.2	9.3	39
<b>Eltan/Tubbs 06</b>		101	110	114	58.2	9.2	41
<b>Brundage 96</b>	88	102	111	113	60.3	8.8	39
<b>03PN107#3</b>				113	61.0	9.0	40
<b>WA 8142</b>				113	<b>61.9</b>	9.4	41
<b>BZ6W02-616</b>		98	107	111	<b>61.8</b>	8.7	38
<b>Sunrise (Soft Red)</b>			112	111	59.6	8.6	44
<b>ID00-475-2DH</b>			106	111	<b>62.0</b>	9.2	39
<i>Coda</i>	88	98	107	109	<b>62.2</b>	8.7	42
<b>Masami</b>	87	100	109	109	59.2	9.2	40
<b>Rod/Tubbs 06</b>		98	104	109	60.6	9.0	41
<b>OR2040726 (Mary)</b>		101	108	109	<b>61.4</b>	9.0	39
<b>WA 8134</b>				109	59.9	8.7	41
<b>OR2071628</b>				109	59.1	8.6	38
<i>ARS970163-4C (ARS-Crescent)</i>			105	108	60.9	8.3	39
<i>Chukar +25%</i>			106	108	59.7	8.5	39
<b>AP Badger</b>				108	58.8	8.7	37
<b>Madsen/Rod</b>	83	95	102	107	59.6	9.0	39
<i>ARS97230-6C</i>				107	<b>61.8</b>	8.3	35
<b>WA 8135</b>				107	60.9	9.4	40
<b>Bitterroot</b>	82	92	103	106	61.0	8.4	43
<b>ORCF-103</b>	85	97	100	106	59.8	9.4	36
<b>Goetze/Skiles</b>			105	106	60.0	10.2	38
<b>Rod/WB-528</b>				106	60.0	8.8	39
<i>Cara</i>	81	93	104	105	59.2	9.2	39
<b>WA 8145</b>				105	59.7	8.9	41
<i>Cara +25%</i>			107	104	59.4	9.3	40
<b>ID96-16702A</b>				104	61.3	8.6	41
<b>Tubbs 06</b>	81	92	96	103	60.1	8.8	41
<b>WA 8116</b>			108	103	58.1	9.3	38
<i>ARS98X402-1C</i>				103	60.4	8.4	39
<i>Chukar</i>	80	91	100	102	59.9	9.2	40

## 2011 WSU Variety Testing SW Winter Wheat Trial, Anatone

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>WA 8094</b>		93	101	102	58.1	9.2	41
<b>OR2070385</b>				102	59.8	9.1	39
<b>Finch</b>	83	91	94	100	60.6	9.1	41
<b>ARS960277L (ARS-Amber)</b>			103	100	60.0	8.1	37
<b>WA 8144</b>				100	59.1	9.4	45
<b>Legion</b>		92	98	99	59.3	8.9	41
<b>ARS970161-3L</b>				98	60.9	8.8	40
<b>SY Ovation</b>				98	60.5	9.4	39
<b>Lambert</b>	80	87	92	95	60.4	9.0	41
<b>WA 8092</b>		95	103	95	56.9	8.8	40
<b>WA 8136</b>				91	57.5	9.2	34
<b>Stephens</b>	76	84	86	90	60.8	9.8	38
<b>AP 700 CL</b>	81	89	88	88	60.9	9.3	42
<b>IDO663</b>				88	61.0	9.2	38
<b>C.V. %</b>	8	7	7	7	1.2	5.4	3
<b>LSD (.10)</b>	3	4	5	8	0.8	0.9	3
<b>Average</b>	86	98	106	108	60.1	9.0	40
<b>Highest</b>	105	119	131	138	62.2	10.2	45
<b>Lowest</b>	76	84	86	88	56.8	8.1	34

1. Grain yield in the Anatone soft white winter wheat trial averaged 108 bushels/acre, 22 bushels/acre more than the 5-year average. The Anatone nursery was located about three miles north of Anatone, WA (J. Johnson, cooperator).
2. This nursery was seeded on 5 October, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 88 to 138 bu/ac. 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 1 of the 60 entries in the trial was within the top LSD range. Xerpha was also the top yielding entry across five years of results at this location. Stripe rust potential was high at this location and fungicide was applied mid-May and again mid-June. Stripe rust was controlled and did not impact yields and influence variety performance.
4. Test weights were good with an average of 60.1 lbs/bu, and ranged from 56.8 to 62.2 lbs/bu. Grain protein averaged 9.0% with a range of 8.1 to 10.2%. Plant height averaged 40 inches with no lodging.

**Table 23. 2011 WSU Variety Testing SW Winter Wheat Trial, Colton**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>Bruneau</b>	138	143	147	<b>153</b>	62.4	9.1	44
<b>Legion</b>		139	148	<b>149</b>	61.4	9.2	45
<i>Bruehl</i>	126	131	139	<b>147</b>	60.1	9.6	46
<b>Rod</b>	127	132	138	<b>147</b>	61.9	9.3	41
<b>Eltan</b>	131	132	142	<b>146</b>	62.4	9.5	45
<b>WA 8134</b>				<b>146</b>	62.0	9.1	47
<i>Chukar</i>	118	125	135	<b>145</b>	61.8	9.3	45
<b>Eltan/Tubbs 06</b>		133	141	144	62.0	9.1	46
<b>WA 8116</b>			133	144	62.6	9.4	42
<b>SY Ovation</b>				144	62.5	9.8	43
<b>WA 8092</b>		127	138	143	62.2	9.7	46
<b>03PN107#3</b>				143	63.0	9.3	42
<b>Xerpha</b>	129	132	135	142	62.5	9.7	43
<i>ARS97230-6C</i>				142	62.1	9.0	42
<b>Brundage 96</b>	121	125	133	141	62.0	9.7	43
<i>Cara +25%</i>			128	141	61.7	9.2	44
<b>ORCF-102</b>	127	127	134	140	62.5	10.1	46
<b>BZ6W02-616</b>		121	133	140	63.2	9.2	41
<b>WA 8143</b>				140	62.4	9.2	45
<b>Tubbs 06</b>	124	127	135	139	62.0	9.2	45
<b>Madsen/Rod</b>	124	129	137	139	62.0	10.0	42
<i>ARS970163-4C (ARS-Crescent)</i>			137	139	62.4	8.5	45
<i>Cara</i>	113	120	129	138	61.6	9.5	44
<i>ARS970075-3C (ARS-Chrysal)</i>			134	138	63.0	8.7	47
<b>Skiles</b>		121	127	138	63.7	10.2	41
<b>Rod/Tubbs 06</b>		128	137	138	61.9	9.1	44
<b>AP Badger</b>				138	60.8	9.8	38
<b>Bitterroot</b>	118	123	133	137	62.4	9.6	45
<b>ARS960277L (ARS-Amber)</b>			133	137	62.3	9.2	44
<i>Chukar +25%</i>			131	137	61.7	9.1	45
<b>ARS970161-3L</b>				137	63.2	9.6	44
<b>OR2070385</b>				137	61.5	9.5	42
<b>LCS-Artdeco (NSA06-2153A)</b>				137	61.7	9.1	39
<b>ORCF-103</b>	126	126	134	136	61.7	9.0	42
<b>OR2071628</b>				136	60.5	8.9	41
<b>WB-528</b>	120	119	129	135	63.3	10.0	44
<b>WA 8094</b>		125	132	135	63.2	9.5	47
<b>ID00-475-2DH</b>			133	135	<b>64.1</b>	9.3	41
<b>Rod/WB-528</b>				135	63.1	9.9	45
<b>UICF-Brundage</b>	121	125	132	134	62.0	9.1	41
<i>ARS98X402-1C</i>				134	62.2	8.9	46
<b>Madsen</b>	115	122	129	133	61.9	9.8	42
<b>Masami</b>	122	129	132	133	61.0	8.7	43
<b>Goetze/Skiles</b>			122	132	63.1	10.6	41
<b>ID96-16702A</b>				132	63.5	8.8	46
<b>OR2040726 (Mary)</b>		125	131	131	63.0	9.6	42

## 2011 WSU Variety Testing SW Winter Wheat Trial, Colton

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>Finch</b>	119	122	127	130	63.1	9.2	43
<b>Stephens</b>	122	123	129	130	62.0	9.7	42
<b>WA 8114</b>			128	130	63.0	9.2	42
<b>WA 8136</b>				130	60.2	9.3	39
<b>WA 8144</b>				130	62.9	10.0	54
<b>AP 700 CL</b>	119	121	129	128	62.6	9.6	44
<b>WA 8142</b>				126	63.0	10.3	43
<b>Lambert</b>	119	122	129	125	62.1	9.0	46
<i>Coda</i>	120	122	125	124	<b>64.0</b>	9.8	46
<b>Sunrise (Soft Red)</b>			131	124	60.3	8.8	46
<b>WA 8135</b>				124	63.2	9.9	46
<b>WA 8145</b>				124	61.8	10.3	44
<b>IDO663</b>				121	62.6	9.2	42
<b>AP Legacy</b>		123	118	117	60.7	9.6	47
<b>C.V. %</b>	6	6	5	5	0.3	3.5	2
<b>LSD (.10)</b>	4	5	5	8	0.2	0.4	1
<b>Average</b>	123	126	133	136	62.3	9.4	44
<b>Highest</b>	138	143	148	153	64.1	10.6	54
<b>Lowest</b>	113	119	118	117	60.1	8.5	38

1. Grain yield in the Colton soft white winter wheat trial averaged 136 bushels/acre, 13 bushels/acre higher than the 5-year average. The Colton nursery was located about one mile west of Colton, WA (Art Schultheis, cooperator).
2. This nursery was seeded on 1 October, 2010 following lentil. Seed was placed at an 85#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 114#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 117 to 153 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Bruneau was the highest yielding named entry in the trial, and 7 of the 60 entries in the trial were within the top LSD range. Bruneau was also the top yielding entry across five years of results at this location. There was stripe rust potential at this location and fungicide was applied on June 11 and July 9. These later fungicide applications provided good control for most of the season, but early stripe rust showed some impact on susceptible varieties. There was an estimated 10% yield loss due to stripe rust for susceptible varieties.
4. Test weights were very good with an average of 62.3 lbs/bu, and ranged from 60.1 to 64.1 lbs/bu. Grain protein averaged 9.4% with a range of 8.5 to 10.6%. Plant height averaged 44 inches and there was no lodging.

**Table 24. 2011 WSU Variety Testing SW Winter Wheat Trial, Connell**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Skiles	--	61	64	81	61.8	11.2	37	144
OR2070385	--			80	60.7	11.7	36	144
ARS970161-3L	--			76	62.8	11.9	39	145
Madsen/Rod	--	57	62	75	61.1	12.2	37	146
WA 8134	--			74	61.7	11.1	38	143
Coda	--	60	66	73	62.5	12.5	40	146
Bruehl	--	60	66	73	59.6	11.2	40	147
ARS970075-3C (ARS-Chrysal)	--		64	73	62.6	10.8	37	144
BZ6W02-616	--	51	54	73	62.6	11.4	35	140
Goetze/Skiles	--		61	73	60.8	12.0	36	142
SY Ovation	--			73	61.6	11.3	37	144
WA 8142	--			73	62.3	11.6	38	143
Madsen	--	55	60	72	61.8	12.1	38	145
Legion	--	61	62	72	60.7	12.2	37	144
OR2040726 (Mary)	--	55	59	72	62.5	10.7	35	142
Cara +25%	--		66	72	61.1	11.6	34	145
ORCF-102	--	58	62	71	61.8	11.5	39	145
ID96-16702A	--			71	62.9	11.2	39	143
Cara	--	57	66	70	60.7	11.8	34	145
Rod	--	58	61	70	60.6	10.4	35	146
Brundage 96	--	56	61	70	61.4	10.6	37	144
WA 8092	--	60	67	70	60.6	11.7	40	148
ARS97230-6C	--			70	61.0	11.7	35	145
ARS98X402-1C	--			70	61.2	10.2	38	145
OR2071628	--			70	61.7	10.6	35	142
Stephens	--	53	55	69	61.7	12.5	32	140
AP 700 CL	--	52	55	69	61.8	11.4	36	142
WA 8136	--			69	60.4	10.6	37	146
Rod/WB-528	--			69	62.2	11.4	37	142
Chukar	--	59	65	68	60.7	11.3	38	145
UICF-Brundage	--	56	62	68	61.5	10.3	35	144
WB-528	--	55	56	67	63.0	10.5	35	140
WA 8114	--		55	67	62.3	10.6	35	140
IDO663	--			67	61.7	10.5	37	141
ARS970163-4C (ARS-Crescent)	--		65	66	61.2	11.1	37	146
Masami	--	59	64	65	61.2	10.9	36	147
WA 8116	--		63	65	61.7	10.8	38	147
03PN107#3	--			65	61.0	11.1	36	145
Bruneau	--	52	58	64	61.8	10.7	37	145
WA 8143	--			64	60.6	11.5	37	147
Bitterroot	--	52	56	62	61.6	10.4	39	145
Eltan/Tubbs 06	--	58	62	62	61.0	11.6	37	145
Rod/Tubbs 06	--	55	57	62	60.8	11.4	34	144
Chukar +25%	--		62	62	60.5	11.2	37	145
WA 8135	--			62	62.2	12.1	40	147
ARS960277L (ARS-Amber)	--		60	61	59.2	11.2	38	145

## 2011 WSU Variety Testing SW Winter Wheat Trial, Connell

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
WA 8145	--			61	61.2	11.4	39	141
WA 8144	--			59	60.9	12.4	41	148
Finch	--	56	57	58	62.0	11.8	39	147
AP Badger	--			58	61.5	10.9	31	141
Eltan	--	58	60	56	61.1	12.2	39	148
Xerpha	--	58	62	56	61.4	10.3	38	146
Tubbs 06	--	55	57	56	60.5	12.1	36	144
AP Legacy	--	55	58	56	60.5	10.6	36	144
WA 8094	--	53	56	53	61.9	11.9	40	146
ORCF-103	--	56	57	52	61.8	11.6	34	146
ID00-475-2DH	--		53	51	<b>62.9</b>	12.1	37	145
Lambert	--	46	46	50	61.9	11.7	38	144
Sunrise (Soft Red)	--		51	42	61.0	10.8	36	146
LCS-Artdeco (NSA06-2153A)	--			40	60.1	10.1	31	143
C.V. %	--	8	8	8	0.9	8.8	5	1
LSD (.10)	--	3	4	5	0.6	1.0	2	1
Average	--	56	60	66	61.4	11.3	37	144
Highest	--	61	67	81	63.0	12.5	41	148
Lowest	--	46	46	40	59.2	10.1	31	140

1. Grain yield in the Connell soft white winter wheat trial averaged 66 bushels/acre, 10 bushels/acre higher than the 3-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister farm).

2. This nursery was seeded on 30 August, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.

3. Yields ranged from 40 to 81 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Skiles was the highest yielding entry in the trial, and 3 of the 60 entries in the trial were within the top LSD range. Skiles and Legion were the top yielding entries across three years of results. The cool and wet spring conditions along with local inoculum sources created early, high levels of stripe rust at this location. A fungicide was applied June 1 and stopped stripe rust across the trial. However, there was an estimated 30% or more yield loss by stripe rust susceptible entries in this trial.

4. Test weights were good with an average of 61.4 lbs/bu, and ranged from 59.2 to 63.0 lbs/bu. Despite early stripe rust, the June 1 fungicide provided protection during grain filling to produce good test weights. Grain protein averaged 11.3% with a range of 10.1 to 12.5%. Plant height averaged 37 inches, and there was no lodging.

**Table 25. 2011 WSU Variety Testing SW Winter Wheat Trial, Creston**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
OR2040726 (Mary)		126	131	154	63.0	9.8	42
OR2070385				154	60.7	10.4	44
Xerpha	140	143	145	152	61.8	10.0	44
WA 8134				150	61.9	10.4	45
<i>Cara +25%</i>			133	147	60.9	9.8	41
WA 8116			137	145	61.4	10.7	40
WA 8143				145	59.7	9.4	46
Bruneau	132	136	138	144	61.7	8.4	44
Skiles		123	134	144	62.1	10.9	40
<i>Coda</i>	120	125	130	143	63.7	9.6	46
ARS960277L (ARS-Amber)			135	143	60.8	9.0	46
ARS970161-3L				143	62.9	10.4	43
<i>ARS97230-6C</i>				142	60.6	9.4	40
<i>Bruehl</i>	129	133	138	140	57.3	10.1	46
WA 8092		137	130	140	60.1	11.2	43
<i>ARS98X402-1C</i>				140	60.5	10.0	46
WA 8136				140	59.1	10.5	41
ID96-16702A				140	61.3	9.8	47
Rod	128	130	130	139	59.3	10.2	41
03PN107#3				139	60.8	9.6	41
<i>Chukar +25%</i>			131	138	60.5	9.4	44
<i>ARS970075-3C (ARS-Chrysal)</i>			136	137	61.5	10.3	48
Rod/Tubbs 06		131	132	137	59.0	11.6	45
OR2071628				137	59.4	8.7	41
AP Badger				137	60.2	10.1	37
Masami	129	135	134	136	58.8	11.0	44
WB-528	116	116	121	136	63.0	9.7	42
Rod/WB-528				136	60.5	10.6	43
Brundage 96	133	131	132	135	61.2	9.8	41
Finch	126	133	131	134	61.2	9.4	44
WA 8114			131	134	61.0	10.2	39
<i>Cara</i>	124	119	131	133	59.9	8.8	42
ORCF-102	123	123	132	133	61.7	9.6	43
Stephens	114	115	115	131	60.0	10.1	41
Madsen/Rod	123	124	122	130	60.6	9.8	43
UICF-Brundage	125	121	117	130	60.6	8.9	40
BZ6W02-616		111	114	130	62.6	8.9	42
WA 8144				130	61.9	11.1	48
<i>Chukar</i>	122	120	128	129	59.7	9.5	44
Lambert	116	116	118	129	60.4	9.8	46
AP Legacy		126	128	129	60.1	10.4	43
ID00-475-2DH			124	129	62.0	10.7	44
SY Ovation				129	61.6	9.6	40
Tubbs 06	124	128	125	128	59.3	11.1	45
ORCF-103	119	119	122	128	60.2	11.4	41
WA 8094		123	121	128	60.8	9.4	47

## 2011 WSU Variety Testing SW Winter Wheat Trial, Creston

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>Sunrise (Soft Red)</b>			116	126	59.4	8.9	50
<b>Bitterroot</b>	117	118	118	124	61.8	10.4	45
<b>Eltan</b>	121	121	119	123	59.5	9.9	45
<b>WA 8142</b>				123	61.7	11.8	42
<b>IDO663</b>				122	60.7	9.7	40
<b>WA 8135</b>				121	61.3	10.1	46
<b>Madsen</b>	117	116	114	119	60.6	8.9	41
<b>Legion</b>		113	114	119	59.5	8.5	43
<b>Eltan/Tubbs 06</b>		130	120	119	59.5	10.2	45
<i>ARS970163-4C (ARS-Crescent)</i>			125	116	59.2	11.1	44
<b>AP 700 CL</b>	115	114	109	115	59.7	10.7	42
<b>Goetze/Skiles</b>			113	113	61.8	10.0	38
<b>WA 8145</b>				100	61.4	11.0	41
<b>LCS-Artdeco (NSA06-2153A)</b>				38	59.9	12.3	32
<b>C.V. %</b>	10	11	8	8	1.6	13.3	4
<b>LSD (.10)</b>	5	9	7	11	1.0	1.4	2
<b>Average</b>	123	124	126	132	60.7	10.1	43
<b>Highest</b>	140	143	145	154	63.7	12.3	50
<b>Lowest</b>	114	111	109	38	57.3	8.4	32

1. Grain yield in the Creston soft white winter wheat trial averaged 132 bushels/acre, 9 bushels/acre more than the 5-year average. The Creston nursery was located about five miles north of Creston, WA (J. Krause, cooperator).
2. This nursery was seeded on 9 September, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 38 to 154 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Mary was the highest yielding entry in the trial, and 12 of the 60 entries in the trial were within the top LSD range. Xerpha was the top yielding entry across five years of results at this location. Stripe rust potential was high at this location and fungicide was applied two times, on May 17 and June 11. Fungicide applications were effective and there was little stripe rust impact at this location. Test weights were good with an average of 60.7 lbs/bu, and ranged from 57.3 to 63.7 lbs/bu. Grain protein averaged 10.1% with a range of 8.4 to 12.3%. Plant height averaged 43 inches and there was no lodging.



**Table 26. 2011 WSU Variety Testing SW Winter Wheat Trial, Dayton**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	LODGING (%)	HEAD DATE
<b>SY Ovation</b>				<b>185</b>	<b>63.0</b>	10.9	43	0	158
<b>LCS-Artdeco (NSA06-2153A)</b>				<b>181</b>	60.9	11.2	37	0	156
<b>Skiles</b>		155	165	172	62.1	11.6	44	27	162
<b>Goetze/Skiles</b>			150	169	61.9	11.4	43	7	158
<i>Cara</i>	141	163	171	167	60.4	11.3	44	23	164
<b>OR2070385</b>				167	59.4	12.3	42	27	164
<i>ARS97230-6C</i>				166	60.9	11.2	43	17	163
<b>ARS970161-3L</b>				166	62.4	11.8	41	20	163
<b>WB-528</b>	135	148	146	164	<b>62.5</b>	11.3	42	20	157
<b>AP Badger</b>				164	60.4	11.2	37	0	159
<b>Madsen</b>	133	150	154	160	61.4	11.9	42	0	166
<b>Bruneau</b>	136	154	162	159	61.4	10.6	44	50	164
<i>Cara +25%</i>			167	159	60.3	11.2	43	10	162
<b>WA 8142</b>				159	62.2	11.6	43	0	160
<i>Chukar</i>	135	153	159	158	60.1	11.1	46	30	165
<b>Brundage 96</b>	134	145	150	158	61.2	11.4	44	3	160
<b>OR2040726 (Mary)</b>		143	145	158	61.5	11.7	41	0	159
<b>03PN107#3</b>				158	60.9	10.8	41	47	160
<b>Eltan/Tubbs 06</b>		140	141	157	60.5	11.1	44	7	163
<b>BZ6W02-616</b>		153	153	157	61.3	11.5	41	70	156
<i>Bruehl</i>	132	145	160	156	57.6	11.2	44	13	168
<b>AP 700 CL</b>	128	143	142	156	60.5	11.5	43	0	159
<b>UICF-Brundage</b>	128	138	143	156	61.1	11.4	40	13	164
<i>Chukar +25%</i>			164	155	59.9	11.3	45	57	164
<b>Bitterroot</b>	124	140	142	154	62.3	11.4	45	33	164
<b>Madsen/Rod</b>	131	141	138	154	60.3	11.6	42	7	164
<b>WA 8092</b>		140	155	153	60.5	11.8	43	43	170
<b>OR2071628</b>				153	59.2	11.7	41	0	159
<b>Stephens</b>	130	142	144	152	60.0	12.3	41	7	158
<b>Tubbs 06</b>	126	135	126	152	60.1	10.9	44	0	161
<b>IDO663</b>				152	61.2	11.4	43	0	158
<b>ORCF-102</b>	137	149	147	151	61.6	11.4	45	17	164
<b>Legion</b>		152	157	151	58.1	12.0	43	40	164
<i>ARS970163-4C (ARS-Crescent)</i>			154	151	61.1	10.7	45	13	165
<b>Rod/WB-528</b>				151	61.6	11.0	43	17	157
<b>Xerpha</b>	135	140	139	150	61.4	11.1	43	20	164
<b>WA 8116</b>			146	150	61.3	11.5	40	50	167
<b>WA 8134</b>				148	60.6	11.4	45	37	162
<b>WA 8145</b>				148	59.8	11.8	43	47	158
<b>ARS960277L (ARS-Amber)</b>			154	147	60.3	10.9	43	43	165
<b>Rod/Tubbs 06</b>		139	135	147	60.2	11.3	43	17	163
<i>ARS98X402-1C</i>				146	60.8	11.3	48	37	164
<b>WA 8135</b>				146	<b>62.6</b>	11.8	45	32	168
<b>ID96-16702A</b>				144	61.4	11.1	45	43	158
<b>Lambert</b>	118	121	118	143	60.8	11.5	44	30	160
<i>ARS970075-3C (ARS-Chrysal)</i>			152	142	61.2	11.8	47	20	162

## 2011 WSU Variety Testing SW Winter Wheat Trial, Dayton

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	LODGING (%)	HEAD DATE
<b>WA 8144</b>				142	61.7	12.2	48	33	169
<b>Rod</b>	135	144	143	139	59.2	11.2	40	68	165
<b>ORCF-103</b>	127	138	137	139	60.3	11.4	43	47	167
<b>WA 8136</b>				139	57.4	11.9	39	10	169
<b>WA 8114</b>			133	138	60.2	11.5	41	37	158
<b>WA 8143</b>				137	60.2	11.8	42	83	169
<b>Finch</b>	126	138	130	136	61.1	11.6	45	37	167
<b>ID00-475-2DH</b>			119	136	61.7	11.3	42	60	165
<b>Eltan</b>	127	137	136	133	60.4	11.8	43	96	168
<b>Sunrise (Soft Red)</b>			118	133	59.7	11.7	45	10	162
<i>Coda</i>	132	145	145	130	61.2	13.3	47	88	165
<b>Masami</b>	119	123	123	129	59.5	10.9	42	17	168
<b>WA 8094</b>		123	127	128	61.2	11.6	46	44	168
<b>AP Legacy</b>		130	114	118	59.6	10.7	46	7	164
<b>C.V. %</b>	6	6	6	6	0.8	3.8	3	81	1
<b>LSD (.10)</b>	4	5	6	9	0.5	0.5	2	23	1
<b>Average</b>	130	142	144	151	60.7	11.5	43	27	163
<b>Highest</b>	141	163	171	185	63.0	13.3	48	96	170
<b>Lowest</b>	118	121	114	118	57.4	10.6	37	0	156

1. Grain yield in the Dayton soft white winter wheat trial averaged 151 bushels/acre, 21 bushels/acre more than the 5-year average. The Dayton nursery was located about four miles northwest of Dayton, WA (J. Penner, cooperator).
2. This nursery was seeded on 28 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Base fertilizer was 110#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 118 to 185 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. SY Ovation was the highest yielding entry in the trial, and 2 of the 60 entries in the trial were within the top LSD range. Cara was the top yielding entry across five years of results at this location. Stripe rust potential was very high at this location. Fungicide was applied three times, on March 19, May 5, and June 21. Despite three fungicide applications, stripe rust was present in the trial on susceptible varieties and influenced yield an estimated 15% or more for susceptible varieties. This trial shows that stripe rust susceptible varieties can sustain damage even with a high fungicide application regime when stripe rust is highly epidemic. There was also lodging in the trial with some yield impact.
4. Test weights were good with an average of 60.7 lbs/bu, and ranged from 57.4 to 63.0 lbs/bu. Grain protein averaged 11.5% with a range of 10.6 to 13.3%. Plant height averaged 43 inches and lodging averaged 27% with a range of 0 to 96%.

**Table 27. 2011 WSU Variety Testing SW Winter Wheat Trial, Dusty**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>Bruehl</i>	--	116	128	<b>137</b>	59.9	11.6	44	187
<b>Skiles</b>	--	126	141	<b>131</b>	62.0	12.2	41	182
<i>ARS970163-4C (ARS-Crescent)</i>	--		135	<b>128</b>	62.2	10.6	43	186
<i>Chukar +25%</i>	--		142	<b>127</b>	61.5	10.4	46	185
<i>ARS98X402-1C</i>	--			<b>127</b>	62.6	10.8	44	185
<i>ARS97230-6C</i>	--			126	62.2	10.1	42	184
<b>WA 8114</b>	--		127	124	62.1	11.0	41	180
<b>Xerpha</b>	--	112	115	121	61.9	11.1	43	186
<i>Cara +25%</i>	--		134	121	61.4	11.1	43	185
<i>Chukar</i>	--	117	127	118	61.6	10.9	43	186
<i>Cara</i>	--	129	145	118	61.1	10.7	43	185
<b>Finch</b>	--	109	120	118	62.8	11.2	42	187
<b>WA 8092</b>	--	103	105	118	61.1	11.1	43	186
<b>Eltan</b>	--	100	105	117	62.2	10.4	43	186
<i>ARS970075-3C (ARS-Chrysal)</i>	--		127	117	62.9	11.8	42	184
<i>Coda</i>	--	106	120	116	<b>63.6</b>	11.9	45	184
<b>WA 8116</b>	--		122	115	62.6	10.9	37	185
<b>03PN107#3</b>	--			115	61.9	11.3	39	185
<b>OR2070385</b>	--			113	61.9	11.3	40	183
<b>Rod</b>	--	107	115	112	60.8	11.0	38	186
<b>ARS960277L (ARS-Amber)</b>	--		127	111	61.8	11.0	41	184
<b>SY Ovation</b>	--			110	62.1	11.2	42	183
<b>ORCF-102</b>	--	117	128	109	61.7	11.4	42	184
<b>WA 8094</b>	--	99	107	108	62.5	11.5	44	187
<b>ARS970161-3L</b>	--			108	62.5	12.1	39	185
<b>WA 8134</b>	--			107	62.0	11.6	41	184
<b>WA 8143</b>	--			107	62.0	11.2	44	186
<b>Rod/Tubbs 06</b>	--	104	114	105	60.5	11.3	42	183
<b>WA 8135</b>	--			104	62.5	11.8	43	186
<b>Madsen/Rod</b>	--	111	123	103	60.8	11.7	41	186
<b>Rod/WB-528</b>	--			103	61.6	11.6	41	180
<b>ID00-475-2DH</b>	--		102	102	62.7	11.7	39	186
<b>AP Badger</b>	--			102	60.8	11.2	38	181
<b>ORCF-103</b>	--	99	97	101	61.0	11.1	40	188
<b>Goetze/Skiles</b>	--		128	101	61.0	12.3	40	182
<b>ID96-16702A</b>	--			101	62.7	11.6	42	184
<b>Brundage 96</b>	--	106	122	98	61.2	11.2	41	181
<b>WA 8144</b>	--			98	62.5	12.0	49	187
<b>Masami</b>	--	102	111	97	61.0	10.9	41	187
<b>UICF-Brundage</b>	--	106	115	97	61.2	11.0	37	183
<b>WA 8136</b>	--			97	59.8	11.6	37	186
<b>OR2071628</b>	--			97	61.9	10.8	37	182
<b>Eltan/Tubbs 06</b>	--	100	105	96	61.1	11.0	42	183
<b>OR2040726 (Mary)</b>	--	110	128	96	61.3	11.5	38	181
<b>LCS-Artdeco (NSA06-2153A)</b>	--			94	59.4	11.1	35	181
<b>Sunrise (Soft Red)</b>	--		88	90	61.4	10.8	45	186

## 2011 WSU Variety Testing SW Winter Wheat Trial, Dusty

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Tubbs 06</b>	--	102	111	89	59.6	10.9	42	184
<b>Legion</b>	--	107	119	89	59.0	12.2	41	185
<b>Madsen</b>	--	105	118	88	61.4	12.3	37	184
<b>WA 8142</b>	--			88	61.8	12.0	38	182
<b>WA 8145</b>	--			88	60.2	12.1	41	181
<b>BZ6W02-616</b>	--	96	110	87	62.1	11.7	36	181
<b>WB-528</b>	--	95	111	85	62.3	12.4	37	182
<b>Bitterroot</b>	--	99	116	84	62.1	11.9	41	183
<b>AP 700 CL</b>	--	101	117	84	60.1	12.0	40	180
<b>Lambert</b>	--	93	102	83	61.2	11.2	41	183
<b>AP Legacy</b>	--	97	93	82	57.9	10.0	44	185
<b>Bruneau</b>	--	102	111	77	61.9	12.4	38	185
<b>IDO663</b>	--			73	59.5	11.9	38	181
<b>Stephens</b>	--	94	106	71	60.5	12.0	37	181
<b>C.V. %</b>	--	10	10	9	0.7	3.3	5	1
<b>LSD (.10)</b>	--	6	8	10	0.4	0.4	2	1
<b>Average</b>	--	105	118	104	61.5	11.4	41	184
<b>Highest</b>	--	129	145	137	63.6	12.4	49	188
<b>Lowest</b>	--	93	88	71	57.9	10.0	35	180

1. Grain yield in the Dusty soft white winter wheat trial averaged 104 bushels/acre, equivalent to the 3-year average. The Dusty nursery was located about 10 miles northwest of Dusty, WA (Bob Morasch, cooperator).

2. This nursery was seeded on 29 September, 2010 following summer 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 fall applied. Fall seeding conditions were favorable although the first attempt at seeding at this site was washed out by an intense rain event. Emergence and stand establishment were very good.

3. Yields ranged from 71 to 137 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. The club Bruehl was the highest yielding entry in the trial, and 5 of the 60 entries in the trial were within the top LSD range. Cara was the top yielding entry across three years of results at this location. Stripe rust potential was moderate at this location and no fungicides were applied to the trial. Stripe rust impact on yield is estimated to be 10% or more for susceptible entries.

Test weights were good with an average of 61.5 lbs/bu, and ranged from 57.9 to 63.6 lbs/bu. Grain protein averaged 11.4% with a range of 10.0 to 12.4%. Plant height averaged 41 inches, and there was no lodging.

**Table 28. 2011 WSU Variety Testing SW Winter Wheat Trial, Fairfield**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>WA 8143</b>	--	--	--	<b>110</b>	62.2	8.4	44	179
<b>OR2070385</b>	--	--	--	<b>106</b>	60.8	8.8	42	172
<i>Chukar</i>	--	--	--	<b>102</b>	60.5	7.8	43	173
<b>Madsen</b>	--	--	--	101	61.5	9.3	42	174
<i>Bruehl</i>	--	--	--	100	59.7	8.9	43	177
<i>ARS970163-4C (ARS-Crescent)</i>	--	--	--	100	62.6	8.2	42	178
<b>ARS960277L (ARS-Amber)</b>	--	--	--	99	61.5	8.7	41	173
<i>Cara</i>	--	--	--	97	60.5	8.4	40	172
<i>Cara +25%</i>	--	--	--	97	61.0	9.0	41	173
<i>ARS970075-3C (ARS-Chrysal)</i>	--	--	--	96	61.5	8.0	42	171
<i>Chukar +25%</i>	--	--	--	96	61.5	8.8	43	174
<b>Xerpha</b>	--	--	--	96	61.2	8.8	41	174
<b>WA 8092</b>	--	--	--	96	62.2	8.4	43	179
<i>ARS97230-6C</i>	--	--	--	95	61.9	8.0	38	172
<b>Brundage 96</b>	--	--	--	95	60.9	9.0	41	172
<b>BZ6W02-616</b>	--	--	--	95	61.8	8.7	39	168
<i>ARS98X402-1C</i>	--	--	--	94	61.4	8.0	44	173
<b>Eltan</b>	--	--	--	94	61.6	7.8	42	178
<b>WA 8116</b>	--	--	--	94	62.3	8.3	39	179
<b>WA 8135</b>	--	--	--	94	62.8	9.1	44	179
<b>Bruneau</b>	--	--	--	94	61.5	9.1	42	173
<b>Skiles</b>	--	--	--	94	62.9	9.8	41	174
<b>WA 8144</b>	--	--	--	94	62.6	9.0	51	178
<b>ORCF-103</b>	--	--	--	94	60.6	8.7	42	174
<b>Rod/WB-528</b>	--	--	--	94	61.1	8.9	43	170
<b>03PN107#3</b>	--	--	--	93	62.4	9.7	41	173
<b>ORCF-102</b>	--	--	--	93	61.0	8.5	42	173
<b>WB-528</b>	--	--	--	92	61.7	9.0	42	168
<b>ID00-475-2DH</b>	--	--	--	92	<b>63.0</b>	9.3	40	175
<b>Rod</b>	--	--	--	90	60.7	9.1	40	178
<b>WA 8094</b>	--	--	--	90	61.9	9.0	44	179
<b>WA 8145</b>	--	--	--	89	60.8	9.9	43	169
<b>Masami</b>	--	--	--	88	60.3	8.2	40	177
<b>ID96-16702A</b>	--	--	--	88	62.3	8.5	43	170
<b>Goetze/Skiles</b>	--	--	--	88	61.8	9.7	40	171
<b>SY Ovation</b>	--	--	--	88	61.2	8.7	40	173
<b>WA 8142</b>	--	--	--	88	62.4	10.0	41	170
<b>OR2040726 (Mary)</b>	--	--	--	87	61.1	8.4	41	170
<b>Legion</b>	--	--	--	87	59.8	9.1	41	174
<b>UICF-Brundage</b>	--	--	--	87	61.3	9.2	40	173
<b>AP Badger</b>	--	--	--	86	58.8	9.3	37	171
<b>Madsen/Rod</b>	--	--	--	86	60.9	8.7	39	179
<b>WA 8114</b>	--	--	--	85	62.2	9.1	38	169
<b>WA 8134</b>	--	--	--	85	60.7	8.6	44	173
<b>ARS970161-3L</b>	--	--	--	85	62.3	9.4	40	174
<b>Bitterroot</b>	--	--	--	85	62.4	10.0	44	175

## 2011 WSU Variety Testing SW Winter Wheat Trial, Fairfield

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
OR2071628	--	--	--	85	60.2	8.8	38	172
Sunrise (Soft Red)	--	--	--	84	59.8	8.2	43	170
Finch	--	--	--	83	62.0	9.0	43	178
Rod/Tubbs 06	--	--	--	82	59.6	8.7	43	173
Coda	--	--	--	81	<b>63.6</b>	9.4	44	174
Eltan/Tubbs 06	--	--	--	81	60.1	8.9	43	173
LCS-Artdeco (NSA06-2153A)	--	--	--	80	59.5	9.1	35	169
Tubbs 06	--	--	--	77	58.5	9.1	43	172
WA 8136	--	--	--	76	60.5	8.7	38	179
Lambert	--	--	--	74	60.0	9.0	43	172
IDO663	--	--	--	72	60.3	9.7	39	168
AP 700 CL	--	--	--	72	61.2	9.9	43	170
Stephens	--	--	--	70	58.5	10.2	39	169
AP Legacy	--	--	--	69	57.3	8.2	43	172
C.V. %	--	--	--	9	0.9	7.0	3	1
LSD (.10)	--	--	--	8	0.6	0.7	2	1
Average	--	--	--	89	61.1	8.9	42	174
Highest	--	--	--	110	63.6	10.2	51	179
Lowest	--	--	--	69	57.3	7.8	35	168

1. Grain yield in the Fairfield soft white winter wheat trial averaged 89 bushels/acre. The Fairfield nursery was located about one mile North of Fairfield, WA (Al Anderberg, cooperator).
2. This nursery was seeded on 30 September, 2010 following lentil. Seed was placed at an 85#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 114#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 69 to 110 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. The club Chukar was the highest yielding named entry in the trial, and 3 of the 60 entries in the trial were within the top LSD range. There was stripe rust at this location and no fungicide was applied to the trial. There was an estimated 20% yield loss due to stripe rust for susceptible varieties.
4. Test weights were good with an average of 61.1 lbs/bu, and ranged from 57.3 to 63.6 lbs/bu. Grain protein averaged 8.9% with a range of 7.8 to 10.2%. Plant height averaged 42 inches and there was no lodging.

**Table 29. 2011 WSU Variety Testing SW Winter Wheat Trial, Farmington**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Legion</b>		139	141	<b>160</b>	60.5	9.6	45	174
<b>ARS970161-3L</b>				<b>154</b>	<b>63.1</b>	10.1	43	176
<i>Cara</i>	116	134	130	<b>151</b>	61.3	9.9	44	173
<b>OR2070385</b>				<b>151</b>	61.4	9.9	43	173
<b>WA 8145</b>				149	60.7	10.0	43	168
<b>WA 8144</b>				144	62.1	10.0	53	176
<b>Bruneau</b>	124	133	129	143	61.7	9.5	41	174
<i>Cara +25%</i>			125	141	61.3	9.9	43	173
<b>Skiles</b>		125	120	140	62.5	10.4	42	173
<b>WA 8143</b>				138	61.1	9.8	45	173
<b>Stephens</b>	116	126	118	137	60.6	9.8	41	169
<b>SY Ovation</b>				136	60.6	9.4	41	172
<i>Chukar</i>	114	128	125	135	61.0	9.9	44	174
<b>WA 8092</b>		123	123	135	61.5	9.8	42	177
<i>Chukar +25%</i>			127	135	60.8	9.1	44	174
<b>WA 8136</b>				135	60.3	9.4	37	177
<b>WA 8142</b>				135	62.0	10.3	42	172
<i>Coda</i>	111	120	122	133	<b>63.5</b>	10.6	46	175
<b>AP 700 CL</b>	130	134	129	133	61.3	9.7	45	169
<i>Bruehl</i>	117	128	122	132	59.2	9.6	43	175
<b>ARS960277L (ARS-Amber)</b>			122	132	60.2	9.1	42	173
<b>BZ6W02-616</b>		124	124	132	61.6	9.5	40	167
<b>Madsen</b>	112	121	121	131	61.2	10.0	41	175
<i>ARS97230-6C</i>				131	60.8	9.0	38	173
<b>WA 8134</b>				131	60.4	9.6	47	173
<b>Bitterroot</b>	113	122	117	130	61.4	9.8	43	174
<b>Madsen/Rod</b>	117	125	117	129	60.3	10.1	43	175
<b>LCS-Artdeco (NSA06-2153A)</b>				129	59.8	9.8	38	167
<i>ARS970163-4C (ARS-Crescent)</i>			114	128	61.8	9.4	43	175
<b>WA 8116</b>			120	126	61.5	9.6	40	173
<b>Finch</b>	116	117	107	124	62.3	9.2	43	176
<b>Brundage 96</b>	116	120	117	124	60.9	9.5	41	173
<b>WA 8114</b>			110	124	60.4	9.7	41	167
<b>OR2071628</b>				124	59.8	9.2	39	171
<b>WB-528</b>	115	121	112	123	61.9	9.8	43	167
<b>ID96-16702A</b>				123	62.1	9.6	43	169
<b>03PN107#3</b>				123	60.8	9.5	41	173
<b>Rod</b>	118	125	117	121	59.3	9.8	40	174
<b>AP Badger</b>				121	59.0	9.8	38	172
<b>Eltan</b>	106	117	115	120	60.3	9.2	42	176
<b>WA 8135</b>				120	62.4	10.5	41	176
<b>UICF-Brundage</b>	118	124	121	119	60.2	9.4	39	173
<b>OR2040726 (Mary)</b>		126	116	118	60.5	9.4	40	169
<i>ARS98X402-1C</i>				118	60.3	8.9	43	172
<b>Rod/WB-528</b>				118	60.5	10.0	41	168
<b>ORCF-103</b>	116	122	121	116	60.1	9.4	42	176

## 2011 WSU Variety Testing SW Winter Wheat Trial, Farmington

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>ARS970075-3C (ARS-Chrysal)</i>			110	113	59.3	9.8	45	172
<b>Goetze/Skiles</b>			107	113	60.8	10.8	39	168
<b>ID00-475-2DH</b>			119	112	60.5	9.4	41	175
<b>IDO663</b>				112	61.2	9.5	39	166
<b>Masami</b>	109	110	102	106	59.4	9.5	41	176
<b>ORCF-102</b>	128	126	114	105	58.0	10.3	43	174
<b>WA 8094</b>		105	100	104	61.5	9.9	43	176
<b>Rod/Tubbs 06</b>		111	98	97	57.4	10.3	43	173
<b>Eltan/Tubbs 06</b>		113	105	95	58.9	9.7	43	173
<b>Xerpha</b>	115	111	94	91	59.7	10.5	40	175
<b>Sunrise (Soft Red)</b>			95	91	58.5	9.6	46	172
<b>Lambert</b>	110	105	88	90	60.0	10.3	43	171
<b>Tubbs 06</b>	102	104	88	83	57.3	9.8	43	173
<b>AP Legacy</b>		99	76	53	53.8	9.9	42	173
<b>C.V. %</b>	10	8	7	7	0.8	3.5	4	1
<b>LSD (.10)</b>	5	6	6	9	0.5	0.4	2	1
<b>Average</b>	115	121	114	124	60.5	9.8	42	173
<b>Highest</b>	130	139	141	160	63.5	10.8	53	177
<b>Lowest</b>	102	99	76	53	53.8	8.9	37	166

1. Grain yield in the Farmington soft white winter wheat trial averaged 124 bushels/acre, 9 bushels/acre higher than the 5-year average. The Farmington nursery was located about three miles south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 30 September, 2010 following pea. Seed was placed at an 85#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 114#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 53 to 160 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Legion was the highest yielding named entry in the trial, and 4 of the 60 entries in the trial were within the top LSD range. AP700CL was the top yielding entry across five years of results at this location. There was high stripe rust potential at this location and no fungicide was applied. There was an estimated 40% yield loss due to stripe rust for susceptible varieties and stripe rust strongly influenced cultivar performance at this site.
4. Test weights were good with an average of 60.5 lbs/bu, and ranged from 53.8 to 63.5 lbs/bu. Grain protein averaged 9.8% with a range of 8.9 to 10.8%. Plant height averaged 42 inches and there was no lodging.



**Table 30. 2011 WSU Variety Testing SW Winter Wheat Trial, Harrington**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	HEAD DATE
<b>ORCF-102</b>	--	--	64	<b>74</b>	61.5	11.1	161
<i>Chukar +25%</i>	--	--	65	<b>72</b>	60.4	9.3	163
<i>Chukar</i>	--	--	63	<b>71</b>	60.5	10.2	163
<b>Skiles</b>	--	--	60	<b>71</b>	61.4	11.0	162
<b>03PN107#3</b>	--	--		<b>71</b>	61.4	11.5	161
<i>Bruehl</i>	--	--	60	<b>69</b>	58.9	10.6	166
<i>ARS970075-3C (ARS-Chrysal)</i>	--	--	60	<b>69</b>	62.0	12.3	162
<b>ARS970161-3L</b>	--	--		<b>69</b>	62.4	11.7	164
<i>Cara</i>	--	--	62	68	60.3	10.6	162
<b>Madsen</b>	--	--	59	68	61.0	11.1	165
<b>Rod</b>	--	--	56	68	60.0	11.4	165
<b>WA 8142</b>	--	--		68	61.8	11.9	161
<b>Finch</b>	--	--	56	67	60.9	11.9	166
<b>Madsen/Rod</b>	--	--	57	67	61.1	11.0	164
<i>Cara +25%</i>	--	--	60	67	60.4	10.7	163
<b>OR2071628</b>	--	--		66	60.7	10.8	162
<b>OR2070385</b>	--	--		66	60.9	11.4	162
<b>WA 8143</b>	--	--		66	61.2	10.9	166
<b>UICF-Brundage</b>	--	--	54	65	60.6	10.4	162
<b>ARS960277L (ARS-Amber)</b>	--	--	58	65	61.0	10.5	164
<b>BZ6W02-616</b>	--	--	49	65	<b>62.6</b>	11.6	160
<b>WA 8116</b>	--	--	56	65	61.5	10.9	166
<b>WA 8134</b>	--	--		65	60.8	10.2	161
<b>Xerpha</b>	--	--	61	64	61.6	10.4	164
<b>Bruneau</b>	--	--	52	64	61.3	10.9	163
<i>ARS98X402-1C</i>	--	--		64	61.2	9.8	163
<i>Coda</i>	--	--	57	63	<b>63.0</b>	11.2	163
<b>Brundage 96</b>	--	--	58	63	61.0	11.1	161
<b>Bitterroot</b>	--	--	55	63	62.2	11.1	164
<b>WB-528</b>	--	--	55	63	62.5	11.1	161
<b>OR2040726 (Mary)</b>	--	--	52	63	61.2	10.2	160
<b>Goetze/Skiles</b>	--	--	55	63	60.9	11.5	161
<b>SY Ovation</b>	--	--		63	61.7	10.0	161
<b>Eltan/Tubbs 06</b>	--	--	55	62	60.8	10.3	163
<b>WA 8136</b>	--	--		62	60.3	10.6	167
<b>AP Badger</b>	--	--		62	60.1	11.2	161
<b>Eltan</b>	--	--	55	61	61.3	11.2	166
<b>ID96-16702A</b>	--	--		61	62.1	11.0	161
<b>WA 8144</b>	--	--		61	62.1	11.1	167
<b>Legion</b>	--	--	53	60	60.2	11.1	162
<b>WA 8114</b>	--	--	48	60	62.0	11.3	159
<i>ARS970163-4C (ARS-Crescent)</i>	--	--	56	60	62.0	11.3	164
<b>WA 8092</b>	--	--	54	59	60.8	11.0	167
<b>Masami</b>	--	--	55	58	60.6	10.3	166
<b>AP 700 CL</b>	--	--	50	58	61.0	11.7	161
<b>Rod/Tubbs 06</b>	--	--	52	58	60.6	11.3	163

## 2011 WSU Variety Testing SW Winter Wheat Trial, Harrington

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	HEAD DATE
Rod/WB-528	--	--		58	61.5	11.2	161
Stephens	--	--	47	57	60.8	11.3	160
WA 8135	--	--		57	62.2	12.0	166
IDO663	--	--		57	61.2	11.0	160
WA 8094	--	--	53	56	62.1	9.9	165
ARS97230-6C	--	--		56	61.0	10.7	162
WA 8145	--	--		56	61.0	11.5	161
Tubbs 06	--	--	55	55	60.5	11.5	162
ORCF-103	--	--	49	55	61.0	11.3	166
ID00-475-2DH	--	--	50	55	62.5	11.8	164
AP Legacy	--	--	51	54	61.3	10.6	164
Sunrise (Soft Red)	--	--	49	50	61.6	12.1	161
Lambert	--	--	45	46	61.6	11.8	160
LCS-Artdeco (NSA06-2153A)	--	--		46	60.0	11.9	159
C.V. %	--	--	11	8	0.7	8.8	1
LSD (.10)	--	--	4	5	0.4	1.0	1
Average	--	--	55	62	61.2	11.0	163
Highest	--	--	65	74	63.0	12.3	167
Lowest	--	--	45	46	58.9	9.3	159

1. Grain yield in the Harrington soft white winter wheat trial averaged 62 bushels/acre, 15 bushels/acre higher than the 2010 average. Higher yields were enabled by favorable spring precipitation and temperatures. The Harrington nursery was located about three miles west of Harrington, WA (M. Kramer, cooperator).

2. This nursery was seeded on 15 September, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were very good.

3. Yields ranged from 46 to 74 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. ORCF-102 was the highest yielding named cultivar in the trial, and 8 of the 60 entries in the trial were within the top LSD range. The cool and wet spring conditions along with regional inoculum sources created significant levels of stripe rust potential at this location. Fungicide was applied June 12 and controlled late stripe rust, but susceptible varieties could have had up to 20% yield loss due to stripe rust.

4. Test weights were good with an average of 61.2 lbs/bu, and ranged from 58.9 to 63.0 lbs/bu. Grain protein averaged 11.0% with a range of 9.3 to 12.3%.

**Table 31. 2011 WSU Variety Testing SW Winter Wheat Trial, Horse Heaven**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>Chukar</i>	--	41	56	<b>71</b>	59.6	9.1	33	151
<b>WA 8116</b>	--		56	<b>71</b>	61.1	8.6	30	150
<b>ARS970161-3L</b>	--			<b>71</b>	61.6	9.9	34	149
<b>ARS960277L (ARS-Amber)</b>	--		54	<b>70</b>	60.1	8.5	33	149
<b>Skiles</b>	--	39	52	<b>70</b>	61.1	8.5	31	149
<b>Xerpha</b>	--	43	58	<b>69</b>	60.9	8.3	33	149
<b>BZ6W02-616</b>	--	39	51	<b>69</b>	<b>62.6</b>	9.2	32	145
<i>Chukar +25%</i>	--		54	<b>69</b>	59.2	7.8	32	150
<i>ARS97230-6C</i>	--			<b>69</b>	61.1	7.4	29	150
<b>OR2070385</b>	--			<b>69</b>	59.6	9.0	33	149
<i>Bruehl</i>	--	39	52	<b>68</b>	59.1	7.9	34	151
<b>Tubbs 06</b>	--	40	54	<b>68</b>	59.9	9.7	33	149
<b>Legion</b>	--	40	54	<b>68</b>	59.8	8.9	33	149
<b>AP Legacy</b>	--	40	53	<b>68</b>	61.4	9.0	33	149
<i>Cara +25%</i>	--		53	<b>68</b>	59.5	8.8	32	150
<b>WA 8135</b>	--			<b>68</b>	<b>62.3</b>	9.0	35	150
<b>ORCF-102</b>	--	39	52	<b>67</b>	61.2	9.6	34	149
<i>ARS970075-3C (ARS-Chrysal)</i>	--		52	<b>67</b>	60.8	9.2	33	150
<b>IDO663</b>	--			<b>67</b>	60.8	9.1	31	147
<b>OR2071628</b>	--			<b>67</b>	60.2	8.9	33	149
<i>Coda</i>	--	37	51	<b>66</b>	61.5	8.5	34	150
<b>Finch</b>	--	38	53	<b>66</b>	<b>62.4</b>	8.8	32	151
<b>ORCF-103</b>	--	40	54	<b>66</b>	61.1	9.0	30	150
<i>ARS970163-4C (ARS-Crescent)</i>	--		52	<b>66</b>	60.9	8.7	34	150
<b>03PN107#3</b>	--			<b>66</b>	60.6	8.6	33	149
<b>Masami</b>	--	39	52	65	60.3	9.5	33	151
<b>Brundage 96</b>	--	38	51	65	60.6	10.0	31	149
<b>Bruneau</b>	--	38	52	65	60.8	9.0	32	150
<b>Eltan/Tubbs 06</b>	--	39	52	65	60.8	8.7	34	150
<b>WA 8094</b>	--	38	51	65	61.8	8.6	34	149
<i>ARS98X402-1C</i>	--			65	60.5	8.5	34	150
<b>AP Badger</b>	--			65	59.3	9.2	33	149
<b>WA 8143</b>	--			65	61.4	9.3	33	151
<b>WB-528</b>	--	40	53	64	61.4	9.3	32	148
<b>Rod/Tubbs 06</b>	--	38	53	64	60.2	9.5	34	150
<b>WA 8092</b>	--	37	50	64	60.9	10.2	34	151
<b>Madsen/Rod</b>	--	38	50	63	60.1	8.2	33	150
<b>Rod/WB-528</b>	--			63	61.1	9.7	32	149
<b>Eltan</b>	--	38	50	62	61.3	8.9	32	151
<b>Rod</b>	--	38	52	62	60.2	9.1	31	150
<b>Goetze/Skiles</b>	--		50	62	61.5	9.8	32	148
<b>SY Ovation</b>	--			62	61.7	9.1	32	148
<b>WA 8142</b>	--			62	61.6	10.6	33	149
<i>Cara</i>	--	35	47	61	60.5	9.6	30	151
<b>WA 8114</b>	--		49	61	61.7	9.6	32	146
<b>ID00-475-2DH</b>	--		50	61	<b>62.7</b>	9.7	33	150

## 2011 WSU Variety Testing SW Winter Wheat Trial, Horse Heaven

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>WA 8136</b>	--			61	59.2	9.4	33	151
<b>ID96-16702A</b>	--			61	61.8	8.8	33	149
<b>Bitterroot</b>	--	36	47	60	61.3	9.0	34	150
<b>Stephens</b>	--	35	46	59	60.1	10.1	30	148
<b>UICF-Brundage</b>	--	36	49	59	60.2	10.0	31	149
<b>WA 8134</b>	--			59	60.9	9.3	34	149
<b>WA 8144</b>	--			59	61.6	9.8	38	152
<b>Sunrise (Soft Red)</b>	--		49	58	61.3	9.8	33	150
<b>Madsen</b>	--	34	46	57	61.0	8.8	32	150
<b>Lambert</b>	--	35	46	57	60.5	9.4	35	148
<b>OR2040726 (Mary)</b>	--	36	48	56	60.4	9.9	31	148
<b>AP 700 CL</b>	--	34	45	55	60.6	9.3	33	149
<b>WA 8145</b>	--			54	61.0	9.4	35	147
<b>LCS-Artdeco (NSA06-2153A)</b>	--			54	61.7	9.1	30	148
<b>C.V. %</b>	--	8	8	8	0.9	10.7	5	1
<b>LSD (.10)</b>	--	2	3	5	0.6	1.0	2	1
<b>Average</b>	--	38	51	64	60.8	9.1	33	149
<b>Highest</b>	--	43	58	71	62.7	10.6	38	152
<b>Lowest</b>	--	34	45	54	59.1	7.4	29	145

1. Grain yield in the Horse Heaven soft white winter wheat trial averaged 64 bushels/acre, 26 bushels/acre higher than the 3-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The Horse Heaven nursery was located about seven miles southeast of Prosser, WA (D. Roseberry, cooperator).

2. This nursery was seeded on 7 September, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.

3. Yields ranged from 54 to 71 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Chukar was the highest yielding entry in the trial, but 25 of the 60 entries in the trial were within the top LSD range. This shows that everything yielded well in the trial. Xerpha was the top yielding entry across three years of results. The cool and wet spring conditions along with local inoculum sources created early, high levels of stripe rust potential at this location. Fungicide was applied the beginning of April and again May 30 and controlled stripe rust across the trial.

4. Test weights were good with an average of 60.8 lbs/bu, and ranged from 59.1 to 62.7 lbs/bu. Grain protein averaged 9.1% with a range of 7.4 to 10.6%. Plant height averaged 33 inches, and there was no lodging.

**Table 32. 2011 WSU Variety Testing SW Winter Wheat Trial, Lamont**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	LODGING (%)	HEAD DATE
<i>Cara</i>	108	120	125	<b>139</b>	59.8	12.5	40	0	159
<i>Cara +25%</i>			117	<b>136</b>	60.1	10.9	38	0	160
<i>ARS970075-3C (ARS-Chrysal)</i>			118	<b>134</b>	61.3	11.1	40	0	161
<b>03PN107#3</b>				<b>133</b>	61.3	10.9	38	17	156
<b>Skiles</b>		110	118	124	61.4	11.2	37	10	159
<b>WA 8134</b>				124	60.5	11.8	45	0	158
<b>SY Ovation</b>				122	60.8	10.8	39	0	156
<b>AP Badger</b>				121	58.7	11.0	32	0	156
<i>Chukar +25%</i>			112	120	59.7	10.3	42	0	161
<b>ID96-16702A</b>				120	<b>62.6</b>	10.5	41	7	156
<b>Xerpha</b>	109	117	122	119	60.2	11.0	37	0	161
<b>ARS970161-3L</b>				119	61.7	11.6	40	0	161
<i>Coda</i>	95	98	104	118	<b>62.6</b>	12.1	45	3	161
<b>ORCF-102</b>	99	102	112	118	60.9	10.9	44	0	160
<b>Finch</b>	103	111	116	117	61.6	11.0	37	0	163
<i>Chukar</i>	99	108	108	116	60.0	11.1	42	0	161
<i>ARS98X402-1C</i>				113	61.0	11.2	36	7	162
<b>ARS960277L (ARS-Amber)</b>			113	112	60.7	11.0	40	0	160
<i>ARS97230-6C</i>				112	60.7	9.4	36	0	160
<b>Madsen/Rod</b>	95	99	106	110	60.1	11.7	41	0	162
<i>ARS970163-4C (ARS-Crescent)</i>			101	109	60.9	10.4	38	0	162
<b>OR2071628</b>				109	59.5	10.3	37	0	156
<b>WA 8114</b>			98	108	61.4	11.3	42	0	156
<b>Goetze/Skiles</b>			110	107	60.8	10.8	39	0	153
<b>Tubbs 06</b>	97	97	106	106	59.5	9.6	42	0	160
<b>Rod/Tubbs 06</b>		101	111	106	60.2	10.8	42	0	159
<b>OR2070385</b>				106	60.1	10.5	36	10	161
<b>WA 8143</b>				105	60.3	10.3	40	23	165
<i>Bruehl</i>	93	96	103	103	58.8	10.4	37	0	165
<b>Legion</b>		92	102	100	59.7	10.8	39	10	161
<b>WA 8092</b>		98	105	100	60.0	11.3	37	3	166
<b>Eltan</b>	98	102	105	99	60.8	10.4	38	13	162
<b>Brundage 96</b>	95	95	106	98	60.2	11.8	35	0	156
<b>Eltan/Tubbs 06</b>		96	103	98	60.0	10.1	37	0	159
<b>WA 8135</b>				98	61.5	11.1	41	10	164
<b>Madsen</b>	87	89	100	97	60.0	11.1	37	0	162
<b>Masami</b>	99	102	111	97	59.7	10.6	40	0	163
<b>ORCF-103</b>	96	101	109	97	59.7	10.1	33	13	164
<b>WB-528</b>	87	88	99	96	61.0	11.1	33	0	154
<b>AP Legacy</b>		105	106	96	59.1	9.8	39	0	160
<b>Rod</b>	94	93	95	95	59.4	11.0	38	0	160
<b>UICF-Brundage</b>	95	95	100	95	59.5	10.9	31	0	161
<b>ID00-475-2DH</b>			99	95	61.9	11.7	38	13	162
<b>WA 8094</b>		97	105	94	60.8	11.5	35	0	164
<b>BZ6W02-616</b>		89	96	91	61.8	11.3	36	13	152
<b>WA 8116</b>			106	91	61.1	11.1	36	7	164

## 2011 WSU Variety Testing SW Winter Wheat Trial, Lamont

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	LODGING (%)	HEAD DATE
<b>WA 8142</b>				91	61.0	12.4	39	0	156
<b>WA 8144</b>				91	60.9	11.8	39	7	165
<b>WA 8136</b>				87	58.8	11.0	32	0	165
<b>WA 8145</b>				86	59.6	12.4	39	10	154
<b>LCS-Artdeco (NSA06-2153A)</b>				86	57.9	11.0	32	0	152
<b>Rod/WB-528</b>				86	60.3	10.6	39	0	154
<b>OR2040726 (Mary)</b>		82	77	83	60.9	11.6	38	0	154
<b>IDO663</b>				82	60.3	10.9	36	0	155
<b>Stephens</b>	80	77	82	80	59.7	11.0	33	0	156
<b>Bitterroot</b>	80	84	92	75	60.7	12.6	36	7	161
<b>AP 700 CL</b>	83	79	83	74	59.5	11.2	37	0	156
<b>Bruneau</b>	83	80	85	70	60.1	11.7	35	10	161
<b>Sunrise (Soft Red)</b>			73	70	59.8	10.6	38	0	159
<b>Lambert</b>	83	78	81	67	60.4	11.1	35	3	157
<b>C.V. %</b>	11	12	12	13	0.9	7.4	10	256	1
<b>LSD (.10)</b>	5	7	9	14	0.6	0.9	4	9	1
<b>Average</b>	94	96	103	103	60.4	11.0	38	3	159
<b>Highest</b>	109	120	125	139	62.6	12.6	45	23	166
<b>Lowest</b>	80	77	73	67	57.9	9.4	31	0	152

1. Grain yield in the Lamont soft white winter wheat trial averaged 103 bushels/acre, 9 bushels/acre more than the 5-year average. The Lamont nursery was located about six miles southeast of Lamont, WA (G. White, cooperator).
2. This nursery was seeded on 13 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Base fertilizer was 70#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 67 to 139 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Cara was the highest yielding entry in the trial, and 4 of the 60 entries in the trial were within the top LSD range. Xerpha was the top yielding entry across five years of results at this location. Stripe rust potential was high at this location and fungicide was applied two times, on May 4 and mid-June. Despite fungicide applications, there was a low level of stripe rust present in the trial on susceptible varieties and reduced yield an estimated 10% or more for susceptible varieties.
4. Test weights were good with an average of 60.4 lbs/bu, and ranged from 57.9 to 62.6 lbs/bu. Grain protein averaged 11.0% with a range of 9.4 to 12.6%. Plant height averaged 38 inches and there was minor lodging.

**Table 33. 2011 WSU Variety Testing SW Winter Wheat Trial, Lind**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<i>Bruehl</i>	41	45	53	<b>53</b>	61.0	12.0	36
<b>Xerpha</b>	43	44	52	<b>53</b>	61.5	11.7	37
<b>ARS970161-3L</b>				<b>52</b>	<b>63.1</b>	12.3	35
<b>Legion</b>		40	48	<b>51</b>	60.5	11.5	37
<i>Coda</i>	38	41	51	<b>50</b>	<b>62.7</b>	11.7	37
<b>WA 8135</b>				<b>50</b>	62.2	11.6	38
<b>WA 8136</b>				<b>50</b>	60.4	12.1	33
<i>Chukar</i>	39	41	52	<b>49</b>	61.3	11.2	36
<b>Skiles</b>		39	43	<b>49</b>	60.8	13.8	33
<b>Eltan</b>	41	43	46	<b>48</b>	62.0	11.4	35
<b>Tubbs 06</b>	37	39	47	<b>48</b>	59.9	11.1	37
<i>Cara +25%</i>			51	<b>48</b>	61.3	10.9	35
<b>WA 8143</b>				<b>48</b>	62.1	11.7	36
<b>WA 8144</b>				<b>48</b>	62.0	12.5	39
<b>Finch</b>	39	44	50	<b>47</b>	62.2	11.1	35
<b>Eltan/Tubbs 06</b>		42	47	<b>47</b>	61.5	11.3	37
<b>WA 8092</b>		43	48	<b>47</b>	61.7	12.6	35
<i>Chukar +25%</i>			55	46	61.3	11.8	34
<b>Rod</b>	35	36	43	45	61.3	12.1	33
<i>ARS970075-3C (ARS-Chrysal)</i>			49	45	61.7	11.9	35
<b>ARS960277L (ARS-Amber)</b>			46	45	61.4	11.4	37
<i>ARS970163-4C (ARS-Crescent)</i>			49	45	62.0	11.7	34
<i>ARS98X402-1C</i>				45	61.8	11.2	34
<i>Cara</i>	33	38	45	44	61.1	11.6	32
<b>Madsen</b>	34	35	45	44	61.7	12.0	36
<b>Masami</b>	40	43	49	44	60.4	11.6	35
<b>Brundage 96</b>	34	36	43	44	61.0	11.7	36
<b>Madsen/Rod</b>	31	33	42	44	61.1	11.7	34
<b>WA 8116</b>			46	44	61.7	12.1	32
<b>Goetze/Skiles</b>			41	44	61.1	13.0	35
<b>OR2070385</b>				44	61.0	12.1	34
<b>AP Badger</b>				44	60.9	11.6	32
<b>ORCF-102</b>	35	37	44	43	61.4	11.9	37
<b>Rod/Tubbs 06</b>		36	44	43	60.6	11.7	36
<b>WA 8094</b>		40	44	43	62.1	11.9	35
<i>ARS97230-6C</i>				43	62.1	11.0	31
<b>OR2071628</b>				43	61.5	11.6	34
<b>Rod/WB-528</b>				43	61.8	12.5	35
<b>ORCF-103</b>	39	42	45	42	61.7	12.5	32
<b>Stephens</b>	31	33	39	41	61.1	11.8	34
<b>UICF-Brundage</b>	37	38	46	41	60.6	11.4	32
<b>OR2040726 (Mary)</b>		35	42	40	60.8	11.8	34
<b>ID00-475-2DH</b>			44	40	61.6	12.5	34
<b>IDO663</b>				40	61.5	11.6	33
<b>Bitterroot</b>	31	33	39	39	62.1	12.8	35
<b>WB-528</b>	33	34	39	39	62.5	12.9	34

## 2011 WSU Variety Testing SW Winter Wheat Trial, Lind

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
AP Legacy		40	42	39	61.0	11.2	35
WA 8134				39	61.4	12.5	37
ID96-16702A				39	<b>62.6</b>	12.5	35
AP 700 CL	32	32	38	38	61.4	12.6	36
BZ6W02-616		31	37	38	62.4	13.2	32
WA 8114			35	37	61.4	12.3	32
Bruneau	29	30	36	36	61.8	12.7	33
WA 8142				35	61.5	14.3	33
Sunrise (Soft Red)			41	31	60.3	11.5	38
Lambert	27	26	32	30	60.3	11.7	36
03PN107#3				30	60.2	11.6	34
SY Ovation				30	61.7	13.2	34
WA 8145				29	61.2	13.4	36
LCS-Artdeco (NSA06-2153A)				26	59.5	10.8	28
C.V. %	13	13	12	14	0.7	4.7	5
LSD (.10)	2	3	4	6	0.5	0.6	2
Average	35	38	45	43	61.4	12.0	35
Highest	43	45	55	53	63.1	14.3	39
Lowest	27	26	32	26	59.5	10.8	28

1. Grain yield in the Lind soft white winter wheat trial averaged 43 bushels/acre, 8 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. 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 3 September, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 26 to 53 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Bruehl and Xerpha were the highest yielding entries in the trial, but 17 of the 60 entries in the trial were within the top LSD range. Xerpha was the top yielding entry across five years of results. There was a relatively low level of stripe rust at this location and no fungicide was applied. Stripe rust impact on crop performance was low. The C.V. for this trial was 14 and is lower than in most previous years.
4. Test weights were good with an average of 61.4 lbs/bu, and ranged from 59.5 to 63.1 lbs/bu. Grain protein averaged 12.0% with a range of 10.8 to 14.3%. Plant height averaged 35 inches, and there was no lodging.



**Table 34. 2011 WSU Variety Testing SW Winter Wheat Trial, Mayview**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Bruneau	112	114	126	<b>153</b>	61.9	10.3	40	171
WA 8116			133	<b>153</b>	61.3	10.0	38	174
WA 8092		110	125	<b>151</b>	58.6	10.2	40	176
ARS960277L (ARS-Amber)			126	<b>149</b>	60.8	9.8	39	172
Skiles		114	122	<b>148</b>	<b>62.5</b>	10.4	37	172
Bruehl	109	107	116	<b>147</b>	59.2	10.3	41	174
ARS970075-3C (ARS-Chrysal)			125	145	61.1	9.9	41	170
Legion		116	124	145	59.9	10.8	41	170
WA 8143				145	60.8	10.5	40	175
WA 8134				143	60.6	10.2	43	170
ARS970161-3L				143	62.0	10.6	40	173
Xerpha	113	114	119	142	61.7	10.3	40	174
Bitterroot	103	104	116	142	61.9	10.1	41	172
BZ6W02-616		104	119	142	<b>62.8</b>	10.1	37	166
Cara		115	128	141	59.6	10.1	39	174
WA 8136				141	59.3	9.9	37	174
SY Ovation				141	61.4	9.8	39	169
Eltan	102	101	107	140	61.0	10.2	41	176
Cara +25%			129	140	59.9	9.7	38	172
ARS97230-6C				140	61.2	9.6	37	170
OR2070385				140	61.3	10.5	39	171
WA 8144				139	61.5	10.2	45	175
LCS-Artdeco (NSA06-2153A)				139	60.5	10.1	37	166
ORCF-102	111	111	123	138	61.5	10.0	41	170
Rod/WB-528				138	61.6	10.3	38	167
Madsen	106	111	121	137	61.5	11.0	40	173
IDO663				137	62.1	10.3	38	166
WB-528	110	109	119	136	<b>62.9</b>	10.7	40	166
OR2071628				136	59.9	9.7	39	169
Coda	106	109	122	135	<b>62.9</b>	10.3	42	173
Rod	111	110	117	135	59.7	9.4	38	173
AP Badger				135	59.5	10.1	35	169
Finch	107	108	115	134	62.1	10.2	40	173
ORCF-103	108	109	116	134	60.7	10.2	40	176
OR2040726 (Mary)		108	117	134	61.5	10.1	38	168
Goetze/Skiles			116	134	61.3	11.1	37	167
03PN107#3				134	61.4	9.9	39	169
Madsen/Rod	108	110	120	133	60.5	10.6	39	175
Eltan/Tubbs 06		106	111	133	59.8	10.1	41	171
ID00-475-2DH			112	133	62.0	10.2	39	175
ARS98X402-1C				133	60.8	9.2	39	174
Chukar +25%			125	132	59.7	9.9	40	173
Chukar		118	127	131	60.0	10.1	40	174
WA 8145				131	60.8	10.4	40	167
AP 700 CL	102	103	113	130	61.5	10.6	40	168
Rod/Tubbs 06		110	116	130	59.8	9.7	40	171

## 2011 WSU Variety Testing SW Winter Wheat Trial, Mayview

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>WA 8094</b>		98	106	130	60.9	10.8	42	176
<b>WA 8114</b>			104	129	62.2	10.1	39	167
<i>ARS970163-4C (ARS-Crescent)</i>			123	129	60.5	9.7	40	175
<b>Tubbs 06</b>	108	107	115	127	59.9	9.4	41	170
<b>Brundage 96</b>	105	106	116	126	60.7	9.8	39	168
<b>ID96-16702A</b>				126	<b>62.7</b>	9.9	41	168
<b>Stephens</b>	103	103	106	125	61.4	10.6	38	166
<b>Sunrise (Soft Red)</b>			99	124	60.8	10.0	42	169
<b>WA 8135</b>				124	<b>62.7</b>	10.8	40	174
<b>Masami</b>	108	107	114	123	59.4	10.1	39	173
<b>WA 8142</b>				123	62.3	10.6	39	168
<b>UICF-Brundage</b>	102	103	110	120	60.8	9.8	39	170
<b>Lambert</b>	99	96	104	119	59.7	10.7	41	168
<b>AP Legacy</b>		99	101	109	57.6	9.3	42	171
<b>C.V. %</b>	7	6	6	4	0.8	4.3	3	1
<b>LSD (.10)</b>	3	4	6	6	0.5	0.5	1	2
<b>Average</b>	107	108	117	135	60.9	10.2	40	171
<b>Highest</b>	113	118	133	153	62.9	11.1	45	176
<b>Lowest</b>	99	96	99	109	57.6	9.2	35	166

1. Grain yield in the Mayview soft white winter wheat trial averaged 135 bushels/acre, 28 bushels/acre more than the 5-year average. The Mayview nursery was located about five 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 12 October, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Base fertilizer was 89#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 109 to 153 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Bruneau was the highest yielding entry in the trial, and 6 of the 60 entries in the trial were within the top LSD range. Xerpha was the top yielding entry across five years of results at this location. Stripe rust potential was high at this location and fungicide was applied the second week of May. Stripe rust was evident in this trial later in the season and impact on yield is estimated to be 10% or more for susceptible entries.
4. Test weights were good with an average of 60.9 lbs/bu, and ranged from 57.6 to 62.9 lbs/bu. Grain protein averaged 10.2% with a range of 9.2 to 11.1%. Plant height averaged 40 inches with no lodging.

**Table 35. 2011 WSU Variety Testing SW Winter Wheat Trial, Moses Lake**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Rod/Tubbs 06		176	178	200	62.4	11.3	37	154
OR2070385				197	62.5	11.6	35	155
Legion		180	178	194	62.3	11.6	36	153
OR2071628				194	61.4	11.3	33	155
Xerpha	173	178	170	193	62.2	12.4	38	155
Stephens	175	179	175	193	62.5	11.3	33	152
BZ6W02-616		188	178	192	63.3	11.1	33	150
IDO663				191	63.5	11.5	33	152
SY Ovation				191	62.6	11.8	35	153
Tubbs 06	169	173	171	190	62.5	11.6	38	153
Rod	163	169	171	189	62.0	11.1	37	154
Madsen/Rod	161	167	167	186	62.4	11.4	36	155
OR2040726 (Mary)		180	173	186	62.5	11.2	34	153
WA 8134				186	62.5	11.7	38	155
AP 700 CL	165	173	166	185	62.2	12.1	36	153
ID96-16702A				185	63.5	11.5	37	152
AP Badger				185	61.6	11.4	32	155
AP Legacy		173	170	184	62.2	11.5	37	153
Masami	152	154	150	183	62.0	10.8	39	155
Bruneau	169	178	177	182	63.5	12.0	35	154
Goetze/Skiles			165	182	61.9	12.3	30	152
ORCF-102	169	177	171	181	62.5	11.5	37	155
ORCF-103	158	160	156	181	61.8	11.4	36	156
Rod/WB-528				181	62.8	11.3	36	152
LCS-Artdeco (NSA06-2153A)				180	61.7	11.1	30	152
Bitterroot	160	167	165	179	62.8	12.0	40	155
WB-528	173	178	172	179	63.7	12.3	34	151
ARS970075-3C (ARS-Chrysal)			169	179	63.6	12.1	38	154
03PN107#3				179	63.6	11.4	34	154
WA 8114			167	178	62.6	11.6	32	149
WA 8116			162	177	62.3	11.9	36	155
WA 8143				177	62.5	11.3	39	156
WA 8092		153	151	176	62.5	11.8	39	155
Madsen	160	165	163	175	62.3	12.2	38	155
Lambert	170	172	162	175	63.3	11.6	37	153
Brundage 96	163	170	165	175	61.7	11.5	33	154
Eltan/Tubbs 06		167	166	175	62.4	12.0	39	155
WA 8145				175	61.8	11.9	35	151
ARS98X402-1C				173	62.7	12.1	38	155
ID00-475-2DH			158	172	63.7	11.2	38	155
WA 8136				172	59.9	11.6	32	156
ARS960277L (ARS-Amber)			157	170	62.3	11.2	38	154
WA 8135				170	63.3	11.6	39	155
ARS970161-3L				170	63.6	12.4	36	154
Finch	143	147	148	169	63.0	12.1	37	155
Skiles		159	157	169	62.6	12.5	32	154

## 2011 WSU Variety Testing SW Winter Wheat Trial, Moses Lake

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>ARS97230-6C</i>				169	61.9	11.2	35	154
<i>Bruehl</i>	157	164	156	168	60.6	12.4	38	156
<b>WA 8144</b>				168	62.7	12.8	46	156
<b>UICF-Brundage</b>	156	160	159	167	60.8	12.1	33	156
<b>WA 8094</b>		154	153	167	63.0	12.4	38	155
<i>Cara +25%</i>			159	166	61.8	11.7	36	154
<b>WA 8142</b>				164	63.0	12.4	35	152
<b>Sunrise (Soft Red)</b>			145	163	61.3	11.8	39	156
<i>ARS970163-4C (ARS-Crescent)</i>			151	162	62.6	11.7	39	154
<b>Eltan</b>	154	158	152	161	62.3	11.8	38	154
<i>Coda</i>	144	151	149	160	<b>63.9</b>	12.7	41	154
<i>Cara</i>	149	151	155	160	61.8	12.4	36	155
<i>Chukar</i>	144	151	147	152	62.6	12.8	40	155
<i>Chukar +25%</i>			155	152	62.3	12.8	39	155
<b>C.V. %</b>	6	6	6	5	0.6	4.6	4	1
<b>LSD (.10)</b>	5	6	7	9	0.4	0.6	1	1
<b>Average</b>	160	167	162	177	62.5	11.8	36	154
<b>Highest</b>	175	188	178	200	63.9	12.8	46	156
<b>Lowest</b>	143	147	145	152	59.9	10.8	30	149

1. Grain yield in the irrigated Moses Lake soft white winter wheat trial averaged 177 bushels/acre, 17 bushels/acre higher than the 5-year average. The Moses Lake nursery was located about two miles southeast of Quincy, WA (Jerry Heilig, cooperator).
2. This nursery was seeded on 26 October, 2010 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 150#N/acre applied through irrigation. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 152 to 200 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. A Rod/Tubbs 06 blend was the highest yielding named entry in the trial, and 9 of the 60 entries in the trial were within the top LSD range. Stephens was the top yielding entry across five years of results at this location. There was moderate stripe rust potential at this location and fungicides were applied twice with good effect. There was no estimated yield loss due to stripe rust.
4. Test weights were very good with an average of 62.5 lbs/bu, and ranged from 59.9 to 63.9 lbs/bu. Grain protein averaged 11.8% with a range of 10.8 to 12.8%. Plant height averaged 36 inches and there was no lodging.

**Table 36. 2011 WSU Variety Testing SW Winter Wheat Trial, Pullman**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Bruneau</b>	158	163	178	<b>196</b>	63.0	10.4	44	180
<b>Legion</b>		168	179	<b>192</b>	61.7	10.8	46	179
<i>Cara +25%</i>			171	<b>188</b>	62.0	11.0	44	178
<b>WA 8143</b>				<b>187</b>	60.5	10.5	46	181
<b>Eltan</b>	152	155	161	<b>184</b>	61.8	10.1	45	180
<i>Bruehl</i>	145	152	162	183	59.3	10.8	46	180
<i>Chukar</i>	149	162	167	183	61.8	10.9	46	179
<i>Cara</i>	144	158	169	183	62.1	11.4	44	177
<i>ARS970075-3C (ARS-Chrysal)</i>			170	181	63.3	10.8	47	179
<b>ARS960277L (ARS-Amber)</b>			173	180	62.4	10.4	44	179
<b>SY Ovation</b>				180	62.5	11.3	42	177
<b>Madsen</b>	142	153	162	179	62.0	11.1	42	179
<b>AP 700 CL</b>	154	162	174	179	62.3	10.9	45	174
<b>WA 8134</b>				178	62.1	10.6	48	178
<b>OR2070385</b>				178	62.0	11.0	41	176
<b>WA 8092</b>		154	166	177	60.3	10.3	45	181
<b>ARS970161-3L</b>				177	63.4	10.8	42	179
<b>Stephens</b>	146	153	165	176	62.3	10.8	42	175
<i>Chukar +25%</i>			170	176	61.7	10.4	44	178
<b>ID96-16702A</b>				176	<b>63.7</b>	10.4	46	178
<b>Skiles</b>		149	157	175	63.2	11.4	41	176
<b>Bitterroot</b>	144	152	162	174	62.5	10.7	45	177
<i>ARS970163-4C (ARS-Crescent)</i>			165	174	62.5	10.2	46	179
<b>OR2071628</b>				174	60.7	10.7	41	177
<b>WA 8144</b>				174	62.6	10.9	52	181
<b>Madsen/Rod</b>	146	154	160	173	61.5	11.0	44	179
<b>WA 8116</b>			163	173	62.0	10.3	41	180
<b>WB-528</b>	145	154	164	172	63.5	11.1	43	176
<b>ID00-475-2DH</b>			161	172	63.4	10.4	41	178
<b>IDO663</b>				171	63.1	10.8	41	175
<b>Rod</b>	153	157	161	170	60.9	10.9	43	179
<b>Eltan/Tubbs 06</b>		155	160	170	61.0	10.7	45	178
<i>ARS98X402-1C</i>				170	62.3	10.5	45	179
<b>LCS-Artdeco (NSA06-2153A)</b>				170	61.9	10.7	39	175
<i>Coda</i>	146	151	162	169	<b>64.3</b>	11.4	47	177
<b>BZ6W02-616</b>		155	169	169	<b>63.7</b>	11.3	41	175
<i>ARS97230-6C</i>				168	63.0	10.1	39	177
<b>WA 8136</b>				168	59.6	10.2	40	180
<b>03PN107#3</b>				167	62.6	9.9	40	179
<b>Finch</b>	151	152	159	165	63.3	10.2	44	180
<b>WA 8135</b>				165	62.8	11.2	46	181
<b>Xerpha</b>	155	152	154	164	61.7	10.4	43	179
<b>ORCF-102</b>	144	152	157	164	61.8	10.6	44	178
<b>AP Badger</b>				164	60.4	11.1	39	176
<b>Rod/WB-528</b>				164	62.3	11.1	43	175
<b>Rod/Tubbs 06</b>		156	161	163	61.1	10.2	45	176

## 2011 WSU Variety Testing SW Winter Wheat Trial, Pullman

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>UICF-Brundage</b>	144	150	155	162	61.4	10.5	41	176
<b>OR2040726 (Mary)</b>		151	159	162	62.7	10.7	41	175
<b>Tubbs 06</b>	148	150	153	160	60.9	10.4	46	179
<b>Sunrise (Soft Red)</b>			149	160	61.1	10.9	48	180
<b>WA 8142</b>				160	63.1	11.3	42	176
<b>WA 8145</b>				158	62.1	11.4	42	175
<b>Brundage 96</b>	141	145	152	156	61.4	10.5	41	176
<b>ORCF-103</b>	143	150	150	154	61.4	10.7	44	182
<b>WA 8114</b>			148	151	62.2	10.3	42	175
<b>WA 8094</b>		138	143	150	62.6	10.5	48	182
<b>Masami</b>	147	147	145	149	60.2	10.3	44	181
<b>Lambert</b>	141	140	147	149	61.4	11.0	44	177
<b>Goetze/Skiles</b>			137	148	62.4	11.6	42	175
<b>AP Legacy</b>		144	146	134	59.6	10.1	46	178
<b>C.V. %</b>	7	6	6	7	0.9	3.7	3	1
<b>LSD (.10)</b>	5	5	7	12	0.6	0.4	1	1
<b>Average</b>	147	153	160	170	62.0	10.7	44	178
<b>Highest</b>	158	168	179	196	64.3	11.6	52	182
<b>Lowest</b>	141	138	137	134	59.3	9.9	39	174

1. Grain yield in the Pullman soft white winter wheat trial averaged 170 bushels/acre, 23 bushels/acre more than the 5-year average. The Pullman nursery was located about nine miles west of Pullman, WA (N. Druffel, cooperator).

2. This nursery was seeded on 20 October, 2010 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.

3. Yields ranged from 134 to 196 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Bruneau was the highest yielding entry in the trial, and 5 of the 60 entries in the trial were within the top LSD range. Bruneau was also the top yielding entry across five years of results. Stripe rust potential was very high at this location and fungicide was applied three times: mid-April, May 30, and early June. Fungicide applications were effective, but there was some stripe rust impact at this location with up to an estimated 20% yield loss in susceptible varieties.

Test weights were very good with an average of 62.0 lbs/bu, and ranged from 59.3 to 64.3 lbs/bu. Grain protein averaged 10.7% with a range of 9.9 to 11.6%. Plant height averaged 44 inches and there was no lodging.

**Table 37. 2011 WSU Variety Testing SW Winter Wheat Trial, Reardan**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<b>WA 8134</b>				<b>174</b>	61.3	11.4	48	173	0
<b>SY Ovation</b>				<b>170</b>	61.7	10.8	44	171	0
<i>Cara +25%</i>			154	<b>162</b>	60.9	11.8	46	173	0
<b>ID96-16702A</b>				<b>162</b>	62.6	10.2	47	170	0
<i>Chukar</i>	109	131	151	<b>160</b>	61.2	11.5	46	174	10
<b>ARS970161-3L</b>				<b>160</b>	62.9	11.5	45	174	3
<i>Cara</i>	109	130	147	158	60.6	12.0	47	173	0
<b>ARS960277L (ARS-Amber)</b>			152	158	61.6	10.7	47	173	0
<i>Chukar +25%</i>			151	157	61.6	11.0	48	174	1
<i>ARS98X402-1C</i>				157	62.1	11.2	46	173	22
<b>WA 8116</b>			146	154	61.6	10.8	44	178	27
<b>03PN107#3</b>				154	61.8	10.1	43	172	13
<i>Bruehl</i>	106	127	141	152	58.9	11.7	46	175	27
<b>Brundage 96</b>	108	124	142	152	61.1	11.1	45	171	0
<i>ARS970075-3C (ARS-Chrysal)</i>			151	151	62.6	11.1	49	173	10
<i>Coda</i>	103	122	142	148	<b>63.7</b>	12.1	47	173	30
<b>UICF-Brundage</b>	112	131	145	146	60.9	11.2	43	174	0
<i>ARS970163-4C (ARS-Crescent)</i>			149	146	62.1	10.2	46	175	3
<b>OR2070385</b>				146	60.7	11.2	45	172	0
<b>WA 8143</b>				145	61.2	10.8	45	175	17
<b>OR2071628</b>				144	60.0	10.7	43	173	0
<b>Finch</b>	108	125	137	143	62.6	10.8	46	175	13
<b>Bitterroot</b>	103	124	143	143	62.3	11.9	49	174	0
<b>Madsen/Rod</b>	108	128	142	143	60.9	11.4	45	173	0
<b>OR2040726 (Mary)</b>		123	137	143	61.5	11.4	43	171	0
<b>Madsen</b>	100	119	134	142	61.4	11.4	49	174	3
<i>ARS97230-6C</i>				142	61.8	11.0	45	174	0
<b>Rod/WB-528</b>				142	61.4	11.1	42	170	0
<b>WA 8114</b>			129	141	60.5	10.6	42	168	43
<b>WA 8136</b>				141	59.3	10.6	43	178	0
<b>Rod</b>	102	122	142	140	60.8	10.0	42	173	3
<b>Rod/Tubbs 06</b>		126	141	140	60.3	10.9	47	174	0
<b>Sunrise (Soft Red)</b>			141	140	60.6	10.0	49	171	0
<b>Goetze/Skiles</b>			132	140	61.1	11.8	42	170	0
<b>WA 8135</b>				140	62.4	11.8	48	178	0
<b>Bruneau</b>	100	120	137	139	61.6	10.9	47	173	0
<b>Skiles</b>		119	131	139	61.7	11.9	41	173	0
<b>WA 8142</b>				138	62.0	11.4	44	171	0
<b>WA 8092</b>		123	137	135	61.0	10.9	43	177	0
<b>ORCF-102</b>	106	125	134	133	60.6	10.8	45	173	0
<b>Masami</b>	103	121	134	132	60.4	9.9	43	175	0
<b>Legion</b>		123	134	132	59.8	10.6	45	173	0
<b>BZ6W02-616</b>		108	121	132	62.3	11.1	42	169	13
<b>Xerpha</b>	110	129	143	131	61.8	11.6	46	176	0
<b>LCS-Artdeco (NSA06-2153A)</b>				129	59.1	10.7	39	168	0
<b>WB-528</b>	93	111	124	127	62.2	12.2	45	170	0

## 2011 WSU Variety Testing SW Winter Wheat Trial, Reardan

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<b>WA 8094</b>		119	131	127	62.0	11.3	49	177	10
<b>ID00-475-2DH</b>			134	127	62.1	10.3	42	174	0
<b>AP Legacy</b>		120	132	126	60.3	10.4	48	174	0
<b>ORCF-103</b>	101	118	128	125	60.9	11.0	40	175	0
<b>Eltan/Tubbs 06</b>		119	133	125	60.4	10.8	45	173	0
<b>WA 8145</b>				122	60.2	11.7	46	172	0
<b>Lambert</b>	96	111	124	121	60.5	10.6	46	171	0
<b>Eltan</b>	101	119	127	117	61.0	10.4	43	176	30
<b>AP Badger</b>				115	58.9	11.6	40	172	0
<b>AP 700 CL</b>	91	109	116	113	59.9	11.1	43	172	0
<b>Tubbs 06</b>	99	120	128	110	59.6	10.3	45	172	0
<b>WA 8144</b>				105	62.0	11.8	49	177	10
<b>IDO663</b>				101	59.7	10.8	40	169	0
<b>Stephens</b>	86	101	109	99	59.7	11.3	41	169	0
<b>C.V. %</b>	9	8	8	9	0.9	6.9	4	1	287
<b>LSD (.10)</b>	4	6	8	14	0.6	0.8	2	1	15
<b>Average</b>	103	121	137	139	61.1	11.1	45	173	5
<b>Highest</b>	112	131	154	174	63.7	12.2	49	178	43
<b>Lowest</b>	86	101	109	99	58.9	9.9	39	168	0

1. Grain yield in the Reardan soft white winter wheat trial averaged 139 bushels/acre, 36 bushels/acre more than the 5-year average. The Reardan nursery was located about six miles west of Reardan, WA (Hal Johnson, cooperator).
2. This nursery was seeded on 21 September, 2010 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 99 to 174 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. SY Ovation was the highest yielding named entry in the trial, and 6 of the 60 entries in the trial were within the top LSD range. UICF Brundage was the top yielding entry across five years of results at this location. There was stripe rust at this location and a fungicide was applied to the surrounding field via aircraft in early July with an undetermined amount on the plot area. It appears that there was not high rust impact on yield at this location.
4. Test weights were good with an average of 61.1 lbs/bu, and ranged from 58.9 to 63.7 lbs/bu. Grain protein averaged 11.1% with a range of 9.9 to 12.2%. Plant height averaged 45 inches and there was minor lodging, from 0 to 43%.



**Table 38. 2011 WSU Variety Testing SW Winter Wheat Trial, Ritzville**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>BZ6W02-616</b>		71	80	<b>92</b>	61.2	9.8	37	179
<b>Xerpha</b>	59	70	76	<b>88</b>	60.8	9.2	41	183
<b>Rod</b>	53	63	73	85	59.8	8.9	39	183
<b>OR2040726 (Mary)</b>		64	71	84	60.7	9.2	35	179
<i>Cara</i>	53	65	73	83	58.7	9.7	36	182
<b>ARS960277L (ARS-Amber)</b>			74	83	59.6	9.3	39	182
<b>Eltan/Tubbs 06</b>		67	73	83	60.0	8.5	40	182
<b>WA 8116</b>			69	83	60.9	8.6	37	184
<b>WA 8143</b>				83	60.3	9.6	41	184
<b>Rod/WB-528</b>				83	60.5	9.5	38	179
<b>Finch</b>	54	63	68	81	<b>61.9</b>	8.8	41	184
<b>Rod/Tubbs 06</b>		63	71	81	59.5	9.5	40	181
<b>WA 8092</b>		68	74	81	59.3	10.1	39	185
<b>WA 8114</b>			68	81	60.6	9.6	38	179
<b>WA 8134</b>				81	59.0	11.0	40	183
<b>Tubbs 06</b>	49	60	67	80	59.6	9.7	41	181
<i>ARS98X402-1C</i>				80	60.4	9.2	37	183
<b>OR2070385</b>				80	59.8	8.5	38	181
<i>Bruehl</i>	56	67	72	79	58.2	9.1	41	184
<b>Madsen/Rod</b>	52	63	70	79	59.5	10.2	38	184
<b>WA 8135</b>				79	60.9	11.0	43	184
<b>WA 8136</b>				79	58.8	9.3	38	184
<b>SY Ovation</b>				79	61.2	9.5	38	181
<b>Skiles</b>		60	67	78	60.6	10.7	37	180
<b>AP Legacy</b>		67	72	78	60.2	9.7	40	182
<b>ARS970161-3L</b>				78	61.2	10.9	40	182
<b>OR2071628</b>				78	59.8	9.4	38	180
<i>Coda</i>	49	60	67	77	<b>62.6</b>	9.2	41	181
<b>Eltan</b>	58	70	72	77	58.2	11.5	40	185
<b>ORCF-102</b>	53	62	68	77	60.9	10.8	40	182
<b>UICF-Brundage</b>	53	63	70	77	60.0	8.6	36	181
<i>Chukar</i>	51	60	70	76	58.3	10.1	40	183
<b>Brundage 96</b>	54	64	72	76	60.3	8.2	36	179
<i>ARS970163-4C (ARS-Crescent)</i>			79	76	59.7	9.7	39	184
<i>Cara +25%</i>			67	76	58.9	7.6	36	183
<b>IDO663</b>				76	60.2	9.7	36	180
<b>03PN107#3</b>				76	59.9	9.0	38	183
<b>Masami</b>	58	69	75	75	58.6	10.5	39	184
<b>WB-528</b>	48	57	63	75	61.0	8.5	38	179
<b>ORCF-103</b>	53	62	66	75	59.8	10.2	38	185
<b>AP 700 CL</b>	50	59	66	75	60.9	9.2	39	179
<i>ARS970075-3C (ARS-Chrysal)</i>			68	75	60.8	9.3	39	183
<b>WA 8094</b>		61	64	74	60.3	10.2	42	184
<b>Sunrise (Soft Red)</b>			70	74	59.6	9.3	42	184
<i>ARS97230-6C</i>				74	58.1	10.8	34	183
<b>Stephens</b>	44	54	60	73	60.4	9.8	35	179

## 2011 WSU Variety Testing SW Winter Wheat Trial, Ritzville

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Legion</b>		65	69	73	57.1	11.2	39	182
<i>Chukar +25%</i>			69	73	58.6	9.8	38	183
<b>ID00-475-2DH</b>			65	73	61.3	11.1	39	184
<b>ID96-16702A</b>				73	60.7	9.3	40	181
<b>WA 8145</b>				73	60.8	9.5	39	179
<b>Goetze/Skiles</b>			61	72	60.6	11.0	37	180
<b>WA 8142</b>				72	61.7	9.4	39	180
<b>Madsen</b>	50	61	67	71	61.0	9.3	38	183
<b>Bruneau</b>	49	60	64	70	60.3	8.2	37	183
<b>WA 8144</b>				70	59.5	10.6	40	185
<b>Lambert</b>	47	55	60	69	59.8	10.8	41	181
<b>AP Badger</b>				68	58.8	8.9	35	180
<b>Bitterroot</b>	48	60	65	66	61.4	8.3	38	182
<b>LCS-Artdeco (NSA06-2153A)</b>				62	59.4	10.1	33	180
<b>C.V. %</b>	10	9	9	8	1.3	12.3	3	0
<b>LSD (.10)</b>	3	3	5	6	0.8	1.2	1	1
<b>Average</b>	52	63	69	77	60.0	9.6	39	182
<b>Highest</b>	59	71	80	92	62.6	11.5	43	185
<b>Lowest</b>	44	54	60	62	57.1	7.6	33	179

1. Grain yield in the Ritzville soft white winter wheat trial averaged 77 bushels/acre, 25 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The Ritzville nursery was located about four miles west of Ritzville, WA (R. Jirava farm).
2. This nursery was seeded on 3 September, 2010 following summer 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 fall applied. Fall seeding conditions were favorable and emergence and stand establishment were very good.
3. Yields ranged from 62 to 92 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Xerpha was the highest yielding named entry in the trial, and 2 of the 60 entries in the trial were within the top LSD range. Xerpha was the top yielding entry across five years of results at this location. The cool and wet spring conditions along with local inoculum sources created early, high levels of stripe rust potential at this location. Fungicide was applied April 30 and again May 30 and controlled stripe rust across the trial.
4. Test weights were good with an average of 60.0 lbs/bu, and ranged from 57.1 to 62.6 lbs/bu. Grain protein averaged 9.6% with a range of 7.6 to 11.5% and was highly variable across the trial. Plant height averaged 39 inches and there was no lodging.

**Table 39. 2011 WSU Variety Testing SW Winter Wheat Trial, St. Andrews**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Eltan	56	56	70	82	61.3	8.8	42	170
Eltan/Tubbs 06		51	63	81	61.1	9.0	43	167
WA 8092		58	74	80	61.2	10.4	40	169
WA 8116			66	74	62.2	9.2	37	169
Skiles		55	67	73	62.0	10.5	37	166
Madsen/Rod	45	49	58	72	61.3	10.1	41	169
ID96-16702A				70	62.4	9.7	42	164
SY Ovation				70	61.9	11.0	39	165
WA 8143				70	61.0	8.3	41	169
Masami	49	52	63	69	60.8	8.9	38	168
Bruehl	51	53	65	68	58.9	9.0	41	169
Rod	48	48	58	68	61.3	10.0	37	167
Xerpha	53	57	67	68	61.4	9.5	36	169
Rod/Tubbs 06		49	58	68	60.9	9.0	40	166
ARS97230-6C				68	61.8	8.9	38	167
ARS970163-4C (ARS-Crescent)			54	67	62.1	9.7	40	172
ID00-475-2DH			66	67	62.9	10.0	39	167
Tubbs 06	46	50	62	65	60.2	8.4	43	166
WA 8136				65	61.3	10.0	35	170
Brundage 96	48	50	61	64	61.5	10.5	38	163
OR2070385				64	61.1	9.1	39	164
Finch	52	55	68	63	62.4	8.7	38	172
ORCF-102	44	46	56	63	61.5	10.0	40	167
ARS960277L (ARS-Amber)			61	63	61.3	9.2	40	167
WA 8094		55	69	63	62.3	9.2	41	168
WA 8114			52	63	63.4	10.3	38	163
IDO663				63	61.6	10.3	37	163
AP Badger				63	59.6	9.7	36	165
Coda	46	51	60	62	62.4	9.1	41	168
AP Legacy		48	58	62	60.8	9.1	40	167
Sunrise (Soft Red)			67	62	61.2	10.2	43	163
Chukar	48	56	63	61	60.3	8.9	38	169
Bruneau	40	43	50	61	62.2	10.5	37	166
BZ6W02-616		43	55	61	63.1	9.9	39	162
ARS98X402-1C				60	62.2	9.9	40	167
03PN107#3				60	61.8	10.2	37	165
Stephens	40	43	53	59	60.4	9.5	39	163
ORCF-103	47	48	58	59	60.4	9.4	37	171
Legion		47	57	59	60.1	9.4	41	165
WA 8134				59	62.1	10.3	39	166
ARS970161-3L				59	62.9	9.2	37	166
Bitterroot	42	46	56	57	62.4	11.0	41	167
AP 700 CL	41	43	52	57	60.8	9.5	39	164
WA 8135				57	62.3	9.7	41	170
WA 8144				57	61.5	10.3	44	171
Lambert	44	43	51	56	61.1	10.0	43	162

## 2011 WSU Variety Testing SW Winter Wheat Trial, St. Andrews

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>OR2040726 (Mary)</b>		46	55	56	61.5	9.8	37	164
<i>Chukar +25%</i>			58	56	60.9	9.1	38	168
<b>UICF-Brundage</b>	44	46	53	55	61.1	9.9	35	165
<i>ARS970075-3C (ARS-Chrysal)</i>			56	54	61.8	9.1	37	166
<b>OR2071628</b>				53	60.4	9.6	36	165
<b>Madsen</b>	40	41	48	52	61.0	10.2	38	172
<b>Goetze/Skiles</b>			53	52	61.1	9.6	36	166
<b>Rod/WB-528</b>				52	61.3	9.3	37	168
<i>Cara</i>	42	46	50	50	60.3	9.5	36	167
<b>WB-528</b>	40	45	50	50	62.7	11.0	38	164
<i>Cara +25%</i>			56	49	60.0	9.1	38	168
<b>WA 8142</b>				48	62.1	10.6	37	164
<b>WA 8145</b>				24	60.8	11.4	37	164
<b>LCS-Artdeco (NSA06-2153A)</b>	-	-	-	-	-	-	-	-
Variety Lost, No Data								
<b>C.V. %</b>	16	17	18	17	0.8	7.4	5	1
<b>LSD (.10)</b>	4	5	8	11	0.5	0.8	2	1
<b>Average</b>	46	49	59	61	61.4	9.5	38	164
<b>Highest</b>	56	58	74	82	63.4	11.4	44	172
<b>Lowest</b>	40	41	48	24	58.9	8.3	35	162

1. Grain yield in the St. Andrews soft white winter wheat trial averaged 61 bushels/acre, 15 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The St. Andrews nursery was located about seven miles west of Coulee City, WA (L. Tannenberg, cooperator).

2. This nursery was seeded on 1 September, 2010 following summer fallow. Seed was placed at a 45#/acre seeding rate using a deep furrow plot drill set on 15-inch spacing. Base fertilizer was #90N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were very good. There were minor levels of snow mold over winter and one entry did not survive.

3. Yields ranged from 24 to 82 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Eltan was the highest yielding variety in the trial, and 6 of the 60 entries in the trial were within the top LSD range. Eltan was also the top yielding entry across five years of results at this location. This large grouping within the top LSD value is due to high variability at this site, although the C.V. is lower than average historical values. There was a low level of stripe rust potential at this location and no fungicide was applied.

4. Test weights were good with an average of 61.4 lbs/bu, and ranged from 58.9 to 63.4 lbs/bu. Grain protein averaged 9.5% with a range of 8.3 to 11.4%. Plant height averaged 38 inches and there was no lodging.

**Table 40. 2011 WSU Variety Testing SW Winter Wheat Trial, St. John**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>Cara +25%</i>			177	183	61.1	9.4	47	185
<b>ARS970161-3L</b>				182	62.3	9.7	45	185
<i>Cara</i>	162	175	178	178	60.9	9.3	48	185
<b>WA 8136</b>				173	56.6	9.6	44	187
<b>ARS960277L (ARS-Amber)</b>			154	171	60.5	8.3	49	185
<b>WA 8116</b>			146	171	58.0	9.5	43	186
<i>Chukar</i>	156	168	163	170	60.8	9.6	48	186
<b>03PN107#3</b>				170	61.5	9.0	45	185
<i>ARS970075-3C (ARS-Chrysal)</i>			154	168	61.9	8.8	50	185
<i>Chukar +25%</i>			158	167	60.3	8.7	49	186
<i>ARS97230-6C</i>				167	61.1	8.5	44	185
<b>WA 8134</b>				167	60.7	9.1	47	185
<b>Skiles</b>		160	164	165	62.2	9.7	43	184
<b>OR2070385</b>				164	61.3	9.5	44	185
<b>Legion</b>		152	153	162	58.7	8.9	47	184
<b>OR2071628</b>				160	59.6	9.1	42	184
<i>ARS970163-4C (ARS-Crescent)</i>			149	159	61.7	8.7	47	186
<b>Madsen</b>	140	151	153	158	61.3	9.9	45	186
<b>AP 700 CL</b>	145	149	147	158	60.6	9.5	45	183
<i>ARS98X402-1C</i>				158	60.7	8.9	48	186
<b>WA 8135</b>				158	61.3	10.1	50	186
<b>WA 8092</b>		148	149	156	54.7	10.0	47	187
<b>Bruneau</b>	152	157	159	155	61.3	8.6	47	185
<b>LCS-Artdeco (NSA06-2153A)</b>				154	60.2	9.2	42	183
<b>Finch</b>	136	138	134	153	60.7	8.9	46	187
<b>ID96-16702A</b>				153	62.0	9.3	50	183
<b>WA 8142</b>				152	61.5	9.6	45	183
<b>Brundage 96</b>	143	145	140	151	60.6	9.5	47	183
<b>BZ6W02-616</b>		149	147	149	61.8	9.0	44	181
<b>Madsen/Rod</b>	137	140	137	148	60.5	9.9	46	186
<b>WA 8144</b>				148	56.9	8.8	53	187
<b>OR2040726 (Mary)</b>		152	145	147	61.5	9.1	42	183
<b>Rod/WB-528</b>				146	61.3	9.0	46	182
<b>Rod</b>	138	139	135	145	59.9	8.4	43	186
<b>Goetze/Skiles</b>			138	145	61.3	10.2	43	183
<b>Eltan</b>	133	131	126	144	56.3	9.7	45	186
<b>Bitterroot</b>	137	133	132	144	61.3	9.3	46	185
<b>WB-528</b>	139	140	134	144	61.8	9.0	46	182
<b>IDO663</b>				144	61.2	9.4	42	182
<i>Coda</i>	136	144	147	143	62.9	9.5	47	184
<b>SY Ovation</b>				143	61.3	9.3	45	184
<b>WA 8145</b>				143	60.2	10.0	47	182
<b>ORCF-102</b>	142	146	142	141	60.2	9.1	47	185
<b>WA 8143</b>				137	57.3	9.9	46	187
<b>WA 8094</b>		123	117	134	57.7	8.8	48	186
<b>Stephens</b>	139	139	136	133	60.3	9.8	43	183

## 2011 WSU Variety Testing SW Winter Wheat Trial, St. John

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Eltan/Tubbs 06</b>		129	116	133	58.9	8.6	46	185
<b>Masami</b>	130	124	114	129	58.3	9.2	44	187
<b>UICF-Brundage</b>	134	131	121	129	60.2	9.5	41	185
<b>Sunrise (Soft Red)</b>			104	128	59.4	9.3	50	187
<b>WA 8114</b>			122	128	60.3	9.5	45	181
<b>ORCF-103</b>	131	131	120	126	59.1	9.8	44	187
<i>Bruehl</i>	136	143	143	125	56.9	9.2	46	187
<b>Rod/Tubbs 06</b>		125	110	125	60.3	9.1	46	185
<b>AP Badger</b>				123	59.5	9.8	39	184
<b>ID00-475-2DH</b>			116	122	61.8	9.4	43	186
<b>Lambert</b>	129	118	99	121	60.8	9.7	47	184
<b>Xerpha</b>	135	122	103	120	61.6	9.7	44	186
<b>Tubbs 06</b>	135	129	108	120	59.7	9.0	45	184
<b>AP Legacy</b>		116	93	91	58.3	9.1	43	185
<b>C.V. %</b>	8	7	8	8	1.0	6.4	5	0
<b>LSD (.10)</b>	5	6	8	12	0.6	0.6	2	1
<b>Average</b>	139	140	136	148	60.2	9.3	46	185
<b>Highest</b>	162	175	178	183	62.9	10.2	53	187
<b>Lowest</b>	129	116	93	91	54.7	8.3	39	181

1. Grain yield in the St. John soft white winter wheat trial averaged 148 bushels/acre, 9 bushels/acre more than the 5-year average. The St. John nursery was located about three miles east of St. John, WA (Mac Mills, cooperator).
2. This nursery was seeded on 27 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Base fertilizer was 90#N/acre fall applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 91 to 183 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. Cara +25% (a 25% higher seeding rate of Cara) was the highest yielding entry in the trial, and 6 of the 60 entries in the trial were within the top LSD range. Cara was the top yielding entry across five years of results at this location. Stripe rust infestation and damage were very high at this location. No fungicide was applied and stripe rust influenced yield an estimated 35% or more for susceptible varieties. Varietal susceptibility to stripe rust was the dominant factor for yield. This trial also shows that resistant varieties can produce high yields even when stripe rust is epidemic.
4. Test weights were good with an average of 60.2 lbs/bu, and ranged from 54.7 to 62.9 lbs/bu, variable possibly due to stripe rust. Grain protein averaged 9.3% with a range of 8.3 to 10.2%. Plant height averaged 46 inches with no lodging.

**Table 41. 2011 WSU Variety Testing SW Winter Wheat Trial, Walla Walla**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
ARS97230-6C	--			149	61.1	8.1	42	154	53
ARS970161-3L	--			149	62.2	9.1	43	152	47
OR2070385	--			149	59.8	8.8	43	152	5
OR2040726 (Mary)	--	135	130	147	60.9	8.1	43	153	20
Cara	--	133	128	144	59.9	9.1	46	156	52
Madsen	--	124	123	143	60.9	9.2	42	154	15
Skiles	--	137	134	143	61.9	9.3	41	152	3
WA 8134	--			143	60.6	9.7	46	151	82
AP Badger	--			143	58.4	8.3	37	152	38
Masami	--	129	128	141	58.9	8.9	44	157	37
AP 700 CL	--	136	134	141	60.4	8.8	46	151	35
Brundage 96	--	133	133	140	60.1	9.3	43	152	37
ARS970075-3C (ARS-Chrysal)	--		132	140	61.7	9.2	47	153	62
OR2071628	--			139	58.8	8.4	42	151	40
Chukar +25%	--		119	136	59.6	7.8	50	157	40
IDO663	--			136	60.6	8.4	42	150	13
03PN107#3	--			135	61.1	8.8	42	153	38
WA 8142	--			135	61.7	9.3	44	152	8
Bruneau	--	115	103	134	60.4	8.2	42	152	73
Cara +25%	--		133	134	59.8	9.2	45	154	67
ARS98X402-1C	--			134	60.6	8.4	46	155	65
WA 8136	--			133	58.6	9.0	40	156	22
WA 8145	--			133	60.0	8.7	43	146	52
ORCF-102	--	135	133	132	61.1	9.2	44	155	37
Finch	--	125	117	130	61.7	8.6	45	156	35
Stephens	--	123	115	130	60.1	8.9	41	150	32
WA 8135	--			129	61.8	10.1	44	156	52
LCS-Artdeco (NSA06-2153A)	--			128	61.3	9.6	39	149	70
UICF-Brundage	--	129	129	126	60.0	8.3	39	156	13
Chukar	--	128	120	125	59.4	8.9	47	152	87
WA 8116	--		104	125	60.9	8.7	43	157	38
ARS960277L (ARS-Amber)	--		107	124	59.8	8.0	46	155	53
SY Ovation	--			124	60.2	9.5	42	151	86
Madsen/Rod	--	122	115	122	59.1	10.7	43	154	96
Tubbs 06	--	120	108	121	59.5	8.5	44	151	53
ARS970163-4C (ARS-Crescent)	--		116	121	60.0	8.6	47	158	82
Lambert	--	114	101	118	59.5	8.9	44	151	70
Eltan/Tubbs 06	--	105	88	118	59.1	8.6	43	152	83
WB-528	--	114	99	117	60.7	8.3	41	149	86
Coda	--	118	110	116	62.4	9.6	46	156	91
Legion	--	117	103	116	57.7	10.3	44	153	99
ORCF-103	--	112	100	115	59.6	8.3	43	161	73
Rod/Tubbs 06	--	116	103	114	58.7	9.2	44	152	63
Goetze/Skiles	--		141	114	60.7	9.8	41	152	65
WA 8144	--			113	60.9	9.1	48	158	87
Bitterroot	--	120	113	112	60.2	8.5	44	153	35

## 2011 WSU Variety Testing SW Winter Wheat Trial, Walla Walla

Variety Name <i>*Club Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<b>ID96-16702A</b>	--			112	60.3	10.1	44	151	99
<b>WA 8092</b>	--	102	93	109	60.2	10.0	45	159	72
<b>AP Legacy</b>	--	124	114	108	58.1	8.9	45	152	57
<b>WA 8094</b>	--	110	102	108	60.6	9.0	46	160	52
<i>Bruehl</i>	--	110	97	107	56.7	8.7	44	157	93
<b>BZ6W02-616</b>	--	104	84	106	60.5	7.9	42	148	75
<b>WA 8114</b>	--		103	104	59.1	9.4	44	151	89
<b>Rod/WB-528</b>	--			104	58.9	9.3	41	150	93
<b>Rod</b>	--	111	98	103	57.8	9.7	43	156	88
<b>Xerpha</b>	--	112	92	98	59.9	9.1	43	155	73
<b>ID00-475-2DH</b>	--		89	95	59.0	9.6	41	154	99
<b>Sunrise (Soft Red)</b>	--		67	82	57.9	8.6	46	153	96
<b>WA 8143</b>	--			78	58.5	9.1	44	158	93
<b>Eltan</b>	--	85	61	70	57.7	10.2	42	158	99
<b>C.V. %</b>	--	11	13	13	1.0	9.4	4	1	43
<b>LSD (.10)</b>	--	8	11	17	0.6	0.9	2	2	27
<b>Average</b>	--	119	110	123	60.0	9.0	44	154	59
<b>Highest</b>	--	137	141	149	62.4	10.7	50	161	99
<b>Lowest</b>	--	85	61	70	56.7	7.8	37	146	3

1. Grain yield in the Walla Walla soft white winter wheat trial averaged 123 bushels/acre, 4 bushels/acre more than the 3-year average. The Walla Walla nursery was located about seven miles north of Walla Walla, WA (Tom and Jason Beechinor, cooperators).
2. This nursery was seeded on 28 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. A spring soil test showed 156#N/acre available. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 70 to 149 bu/ac. All yield values within the 10% LSD range of the highest yield are shown in bold. The club Cara was the highest yielding named entry in the trial, but 24 of the 60 entries in the trial were within the top LSD range. Skiles was the top yielding entry across three years of results at this location. Stripe rust potential was very high at this location with early infection and season long pressure. Fungicide was applied once on June 16 to the trial. Stripe rust impact on yield is estimated to be 20% or more for susceptible entries. There was a high level of lodging in this trial and it influenced yields and increased variability.
4. Test weights were good with an average of 60.0 lbs/bu, and ranged from 56.7 to 62.4 lbs/bu. Grain protein averaged 9.0% with a range of 7.8 to 10.7%. Plant height averaged 44 inches, and lodging averaged 59% with a range of 3 to 99%.



Table 42.

STRIPE RUST INFECTION TYPE (IT\*) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER VARIETY TRIALNURSERY (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 2011 UNDER NATURAL INFECTION

Variety	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Whitlow Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Reaction Type
		LOC 1	LOC 3	LOC 4	LOC 5		LOC 6	LOC 7	
		6/23	6/22	6/24	5/10	6/4	6/10	6/16	
		Heading	Heading	Heading	Stem elong.	Boot	Flowering	Soft dough	
		IT %	IT %	IT %	IT %	IT %	IT %	IT %	
CODA	WC	2 5	2 5	2 5	2 1	2 1	2 5	3 10	R
CHUKAR	WC	2 5	2 1	2 2	2 5	2 1	2 5	3 5	R
CARA	WC	2 2	2 1	2 2	2 1	3 5	2 5	3 2	R
BRUEHL	WC	2 5	2 5	2 5	2 5	3 5	2 5	3 2	R
ARS970075-3C	WC	5 20	2 2	5 10	2 10	5 10	5 10	5 10	MR
ARS970163-4C	WC	8 5	2 3 5	5 10	2 5	3 5	5 20	5 10	MR
ARS97230-6C	WC	2 10	2 5	3 10	2 10	3 5	3 20	5 10	MR
ARS98X402-1C	WC	2 10	2 5	5 20	2 5	3 5	8 10	5 20	MR
CARA +25%	WC	2 1	2 1	2 1	2 5	3 5	3 5	3 5	R
CHUKAR +25%	WC	2 5	2 2	2 5	2 5	2 5	3 10	5 10	R
MADSEN	SWW	2 5	2 2	2 5	2 5	2 5	2 5	3 5	R
ELTAN	SWW	2 20	2 10	3 10	2 5	2 10	2 10	5 40	MR
ROD	SWW	5 50	3 10	5 40	3 10	3 15	2 10	5 50	MR
FINCH	SWW	5 40	3 10	5 30	5 20	5 20	3 20	5 50	MR
MASAMI	SWW	5 40	3 10	5 50	2 10	3 15	5 20	5 50	MR
XERPHA	SWW	7 80	5 40	7 80	8 60	5 20	5 10	5 60	MS
WA008114	SWW	5 20	2 10	5 30	3 15	3 15	5 30	8 60	MS
WA008116	SWW	2 20	2 5	3 20	2 5	3 10	3 10	5 40	MR
WA008092	SWW	2 10	2 2	2 10	2 1	2 5	2 2	5 20	MR
WA008094	SWW	5 30	3 20	5 30	3 10	3 5	5 20	8 40	MS
<b>PS 279</b>		<b>8 100</b>	<b>8 90</b>	<b>8 90</b>	<b>8 80</b>	<b>8 80</b>	<b>8 70</b>	<b>8 100</b>	<b>S</b>
WA008134	SWW	5 20	3 10	5 10	2 10	3 15	2 10	5 10	MR
WA008135	SWW	2 10	2 5	3 10	2 5	3 15	3 5	5 30	MR
WA008136	SWW	2 5	2 2	2 5	2 5	2 5	2 5	5 20	MR
ARS960277L	SWW	3 10	2 5	5 10	3 10	5 20	3 10	5 40	MR
ARS970161-3L	SWW	2 20	2 5	2 20	2 10	2 10	2 5	5 10	R
IDO663	SWW	3 50	3 30	5 60	3 10	5 30	3 20	5 30	MR
BRUNEAU	SWW	2 8 10	2 5	5 20	2 5	2 5	3 5	5 20	MR
BITTERROOT	SWW	2 20	2 5	3 10	2 10	2 10	2 5	5 30	MR
LAMBERT	SWW	7 90	3 30	7 70	3 10	3 15	5 30	7 60	MS
BRUNDAGE 96	SWW	5 50	2 20	3 20	2 10	3 10	3 20	5 30	MR
96-16702A	SWW	5 30	3 20	5 20	2 5	3 5	5 10	3 10	MR
STEPHENS	SWW	5 60	2 40	3 30	3 10	2 10	3 50	5 20	MR
TUBBS 06	SWW	8 90	8 60	8 80	8 20	8 30	3 40	8 40	S
SKILES	SWW	2 20	2 5	2 20	2 10	2 10	3 20	2 5	R
GOETZE/SKILES	SWW	8 30	2 10	2 8 5	3 10	5 50	8 2 20	3 10	MR
OR2040726	SWW	8 80	2 30	5 40	3 5	3 10	8 2 30	5 20	MS
OR2071628	SWW	5 30	2 5	2 20	2 5	3 5	8 2 20	2 10	MR
OR2070385	SWW	2 20	2 10	2 15	2 10	3 5	2 10	3 10	R
WB-528	SWW	5 30	3 10	3 5	2 10	3 5	5 20	5 20	MR
<b>PS 279</b>		<b>8 90</b>	<b>8 90</b>	<b>8 100</b>	<b>8 80</b>	<b>8 80</b>	<b>8 60</b>	<b>8 90</b>	<b>S</b>
BZ6W02-616	SWW	3 10	2 5	3 5	2 10	8 40	2 5	2 5	MR
LEGION	SWW	2 20	2 10	2 10	3 10	3 5	2 10	2 5	R
AP LEGACY	SWW	8 90	8 60	8 90	3 30	5 40	8 80	3 20	<b>S</b>
AP BADGER	SWW	8 80	5 20	8 80	8 50	3 10	5 40	5 30	S
03PN107#3	SWW	5 30	3 30	5 40	3 15	3 15	3 30	5 30	MR
03PN108#21	SWW	5 40	3 10	3 20	2 10	3 5	3 30	3 10	MR
WA008142	SWWI	2 5	2 5	2 5	2 5	2 10	2 10	3 5	R
WA008143	SWWI	2 10	3 10	2 10	2 10	2 10	2 10	5 20	MR
WA008144	SWWI	2 20	2 10	2 10	2 5	2 10	2 10	5 20	MR
WA008145	SWWI	2 10	2 5	2 20	2 10	3 5	3 10	3 10	R
UICF-BRUNDAGE	SWW	8 80	3 30	5 50	3 10	3 10	3 20	5 20	S
ID00-475-2DH	SWW	8 50	5 20	8 60	5 30	3 20	8 2 40	5 20	MS
ORCF-102	SWW	5 50	5 20	8 50	3 10	3 15	5 2 20	5 30	MR
ORCF-103	SWW	5 50	5 20	8 30	3 10	3 10	5 2 10	5 40	MR
AP 700 CL	SWW	2 20	2 5	2 10	3 10	3 5	5 10	5 20	MR
DH99-55-2	SRW	5 40	5 20	5 20	2 10	3 10	3 30	8 80	S
NSA06-2153A	SWW	5 20	2 20	3 30	3 20	3 5	3 30	8 30	MS
MADSEN/ROD	SWW	5 10	2 10	2 20	3 10	3 10	8 2 20	8 20	MS
ROD/WB-528	SWW	8 30	3 20	5 40	3 10	3 10	5 10	5 30	MS
<b>PS 279</b>		<b>8 100</b>	<b>8 100</b>	<b>8 90</b>	<b>8 60</b>	<b>8 80</b>	<b>8 80</b>	<b>8 100</b>	<b>S</b>
ELTAN/TUBBS06	SWW	8 80	5 40	8 70	3 20	3 10	5 30	5 50	MS
ROD/TUBBS06	SWW	8 80	5 30	8 80	3 15	5 30	5 30	5 60	MS

\* 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 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

**Table 43.**

**STRIPE RUST INFECTION TYPE (IT) ON ENTRIES IN 2011 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 <sup>a</sup>															HTAP resistance	Seed treated <sup>d</sup>
		Seedling test (4-20°C) <sup>b</sup>					Adult-plant test (10-30°C) <sup>b</sup>											
		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			
CODA	WC	2	2	2	2	2	1,1,1	1,1,1	1,1,1	2,1,1	1,1,1	2,1,1	1,1,1	1,1,1	1,1,1	Unknown		
CHUKAR	WC	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown		
CARA	WC	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown		
BRUEHL	WC	2	2	2	2	4	2	1,1,2	1,1,1	1,2,2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown		
ARS970075-3C	WC	2	2	2	2	8	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown		
ARS970163-4C	WC	3	8	2,8	8	8	2,2,3	2,2,2	1,1,1	2,2,3	2,2,3	2,2,3	2,2,3	2,2,3	2,2,2	High		
ARS97230-6C	WC	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown		
ARS98X402-1C	WC	2	2	3	8	8	2	1,1,2	1,1,1	1,1,1	1,1,3	1,1,1	1,1,1	1,1,1	1,1,1	High		
CARA +25%	WC	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown	Y	
CHUKAR +25%	WC	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown	Y	
MADSEN	SWW	8	2	2	2	2	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	High		
ELTAN	SWW	5	8	5	7	8	3,3,3	2,2,2	2,2,2	3,3,3	3,3,4	2,3,3	2,2,3	2,3,3	2,3,3	Moderate		
ROD	SWW	8	8	3	3,8	8	8	2,2,2	2,2,2	2,2,2	1,1,2	1,1,1	1,1,2	2,2,2	2,2,2	Moderate		
FINCH	SWW	8	8	8	8	8	1,1,1	1,1,1	1,1,1	1,1,1	2,2,2	2,2,2	2,2,2	2,3,3	2,2,2	Moderate		
MASAMI	SWW	8	2	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	3,4,4	3,3,3	3,3,3	Low		
XERPHA	SWW	8	8	8	8	8	8	2,2,3	2,2,2	2,2,2	2,3,3	2,2,2	2,2,2	3,3,3	3,3,3	3,3,4	Low	
WA008114	SWW	8	8	8	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,3,3	2,3,3	2,2,3	Moderate	
WA008116	SWW	3	5	3	2	5	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	2,3,3	Moderate		
WA008092	SWW	2	3	2	2	5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	High		
WA008094	SWW	8	8	8	7	8	8	2,2,2	2,2,3	2,3,3	2,2,2	2,2,2	2,2,2	2,2,2	3,2,2	Moderate		
PS 279		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		
WA008134	SWW	8	2,5(1)	8	5	5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	1,1,1	1,1,1	1,2,2	High		
WA008135	SWW	8	8	8	8	8	8	2,2,2	2,2,2	2,2,2	1,2,2	2,2,2	2,3,3	3,3,3	3,3,4	Low		
WA008136	SWW	5	2	5	3	2-5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,1,1	1,1,1	2,2,2	3,3,3	Moderate		
ARS960277L	SWW	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,3	1,1,2	1,1,2	2,2,2	2,2,2	Unknown		
ARS970161-3L	SWW	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,2,2	1,1,1	1,1,1	Unknown		
IDO663	SWW	8	8	8	5	8	8	2,2,2	2,1,1	1,1,1	2,2,2	2,2,2	2,2,2	2,2,2	2,3,3	Moderate		
BRUNEAU	SWW	8	5	8	3	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	High		
BITTERROOT	SWW	8	5	5	3	5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	1,1,2	1,1,1	High		
LAMBERT	SWW	5	2,5	8	8	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,2,2	3,3,3	3,3,3	3,3,3	Low		
BRUNDAGE 96	SWW	8	2,3	5	2,8	8	8	1,1,1	2,1,1	2,1,1	1,1,1	1,1,1	1,1,1	1,2,2	2,3,3	2,3,2	Moderate	
96-16702A	SWW	8	8	8	8	8	8	2,2,2	3,3,2	3,3,3	3,3,3	2,3,3	3,3,3	3,3,3	3,3,5	5,5,5	Low	
STEPHENS	SWW	8	2,5(1)	8	8	8	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	2,2,2	2,2,2	2,2,2	High		
TUBBS 06	SWW	8	3	8	8	8	8	3,2,2	2,2,2	2,2,2	2,2,2	2,2,2	3,3,5	3,3,3	2,3,3	2,3,3	Moderate	
SKILES	SWW	8	8	8	8	8	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	High		
GOETZE/SKILES	SWW	3	4	5	5	8	8	1,1,1	1,1,1	1,1,1	1,1,3	1,1,1	1,1,1	3,3,3	3,3,3	3,3,3	Low	
OR2040726	SWW	8	8	8	8	8	8	3,3,3	3,3,3	3,3,3	5,5,5	5,5,5	5,5,6	3,3,3	2,3,3	4,4,5	Low	
OR2071628	SWW	5	8	5	3	5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,3	2,1,1	1,1,3	1,1,1	2,2,2	High		
OR2070385	SWW	5	2	2	2	8	8	1,1,1	2,1,1	1,1,2	1,1,1	1,1,1	1,1,1	1,1,2	2,2,2	High		
WB-528	SWW	8	2,8(2)	8	8	8	8	1,1,1	1,1,1	1,1,1	2,2,2	2,2,2	2,2,2	2,3,3	3,3,3	3,3,3	Moderate	
PS 279		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		
BZBW02-616	SWW	8	8	8	8	5	1,2,2	2,2,2	2,2,2	1,1,3	1,1,1	1,1,3	5,5,5	3,5,5	5,5,5	Low		
LEGION	SWW	5	2	5	5	8	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,2,3	2,2,2	High		
AP LEGACY	SWW	8	2	5	5	5	2,2,2	2,2,2	2,2,2	1,1,1	1,1,1	2,2,2	3,3,3	2,3,3	2,3,3	Moderate		
AP BADGER	SWW	8	2	8	5	8	8	2,2,3	2,2,2	3,3,4	2,2,3	2,2,3	3,3,3	8,8,8	8,8,8	Low		
03PN107#3	SWW	8	8	8	8	8	8	1,1,1	1,1,1	2,1,1	1,1,1	1,1,1	3,3,5	2,2,3	2,2,2	3,3,3	No	
03PN108#21	SWW	8	8	8	8	5	1,1,1	1,1,1	1,1,1	1,1,1	2,2,1	1,1,1	2,3,3	2,2,2	2,2,3	Moderate		
WA008142	SWWI	7	2	2,8(1)	2,5(1)	2	2	1,1,2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	2,2,1	1,2,2	1,1,3	Unknown	Y
WA008143	SWWI	2	2	3	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	2,2,2	2,2,2	1,1,2	1,1,1	2,2,2	Unknown	Y
WA008144	SWWI	2	2	2	2	2,5(1)	2	1,1,1	1,1,1	1,1,1	2,2,2	2,2,2	2,2,3	2,2,2	2,2,2	2,2,2	Unknown	Y
WA008145	SWWI	2	2	2	2	2	2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,2,3	2,2,2	2,2,2	Unknown	Y
UICF-BRUNDAZE	SWW	8	3	8	2,5(2)	8	8	2,2,2	1,2,2	2,2,2	2,2,2	2,2,2	2,2,1	3,3,3	3,3,3	3,3,3	Moderate	
ID00-475-2DH	SWW	8	8	8	8	8	8	2,2,2	2,2,2	2,2,3	3,3,2	3,3,3	3,3,3	3,3,3	3,3,3	2,3,2	Moderate	
ORCF-102	SWW	8	4	8	8	7	1,1,1	1,1,1	1,1,1	2,2,2	1,1,1	2,2,2	2,2,2	2,2,2	2,2,2	1,1,1	High	
ORCF-103	SWW	8	8	8	8	8	8	2,2,2	3,3,3	2,3,3	3,3,3	3,3,3	3,3,3	2,3,3	3,4,4	3,3,3	Low	
AP 700 CL	SWW	8	5	7	8	8	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	2,2,2	1,1,3	2,2,2	High		
DH99-55-2	SRW	8	8	8	8	8	8	1,1,1	1,1,1	1,1,1	2,2,3	3,3,3	3,3,3	3,3,3	3,3,3	Low		
NSA06-2153A	SWW	2	8	8	8	8	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	3,3,3	2,2,2	2,2,2	Moderate	
MADSEN/ROD	SWW	7	2	7	2	7	2,2,2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	2,2,2	1,1,2	1,1,1	High		
ROD/WB-528	SWW	5	2	2,8	2,8	8	8	1,1,2	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	5,5,2	2,2,5	2,2,2	Low	Y
PS 279		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/TUBBS06	SWW	5	8	8	7	8	8	2,2,2	2,2,2	2,2,2	2,2,2	2,3,3	3,3,3	3,3,3	3,3,3	2,2,2	Low	
ROD/TUBBS06	SWW	8	3	8	8	8	8	1,1,1	1,1,1	1,1,1	2,2,2	2,3,3	3,3,3	2,5,5	5,5,5	2,5,5	Low	

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

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> Treatment of seeds with chemicals may affect the seedling reaction (reducing IT). The treated seeds were washed before planting for the seedling tests to reduce the chemical effect. The wash appeared to work to some extent. Nevertheless, it is still possible that chemical-treated seeds might produce false resistant reactions, and therefore, no conclusion is made for the treated entries.



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## **2011 WSU Hard Winter Wheat Trial Summary**

### **Precipitation Zone >16"**

1. Hard red and white winter wheat grain yield across four locations and 30 entries in the >16" precipitation zone averaged 126 bushels/acre, 22 bushels/acre higher than the 2010 average of 104 bushels/acre and 21 bushels/acre higher than the 2009 average of 105 bushels/acre. The C.V. for the average data was 10 and was lower than the 2010 C.V. value. In general the trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 85 to 156 bushels/acre and reflected the favorable precipitation and temperature through most of the growing season. Altigo was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (6 bushels/acre) of the highest yield are shown in bold and this included 2 of the 30 entries. Stripe rust significantly reduced yields in most of these locations and influenced yield rankings based on susceptibility. Fungicide applications and yield impacts in percent for these locations were: one fungicide and 20% impact at Walla Walla, three and 20% at Pullman, three and 15% at Dayton, and 1 and low at Reardan.
3. Test weight averaged 61.2 lbs/bu across locations and entries and was higher than last year's 58.5 lbs/bu average. Grain protein averaged 12.4% and was the same as last year's value.

## **2011 WSU Hard Winter Wheat Trial Summary**

### **Precipitation Zone 12-16"**

1. Hard red and white winter wheat grain yield across two locations and 30 entries in the 12-16" precipitation zone averaged 97 bushels/acre, 7 bushels/acre higher than the 2010 average of 90 bushels/acre and 9 bushels/acre higher than the 2009 average of 88 bushels/acre. The C.V. for the average data was 17, slightly higher than the 2010 C.V. value. Much of the variation at Almira is due to snow mold over winter that created stand loss unevenly across the trial. In general trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 68 to 132 bushels/acre and reflected the favorable precipitation and temperature through most of the growing season, and snow mold at Almira. Norwest 553 was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (12 bushels/acre) of the highest yield are shown in bold and this included 1 of the 30 entries. Stripe rust reduced yields of susceptible varieties by 10% or more at both locations. The Almira trial did not have fungicide applied, while fungicide was applied twice at Lamont.
3. Test weight averaged 60.1 lbs/bu across locations and entries and was higher than last year's 58.0 lbs/bu average. Grain protein averaged 12.2% and was less than last year's 13.0% value.

**2011 WSU Hard Winter Wheat Trial Summary**  
**Precipitation Zone <12"**

1. Hard red and white winter wheat grain yield across five locations and 30 entries in the <12" precipitation zone averaged 56 bushels/acre, 12 bushels/acre higher than the 2010 average of 44 bushels/acre and 24 bushels/acre higher than the 2009 average of 32 bushels/acre. The C.V. for the average data was 13, similar to the 2010 C.V. value. In general the trials had good fall establishment.
2. Yields among entries averaged across locations ranged from 43 to 70 bushels/acre and reflected the favorable precipitation and temperature through most of the growing season. Farnum was the highest yielding named variety averaged across locations. Average yield values within the 10% LSD range (4 bushels/acre) of the highest yield are shown in bold and this included 2 of the 30 entries. Stripe rust significantly reduced yields in the 20-30% or more range for susceptible entries at Connell, despite a fungicide application at this location. At the Horse Heaven and Ritzville sites there were two fungicide applications that effectively controlled stripe rust. At Lind and St. Andrews no fungicides were applied but stripe rust was not a factor.
3. Test weight averaged 61.5 lbs/bu across locations and entries and was higher than last year's 61.0 lbs/bu average. Grain protein averaged 10.9% and was lower than last year's 11.9% value.

Table 44.

## 2011 WSU Variety Testing Hard Winter Wheat Trial Summary

### Precipitation Zone >16"

Variety Name	Dayton	Pullman	Reardan	Walla Walla	Average	Dayton	Pullman	Reardan	Walla Walla	Average	Dayton	Pullman	Reardan	Walla Walla	Average
<b>Hard Red Winter</b>	<b>Yield (Bu/A)</b>					<b>Test Wt (Lbs/Bu)</b>					<b>Protein (%)</b>				
Altigo	161	169	143	150	<b>156</b>	58.6	59.8	58.5	59.2	59.0	12.9	12.0	11.8	11.9	12.1
Norwest 553	179	167	118	139	<b>151</b>	63.1	63.7	61.4	61.8	62.5	13.2	12.2	11.8	12.7	12.5
Genesi	163	161	139	132	149	63.1	62.7	61.8	61.2	62.2	13.7	12.2	13.0	13.3	13.1
Azimut	133	157	135	166	148	57.4	58.6	58.4	59.1	58.4	13.9	12.2	11.9	11.7	12.4
WA 8120	133	177	164	116	147	56.8	59.3	60.6	59.1	59.0	12.8	12.1	11.1	11.5	11.9
WA 8119	114	186	159	125	146	57.7	57.9	59.4	59.7	58.6	13.1	12.2	12.0	11.5	12.2
ML9W05-2501	146	190	140	96	143	61.9	63.5	62.8	58.9	61.8	13.8	12.6	12.7	13.0	13.0
Whetstone	132	161	143	99	134	58.6	63.7	63.1	59.6	61.2	14.4	12.3	11.6	13.6	13.0
IDO656	107	174	151	95	132	59.7	62.9	62.1	58.4	60.8	14.3	12.5	12.7	12.7	13.1
Boundary	114	155	110	113	123	61.9	62.8	62.2	61.1	62.0	12.5	11.7	11.7	11.5	11.9
WB-Tucson	125	143	126	97	123	61.8	64.0	63.8	61.4	62.8	13.3	11.8	11.2	12.4	12.2
Esperia	147	129	123	84	121	61.5	63.0	62.0	59.4	61.5	13.2	12.8	12.4	13.7	13.0
Bauermeister	110	153	120	96	120	59.2	60.7	61.7	59.8	60.3	13.9	12.2	10.6	11.7	12.1
WA 8118	97	167	115	93	118	60.8	63.7	62.4	61.1	62.0	15.3	13.7	13.8	12.9	<b>13.9</b>
AgriPro Paladin	107	135	108	113	116	59.3	62.6	61.7	60.5	61.0	13.5	12.4	11.3	12.3	12.4
WA 8070	89	150	132	90	115	61.0	63.0	63.4	61.1	62.1	14.2	12.1	10.8	11.4	12.1
Eddy	126	137	107	82	113	62.6	63.6	62.9	61.5	62.6	13.4	11.8	11.7	11.9	12.2
Peregrine	95	156	106	83	110	62.6	64.2	63.5	61.2	62.9	14.1	11.4	10.9	11.5	12.0
Finley	102	152	108	77	109	63.4	64.9	64.0	62.4	<b>63.7</b>	13.8	12.6	12.9	12.6	13.0
Accipiter	112	130	106	82	108	60.5	63.2	63.1	60.3	61.8	13.1	11.5	11.3	11.3	11.8
Farnum	96	129	108	68	100	61.4	61.5	62.0	59.0	61.0	14.9	13.4	13.5	13.9	<b>13.9</b>
Hatton	91	118	78	51	85	63.5	65.0	65.5	59.2	<b>63.3</b>	13.1	11.7	12.2	12.2	12.3
<b>Hard White Winter</b>															
OR2080111H	162	163	144	145	<b>154</b>	60.8	61.5	60.6	60.1	60.8	13.3	12.0	11.8	11.9	12.2
OR2080156H	154	165	119	148	147	61.3	63.0	61.7	60.9	61.7	13.2	12.3	11.5	11.3	12.1
UI Silver	137	167	131	90	131	61.6	63.8	63.4	58.1	61.7	12.9	10.9	10.6	13.0	11.9
WA 8096	100	155	140	116	128	57.3	60.4	60.3	58.3	59.1	13.8	12.0	11.5	10.8	12.0
MDM	115	167	112	92	121	59.9	61.2	61.6	59.4	60.5	12.7	11.7	10.3	10.1	11.2
IDO835	108	135	113	92	112	60.6	61.9	62.8	59.8	61.3	12.0	10.3	10.2	11.9	11.1
UICF-Grace	73	137	100	80	97	58.8	63.3	62.3	58.9	60.8	15.2	12.3	12.1	13.3	13.2
<b>Soft White Winter</b>															
Eltan	122	161	140	103	132	59.3	60.5	61.6	58.0	59.9	13.5	11.1	11.1	11.9	11.9
<b>C.V. %</b>	9	10	9	12	10	1.4	0.6	0.8	1.5	1.1	4.9	2.8	6.8	6.4	5.4
<b>LSD (0.10)</b>	12	16	12	13	6	0.9	0.4	0.6	0.9	0.4	0.7	0.4	0.9	0.8	0.4
<b>Average</b>	122	155	125	104	126	60.5	62.3	62.0	59.9	61.2	13.6	12.1	11.7	12.2	12.4
<b>Highest</b>	179	190	164	166	156	63.5	65.0	65.5	62.4	63.7	15.3	13.7	13.8	13.9	13.9
<b>Lowest</b>	73	119	79	51	85	56.8	57.9	58.4	58.0	58.4	12.0	10.3	10.2	10.1	11.1

**Table 45.**  
**2011 WSU Variety Testing Hard Winter Wheat Trial Summary**  
**Precipitation Zone 12-16"**

Variety Name	Almira	Lamont	Average	Almira	Lamont	Average	Almira	Lamont	Average
<b>Hard Red Winter</b>	<b>Yield (Bu/A)</b>			<b>Test Wt (Lbs/Bu)</b>			<b>Protein (%)</b>		
WA 8120	112	152	132	57.0	59.2	58.1	11.9	12.0	11.9
ML9W05-2501	123	115	119	60.8	62.4	61.6	13.1	11.8	12.5
Norwest 553	81	153	117	62.1	62.2	62.2	12.1	12.6	12.4
WA 8119	83	151	117	55.5	59.3	57.4	13.9	11.9	12.9
Esperia	108	122	115	60.6	61.1	60.9	13.0	12.8	12.9
Boundary	111	107	109	59.5	60.8	60.1	12.5	11.5	12.0
Azimut	111	103	107	54.1	58.3	56.2	12.8	12.0	12.4
IDO656	97	115	106	57.4	62.1	59.8	13.5	12.4	13.0
Bauermeister	98	105	101	56.4	59.8	58.1	14.1	11.1	12.6
Genesi	85	105	95	60.8	60.9	60.8	12.7	12.2	12.5
Whetstone	81	107	94	60.5	62.3	61.4	12.4	12.1	12.2
Farnum	89	99	94	59.3	60.4	59.9	13.1	12.5	12.8
WA 8118	87	99	93	58.9	61.6	60.2	13.0	12.9	12.9
Peregrine	84	100	92	60.0	62.8	61.4	12.5	11.9	12.2
Accipiter	84	95	90	59.8	63.2	61.5	12.4	11.5	11.9
Eddy	73	104	89	61.6	63.2	62.4	12.3	12.2	12.3
Finley	75	101	88	60.3	62.6	61.5	13.2	12.8	13.0
WA 8070	77	96	87	58.9	62.1	60.5	14.1	11.6	12.8
AgriPro Paladin	84	82	83	60.3	61.2	60.7	13.0	12.0	12.5
WB-Tucson	67	93	80	61.0	63.2	62.1	12.5	11.8	12.1
Hatton	73	69	71	64.1	62.8	63.5	11.3	12.0	11.7
Altigo	59	77	68	58.0	58.3	58.2	11.8	11.4	11.6
<b>Hard White Winter</b>									
OR2080111H	111	118	115	57.3	61.0	59.2	12.7	11.7	12.2
UI Silver	97	116	106	59.5	63.2	61.3	12.2	11.5	11.9
MDM	92	116	104	56.8	60.5	58.7	12.5	9.8	11.2
WA 8096	81	107	94	54.7	58.9	56.8	12.5	11.2	11.9
IDO835	80	103	92	60.1	61.2	60.7	11.5	10.2	10.9
OR2080156H	66	105	85	60.8	60.9	60.8	12.1	12.5	12.3
UICF-Grace	69	83	76	60.2	61.6	60.9	12.6	11.8	12.2
<b>Soft White Winter</b>									
Eltan	88	99	94	54.7	59.7	57.2	13.4	10.5	12.0
<b>C.V. %</b>	19	15	17	2.7	0.9	1.9	8.6	5.9	7.5
<b>LSD (0.10)</b>	17	17	12	1.7	0.6	0.9	1.2	0.7	0.7
<b>Average</b>	88	107	97	59.0	61.2	60.1	12.7	11.8	12.2
<b>Highest</b>	123	153	132	64.1	63.2	63.5	14.1	12.9	13.0
<b>Lowest</b>	59	69	68	54.1	58.3	56.2	11.3	9.8	10.9



Table 46.

## 2011 WSU Variety Testing Hard Winter Wheat Trial Summary

## Precipitation Zone &lt;12"

Variety Name	Connell	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Connell	Horse Heaven	Lind	Ritzville	St. Andrews	Average	Connell	Horse Heaven	Lind	Ritzville	St. Andrews	Average
<b>Hard Red Winter</b>	<b>Yield (Bu/A)</b>						<b>Test Wt (Lbs/Bu)</b>						<b>Protein (%)</b>					
WA 8119	76	66	59	78	72	<b>70</b>	61.3	60.7	60.9	58.9	61.0	60.5	12.2	7.8	12.2	9.9	9.0	10.2
WA 8120	76	66	56	77	72	<b>69</b>	61.0	60.5	61.3	59.9	61.1	60.8	12.1	8.3	12.3	9.2	9.4	10.3
Farnum	56	72	58	62	61	62	60.2	60.8	60.6	58.6	61.1	60.2	12.9	9.3	13.0	11.5	9.2	11.2
ML9W05-2501	66	62	49	69	60	61	61.7	63.1	62.3	61.3	62.8	62.2	13.9	10.3	13.7	10.9	9.8	<b>11.7</b>
Norwest 553	76	59	36	79	57	61	62.6	62.3	62.2	60.2	62.2	61.9	12.6	9.8	13.9	10.4	10.4	11.4
IDO656	61	55	47	70	70	61	60.4	62.6	62.1	60.8	63.0	61.8	13.2	9.3	13.9	10.7	10.0	11.4
Bauermeister	57	66	55	63	65	61	60.9	61.1	61.2	59.7	61.4	60.9	12.6	8.5	12.0	9.8	7.9	10.2
Azimut	68	57	36	80	55	59	60.7	60.2	60.6	56.3	59.6	59.5	11.8	9.9	12.5	10.7	11.5	11.3
WA 8070	57	62	48	61	60	58	61.2	61.7	61.7	60.2	62.4	61.4	12.5	9.6	12.1	10.7	9.9	11.0
Genesi	65	53	36	87	43	57	61.3	61.7	60.2	60.8	62.0	61.2	13.3	11.0	12.8	11.0	11.4	<b>11.9</b>
Boundary	46	53	42	74	64	56	61.7	61.7	60.3	60.8	61.8	61.3	12.9	9.7	12.3	9.6	9.3	10.7
WA 8118	65	58	45	57	55	56	60.5	61.8	61.6	59.5	61.9	61.1	13.6	10.3	14.2	11.8	10.1	<b>12.0</b>
WB-Tucson	57	62	40	63	51	55	63.9	63.9	62.2	62.7	63.8	<b>63.3</b>	12.1	9.7	12.9	11.0	11.1	11.4
Finley	60	54	44	55	57	54	63.4	64.1	62.8	62.2	63.9	<b>63.3</b>	12.4	9.5	12.3	10.5	10.0	10.9
Accipiter	46	60	40	72	51	54	63.1	62.7	62.2	62.7	62.7	62.7	12.0	8.8	11.7	9.8	9.7	10.4
Whetstone	58	51	42	69	46	53	62.6	63.1	62.0	59.3	63.0	62.0	12.4	10.7	13.0	11.6	11.0	<b>11.7</b>
Eddy	46	59	36	57	58	51	63.8	63.6	62.0	62.3	63.5	<b>63.1</b>	12.1	10.2	12.2	11.4	9.7	11.1
Peregrine	51	47	40	60	58	51	62.6	62.6	62.2	60.6	63.0	62.2	11.0	10.3	11.7	12.0	9.3	10.9
AgriPro Paladin	45	45	40	68	52	50	63.1	63.5	62.2	62.4	63.1	62.9	12.7	11.2	12.7	11.7	10.8	<b>11.8</b>
Altigo	42	50	29	83	40	49	59.4	59.4	58.5	56.2	58.6	58.4	11.7	10.0	11.8	9.7	11.2	10.9
Esperia	49	41	28	69	49	47	61.8	62.4	60.9	61.5	62.5	61.8	12.9	10.5	13.6	10.3	10.8	<b>11.6</b>
Hatton	36	51	23	58	48	43	64.8	64.1	60.4	63.6	64.4	<b>63.4</b>	12.0	9.6	11.9	9.5	10.2	10.7
<b>Hard White Winter</b>																		
MDM	56	69	49	72	59	61	61.3	61.9	61.6	61.7	61.4	61.6	11.5	8.4	11.3	7.3	7.6	9.2
OR2080111H	73	60	37	83	53	61	61.4	61.3	59.8	59.3	60.6	60.5	11.7	8.7	12.7	10.4	8.5	10.4
WA 8096	57	54	48	71	67	59	60.5	60.8	60.1	56.8	61.5	59.9	11.5	8.7	11.0	10.8	7.1	9.8
UI Silver	59	62	40	71	60	58	62.2	63.3	62.9	60.4	63.4	62.4	12.2	9.7	13.2	9.7	9.5	10.9
IDO835	44	59	37	70	57	53	62.6	62.3	61.4	61.0	62.3	61.9	12.4	8.4	11.6	9.3	8.3	10.0
OR2080156H	51	45	34	74	55	52	61.6	62.2	60.8	59.7	61.9	61.2	12.7	9.7	13.1	11.1	10.7	11.4
UICF-Grace	54	52	36	56	38	47	60.2	61.7	60.7	58.4	61.4	60.5	12.8	10.1	13.2	11.2	10.1	11.5
<b>Soft White Winter</b>																		
Eltan	59	62	51	78	58	61	61.1	60.8	61.0	58.6	59.9	60.3	11.6	8.6	11.1	10.3	8.7	10.1
<b>C.V. %</b>	7	18	12	11	16	13	0.7	0.7	0.6	1.9	0.7	1.0	3.5	9.8	3.2	12.8	9.5	8.1
<b>LSD (0.10)</b>	4	11	6	8	10	4	0.5	0.5	0.4	1.2	0.4	0.3	0.5	1.0	0.4	1.4	1.0	0.4
<b>Average</b>	57	57	42	70	56	56	61.8	62.1	61.3	60.2	62.0	61.5	12.4	9.6	12.5	10.5	9.7	10.9
<b>Highest</b>	76	72	59	87	72	70	64.8	64.1	62.9	63.6	64.4	63.4	13.9	11.2	14.2	12.0	11.5	12.0
<b>Lowest</b>	36	41	23	55	38	43	59.4	59.4	58.5	56.2	58.6	58.4	11.0	7.8	11.0	7.3	7.1	9.2

**Table 47. WSU Hard Winter Wheat Trial Multi-Year Summary**

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

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 8 loc/yr			2009-2011, 12 loc/yr			2007-2011, 19 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Winter</i></b>									
Norwest 553	143	61.9	12.6	136	61.8	12.3	125	61.4	12.6
WA 8120	140	57.9	11.8						
WA 8119	137	57.9	12.0						
Boundary	122	60.5	11.8	118	60.6	11.8	116	60.4	12.1
Whetstone	117	60.3	13.0	115	60.9	12.7	112	60.8	12.8
Esperia	116	60.9	13.0	114	60.7	12.7			
Bauermeister	112	58.8	12.2	111	59.3	12.0	112	59.4	12.1
WA 8118	111	60.7	13.8						
WA 8070	107	61.0	12.1	105	61.2	11.9			
Accipiter	106	60.3	11.8	106	60.7	11.7			
Eddy	105	61.3	12.4	106	61.5	12.2	104	61.2	12.4
Finley	104	62.0	12.9	99	62.1	12.6	97	61.9	12.7
AgriPro Paladin	104	58.7	12.7	104	59.8	12.5	104	60.3	12.7
Peregrine	103	60.7	12.0	103	61.2	11.8			
Farnum	95	59.6	13.5	94	59.5	13.1	92	59.2	13.2
Hatton	78	60.8	12.4	81	61.5	12.0	87	61.8	12.2
<b><i>Hard White Winter</i></b>									
OR2080156H	136	60.8	12.3						
UI Silver	128	61.3	11.6	122	61.5	11.4			
WA 8096	115	57.5	12.2	112	58.4	11.9			
MDM	114	59.1	11.4	113	59.6	11.4	112	60.8	12.8
UICF-Grace	97	59.8	13.0	98	60.1	12.6			
<b><i>Soft White Winter (Check)</i></b>									
Eltan	118	58.4	11.8	113	58.7	11.6	114	58.9	11.6
C.V. %	10	1.6	4.8	10	1.4	4.5	9	1.3	4.0
LSD (.10)	4	0.4	0.2	3	0.3	0.2	2	0.2	0.1
Average	114	60.0	12.4	109	60.6	12.1	107	60.5	12.3
Highest	143	62.0	13.8	136	62.5	13.1	125	61.9	13.2
Lowest	78	57.5	11.4	81	58.4	11.4	87	59.0	11.6

**Table 48. WSU Hard Winter Wheat Trial Multi-Year Summary**

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

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 4 loc/yr			2009-2011, 6 loc/yr			2007-2011, 10 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Winter</i></b>									
WA 8120	122	56.6	12.2						
Norwest 553	112	61.5	12.8	106	61.6	12.6	100	61.0	12.3
WA 8119	110	56.0	12.9						
Esperia	108	60.9	13.4	104	60.8	12.9			
Boundary	107	59.4	12.4	106	60.1	12.1	103	60.0	11.9
Peregrine	98	60.4	12.3	96	61.2	11.9			
WA 8118	98	60.1	13.7						
Whetstone	97	61.1	12.8	94	61.5	12.6	93	60.9	12.2
Bauermeister	93	56.5	12.8	93	58.1	12.5	93	58.2	12.2
Eddy	89	61.7	12.6	91	61.8	12.3	92	61.8	12.1
WA 8070	89	59.0	12.8	89	60.0	12.5			
Accipiter	89	60.0	12.2	90	60.7	12.0			
Finley	88	61.2	13.1	86	61.6	12.7	87	61.6	12.3
Farnum	84	58.1	13.0	85	58.8	12.8	83	58.7	12.5
AgriPro Paladin	81	60.6	12.7	82	61.1	12.6	85	60.9	12.5
Hatton	63	60.2	12.1	72	61.4	12.1	78	61.9	11.8
<b><i>Hard White Winter</i></b>									
UI Silver	108	60.6	11.9	102	61.3	11.7			
MDM	96	57.0	11.6	97	58.5	11.4	99	58.8	11.1
WA 8096	94	55.6	12.2	92	57.3	11.9			
OR2080156H	87	59.5	13.0						
UICF-Grace	85	59.6	12.8	82	60.1	12.5			
<b><i>Soft White Winter (Check)</i></b>									
Eltan	86	55.3	12.4	88	57.2	12.0	91	57.5	11.7
C.V. %	16	2.0	5.9	14	1.7	5.6	13	1.6	5.3
LSD (.10)	8	0.6	0.4	6	0.4	0.3	4	0.3	0.2
Average	95	59.1	12.6	91	60.3	12.3	91	60.1	12.0
Highest	122	61.7	13.7	106	62.2	12.9	103	61.9	12.5
Lowest	63	55.3	11.6	72	57.2	11.4	78	57.5	11.1

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

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

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 10 loc/yr			2009-2011, 15 loc/yr			2007-2011, 24 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Winter</i></b>									
WA 8119	65	60.2	10.6						
WA 8120	64	60.3	10.7						
Farnum	57	59.9	11.3	50	59.7	11.9	46	59.4	12.2
Bauermeister	57	60.5	10.7	50	60.2	11.3	46	60.0	11.7
WA 8070	54	61.2	11.1	47	61.1	11.6			
Boundary	53	60.9	11.2	45	60.7	11.7	43	60.4	12.0
Finley	51	62.8	11.3	46	62.6	11.8	43	62.3	12.1
Peregrine	50	61.9	11.1	45	61.7	11.5			
Accipiter	50	62.0	11.0	44	61.4	11.6			
Norwest 553	48	61.5	12.1	43	61.5	12.3	38	61.2	12.7
WA 8118	48	61.2	12.4						
Eddy	45	62.4	12.1	41	62.1	12.5	37	61.9	12.8
Whetstone	45	61.9	12.3	41	61.6	12.6	37	61.4	12.9
Hatton	44	63.1	10.9	40	63.1	11.5	39	62.9	11.9
AgriPro Paladin	40	62.2	12.3	36	62.1	12.7	35	62.1	13.0
Esperia	35	61.0	12.9	33	60.7	13.1			
<b><i>Hard White Winter</i></b>									
MDM	56	61.0	10.0	49	60.8	10.6	45	60.7	11.1
WA 8096	55	59.8	10.3	48	59.4	11.0			
UI Silver	54	62.4	11.1	47	62.2	11.4			
OR2080156H	43	60.6	12.2						
UICF-Grace	43	60.7	11.8	40	60.2	12.1			
<b><i>Soft White Winter (Check)</i></b>									
Eltan	57	60.1	10.4	51	59.9	10.8	47	60.1	11.1
C.V. %	13	0.9	6.3	13	1.1	5.8	13	1.4	5.5
LSD (.10)	2	0.2	0.2	2	0.2	0.2	1	0.2	0.1
Average	51	61.3	11.4	44	61.2	11.8	41	61.1	12.1
Highest	65	63.1	12.9	51	63.1	13.1	47	62.9	13.0
Lowest	35	59.8	10.0	33	59.4	10.6	35	59.4	11.1

**Table 50. 2011 WSU Variety Testing Hard Winter Wheat Trial, Almira**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	S.MOLD (%)
<b>WB-Arrowhead</b>				<b>123</b>	60.8	13.1	48	168	5
<b>WA 8120</b>			104	<b>112</b>	57.0	11.9	43	168	13
<b>Boundary</b>	105	105	105	<b>111</b>	59.5	12.5	44	168	13
<b>Azimut</b>				<b>111</b>	54.1	12.8	37	166	48
<i>OR2080111H</i>				<b>111</b>	57.3	12.7	41	167	28
<b>Esperia</b>		113	121	<b>108</b>	60.6	13.0	39	165	18
<b>Bauermeister</b>	94	96	93	98	56.4	14.1	46	168	2
<i>UI Silver</i>		103	104	97	59.5	12.2	44	168	37
<b>IDO656</b>				97	57.4	13.5	50	168	27
<i>MDM</i>	96	94	92	92	56.8	12.5	46	168	2
<b>Farnum</b>	83	85	80	89	59.3	13.1	50	170	12
<b>Eltan (SWW Check)</b>	92	92	84	88	54.7	13.4	45	170	2
<b>WA 8118</b>			101	87	58.9	13.0	45	166	48
<b>Genesis</b>				85	60.8	12.7	36	165	82
<b>AgriPro Paladin</b>	92	91	90	84	60.3	13.0	39	167	22
<b>Peregrine</b>		96	95	84	60.0	12.5	48	167	30
<b>Accipiter</b>		91	88	84	59.8	12.4	43	169	47
<b>WA 8119</b>			91	83	55.5	13.9	43	168	8
<b>Norwest 553</b>	105	111	117	81	62.1	12.1	33	166	95
<b>Whetstone</b>	96	96	100	81	60.5	12.4	39	165	75
<i>WA 8096</i>		90	86	81	54.7	12.5	40	169	2
<i>IDO835</i>				80	60.1	11.5	43	168	12
<b>WA 8070</b>		85	81	77	58.9	14.1	46	169	48
<b>Finley</b>	86	86	84	75	60.3	13.2	57	167	52
<b>Hatton</b>	87	83	75	73	<b>64.1</b>	11.3	53	169	40
<b>Eddy</b>	96	93	91	73	61.6	12.3	40	166	60
<i>UICF-Grace</i>		84	82	69	60.2	12.6	53	167	92
<b>WB-Tucson</b>		80		67	61.0	12.5	39	167	95
<i>OR2080156H</i>			88	66	60.8	12.1	36	168	77
<b>Altigo</b>				59	58.0	11.8	35	166	100
<b>C.V. %</b>	13	13	16	18	2.7	8.6	6	1	24
<b>LSD (.10)</b>	6	8	11	17	1.7	1.2	3	1	10
<b>Average</b>	94	93	93	88	59.0	12.7	43	167	40
<b>Highest</b>	105	113	121	123	64.1	14.1	57	170	100
<b>Lowest</b>	83	80	75	59	54.1	11.3	33	165	2

### Almira Hard Winter Wheat

1. Grain yield in the Almira hard winter wheat trial averaged 88 bushels/acre, 6 bushels/acre lower 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 9 September, 2010 following fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 75#N/acre fall applied. Based on a spring soil test, an additional 25#N/acre was applied for hard wheat protein based on expected yields.
3. Yields ranged from 59 to 123 bu/ac. Boundary 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 6 of the 30 entries. Norwest 553 and Boundary were the top yielding hard entries across five years of results at this location. This site had high potential for snow mold and symptoms were evident after the snow left in the spring. Entries were rated for stand about 3 weeks after the snow came off and provide a good differential for snow mold tolerance/resistance for the trial. There was little or no snow mold effect on Eltan, while other entries were nearly wiped out, with everything else in between. Snow mold was not uniform across the trial and contributed to an increased C.V. for yield. There was moderate stripe rust potential at this location and no fungicide was applied. There was an estimated 10% or more yield loss due to stripe rust for susceptible varieties.
4. Test weights averaged 59.0 lbs/bu, and ranged from 54.1 to 64.1 lbs/bu. Grain protein averaged 12.7% with a range of 11.3 to 14.1%. Plant height averaged 43 inches with no lodging.

**Table 51. 2011 WSU Variety Testing Hard Winter Wheat Trial, Connell**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Norwest 553	--	50	55	76	62.6	12.6	33	141
WA 8119	--		68	76	61.3	12.2	40	146
WA 8120	--		70	76	61.0	12.1	40	146
OR2080111H	--			73	61.4	11.7	37	140
Azimut	--			68	60.7	11.8	34	140
WB-Arrowhead	--			66	61.7	13.9	38	143
WA 8118	--		49	65	60.5	13.6	39	140
Genesis	--			65	61.3	13.3	33	140
IDO656	--			61	60.4	13.2	42	145
Finley	--	51	56	60	63.4	12.4	41	145
Eltan (SWW Check)	--	55	58	59	61.1	11.6	37	147
UI Silver	--	47	55	59	62.2	12.2	39	145
Whetstone	--	44	49	58	62.6	12.4	35	140
Bauermeister	--	54	57	57	60.9	12.6	38	148
WB-Tucson	--	49		57	63.9	12.1	36	144
WA 8070	--	51	57	57	61.2	12.5	41	147
WA 8096	--	54	59	57	60.5	11.5	40	148
Farnum	--	51	57	56	60.2	12.9	40	148
MDM	--	55	59	56	61.3	11.5	39	147
UICF-Grace	--	44	47	54	60.2	12.8	43	142
Peregrine	--	45	48	51	62.6	11.0	41	144
OR2080156H	--		44	51	61.6	12.7	34	146
Esperia	--	38	34	49	61.8	12.9	33	140
Boundary	--	48	52	46	61.7	12.9	37	145
Eddy	--	43	45	46	63.8	12.1	36	141
Accipiter	--	45	48	46	63.1	12.0	38	147
AgriPro Paladin	--	29	25	45	63.1	12.7	36	143
IDO835	--			44	62.6	12.4	37	146
Altigo	--			42	59.4	11.7	32	144
Hatton	--	44	41	36	64.8	12.0	40	146
C.V. %	--	9	8	7	0.7	3.5	5	0
LSD (.10)	--	3	3	4	0.5	0.5	2	1
Average	--	47	52	57	61.8	12.4	38	144
Highest	--	55	70	76	64.8	13.9	43	148
Lowest	--	29	25	36	59.4	11.0	32	140

### Connell Hard Winter Wheat

1. Grain yield in the Connell hard winter wheat trial averaged 57 bushels/acre, 10 bushels/acre higher than the 3-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister farm).
2. This nursery was seeded on 30 August, 2010 following summer 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 fall applied and a spring soil test analysis showed a greater than needed N supply for hard protein levels at projected yield levels, so no additional fertilizer was applied. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 36 to 76 bu/ac. 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 4 of the 30 entries. The cool and wet spring conditions along with local inoculum sources created early, high levels of stripe rust at this location. A fungicide was applied June 1 and stopped stripe rust across the trial. However, there is an estimated 30% or more yield loss by stripe rust susceptible entries in this trial.
4. Test weights were very good with an average of 61.8 lbs/bu, and ranged from 59.4 to 64.8 lbs/bu. Despite early stripe rust, the June 1 fungicide provided protection during grain filling and helped maintain test weight.
5. Grain protein averaged 12.4% with a range of 11.0 to 13.9%. Protein overall was lower than predicted because of high yield levels. Protein was not higher in the lower yield levels in this trial because stripe rust lowered yield potential early and did not occur during grain filling when plants were protected by fungicide. Plant height averaged 38 inches with no lodging.



**Table 52. 2011 WSU Variety Testing Hard Winter Wheat Trial, Dayton**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<b>Norwest 553</b>	141	163	172	<b>179</b>	<b>63.1</b>	13.2	40	157	0
<b>Genesis</b>				163	<b>63.1</b>	13.7	38	155	43
<i>OR2080111H</i>				162	60.8	13.3	42	158	0
<b>Altigo</b>				161	58.6	12.9	38	158	0
<i>OR2080156H</i>			148	154	61.3	13.2	42	164	27
<b>Esperia</b>		137	141	147	61.5	13.2	36	155	57
<b>WB-Arrowhead</b>				146	61.9	13.8	44	159	60
<i>UI Silver</i>		135	144	137	61.6	12.9	46	166	91
<b>WA 8120</b>			149	133	56.8	12.8	46	167	87
<b>Azimut</b>				133	57.4	13.9	37	157	3
<b>Whetstone</b>	118	123	122	132	58.6	14.4	44	156	53
<b>Eddy</b>	109	113	111	126	<b>62.6</b>	13.4	43	157	47
<b>WB-Tucson</b>		126		125	61.8	13.3	45	160	58
<b>Eltan (SWW Check)</b>	114	112	122	122	59.3	13.5	42	169	90
<i>MDM</i>	112	112	118	115	59.9	12.7	42	168	96
<b>Boundary</b>	113	118	119	114	61.9	12.5	44	161	83
<b>WA 8119</b>			138	114	57.7	13.1	45	168	93
<b>Accipiter</b>		104	99	112	60.5	13.1	46	164	47
<b>Bauermeister</b>	113	114	117	110	59.2	13.9	45	168	96
<i>IDO835</i>				108	60.6	12.0	45	166	75
<b>AgriPro Paladin</b>	101	97	84	107	59.3	13.5	42	161	0
<b>IDO656</b>				107	59.7	14.3	50	166	96
<b>Finley</b>	101	106	107	102	<b>63.4</b>	13.8	51	162	96
<i>WA 8096</i>		108	110	100	57.3	13.8	44	167	90
<b>WA 8118</b>			117	97	60.8	15.3	47	157	92
<b>Farnum</b>	96	100	104	96	61.4	14.9	49	171	87
<b>Peregrine</b>		97	88	95	<b>62.6</b>	14.1	51	164	43
<b>Hatton</b>	87	80	74	91	<b>63.5</b>	13.1	50	165	82
<b>WA 8070</b>		97	99	89	61.0	14.2	48	169	47
<i>UICF-Grace</i>		97	90	73	58.8	15.2	53	164	88
<b>C.V. %</b>	9	8	8	9	1.4	4.9	3	1	30
<b>LSD (.10)</b>	4	6	7	11	0.9	0.7	2	2	19
<b>Average</b>	110	113	117	122	60.5	13.6	45	163	61
<b>Highest</b>	141	163	172	179	63.5	15.3	53	171	96
<b>Lowest</b>	87	80	74	73	56.8	12.0	36	155	0

### Dayton Hard Winter Wheat

1. Grain yield in the Dayton hard winter wheat trial averaged 122 bushels/acre, 12 bushels/acre higher than the 5-year average. The Dayton nursery was located about four miles northwest of Dayton, WA (J. Penner, cooperator).
2. This nursery was seeded on 28 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 110#N/acre fall applied, and a spring soil test showed 153#N/acre available and an additional 110#N/acre was applied in the spring to supply adequate N for hard wheat protein based on expected yields.
3. Yields ranged from 73 to 179 bu/ac. 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 1 of the 30 entries. Norwest 553 was also the top yielding entry across five years of results at this location. Stripe rust potential was very high at this location. Fungicide was applied three times, on March 19, May 5, and June 21. Despite three fungicide applications, stripe rust was present in the trial on susceptible varieties and influenced yield an estimated 15% or more for susceptible varieties. This trial shows that stripe rust susceptible varieties can sustain damage even with a high fungicide application regime when stripe rust is highly epidemic. There was also lodging in the trial with some yield impact.
4. Test weights were good with an average of 60.5 lbs/bu, and ranged from 56.8 to 63.5 lbs/bu. Grain protein averaged 13.6% with a range of 12.0 to 15.3%. Plant height averaged 45 inches, and lodging averaged 61% across the trial with a range of 0 to 96%.

**Table 53. 2011 WSU Variety Testing Hard Winter Wheat Trial, Horse Heaven**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Farnum</b>	38	40	54	<b>72</b>	60.8	9.3	36	150
<i>MDM</i>	39	40	52	<b>69</b>	61.9	8.4	34	150
<b>Bauermeister</b>	38	40	53	<b>66</b>	61.1	8.5	34	150
<b>WA 8119</b>			55	<b>66</b>	60.7	7.8	34	149
<b>WA 8120</b>			53	<b>66</b>	60.5	8.3	34	149
<b>Eltan (SWW Check)</b>	39	39	52	<b>62</b>	60.8	8.6	35	150
<b>WB-Tucson</b>		39		<b>62</b>	<b>63.9</b>	9.7	33	148
<b>WA 8070</b>		37	49	<b>62</b>	61.7	9.6	34	149
<i>UI Silver</i>		37	49	<b>62</b>	63.3	9.7	35	149
<b>WB-Arrowhead</b>				<b>62</b>	63.1	10.3	36	148
<b>Accipiter</b>		36	47	60	62.7	8.8	34	149
<i>OR2080111H</i>				60	61.3	8.7	31	146
<b>Norwest 553</b>	34	35	46	59	62.3	9.8	31	148
<b>Eddy</b>	32	35	45	59	<b>63.6</b>	10.2	33	147
<i>IDO835</i>				59	62.3	8.4	31	149
<b>WA 8118</b>			46	58	61.8	10.3	35	146
<b>Azimut</b>				57	60.2	9.9	30	147
<b>IDO656</b>				55	62.6	9.3	39	149
<b>Finley</b>	34	35	45	54	<b>64.1</b>	9.5	39	148
<i>WA 8096</i>		35	46	54	60.8	8.7	33	150
<b>Boundary</b>	32	33	43	53	61.7	9.7	33	149
<b>Genesis</b>				53	61.7	11.0	28	147
<i>UICF-Grace</i>		34	43	52	61.7	10.1	41	148
<b>Hatton</b>	31	32	42	51	<b>64.1</b>	9.6	33	149
<b>Whetstone</b>	31	32	41	51	63.1	10.7	33	146
<b>Altigo</b>				50	59.4	10.0	32	148
<b>Peregrine</b>		33	41	47	62.6	10.3	37	148
<b>AgriPro Paladin</b>	29	31	39	45	63.5	11.2	32	148
<i>OR2080156H</i>			40	45	62.2	9.7	32	149
<b>Esperia</b>		27	33	41	62.4	10.5	28	145
<b>C.V. %</b>	15	16	16	18	0.7	9.8	6	0
<b>LSD (.10)</b>	2	4	6	11	0.5	1.0	2	1
<b>Average</b>	34	35	46	57	62.1	9.6	34	148
<b>Highest</b>	39	40	55	72	64.1	11.2	41	150
<b>Lowest</b>	29	27	33	41	59.4	7.8	28	145

### Horse Heaven Hard Winter Wheat

1. Grain yield in the Horse Heaven hard winter wheat trial averaged 57 bushels/acre, 23 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The Horse Heaven nursery was located about seven miles southeast of Prosser, WA (D. Roseberry, cooperator).
2. This nursery was seeded on 7 September, 2010 following summer 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 fall applied and a spring soil test analysis showed an adequate N supply for hard protein levels at projected, historic yield levels. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 41 to 72 bu/ac. Farnum 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 10 of the 30 entries. The cool and wet spring conditions along with local inoculum sources created early, high levels of stripe rust potential at this location. Fungicide was applied the beginning of April and again May 30 and controlled stripe rust across the trial.
4. Test weights were very good with an average of 62.1 lbs/bu, and ranged from 59.4 to 64.1 lbs/bu. Grain protein averaged 9.6% with a range of 7.8 to 11.2%. Protein overall was much lower than predicted because yield levels exceeded expectations by over 50%. Plant height averaged 34 inches with no lodging.

**Table 54. 2011 WSU Variety Testing Hard Winter Wheat Trial, Lamont**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
Norwest 553	95	100	108	153	62.2	12.6	36	155	0
WA 8120			140	152	59.2	12.0	41	164	20
WA 8119			129	151	59.3	11.9	41	164	23
Esperia		95	95	122	61.1	12.8	37	153	7
OR2080111H				118	61.0	11.7	39	156	0
MDM	101	100	101	116	60.5	9.8	35	165	42
UI Silver		100	112	116	63.2	11.5	42	164	47
WB-Arrowhead				115	62.4	11.8	43	157	23
IDO656				115	62.1	12.4	46	163	32
Boundary	101	107	110	107	60.8	11.5	40	157	27
Whetstone	91	92	94	107	62.3	12.1	42	153	7
WA 8096		94	102	107	58.9	11.2	38	167	42
Bauermeister	93	90	94	105	59.8	11.1	22	167	33
OR2080156H			86	105	60.9	12.5	38	162	10
Genesis				105	60.9	12.2	35	153	7
Eddy	89	88	87	104	63.2	12.2	42	156	35
Azimut				103	58.3	12.0	32	154	0
IDO835				103	61.2	10.2	40	163	27
Finley	88	87	92	101	62.6	12.8	55	156	30
Peregrine		96	100	100	62.8	11.9	50	161	0
Eltan (SWW Check)	91	84	89	99	59.7	10.5	37	166	38
Farnum	82	85	88	99	60.4	12.5	50	168	33
WA 8118			95	99	61.6	12.9	46	156	37
WA 8070		93	97	96	62.1	11.6	42	167	0
Accipiter		88	90	95	63.2	11.5	37	162	7
WB-Tucson		84		93	63.2	11.8	38	157	17
UICF-Grace		80	87	83	61.6	11.8	47	162	32
AgriPro Paladin	77	74	72	82	61.2	12.0	35	160	0
Altigo				77	58.3	11.4	32	156	0
Hatton	69	60	51	69	62.8	12.0	44	162	30
C.V. %	13	14	16	15	0.9	5.9	13	1	74
LSD (.10)	5	8	11	17	0.6	0.7	5	1	16
Average	89	89	96	107	61.2	11.8	40	160	20
Highest	101	107	140	153	63.2	12.9	55	168	47
Lowest	69	60	51	69	58.3	9.8	22	153	0

### Lamont Hard Winter Wheat

1. Grain yield in the Lamont hard winter wheat trial averaged 107 bushels/acre, 18 bushels/acre higher than the 5-year average. The Lamont nursery was located about six miles southeast of Lamont, WA (G. White, cooperator).
2. This nursery was seeded on 13 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 70#N/acre fall applied, and a spring soil test showed more than adequate N for hard wheat protein based on expected yields, but most N was found in the 3<sup>rd</sup> and 4<sup>th</sup> foot of the sample.
3. Yields ranged from 69 to 153 bu/ac. 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 30 entries. The hard white MDM and Boundary were the top yielding entries across five years of results at this location. Stripe rust potential was high at this location and fungicide was applied two times, on May 4 and mid-June. Despite fungicide applications, there was a low level of stripe rust present in the trial on susceptible varieties and influenced yield an estimated 10% or more for susceptible varieties.
4. Test weights were good with an average of 61.2 lbs/bu, and ranged from 58.3 to 63.2 lbs/bu. Grain protein averaged 11.8% with a range of 9.8 to 12.9%. Plant height averaged 40 inches, and lodging averaged 20% across the trial with a range of 0 to 47%.

**Table 55. 2011 WSU Variety Testing Hard Winter Wheat Trial, Lind**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>WA 8119</b>			56	<b>59</b>	60.9	12.2	36
<b>Farnum</b>	43	47	54	<b>58</b>	60.6	13.0	39
<b>WA 8120</b>			53	<b>56</b>	61.3	12.3	36
<b>Bauermeister</b>	40	43	49	<b>55</b>	61.2	12.0	37
<b>Eltan (SWW Check)</b>	39	41	46	51	61.0	11.1	35
<i>MDM</i>	39	41	46	49	61.6	11.3	36
<b>WB-Arrowhead</b>				49	62.3	13.7	39
<b>WA 8070</b>		43	48	48	61.7	12.1	40
<i>WA 8096</i>		40	45	48	60.1	11.0	36
<b>IDO656</b>				47	62.1	13.9	40
<b>WA 8118</b>			40	45	61.6	14.2	39
<b>Finley</b>	39	41	45	44	<b>62.8</b>	12.3	40
<b>Boundary</b>	36	37	43	42	60.3	12.3	34
<b>Whetstone</b>	30	33	36	42	62.0	13.0	36
<b>AgriPro Paladin</b>	29	30	33	40	62.2	12.7	34
<b>WB-Tucson</b>		32		40	62.2	12.9	35
<b>Peregrine</b>		40	42	40	62.2	11.7	40
<b>Accipiter</b>		35	41	40	62.2	11.7	36
<i>UI Silver</i>		36	40	40	<b>62.9</b>	13.2	37
<i>IDO835</i>				37	61.4	11.6	34
<i>OR2080111H</i>				37	59.8	12.7	33
<b>Norwest 553</b>	29		35	36	62.2	13.9	32
<b>Eddy</b>	31		33	36	62.0	12.2	34
<i>UICF-Grace</i>		32	34	36	60.7	13.2	41
<b>Azimut</b>				36	60.6	12.5	31
<b>Genesis</b>				36	60.2	12.8	30
<i>OR2080156H</i>			34	34	60.8	13.1	34
<b>Altigo</b>				29	58.5	11.8	31
<b>Esperia</b>		19	22	28	60.9	13.6	32
<b>Hatton</b>	31	29	32	23	60.4	11.9	37
<b>C.V. %</b>	13	13	11	12	0.6	3.2	4
<b>LSD (.10)</b>	2	3	3	5	0.4	0.4	2
<b>Average</b>	35	36	41	42	61.3	12.5	36
<b>Highest</b>	43	47	56	59	62.9	14.2	41
<b>Lowest</b>	29	19	22	23	58.5	11.0	30

### Lind Hard Winter Wheat

1. Grain yield in the Lind hard winter wheat trial averaged 42 bushels/acre, 7 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. 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 3 September, 2010 following summer 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 fall applied and a spring soil test analysis showed 160# N/ac available in the top 4 feet and that was a more than adequate N supply for hard protein levels at projected yield levels. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 23 to 59 bu/ac. Farnum was the highest yielding named variety 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 30 entries. Farnum was the top yielding entry across five years of results. There was a relatively low level of stripe rust at this location and no fungicide was applied. Stripe rust impact on crop performance was low. The C.V. for this trial was 12 and is lower than in most previous years.
4. Test weights were very good with an average of 61.3 lbs/bu, and ranged from 58.5 to 62.9 lbs/bu. Grain protein averaged 12.5% with a range of 11.0% to 14.2%. Protein overall was lower than predicted because of high yield levels. Plant height averaged 36 inches with no lodging.



**Table 56.2011 WSU Variety Testing Hard Winter Irrigated Wheat Trial, Moses Lake**

Variety Name <i>*Hard White Italized</i> #Soft White	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
WA 8118				212	63.3	13.5	39	148	0
WA 8120				208	58.9	12.7	41	152	0
# WA 8115				207	61.6	11.6	32	149	0
WA 8139				206	62.7	13.2	43	151	10
# YS29				206	63.2	11.5	34	152	0
# Stephens	178	186	182	203	62.1	11.5	34	151	0
# LCS-Artdeco (NSA06-2153A)				200	60.7	11.1	32	152	0
WB-Arrowhead			195	199	62.6	12.6	35	150	0
Altigo				199	59.0	12.0	31	151	0
# WA 8147				196	62.8	11.8	43	150	20
Whetstone	179	186	182	195	63.1	13.1	35	149	0
OR2080156H			180	193	62.9	12.5	36	153	0
# YS18				193	59.8	12.0	34	154	0
Eddy	169	176	178	192	63.6	12.8	35	150	0
WA 8140				192	62.9	13.6	42	150	0
# YS20				192	60.5	11.3	39	154	0
WB-Tucson	182	187	184	191	63.7	12.7	36	152	0
Azimut				190	58.9	12.4	31	150	0
Genesis				190	62.0	12.4	32	149	0
Accipiter		177	170	189	62.8	11.9	37	154	0
OR2080111H				189	61.1	12.5	34	150	0
Norwest 553	162	165	172	188	62.5	12.9	32	151	0
# YS27				186	61.3	11.6	35	154	0
Tyche				185	61.3	11.6	31	152	0
WA 8146				184	61.6	11.9	33	152	0
UI Silver			174	182	62.6	12.1	39	154	7
Bauermeister	156	156	154	179	60.7	12.7	40	154	43
UICF-Grace	157	173	163	179	62.7	13.5	47	154	0
Sunrise		159	148	179	60.1	11.7	42	152	0
UI Winchester			140	172	64.3	14.5	34	149	0
Esperia		173	173	171	60.5	13.3	31	149	0
Declo	143	147	142	171	62.4	12.8	32	152	0
AgriPro Paladin	158	163	162	170	62.5	12.6	34	153	0
Boundary	161	165	156	162	62.4	12.8	36	154	0
Bora				159	63.2	13.2	30	149	0
Peregrine		155	146	141	63.6	12.4	43	154	0
C.V. %	6	6	7	5	0.7	1.6	4	1	259
LSD (.10)	5	7	9	10	0.5	0.2	1	1	6
Average	165	169	167	188	61.9	12.5	36	152	2
Highest	182	187	195	212	64.3	14.5	47	154	43
Lowest	143	147	140	141	58.9	11.1	30	148	0

### Moses Lake Irrigated Hard Winter Wheat

1. Grain yield in the Moses Lake Irrigated hard winter wheat trial averaged 188 bushels/acre, 23 bushels/acre higher than the 5-year average. The Moses Lake nursery was located about two miles southeast of Quincy, WA (Jerry Heilig, cooperator).
2. This nursery was seeded on 26 October, 2010 following potatoes. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 30#N/acre applied through irrigation. Based on a spring soil test, an additional 200#N/acre was applied for hard wheat protein based on expected yields.
3. Yields ranged from 141 to 212 bu/ac. Stephens (a soft white check) 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 6 of the 36 entries. WB-Tucson was the top yielding hard entry across five years of results at this location. There was moderate stripe rust potential at this location and fungicides were applied twice with good effect. There was no estimated yield loss due to stripe rust.
4. Test weights were very good and averaged 61.9 lbs/bu, and ranged from 58.9 to 64.3 lbs/bu. Grain protein averaged 12.5% with a range of 11.1 to 14.5%. Plant height averaged 36 inches with minor lodging on a few entries.

**Table 57. 2011 WSU Variety Testing Hard Winter Wheat Trial, Pullman**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>WB-Arrowhead</b>				<b>190</b>	63.5	12.6	45	173
<b>WA 8119</b>			156	<b>186</b>	57.9	12.2	48	177
<b>WA 8120</b>			148	<b>177</b>	59.3	12.1	48	177
<b>IDO656</b>				<b>174</b>	62.9	12.5	51	175
<b>Altigo</b>				169	59.8	12.0	37	171
<b>Norwest 553</b>	135	140	145	167	63.7	12.2	38	172
<i>MDM</i>	135	138	131	167	61.2	11.7	45	176
<i>UI Silver</i>		143	149	167	63.8	10.9	48	176
<b>WA 8118</b>			132	167	63.7	13.7	49	168
<i>OR2080156H</i>			144	165	63.0	12.3	43	175
<i>OR2080111H</i>				163	61.5	12.0	41	172
<b>Eltan (SWW Check)</b>	138	136	130	161	60.5	11.1	46	182
<b>Whetstone</b>	125	129	136	161	63.7	12.3	43	171
<b>Genesis</b>				161	62.7	12.2	39	170
<b>Azimut</b>				157	58.6	12.2	36	170
<b>Peregrine</b>		123	129	156	64.2	11.4	54	173
<b>Boundary</b>	132	134	138	155	62.8	11.7	44	174
<i>WA 8096</i>		127	123	155	60.4	12.0	45	180
<b>Bauermeister</b>	134	128	123	153	60.7	12.2	47	179
<b>Finley</b>	120	122	126	152	<b>64.9</b>	12.6	54	175
<b>WA 8070</b>		128	126	150	63.0	12.1	54	181
<b>WB-Tucson</b>		132		143	64.0	11.8	44	174
<b>Eddy</b>	110	114	114	137	63.6	11.8	43	173
<i>UICF-Grace</i>		123	122	137	63.3	12.3	57	175
<b>AgriPro Paladin</b>	111	106	109	135	62.6	12.4	40	173
<i>IDO835</i>				135	61.9	10.3	48	177
<b>Accipiter</b>		121	118	130	63.2	11.5	45	175
<b>Farnum</b>	103	113	109	129	61.5	13.4	56	183
<b>Esperia</b>		123	132	129	63.0	12.8	36	168
<b>Hatton</b>	102	94	92	118	<b>65.0</b>	11.7	53	177
<b>C.V. %</b>	9	9	10	9	0.6	2.8	4	1
<b>LSD (.10)</b>	5	7	10	16	0.4	0.4	2	1
<b>Average</b>	122	125	129	155	62.3	12.1	46	175
<b>Highest</b>	138	143	156	190	65.0	13.7	57	183
<b>Lowest</b>	102	94	92	118	57.9	10.3	36	168

### Pullman Hard Winter Wheat

1. Grain yield in the Pullman hard winter wheat trial averaged 155 bushels/acre, 33 bushels/acre higher than the 5-year average. The Pullman nursery was located about nine miles west of Pullman, WA (N. Druffel, cooperator).
2. This nursery was seeded on 20 October, 2010 following chickpeas. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 120#N/acre fall applied. A spring soil test showed 279#N/acre available and an additional 24#N/acre was applied for hard wheat protein based on expected yields.
3. Yields ranged from 118 to 190 bu/ac. 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 4 of the 30 entries. The hard white MDM and Norwest 553 were the top yielding hard entries across five years of results at this location. Stripe rust potential was very high at this location and fungicide was applied three times: mid-April, May 30, and early June. Fungicide applications were effective, but there was some stripe rust impact at this location with up to an estimated 20% yield loss in susceptible varieties.
4. Test weights were very good with an average of 62.3 lbs/bu, and ranged from 57.9 to 65.0 lbs/bu. Grain protein averaged 12.1% with a range of 10.3 to 13.7%. Plant height averaged 46 inches with no lodging.

**Table 58. 2011 WSU Variety Testing Hard Winter Wheat Trial, Reardan**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<b>WA 8120</b>			160	<b>164</b>	60.6	11.1	46	173	20
<b>WA 8119</b>			156	<b>159</b>	59.4	12.0	48	174	17
<b>IDO656</b>				151	62.1	12.7	50	172	25
<i>OR2080111H</i>				144	60.6	11.8	41	169	0
<b>Whetstone</b>	94	109	122	143	63.1	11.6	44	168	0
<b>Altigo</b>				143	58.5	11.8	38	169	0
<b>Eltan (SWW Check)</b>	103	117	139	140	61.6	11.1	44	176	8
<i>WA 8096</i>		119	139	140	60.3	11.5	45	176	18
<b>WB-Arrowhead</b>				140	62.8	12.7	48	171	0
<b>Genesis</b>				139	61.8	13.0	41	168	0
<b>Azimut</b>				135	58.4	11.9	37	169	0
<b>WA 8070</b>		110	125	132	63.4	10.8	55	174	17
<i>UI Silver</i>		115	134	131	63.4	10.6	46	171	27
<b>WB-Tucson</b>		103		126	63.8	11.2	43	170	0
<b>Esperia</b>		98	109	123	62.0	12.4	41	168	10
<b>Bauermeister</b>	99	111	126	120	61.7	10.6	44	176	25
<i>OR2080156H</i>			119	119	61.7	11.5	43	173	0
<b>Norwest 553</b>	94	105	117	118	61.4	11.8	39	168	0
<b>WA 8118</b>			111	115	62.4	13.8	53	168	72
<i>IDO835</i>				113	62.8	10.2	43	173	7
<i>MDM</i>	106	118	131	112	61.6	10.3	44	175	7
<b>Boundary</b>	105	115	130	110	62.2	11.7	43	171	3
<b>Finley</b>	90	100	114	108	64.0	12.9	55	171	88
<b>Farnum</b>	90	98	111	108	62.0	13.5	57	174	87
<b>AgriPro Paladin</b>	88	100	115	108	61.7	11.3	40	170	0
<b>Eddy</b>	92	104	117	107	62.9	11.7	45	169	2
<b>Peregrine</b>		105	120	106	63.5	10.9	54	170	23
<b>Accipiter</b>		106	123	106	63.1	11.3	46	174	0
<i>UICF-Grace</i>		93	104	100	62.3	12.1	57	170	13
<b>Hatton</b>	84	89	96	78	<b>65.5</b>	12.2	53	176	17
<b>C.V. %</b>	8	8	8	9	0.8	6.8	3	1	115
<b>LSD (.10)</b>	4	6	7	12	0.6	0.9	2	1	20
<b>Average</b>	95	106	124	125	62.0	11.7	46	172	16
<b>Highest</b>	106	119	160	164	65.5	13.8	57	176	88
<b>Lowest</b>	84	89	96	78	58.4	10.2	37	168	0

### Reardan Hard Winter Wheat

1. Grain yield in the Reardan hard winter wheat trial averaged 125 bushels/acre, 30 bushels/acre higher than the 5-year average. The Reardan nursery was located about six miles west of Reardan, WA (Hal Johnson, cooperator).
2. This nursery was seeded on 21 September, 2010 following fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. Base fertilizer was 80#N/acre fall applied. A spring soil test showed 260#N/acre available and no additional N was applied for hard wheat protein based on expected yields.
3. Yields ranged from 78 to 164 bu/ac. Whetstone 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 2 of the 30 entries. The hard white MDM and Boundary were the top yielding hard entries across five years of results at this location. There was stripe rust at this location and a fungicide was applied to the surrounding field via aircraft in early July with an undetermined amount on the plot area. It appears that there was not high rust impact on yield at this location.
4. Test weights were very good with an average of 62.0 lbs/bu, and ranged from 58.4 to 65.5 lbs/bu. Grain protein averaged 11.7% with a range of 10.2 to 13.8%. Plant height averaged 46 inches and lodging ranged from 0 to 88%.

**Table 59. 2011 WSU Variety Testing Hard Winter Wheat Trial, Ritzville**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Genesis</b>				<b>87</b>	60.8	11.0	34	179
<b>Altigo</b>				<b>83</b>	56.2	9.7	36	180
<i>OR2080111H</i>				<b>83</b>	59.3	10.4	37	178
<b>Azimut</b>				<b>80</b>	56.3	10.7	34	180
<b>Norwest 553</b>	46	57	64	<b>79</b>	60.2	10.4	33	179
<b>Eltan (SWW Check)</b>	60	72	73	78	58.6	10.3	39	184
<b>WA 8119</b>			75	78	58.9	9.9	40	183
<b>WA 8120</b>			77	77	59.9	9.2	39	183
<b>Boundary</b>	52	60	65	74	60.8	9.6	39	181
<i>OR2080156H</i>			58	74	59.7	11.1	37	184
<i>MDM</i>	53	65	67	72	61.7	7.3	39	184
<b>Accipiter</b>		59	63	72	<b>62.7</b>	9.8	41	184
<i>WA 8096</i>		64	66	71	56.8	10.8	41	185
<i>UI Silver</i>		63	62	71	60.4	9.7	39	182
<b>IDO656</b>				70	60.8	10.7	45	183
<i>IDO835</i>				70	61.0	9.3	39	183
<b>Whetstone</b>	45	57	58	69	59.3	11.6	38	178
<b>Esperia</b>		46	44	69	61.5	10.3	33	179
<b>WB-Arrowhead</b>				69	61.3	10.9	43	182
<b>AgriPro Paladin</b>	46	54	56	68	<b>62.4</b>	11.7	38	179
<b>Bauermeister</b>	52	61	63	63	59.7	9.8	40	185
<b>WB-Tucson</b>		60		63	<b>62.7</b>	11.0	38	180
<b>Farnum</b>	51	61	62	62	58.6	11.5	42	184
<b>WA 8070</b>		59	58	61	60.2	10.7	43	183
<b>Peregrine</b>		60	62	60	60.6	12.0	43	183
<b>Hatton</b>	47	54	53	58	<b>63.6</b>	9.5	43	184
<b>Eddy</b>	43	49	49	57	62.3	11.4	37	179
<b>WA 8118</b>			51	57	59.5	11.8	41	178
<i>UICF-Grace</i>		50	49	56	58.4	11.2	47	181
<b>Finley</b>	47	55	54	55	62.2	10.5	44	181
<b>C.V. %</b>	11	11	10	11	1.9	12.8	3	0
<b>LSD (.10)</b>	3	4	5	8	1.2	1.4	1	1
<b>Average</b>	49	58	60	69	60.2	10.5	39	182
<b>Highest</b>	60	72	77	87	63.6	12.0	47	185
<b>Lowest</b>	43	46	44	55	56.2	7.3	33	178

### Ritzville Hard Winter Wheat

1. Grain yield in the Ritzville hard winter wheat trial averaged 69 bushels/acre, 20 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The Ritzville nursery was located about four miles west of Ritzville, WA (R. Jirava farm).
2. This nursery was seeded on 3 September, 2010 following summer 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 fall applied and a spring soil test analysis showed an adequate N supply for hard protein levels at projected, historic yield levels. Fall seeding conditions were favorable and emergence and stand establishment were good.
3. Yields ranged from 55 to 87 bu/ac. Genesis 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 30 entries. The cool and wet spring conditions along with local inoculum sources created early, high levels of stripe rust potential at this location. Fungicide was applied April 30 and again May 30 and controlled stripe rust across the trial.
4. Test weights were good with an average of 60.2 lbs/bu, and ranged from 56.2 to 63.6 lbs/bu. Grain protein averaged 10.5% but was highly variable across the trial with a range of 7.3 to 12.0%. Protein overall was lower than predicted because yield levels exceeded expectations by over 50%. Plant height averaged 39 inches with no lodging.



**Table 60. 2011 WSU Variety Testing Hard Winter Wheat Trial, St. Andrews**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>WA 8119</b>			72	<b>72</b>	61.0	9.0	44	167
<b>WA 8120</b>			69	<b>72</b>	61.1	9.4	41	167
<b>IDO656</b>				<b>70</b>	63.0	10.0	48	165
<i>WA 8096</i>		47	61	<b>67</b>	61.5	7.1	43	169
<b>Bauermeister</b>	49	51	62	<b>65</b>	61.4	7.9	44	169
<b>Boundary</b>	51	50	62	<b>64</b>	61.8	9.3	42	165
<b>Farnum</b>	49	50	60	61	61.1	9.2	50	170
<b>WA 8070</b>		46	56	60	62.4	9.9	48	170
<i>UI Silver</i>		51	62	60	63.4	9.5	42	165
<b>WB-Arrowhead</b>				60	62.8	9.8	43	164
<i>MDM</i>	47	45	56	59	61.4	7.6	42	171
<b>Eltan (SWW Check)</b>	47	46	56	58	59.9	8.7	41	168
<b>Eddy</b>	39	41	53	58	63.5	9.7	40	162
<b>Peregrine</b>		50	59	58	63.0	9.3	49	163
<b>Finley</b>	46	45	55	57	63.9	10.0	51	163
<b>Norwest 553</b>	32	37	39	57	62.2	10.4	34	163
<i>IDO835</i>				57	62.3	8.3	42	165
<b>WA 8118</b>			54	55	61.9	10.1	46	162
<i>OR2080156H</i>			40	55	61.9	10.7	38	167
<b>Azimut</b>				55	59.6	11.5	34	163
<i>OR2080111H</i>				53	60.6	8.5	38	163
<b>AgriPro Paladin</b>	37	37	45	52	63.1	10.8	39	163
<b>WB-Tucson</b>		40		51	63.8	11.1	39	163
<b>Accipiter</b>		47	51	51	62.7	9.7	41	167
<b>Esperia</b>		35	43	49	62.5	10.8	36	162
<b>Hatton</b>	42	44	52	48	<b>64.4</b>	10.2	48	167
<b>Whetstone</b>	37	37	42	46	63.0	11.0	37	162
<b>Genesis</b>				43	62.0	11.4	35	162
<b>Altigo</b>				40	58.6	11.2	36	163
<i>UICF-Grace</i>		38	43	38	61.4	10.1	50	161
<b>C.V. %</b>	16	16	16	16	0.7	9.5	5	1
<b>LSD (.10)</b>	3	4	6	10	0.4	1.0	2	1
<b>Average</b>	43	44	54	56	62.0	9.7	42	165
<b>Highest</b>	51	51	72	72	64.4	11.5	51	171
<b>Lowest</b>	32	35	39	38	58.6	7.1	34	161

### St. Andrews Hard Winter Wheat

1. Grain yield in the St. Andrews hard winter wheat trial averaged 56 bushels/acre, 13 bushels/acre higher than the 5-year average. Higher yields were enabled by favorable spring precipitation and temperatures. The St. Andrews nursery was located about seven miles west of Coulee City, WA (L. Tannenberg, cooperator).
2. This nursery was seeded on 1 September, 2010 following summer fallow. Seed was placed at a 45#/acre seeding rate using a deep furrow plot drill set on 15-inch spacing. Base fertilizer was 90#N/acre fall applied, and a spring soil test analysis showed 109#N/acre available which was an adequate N supply for hard protein levels at projected, historic yield levels. Fall seeding conditions were favorable and emergence and stand establishment were good. There were minor levels of snow mold over winter.
3. Yields ranged from 38 to 72 bu/ac. Bauermeister 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 6 of the 30 entries. This large grouping within the top LSD value is due to a relatively narrow yield range and high variability at this site, although the C.V. is lower than average historical values. There was a low level of stripe rust potential at this location and no fungicide was applied.
4. Test weights were very good with an average of 62.0 lbs/bu, and ranged from 58.6 to 64.4 lbs/bu. Grain protein was low and averaged 9.7% due to higher than projected yields with a range of 7.1 to 11.5%. Plant height averaged 42 inches with no lodging.

**Table 61. 2011 WSU Variety Testing Hard Winter Wheat Trial, Walla Walla**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<b>Azimut</b>	--			<b>166</b>	59.1	11.7	38	147	52
<b>Altigo</b>	--			150	59.2	11.9	39	150	25
<i>OR2080156H</i>	--		134	148	60.9	11.3	41	148	52
<i>OR2080111H</i>	--			145	60.1	11.9	40	148	91
<b>Norwest 553</b>	--	137	139	139	<b>61.8</b>	12.7	37	151	53
<b>Genesis</b>	--			132	61.2	13.3	39	145	98
<b>WA 8119</b>	--		97	125	59.7	11.5	42	154	93
<i>WA 8096</i>	--	95	86	116	58.3	10.8	44	157	95
<b>WA 8120</b>	--		101	116	59.1	11.5	43	154	92
<b>Boundary</b>	--	104	101	113	61.1	11.5	43	151	98
<b>AgriPro Paladin</b>	--	113	109	113	60.5	12.3	42	150	93
<b>Eltan (SWW Check)</b>	--	88	80	103	58.0	11.9	42	157	99
<b>Whetstone</b>	--	101	89	99	59.6	13.6	43	147	95
<b>WB-Tucson</b>	--	112		97	61.4	12.4	43	151	99
<b>Bauermeister</b>	--	92	84	96	59.8	11.7	42	155	98
<b>WB-Arrowhead</b>	--			96	58.9	13.0	42	152	98
<b>IDO656</b>	--			95	58.4	12.7	45	152	96
<b>WA 8118</b>	--		83	93	61.1	12.9	46	144	98
<i>MDM</i>	--	84	74	92	59.4	10.1	43	156	98
<i>IDO835</i>	--			92	59.8	11.9	41	154	99
<b>WA 8070</b>	--	86	78	90	61.1	11.4	44	157	93
<i>UI Silver</i>	--	95	86	90	58.1	13.0	45	153	99
<b>Esperia</b>	--	98	81	84	59.4	13.7	38	145	99
<b>Peregrine</b>	--	86	76	83	61.2	11.5	43	150	90
<b>Eddy</b>	--	94	80	82	<b>61.5</b>	11.9	42	150	96
<b>Accipiter</b>	--	94	82	82	60.3	11.3	42	152	94
<i>UICF-Grace</i>	--	79	73	80	58.9	13.3	47	153	99
<b>Finley</b>	--	69	67	77	<b>62.4</b>	12.6	51	153	99
<b>Farnum</b>	--	66	55	68	59.0	13.9	44	160	94
<b>Hatton</b>	--	62	49	51	59.2	12.2	43	155	99
<b>C.V. %</b>	--	13	16	12	1.5	6.4	8	1	15
<b>LSD (.10)</b>	--	8	11	13	0.9	0.8	4	2	14
<b>Average</b>	--	92	87	104	60.0	12.2	42	152	89
<b>Highest</b>	--	137	139	166	62.4	13.9	51	160	99
<b>Lowest</b>	--	62	49	51	58.0	10.1	37	144	25

### Walla Walla Hard Winter Wheat

1. Grain yield in the Walla Walla hard winter wheat trial averaged 104 bushels/acre, 12 bushels/acre higher than the 3-year average. The Walla Walla nursery was located about seven miles north of Walla Walla, WA (Tom and Jason Beechinor, cooperators).
2. This nursery was seeded on 28 September, 2010 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Fall seeding conditions were favorable and emergence and stand establishment were good. A spring soil test showed 156#N/acre available and an additional 136#N/acre was applied in the spring to supply adequate N for hard wheat protein based on expected yields.
3. Yields ranged from 51 to 166 bu/ac. Azimut 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 1 of the 30 entries. Stripe rust potential was very high at this location with early infection and season long pressure. Fungicide was applied once June 16 to the trial. Stripe rust impact on yield is estimated to be 20% or more for susceptible entries. There was a high level of lodging in this trial and it influenced yields and increased variability.
4. Test weights were good with an average of 60.0 lbs/bu, and ranged from 58.0 to 62.4 lbs/bu. Grain protein averaged 12.2% with a range of 10.1 to 13.9%. Plant height averaged 42 inches, and lodging was severe for most varieties averaging 89% across the trials with a range of 25 to 99%.

**Table 62.**

**STRIPE RUST INFECTION TYPE (IT\*) AND SEVERITY (%) ON CULTIVARS AND LINES IN THE WINTER VARIETY TRIALNURSERY (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 2011 UNDER NATURAL INFECTION**

Variety	Class	Spillman Farm (Pullman)	Plant Path Farm (Pullman)	Whitlow Farm (Pullman)	Mt. Vernon		Walla Walla	Lind	Reaction Type
		LOC 1	LOC 3	LOC 4	LOC 5		LOC 6	LOC 7	
		6/23	6/22	6/24	5/10	6/4	6/10	6/16	
		Heading IT %	Heading IT %	Heading IT %	Stem elong. IT %	Boot IT %	Flowering IT %	Soft dough IT %	
FINLEY	HRW	2 5	2 20	2 5	2 10	3 20	2 5	5 20	MR
HATTON	HRW	8 100	8 90	8 100	8 80	8 80	5 30	8 90	S
BAUERMEISTER	HRW	5 20	5 30	5 30	2 10	3 20	5 40	5 50	MR
WA008118	HRW	2 5	2 10	2 5	2 10	2 1	3 10	2 5	R
WA008119	HRW	2 10	2 5	2 10	2 5	2 5	2 5	2 5	R
WA008120	HRW	2 10	2 5	2 20	2 10	2 10	2 10	3 5	R
WA008070	HRW	2 5	2 5	2 5	2 5	3 20	2 5	3 5	R
FARNUM	HRW	2 2	2 2	2 5	2 5	2 5	2 5	3 5	R
BOUNDARY	HRW	8 90	3 30	5 50	5 20	2 1	5 30	8 80	MS
IDO656	HRW	2 5	2 5	2 2	2 5	5 50	2 10	3 10	MR
NORWEST 553	HRW	2 2	2 2	2 2	2 10	2 20	2 10	2 5	R
EDDY	HRW	8 90	8 80	8 90	3 20	2 1	8 70	8 60	S
WB-TUCSON	HRW	8 90	8 90	8 100	8 30	3 20	8 80	8 50	S
ML9W05-2501	HRW	2 1	2 2	2 2	2 10	3 15	2 5	3 5	R
AGRIPRO PALADIN	HRW	5 40	3 10	8 30	5 30	3 10	8 60	8 80	S
WHETSTONE	HRW	3 20	2 5	3 40	3 20	8 80	5 30	5 30	S
PEREGRINE	HRW	8 90	2 10	5 20	3 20	8 60	5 20	5 40	S
<b>PS 279</b>		<b>8 100</b>	<b>8 100</b>	<b>8 90</b>	<b>8 80</b>	<b>8 80</b>	<b>8 80</b>	<b>8 90</b>	<b>S</b>
ACCIPITER	HRW	8 70	5 40	8 80	8 60	3 10	5 50	8 80	S
ESPERIA	HRW	8 80	8 60	8 70	5 30	3 10	5 60	5 40	S
GENESI	HRW	5 40	5 40	5 30	3 20	2 1	3 30	5 30	MR
ALTIGO	HRW	5 30	3 10	2 20	3 10	2 10	3 40	5 20	MR
AZIMUT	HRW	2 5	2 5	2 5	2 5	2 10	2 20	2 5	R
MDM	HWW	5 30	5 10	5 30	2 10	5 20	3 30	5 30	MR
WA008096	HWW	3 20	2 10	5 20	2 10	3 20	3 20	3 10	R
IDO835	HWW	8 80	5 40	8 80	8 60	2 10	8 40	5 40	S
UICF GRACE	HWW	5 40	3 40	5 50	3 10	2 10	5 30	5 20	MR
UI SILVER	HWW	2 10	2 5	2 5	2 10	5 20	2 5	5 20	MR
OR2080156H	HWW	5 40	2 8 20	2 10	3 10	3 5	2 10	3 10	MR
OR2080111H	HWW	5 20	2 10	2 10	2 10	8 80	2 10	3 10	S
ELTAN	SWW	5 30	5 10	5 20	2 10	5 20	5 10	5 40	MR
BORA		8 90	- -	8 90	- -	- -	8 60	- -	S
TYCHE		8 90	- -	8 90	- -	- -	8 50	- -	S
<b>PS 279</b>		<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 80</b>	<b>8 80</b>	<b>8 70</b>	<b>8 100</b>	<b>S</b>
<b>PS 279</b>		<b>8 100</b>	<b>8 100</b>	<b>8 100</b>	<b>8 80</b>	<b>8 80</b>	<b>8 70</b>	<b>8 100</b>	<b>S</b>

\* 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 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

**Table 63.**

**STRIPE RUST INFECTION TYPE (IT) ON ENTRIES IN 2011 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 <sup>a</sup>														HTAP resistance
		Seedling test (4-20°C) <sup>b</sup>					Adult-plant test (10-30°C) <sup>b</sup>									
		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		
FINLEY	HRW	2	2	2	8	8	1,1,3	1,1,3	1,1,3	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	8,8,8	No
HATTON	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
BAUERMEISTER	HRW	7	8	8	7	8	3,3,3	2,3,3	3,3,3	3,3,3	3,3,3	3,3,3	3,3,3	3,3,3	3,3,3	Low
WA008118	HRW	5	5	5	6	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	3,3,3	2,3,5	3,3,8	Low
WA008119	HRW	2	2	2	2	5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,2,2	1,1,1	1,1,1	High
WA008120	HRW	3	2	2	2	5	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,2,2	2,2,2	2,2,2	High
WA008070	HRW	8	7	5	5	8	1,1,1	2,2,2	1,1,1	1,1,1	1,1,2	1,1,1	1,1,1	1,1,1	1,1,1	High
FARNUM	HRW	8	5	8	8	8	1,1,1	1,1,2	1,1,1	1,1,1	2,2,2	2,2,3	2,3,3	2,2,2	2,2,2	Moderate
BOUNDARY	HRW	8	8	8	8	8	2,2,3	2,2,3	2,2,3	3,3,4	3,3,3	3,3,3	3,3,3	3,3,3	3,3,3	Low
IDO656	HRW	2	2	2	8	2	1,1,1	1,1,1	1,1,1	3,3,3	3,3,3	3,3,3	1,1,1	1,1,1	1,1,1	Low
NORWEST 553	HRW	7	6	7	5	8	1,1,1	1,1,1	1,1,1	1,1,2	1,1,1	1,1,1	3,3,3	2,2,3	2,2,3	Moderate
EDDY	HRW	7	8	8	8	8	2,2,2	2,2,2	2,2,2	3,3,3	2,2,2	3,3,3	3,3,3	3,3,3	3,3,3	Low
WB-TUCSON	HRW	8	8	8	8	8	1,1,1	1,1,1	1,1,1	2,2,3	2,2,3	2,2,2	5,5,5	3,3,3	5,5,5	Low
ML9W05-2501	HRW	2	1	2	8	2	1,1,1	1,1,1	1,1,2	3,3,3	3,3,3	3,3,3	1,1,1	1,1,1	1,1,1	Low
AGRIPRO PALADIN	HRW	8	8	8	8	8	2,2,2	2,2,2	2,2,3	2,2,2	2,3,3	2,2,3	3,3,3	3,5,5	3,5,5	Low
WHETSTONE	HRW	8	2,8	8	8	8	1,1,1	1,1,1	1,1,1	1,2,2	1,1,2	1,1,2	3,3,3	3,4,3	3,3,3	Low
PEREGRINE	HRW	8	5	8	8	8	1,1,1	1,1,3	1,1,1	1,1,1	2,2,3	1,1,1	3,3,3	3,3,5	5,5,5	Low
PS 279		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
ACCIPITER	HRW	8	8	8	8	8	3,3,3	2,3,3	3,3,3	2,2,2	2,2,2	2,2,3	3,3,3	3,3,3	3,3,3	Low
ESPERIA	HRW	8	8	8	8	3	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	5	5	8	1,1,1	1,1,1	2,1,1	1,1,1	1,1,1	3,3,3	3,3,3	2,3,3	3,3,3	Low
ALTIGO	HRW	5	3	8	2,8(1)	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,2	2,2,2	3,3,3	3,3,3	3,3,3	Low
AZIMUT	HRW	2	2,8(1)	2	2	2-3	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	Unknown
MDM	HWW	6	7	7	7	7	2,2,2	2,2,2	2,2,2	2,2,3	3,3,3	3,3,3	3,3,3	3,3,3	3,3,3	Low
WA008096	HWW	5	2	5	5	8	2,2,2	2,2,2	2,2,2	1,1,1	1,1,1	1,1,1	2,2,3	2,2,2	2,2,3	Moderate
IDO835	HWW	8	8	8	8	8	3,3,4	4,3,3	3,3,3	5,5,5	5,5,5	4,4,5	8,8,8	8,8,8	8,8,8	No
UICF GRACE	HWW	8	8	8	8	8	2,3,3	3,3,3	2,2,3	3,3,3	3,3,3	3,3,4	5,5,5	5,5,5	5,5,5	Low
UI SILVER	HWW	2	2,8(1)	2	8	5	1,1,1	1,1,1	1,1,1	2,2,2	3,3,3	2,3,3	2,2,2	2,2,2	2,2,2	Moderate
OR2080156H	HWW	8	8	5	8	8	1,1,1	1,1,1	2,2,3	2,2,2	2,2,2	2,2,2	3,3,3	2,2,2	2,2,2	Moderate
OR2080111H	HWW	5	8	5	3	8	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	1,1,1	2,2,2	2,2,2	2,2,2	High
ELTAN	SWW	7	8	8	8	8	2,2,2	2,2,3	2,3,2	3,3,3	3,3,3	3,3,3	3,3,3	2,2,2	3,3,3	Moderate
BORA		3	5	8	8	8	1,1,1	1,1,2	1,1,1	1,1,1	1,1,1	1,1,1	8,8,8	8,8,8	8,8,8	No
TYCHE		2	7	8	2,8	8	3,3,3	3,3,3	3,3,3	2,2,2	2,2,2	2,2,2	8,8,8	8,8,8	8,8,8	No
PS 279		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
PS 279		8	8	8	8	8										

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

<sup>b</sup> 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.

<sup>c</sup> 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.



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**2011 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 59 bushels/acre; that is 11 bushels/acre less than the average in the 16-20" zone and 9 bushels/acre less than the 2010 average of 68 bushels/acre. The C.V. for the average data is 8, similar to the 2010 C.V. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 47 to 69 bu/ac. Louise-G2 was the highest yielding entry averaged across locations. The Louise-G2 is a 2 oz/100lb of seed treatment of Gaucho. This treatment targets wire worms that may be causing yield losses and appears to be effective at some sites. Average yield values within the 10% LSD range (3 bushels/acre) of the highest yield are shown in bold and this included 4 of the 24 entries. Stripe rust significantly reduced yields at these locations and influenced yield rankings based on susceptibility. No fungicide applications were made on these trials and stripe rust yield impacts in percent are: 10% impact at Farmington, 25% at Fairfield, and 25% at Pullman.
3. Test weight averaged 61.3 lbs/bu across locations and entries and was higher than last year's 58.1 lbs/bu average. Grain protein averaged 9.2% and was lower than last year's 11.6% protein value.

**2011 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 70 bushels/acre; that is 11 bushels/acre higher than the average in the >20" zone and 10 bushels/acre higher than the 2010 average of 60 bushels/acre. The C.V. for the average data is 7, lower than the 2010 C.V. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 57 to 80 bu/ac. Louise-G2 was the highest yielding entry averaged across locations. The Louise-G2 is a 2 oz/100lb of seed treatment of Gaucho. This treatment targets wire worms that may be causing yield losses and appears to be effective at the St. John site. 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 a factor at all locations and influenced yield rankings based on susceptibility. The number of fungicide applications made on these trials and stripe rust yield impacts in percent are: 2 applications and 10% impact at Dayton, two and minimal at Mayview, none and 25% at Reardan, none and 25% at St. John, and 2 and minimal at Walla Walla.
3. Test weight averaged 61.6 lbs/bu across locations and entries and was higher than last year's 56.3 lbs/bu average. Grain protein averaged 11.0% and was lower than last year's 12.4% protein value.

**2011 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 65 bushels/acre and is 5 bushels/acre higher than the 2010 average of 60 bushels/acre. The C.V. for the average data is 9, lower than the 2010 C.V. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 54 to 74 bu/ac. Louise-G2 was the highest yielding entry averaged across locations. The Louise-G2 is a 2 oz/100lb of seed treatment of Gaucho. This treatment targets wire worms that may be causing yield losses and appears to be effective at the Almira and Endicott sites. Average yield values within the 10% LSD range (4 bushels/acre) of the highest yield are shown in bold and this included 5 of the 24 entries. Stripe rust was a factor at all locations and influenced yield rankings based on susceptibility. There were no fungicide applications made on these trials and stripe rust yield impacts in percent are: 20% impact at Almira, 10% at Endicott, and 20% at Lamont.
3. Test weight averaged 61.5 lbs/bu across locations and entries and was higher than last year's 58.1 lbs/bu average. Grain protein averaged 10.1% and was lower than last year's 13.0% protein value.

**2011 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 31 bushels/acre and is 10 bushels/acre lower than the 2010 average of 41 bushels/acre. The C.V. for the average data is 13, higher than the 2010 C.V.
2. Yields among entries averaged across locations ranged from 26 to 37 bu/ac. JD was the highest yielding entry averaged across locations. Average yield values within the 10% LSD range (2 bushels/acre) of the highest yield are shown in bold and this included 4 of the 24 entries. Stripe rust was a factor at most locations and influenced yield rankings based on susceptibility. The only fungicide application made on these trials was one at Connell and stripe rust yield impacts in percent are: minimal impact at Bickleton, minimal at Connell, 20% at Horse Heaven, and 20% at Lind.
3. Test weight averaged 60.7 lbs/bu across locations and entries and was higher than last year's 59.0 lbs/bu average. Grain protein averaged 11.5% and was lower than last year's 12.0% protein value.

Table 64.

# 2011 WSU Variety Testing Soft White Spring Wheat Trial Summary

## Precipitation Zone >20"

Variety Name (Club <i>Italicized</i> )	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average
Yield (Lbs/A)					Test Wt (Lbs/Bu)				Protein (%)			
Louise-G2	59	74	74	<b>69</b>	61.2	61.4	61.6	61.4	9.9	9.5	7.4	8.9
Diva	53	70	77	<b>67</b>	61.8	61.5	62.2	61.9	10.1	9.4	8.7	9.4
Louise	55	74	73	<b>67</b>	61.3	61.5	61.9	61.6	10.1	9.4	8.0	9.2
<i>JD</i>	58	64	79	<b>67</b>	62.7	61.8	62.9	<b>62.5</b>	10.2	9.9	8.1	9.4
Whit	62	66	65	64	60.8	61.1	61.5	61.1	9.4	10.0	7.2	8.9
WA 8124	45	66	75	62	61.2	61.0	62.0	61.4	10.0	9.7	7.1	8.9
Babe	58	67	62	62	60.6	61.5	61.9	61.3	8.9	9.4	8.0	8.8
WA 8128	49	59	76	61	61.9	61.5	63.0	62.2	10.4	10.8	8.4	9.9
WA 8127	47	63	69	60	61.2	61.6	62.4	61.7	10.4	9.9	8.2	9.5
<i>WA 8131</i>	52	61	66	60	61.0	60.3	62.1	61.2	10.7	10.0	8.9	9.9
IDO687	54	55	67	59	61.7	61.7	62.8	62.1	9.5	9.4	7.7	8.9
<i>Eden</i>	45	64	66	59	62.4	61.6	61.8	62.0	10.6	9.8	7.5	9.3
IDO686	48	59	67	58	62.3	62.1	62.6	<b>62.3</b>	9.9	9.6	7.8	9.1
Alturas	52	53	70	58	60.4	60.2	61.7	60.8	9.5	9.2	8.5	9.1
Wakanz	47	60	67	58	59.4	59.9	61.5	60.3	10.6	10.0	8.0	9.6
WA 8150	40	62	68	57	61.5	61.7	62.2	61.8	10.1	10.1	7.4	9.2
IDO671	49	63	61	57	60.7	61.0	61.6	61.1	9.6	8.9	8.0	8.8
IDO644	53	56	63	57	59.7	59.9	60.7	60.1	9.1	9.2	6.9	8.4
Alpowa	45	58	61	55	60.3	61.6	62.6	61.5	9.2	9.0	7.2	8.4
WA 8149	43	55	67	55	59.7	59.7	61.1	60.2	9.6	9.4	7.2	8.7
Zak	44	59	58	54	60.5	60.8	62.0	61.1	10.4	10.1	8.5	9.7
UI-Cataldo	43	54	55	51	60.2	60.3	61.1	60.6	9.9	9.6	8.9	9.5
WB-1035CL2	42	56	45	48	59.6	61.5	61.5	60.8	11.1	10.5	9.6	<b>10.4</b>
Nick	46	51	45	47	60.0	61.4	60.6	60.6	9.5	10.2	7.9	9.2
<b>C.V. %</b>	9	7	8	8	0.6	0.5	0.8	0.6	2.4	4.7	8.1	5.2
<b>LSD (0.10)</b>	5	5	6	3	0.4	0.4	0.5	0.2	0.2	0.5	0.7	0.3
<b>Average</b>	50	61	66	59	60.9	61.1	61.9	61.3	9.9	9.7	8.0	9.2
<b>Highest</b>	62	74	79	69	62.7	62.1	63.0	62.5	11.1	10.8	9.6	10.4
<b>Lowest</b>	40	51	45	47	59.4	59.7	60.6	60.1	8.9	8.9	6.9	8.4

Table 65.

## 2011 WSU Variety Testing Soft White Spring Wheat Trial Summary

## Precipitation Zone 16-20"

Variety Name (Club Italicized)	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
Yield (Lbs/A)							Test Wt (Lbs/Bu)						Protein (%)					
Louise-G2	96	62	90	78	73	80	62.7	61.0	63.3	62.1	60.0	61.8	11.0	7.6	10.5	10.4	13.2	10.5
Louise	97	61	89	71	79	79	62.8	60.6	63.4	61.7	59.7	61.7	11.1	7.9	10.9	10.1	13.1	10.6
Diva	97	58	85	72	71	76	62.6	61.1	62.6	62.6	60.2	61.8	11.2	8.4	11.1	10.6	13.3	10.9
<i>JD</i>	91	58	88	66	61	73	64.2	62.3	64.4	63.4	61.3	63.1	11.4	8.2	11.6	11.7	14.5	11.5
<i>WA 8131</i>	86	49	85	68	78	73	62.8	61.5	63.0	62.0	60.1	61.9	11.6	8.8	11.8	10.9	14.5	11.5
Babe	97	52	76	65	70	72	63.7	61.1	62.6	61.6	59.4	61.7	10.9	7.4	10.8	9.9	13.9	10.6
Whit	95	58	74	63	71	72	62.2	60.6	62.7	61.2	57.3	60.8	11.1	7.9	10.9	10.0	14.5	10.9
<i>WA 8127</i>	90	54	77	64	69	71	63.3	61.8	63.1	62.1	60.0	62.0	11.3	8.6	11.6	10.9	14.0	11.3
IDO644	91	55	79	55	74	71	61.7	59.5	62.0	60.5	57.8	60.3	11.2	6.9	10.6	10.1	13.6	10.5
<i>Eden</i>	86	54	76	63	74	71	63.7	61.7	63.5	62.8	61.2	62.6	10.8	8.2	11.1	10.6	12.9	10.7
IDO686	86	53	82	62	66	70	63.9	61.5	64.2	62.8	60.0	62.5	10.9	8.0	11.0	10.8	13.1	10.8
<i>WA 8128</i>	85	51	84	65	67	70	63.1	61.8	63.7	62.5	59.2	62.1	11.5	8.3	11.3	11.5	14.3	11.4
Alturas	86	52	80	63	69	70	62.2	60.0	62.3	61.1	59.3	61.0	11.0	7.7	10.5	10.2	13.3	10.5
<i>Wakanz</i>	93	56	79	60	63	70	61.9	61.0	61.9	60.7	56.4	60.4	11.7	8.8	11.3	11.1	14.7	11.5
<i>WA 8124</i>	88	49	83	65	61	69	63.9	61.0	63.4	62.9	60.2	62.3	11.2	7.3	10.8	10.8	14.3	10.9
<i>IDO687</i>	84	48	80	60	66	68	64.0	61.3	63.9	62.8	60.6	62.5	11.1	7.0	10.9	10.5	13.7	10.6
IDO671	86	50	77	58	65	67	62.8	60.4	62.5	61.7	59.8	61.4	10.8	8.3	10.6	9.8	13.2	10.5
Alpowa	89	49	74	55	64	66	63.6	61.8	62.7	61.9	59.4	61.9	11.0	7.7	10.6	10.0	14.4	10.7
Nick	91	49	66	48	74	66	62.7	60.2	61.8	60.4	59.3	60.9	11.5	7.5	11.5	10.6	13.9	11.0
<i>WA 8150</i>	81	53	74	56	61	65	63.5	61.6	62.8	62.5	60.5	62.2	11.0	7.9	10.3	10.2	14.3	10.7
UI-Cataldo	85	49	72	49	70	65	62.0	59.9	62.5	60.6	59.3	60.8	11.6	8.6	11.6	11.1	14.3	11.4
<i>Zak</i>	84	49	66	55	69	64	61.9	61.2	62.1	60.8	60.6	61.3	11.9	8.7	11.0	10.9	15.0	11.5
<i>WA 8149</i>	83	48	76	58	57	64	62.8	60.4	61.9	61.2	59.7	61.2	11.1	7.0	10.4	10.3	12.9	10.3
<i>WB-1035CL2</i>	76	40	61	40	67	57	62.4	60.7	61.9	60.0	58.5	60.7	13.1	9.0	13.2	11.9	15.2	12.5
C.V. %	4	7	7	10	7	7	0.4	0.6	0.7	0.7	1.5	0.9	1.7	9.1	3.6	4.1	5.0	4.8
LSD (0.10)	4	4	6	12	9	2	0.3	0.4	0.5	0.9	1.8	0.2	0.2	0.8	0.4	0.9	1.4	0.2
Average	88	52	78	61	68	70	62.9	61.0	62.9	61.7	59.6	61.6	11.3	8.0	11.1	10.6	13.9	11.0
Highest	97	62	90	78	79	80	64.2	62.3	64.4	63.4	61.3	63.1	13.1	9.0	13.2	11.9	15.2	12.5
Lowest	76	40	61	40	57	57	61.7	59.5	61.8	60.0	56.4	60.3	10.8	6.9	10.3	9.8	12.9	10.3

Table 66.

# 2011 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 (%)			
Louise-G2	71	61	89	74	59.7	62.3	61.2	61.1	10.5	9.9	10.1	10.2
Diva	80	56	81	72	60.6	61.5	61.5	61.2	9.8	10.3	9.5	9.9
Louise	68	56	88	71	60.2	62.3	61.6	61.4	10.3	10.1	9.6	10.0
WA 8131	78	54	81	71	60.4	62.3	61.5	61.4	10.9	10.6	9.9	10.5
JD	75	57	78	70	61.2	63.6	62.7	62.5	10.9	10.2	10.4	10.5
IDO687	76	51	77	68	62.0	63.7	62.3	62.7	10.2	10.0	9.4	9.9
Babe	68	54	83	68	61.5	63.0	61.3	61.9	10.1	9.9	9.8	9.9
IDO686	73	49	78	67	60.1	63.5	62.4	62.0	10.0	10.5	9.8	10.1
Whit	69	55	78	67	60.9	62.3	60.8	61.3	10.4	10.0	10.1	10.2
IDO671	72	48	81	67	60.0	62.6	61.3	61.3	9.7	10.0	9.3	9.7
WA 8150	70	55	74	66	61.3	63.5	62.0	62.2	9.9	10.1	9.8	10.0
WA 8128	71	50	76	66	61.5	62.7	62.0	62.1	10.8	10.2	10.7	10.6
WA 8127	71	51	75	66	60.9	62.9	61.6	61.8	10.0	10.2	9.7	10.0
Alturas	68	49	80	66	58.9	62.2	60.7	60.6	10.6	9.9	9.4	10.0
Eden	69	55	73	66	60.7	63.2	62.5	62.2	10.1	9.9	9.9	10.0
WA 8149	69	56	71	65	61.2	61.6	60.6	61.1	9.2	10.2	9.1	9.5
IDO644	63	54	80	65	60.4	61.3	60.4	60.7	10.7	9.6	8.9	9.8
WA 8124	55	56	82	64	60.7	63.7	61.8	62.1	10.1	10.5	9.6	10.1
Wakanz	61	54	76	64	60.1	61.0	59.7	60.3	11.2	10.4	10.5	10.7
Zak	62	49	67	59	61.0	62.6	60.1	61.3	10.6	10.6	10.2	10.5
Nick	57	51	68	59	60.9	61.9	60.7	61.2	9.9	10.0	9.3	9.7
UI-Cataldo	60	46	71	59	59.0	61.8	60.6	60.5	10.3	10.4	10.0	10.2
Alpowa	56	47	71	58	61.7	63.2	61.6	62.2	9.5	10.1	8.9	9.5
WB-1035CL2	54	43	64	54	60.4	61.6	60.9	60.9	11.5	11.1	11.1	11.2
C.V. %	13	4	6	9	1.8	0.6	0.6	1.2	4.4	2.1	5.9	4.4
LSD (0.10)	9	4	5	4	1.2	0.8	0.4	0.4	0.5	0.4	0.6	0.3
Average	67	52	77	65	60.6	62.5	61.3	61.5	10.3	10.2	9.8	10.1
Highest	80	61	89	74	62.0	63.7	62.7	62.7	11.5	11.1	11.1	11.2
Lowest	54	43	64	54	58.9	61.0	59.7	60.3	9.2	9.6	8.9	9.5

Table 67.

## 2011 WSU Variety Testing Soft White Spring Wheat Trial Summary

### Precipitation Zone <12"

Variety Name (Club <i>Italicized</i> )	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average
Yield (Lbs/A)						Test Wt (Lbs/Bu)					Protein (%)				
<i>JD</i>	32	25	47	44	<b>37</b>	62.0	62.7	62.2	61.9	<b>62.2</b>	11.7	12.9	10.2	12.4	11.8
<i>Diva</i>	30	29	40	43	<b>35</b>	61.6	62.3	61.0	61.3	61.6	10.5	12.8	9.6	12.1	11.3
<i>Louise-G2</i>	28	29	40	42	<b>35</b>	60.9	62.0	60.9	60.8	61.1	10.7	12.6	9.8	11.8	11.2
<i>Wakanz</i>	30	30	36	42	<b>35</b>	59.1	60.4	58.9	59.6	59.5	11.3	12.9	10.2	12.2	11.6
<i>Louise</i>	24	29	40	41	33	60.6	61.7	60.7	61.4	61.1	10.7	12.7	9.7	12.0	11.3
<i>WA 8131</i>	22	30	36	43	33	59.4	61.6	60.5	60.1	60.4	11.1	12.8	10.4	13.1	11.9
<i>Babe</i>	26	27	38	40	32	61.8	62.1	59.5	61.2	61.2	10.9	12.6	9.5	11.6	11.2
<i>IDO687</i>	25	27	33	39	31	60.7	62.2	61.7	61.3	61.5	10.4	12.8	9.7	12.6	11.4
<i>WA 8124</i>	19	26	36	42	31	60.3	61.7	60.6	61.0	60.9	10.8	13.1	9.5	12.7	11.5
<i>Whit</i>	24	25	38	37	31	60.9	61.3	59.9	60.0	60.5	10.5	12.8	9.9	12.0	11.3
<i>WA 8128</i>	21	22	38	39	30	61.6	61.4	61.8	61.0	61.5	11.6	13.9	10.5	13.0	12.2
<i>WA 8127</i>	18	25	37	39	30	60.8	61.5	61.0	61.5	61.2	11.6	13.2	9.9	12.1	11.7
<i>WA 8149</i>	20	23	35	42	30	60.5	60.8	59.8	61.1	60.5	11.4	12.7	9.3	11.7	11.3
<i>Alturas</i>	26	24	32	37	30	60.0	60.9	59.2	59.5	59.9	11.0	12.4	9.8	12.4	11.4
<i>IDO644</i>	23	26	33	39	30	58.9	61.0	59.8	59.0	59.7	10.9	12.7	9.4	12.1	11.3
<i>Eden</i>	21	23	37	40	30	61.7	62.7	60.7	62.0	61.7	11.4	12.2	9.6	11.5	11.2
<i>IDO686</i>	19	23	35	40	29	61.2	62.1	61.2	61.0	61.4	10.9	12.4	9.9	12.2	11.4
<i>Alpowa</i>	24	23	33	37	29	58.5	61.4	60.7	61.2	60.4	10.8	12.8	9.3	11.5	11.1
<i>Zak</i>	23	27	31	32	28	61.3	61.2	59.9	59.9	60.6	12.1	13.4	10.0	13.5	12.3
<i>IDO671</i>	17	23	34	39	28	59.7	61.2	60.0	60.3	60.3	10.5	12.4	9.6	12.0	11.1
<i>Nick</i>	16	26	34	36	28	59.8	61.8	58.9	59.5	60.0	11.3	13.4	10.0	12.4	11.8
<i>WA 8150</i>	20	19	31	39	27	60.6	61.9	60.8	62.1	61.3	10.5	12.4	8.9	11.4	10.8
<i>UI-Cataldo</i>	27	21	26	35	27	59.2	60.6	58.9	58.4	59.3	11.1	13.1	10.4	12.6	11.8
<i>WB-1035CL2</i>	17	25	26	35	26	58.5	61.6	58.8	58.5	59.4	12.0	14.6	10.9	13.3	<b>12.7</b>
<b>C.V. %</b>	29	10	8	3	13	1.8	0.5	0.9	0.8	1.1	4.9	1.9	3.7	2.1	3.2
<b>LSD (0.10)</b>	N.S. <sup>1</sup>	3	5	2	2	1.2	0.3	0.7	0.7	0.4	0.6	0.3	0.5	0.5	0.2
<b>Average</b>	23	25	35	39	31	60.4	61.6	60.3	60.6	60.7	11.1	12.9	9.8	12.3	11.5
<b>Highest</b>	32	31	47	44	37	62.0	62.7	62.2	62.1	62.2	12.1	14.6	10.9	13.5	12.7
<b>Lowest</b>	16	19	26	32	26	58.5	60.4	58.8	58.4	59.3	10.4	12.2	8.9	11.4	10.8

<sup>1</sup> - No Significant Differences

**Table 68. WSU Soft White Spring Wheat Trial Multi-Year Summary**

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

Variety Name*	2 Years			3 Years			5 Years		
	2010-2011, 5 loc/yr			2009-2011, 7 loc/yr			2007-2011, 12 loc/yr		
	Yield	TW	Protein	Yield	TW	Protein	Yield	TW	Protein
	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%
<i>JD</i>	77	61.8	10.3	80	62.1	10.7	78	61.7	10.8
WA 8124	72	60.2	10.0						
Louise	70	59.7	10.1	75	60.2	10.4	76	60.0	10.5
Diva	69	60.1	10.2	74	60.7	10.5			
Babe	68	59.7	9.9	74	60.4	10.3	75	60.4	10.4
Whit	65	59.2	10.0	70	59.8	10.4	71	59.6	10.7
Alturas	65	59.6	10.0	71	60.1	10.2	71	59.8	10.3
IDO671	65	60.0	9.8						
<i>Eden</i>	64	60.6	10.1	70	61.2	10.4	72	61.0	10.5
Wakanz	63	58.2	10.7	69	59.0	10.9	71	58.8	11.1
Alpowa	60	59.8	9.8	67	60.5	10.2	70	60.4	10.5
Zak	56	59.2	10.7	63	59.8	10.9	67	59.5	11.1
UI-Cataldo	51	58.9	10.5	58	59.2	10.7	61	59.1	11.0
Nick	49	58.7	10.3	58	59.5	10.7	64	59.8	10.9
C.V. %	7	0.9	4.7	7	0.8	4.1	6	0.9	4.2
LSD (.10)	2	0.3	0.2	2	0.2	0.2	1	0.2	0.1
Average	64	59.7	10.2	69	60.2	10.5	71	60.0	10.7
Highest	77	61.8	10.7	80	62.1	10.9	78	61.7	11.1
Lowest	49	58.2	9.8	58	59.0	10.19	61	58.8	10.3

\* Club Wheat Italicized

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

**Precipitation Zone = 16-20"**  
**(Dayton, Mayveiw, Reardan, St. John, Walla Walla)**

Variety Name*	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 10 loc/yr			2009-2011, 15 loc/yr			2007-2011, 25 loc/yr		
	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>
	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%
<i>JD</i>	69	60.4	12.1	68	60.9	12.1	61	60.9	11.9
<i>Eden</i>	66	60.4	11.3	66	60.9	11.4	60	60.9	11.3
<i>Diva</i>	70	59.1	11.5	70	59.8	11.5			
<i>Louise</i>	69	58.2	11.4	69	59.1	11.4	64	59.2	11.3
<i>Alturas</i>	68	58.6	11.3	69	59.2	11.2	61	59.1	11.3
<i>Babe</i>	68	59.2	11.3	70	59.8	11.4	63	60.0	11.4
<i>Whit</i>	67	58.0	11.6	68	58.8	11.6	62	58.9	11.7
<i>IDO671</i>	66	59.0	11.2						
<i>WA 8124</i>	66	59.1	11.8						
<i>Wakanz</i>	66	57.6	12.1	67	58.3	12.0	62	58.4	11.9
<i>Alpowa</i>	62	58.8	11.6	63	59.5	11.6	59	59.8	11.6
<i>Nick</i>	62	58.4	11.6	63	59.2	11.8	59	59.5	11.9
<i>UI-Cataldo</i>	60	58.1	12.0	60	58.7	11.9	55	58.8	11.9
<i>Zak</i>	57	58.5	12.3	61	59.0	12.3	58	59.1	12.2
C.V. %	8	1.7	4.5	12	2.0	5.7	8	1.4	3.9
LSD (.10)	2	0.3	0.2	1	0.2	0.1	1	0.2	0.1
Average	65	58.8	11.7	66	59.4	11.7	60	59.5	11.7
Highest	70	60.4	12.3	70	60.9	12.3	64	60.9	12.2
Lowest	57	57.6	11.2	60	58.3	11.2	55	58.4	11.3

\* *Club Wheat Italicized*



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

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

Variety Name*	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 6 loc/yrs			2009-2011, 9 loc/yrs			2007-2011, 15 loc/yrs		
	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>
	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%
Diva	70	59.7	11.2	66	60.1	11.3			
<i>JD</i>	69	61.4	12.1	64	61.3	12.1	58	61.2	12.0
Louise	69	59.6	11.2	66	60.0	11.3	59	59.4	11.4
WA 8124	67	60.2	11.8						
IDO671	67	60.1	11.0						
Alturas	66	59.2	11.3	63	59.5	11.3	56	59.3	11.3
Wakanz	62	58.2	12.1	60	58.5	12.1	55	58.3	12.0
Whit	62	59.3	11.7	60	59.5	11.7	55	59.2	11.8
Babe	61	59.7	11.4	59	60.0	11.4	55	60.1	11.5
<i>Eden</i>	60	60.1	11.4	58	60.4	11.4	53	60.6	11.4
Alpowa	60	60.7	10.9	57	60.6	11.2	53	60.4	11.3
Zak	57	59.3	12.0	57	59.5	12.0	53	59.4	12.1
Nick	55	58.8	11.4	57	59.5	11.6	53	59.6	11.7
UI-Cataldo	54	58.4	11.6	54	58.8	11.7	49	58.7	11.8
C.V. %	11	2.2	4.3	11	1.8	3.8	10	1.6	3.6
LSD (.10)	3	0.5	0.2	2	0.4	0.2	2	0.3	0.1
Average	63	59.6	11.5	60	59.8	11.6	54	59.6	11.7
Highest	70	61.4	12.1	66	61.3	12.1	59	61.2	12.1
Lowest	54	58.2	10.9	54	58.5	11.2	49	58.3	11.3

\* *Club Wheat Italicized*

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

**Precipitation Zone = <12"**  
**(Bickleton, Connell, Horse Heaven, Lind)**

Variety Name*	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 8 loc/ys			2009-2011, 12 loc/ys			2007-2011, 19 loc/ys		
	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>
	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%	Bu/A	Lbs/Bu	%
<i>JD</i>	41	61.1	12.2	35	61.4	12.3	32	61.2	12.5
Wakanz	40	58.2	11.9	34	58.8	12.3	31	58.8	12.5
Diva	39	60.2	11.7	34	60.6	11.8			
Louise	38	59.8	11.5	34	60.2	11.8	32	60.2	12.0
WA 8124	38	59.6	11.9						
Babe	37	60.2	11.5	32	60.6	11.9	30	60.6	12.2
<i>Eden</i>	36	60.9	11.3	32	61.3	11.5	29	61.4	11.8
Whit	36	59.8	11.7	32	60.0	12.0	30	60.0	12.3
Alpowa	35	59.5	11.4	30	60.3	11.9	29	60.5	12.1
Nick	35	59.6	11.9	31	60.1	12.3	30	60.2	12.7
Alturas	35	59.6	11.5	32	59.9	11.8	29	59.9	12.0
Zak	34	59.2	12.5	31	59.9	12.7	30	59.7	12.9
IDO671	34	59.9	11.3						
UI-Cataldo	29	58.6	12.1	26	58.8	12.3	25	59.1	12.5
C.V. %	10	1	2.9	9	1.0	2.8	10	1.0	2.7
LSD (.10)	1	0.2	0.1	1	0.2	0.1	1	0.1	0.1
Average	36	59.7	11.8	32	60.1	12.1	30	60.1	12.3
Highest	41	61.1	12.5	35	61.4	12.7	32	61.4	12.9
Lowest	29	58.2	11.3	26	58.8	11.5	25	58.8	11.8

\* *Club Wheat Italicized*

**Table 72. 2011 WSU Variety Testing SW Spring Wheat Trial, Almira**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>Diva</b>		61	63	<b>80</b>	60.6	9.8	37
<i>WA 8131</i>				<b>78</b>	60.4	10.9	32
<b>IDO687</b>				<b>76</b>	<b>62.0</b>	10.2	36
<i>JD</i>	57	61	62	<b>75</b>	<b>61.2</b>	10.9	35
<b>IDO686</b>				<b>73</b>	60.1	10.0	38
<b>IDO671</b>			58	<b>72</b>	60.0	9.7	35
<b>WA 8127</b>				<b>71</b>	<b>60.9</b>	10.0	33
<b>WA 8128</b>				<b>71</b>	<b>61.5</b>	10.8	34
<b>Louise-G2</b>				<b>71</b>	59.7	10.5	36
<b>WA 8150</b>				70	<b>61.3</b>	9.9	33
<i>Eden</i>	52	53	50	69	60.7	10.1	33
<b>Whit</b>	55	57	57	69	<b>60.9</b>	10.4	34
<b>WA 8149</b>				69	<b>61.2</b>	9.2	35
<b>Louise</b>	55	57	58	68	60.2	10.3	37
<b>Alturas</b>	50	52	52	68	58.9	10.6	35
<b>Babe</b>	54	55	52	68	<b>61.5</b>	10.1	35
<b>IDO644</b>				63	60.4	10.7	32
<b>Zak</b>	49	51	49	62	<b>61.0</b>	10.6	34
<b>Wakanz</b>	50	50	47	61	60.1	11.2	29
<b>UI-Cataldo</b>	47	48	46	60	59.0	10.3	34
<b>Nick</b>	53	52	48	57	<b>60.9</b>	9.9	33
<b>Alpowa</b>	53	55	54	56	<b>61.7</b>	9.5	32
<b>WA 8124</b>			43	55	60.7	10.1	34
<b>WB-1035CL2</b>				54	60.4	11.5	32
<b>C.V. %</b>	12	13	15	13	1.8	4.4	7
<b>LSD (.10)</b>	3	5	7	9	1.2	0.5	3
<b>Average</b>	52	54	53	67	60.6	10.3	34
<b>Highest</b>	57	61	63	80	62.0	11.5	38
<b>Lowest</b>	47	48	43	54	58.9	9.2	29

1. Grain yield in the Almira soft white spring wheat trial averaged 67 bushels/acre, 15 bushels/acre more than the 5-year average. The Almira nursery was located about 10 miles north of Almira, WA (Dan McKay, cooperator).
2. This nursery was seeded on 22 April, 2011 following winter wheat. Seed was placed at a 80#/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 65 #N/acre applied at seeding. Seeding was late but emergence was good.
3. Yields ranged from 54 to 80 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 9 of the 24 entries are in this group. Diva was the highest yielding entry in this trial and JD was highest yielding across 5 years of results at this location. Stripe rust was a factor in this trial and no fungicide was applied. There appears to be a 20% or more effect on yield by stripe rust for susceptible entries.
4. Test weights were good and averaged 60.6 lbs/bu, and ranged from 58.9 to 62.0 lbs/bu. Grain protein was good and averaged 10.3% with a range of 9.2 to 11.5%. The average plant height was 34 inches with no lodging.

**Table 73. 2011 WSU Variety Testing Hard Spring Wheat Trial, Bickleton**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>JD</b>	--	28	29	32	<b>62.0</b>	11.7	21
<i>Wakanz</i>	--	27	28	30	59.1	11.3	23
<i>Diva</i>	--	24	24	30	61.6	10.5	25
<i>Louise-G2</i>	--			28	60.9	10.7	25
<i>UI-Cataldo</i>	--	21	21	27	59.2	11.1	23
<i>Alturas</i>	--	24	23	26	60.0	11.0	23
<i>Babe</i>	--	28	29	26	<b>61.8</b>	10.9	23
<i>IDO687</i>	--			25	60.7	10.4	21
<i>Alpowa</i>	--	23	24	24	58.5	10.8	22
<i>Louise</i>	--	24	23	24	60.6	10.7	25
<i>Whit</i>	--	25	25	24	60.9	10.5	21
<i>Zak</i>	--	25	24	23	61.3	12.1	21
<i>IDO644</i>	--			23	58.9	10.9	22
<b>WA 8131</b>	--			22	59.4	11.1	21
<b>Eden</b>	--	25	25	21	<b>61.7</b>	11.4	18
<i>WA 8128</i>	--			21	61.6	11.6	20
<i>WA 8149</i>	--			20	60.5	11.4	19
<i>WA 8150</i>	--			20	60.6	10.5	22
<i>WA 8124</i>	--		21	19	60.3	10.8	23
<i>IDO686</i>	--			19	61.2	10.9	25
<i>WA 8127</i>	--			18	60.8	11.6	20
<i>IDO671</i>	--		19	17	59.7	10.5	19
<i>WB-1035CL2</i>	--			17	58.5	12.0	21
<i>Nick</i>	--	25	24	16	59.8	11.3	19
<b>C.V. %</b>	--	20	23	29	1.8	4.9	12
<b>LSD (.10)</b>	--	3	4	N.S. <sup>1</sup>	1.2	0.6	3
<b>Average</b>	--	25	24	23	60.4	11.1	22
<b>Highest</b>	--	28	29	32	62.0	12.1	25
<b>Lowest</b>	--	21	19	16	58.5	10.4	18

<sup>1</sup> -No Significant Difference

1. Grain yield in the Bickleton soft white spring wheat trial averaged 23 bushels/acre, 2 bushels/acre less than the 3-year average. The Bickleton nursery was located about four miles east of Bickleton, WA (Steve Matsen, cooperator).

2. This nursery was seeded on 12 May, 2011 following spring wheat. Seed was placed at a 60#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 30 #N/acre applied at seeding. Seeding was late and emergence was slow due to cool temperatures.

3. Yields ranged from 16 to 32 bu/ac. Due to low yields and high variability at this site, yield was not significantly different among entries. JD and Babe were highest yielding across 3 years at this location. Stripe rust was a minor factor in this trial and no fungicide was applied.

4. Test weights were good and averaged 60.4 lbs/bu, and ranged from 58.5 to 62.0 lbs/bu. Grain protein was good and averaged 11.1% with a range of 10.4 to 12.1%. The average plant height was 22 inches with no lodging.

**Table 74. 2011 WSU Variety Testing SW Spring Wheat Trial, Connell**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Wakanz</b>	31	35	40	<b>30</b>	60.4	12.9	25	163
<i>WA 8131</i>				<b>30</b>	61.6	12.8	24	159
<b>Louise</b>	31	37	39	<b>29</b>	61.7	12.7	28	159
<b>Diva</b>		37	40	<b>29</b>	62.3	12.8	27	159
<b>Louise-G2</b>				<b>29</b>	62.0	12.6	26	160
<b>Zak</b>	29	32	34	<b>27</b>	61.2	13.4	25	161
<b>Babe</b>	27	32	35	<b>27</b>	62.1	12.6	25	158
<b>IDO687</b>				<b>27</b>	62.2	12.8	26	162
<b>Nick</b>	29	32	34	26	61.8	13.4	24	160
<b>WA 8124</b>			39	26	61.7	13.1	25	162
<b>IDO644</b>				26	61.0	12.7	23	158
<b>Whit</b>	27	31	34	25	61.3	12.8	25	159
<i>JD</i>	30	36	39	25	<b>62.7</b>	12.9	24	160
<b>WA 8127</b>				25	61.5	13.2	26	160
<b>WB-1035CL2</b>				25	61.6	14.6	23	158
<b>Alturas</b>	29	33	35	24	60.9	12.4	24	159
<b>Alpowa</b>	27	30	32	23	61.4	12.8	25	164
<i>Eden</i>	28	32	34	23	<b>62.7</b>	12.2	21	159
<b>IDO671</b>			36	23	61.2	12.4	24	159
<b>WA 8149</b>				23	60.8	12.7	26	162
<b>IDO686</b>				23	62.1	12.4	27	164
<b>WA 8128</b>				22	61.4	13.9	28	159
<b>UI-Cataldo</b>	25	28	28	21	60.6	13.1	24	158
<b>WA 8150</b>				19	61.9	12.4	24	163
<b>C.V. %</b>	8	7	8	10	0.5	1.9	7	1
<b>LSD (.10)</b>	1	1	2	3	0.3	0.3	2	1
<b>Average</b>	28	33	36	25	61.6	12.9	25	160
<b>Highest</b>	31	37	40	30	62.7	14.6	28	164
<b>Lowest</b>	25	28	28	19	60.4	12.2	21	158

1. Grain yield in the Connell soft white spring wheat trial averaged 25 bushels/acre, 3 bushels/acre less than the 5-year average. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister farm).
2. This nursery was seeded on 18 March, 2011 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 58#N/acre fall applied. Spring seeding and establishment were good, but plants did not grow or tiller well.
3. Yields ranged from 19 to 30 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 8 of the 24 entries are in this group. Wakanz was the highest yielding entry in 2011 and was also highest yielding over 5 years of results at this site along with Louise. Stripe rust was not a factor in this trial and fungicide was applied June 1.
4. Test weights were good and averaged 61.6 lbs/bu, and ranged from 60.4 to 62.7 lbs/bu. Grain protein was high and averaged 12.9% with a range of 12.2 to 14.6%. The average plant height was 25 inches with no lodging.

**Table 75. 2011 WSU Variety Testing SW Spring Wheat Trial, Dayton**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Louise	65	63	74	<b>97</b>	62.8	11.1	36	180
Babe	63	65	77	<b>97</b>	63.7	10.9	33	178
Diva		64	76	<b>97</b>	62.6	11.2	36	181
Louise-G2				<b>96</b>	62.7	11.0	36	180
Whit	63	62	73	<b>95</b>	62.2	11.1	32	178
Wakanz	69	68	78	<b>93</b>	61.9	11.7	30	181
Nick	62	62	70	91	62.7	11.5	31	177
JD	63	63	73	91	<b>64.2</b>	11.4	35	181
IDO644				91	61.7	11.2	29	177
WA 8127				90	63.3	11.3	32	181
Alpowa	60	57	69	89	63.6	11.0	32	181
WA 8124			69	88	<b>63.9</b>	11.2	31	183
Alturas	58	60	70	86	62.2	11.0	30	181
Eden	61	61	71	86	63.7	10.8	31	180
IDO671			70	86	62.8	10.8	33	179
WA 8131				86	62.8	11.6	29	182
IDO686				86	<b>63.9</b>	10.9	34	180
UI-Cataldo	54	54	63	85	62.0	11.6	32	178
WA 8128				85	63.1	11.5	31	178
Zak	60	57	63	84	61.9	11.9	32	181
IDO687				84	<b>64.0</b>	11.1	31	180
WA 8149				83	62.8	11.1	31	181
WA 8150				81	63.5	11.0	29	181
WB-1035CL2				76	62.4	13.1	29	177
C.V. %	6	6	6	4	0.4	1.7	5	1
LSD (.10)	2	2	3	4	0.3	0.2	2	1
Average	62	61	71	88	62.9	11.3	32	180
Highest	69	68	78	97	64.2	13.1	36	183
Lowest	54	54	63	76	61.7	10.8	29	177

1. Grain yield in the Dayton soft white spring wheat trial averaged 88 bushels/acre, 26 bushels/acre higher than the 5-year average. The Dayton nursery was located about five miles north of Dayton, WA (Jay Penner, cooperator).
2. This nursery was seeded on 18 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 160 #N/acre. Spring seeding was late, but establishment was good.
3. Yields ranged from 76 to 97 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. Louise was the highest yielding entry in 2011 and Wakanz was the highest yielding over 5 years of results at this site. Stripe rust was a factor in this trial and fungicide was applied on May 31 and June 27. There appears to be a slight effect on yield by stripe rust for susceptible entries of 10% or more.
4. Test weights were very good averaging 62.9 lbs/bu, and ranged from 61.7 to 64.2 lbs/bu. Grain protein averaged 11.3% with a range of 10.8 to 13.1%. The average plant height was 32 inches with no lodging.

**Table 76. 2011 WSU Variety Testing SW Spring Wheat Trial, Endicott**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Louise-G2</b>				<b>61</b>	62.3	9.9	32	180
<i>JD</i>	63	67	70	57	<b>63.6</b>	10.2	32	180
<b>Louise</b>	64	67	69	56	62.3	10.1	33	179
<b>Diva</b>		65	67	56	61.5	10.3	31	179
<b>WA 8124</b>			68	56	<b>63.7</b>	10.5	29	181
<b>WA 8149</b>				56	61.6	10.2	30	180
<i>Eden</i>	57	60	62	55	63.2	9.9	29	179
<b>Whit</b>	60	62	61	55	62.3	10.0	31	178
<b>WA 8150</b>				55	<b>63.5</b>	10.1	28	181
<b>Wakanz</b>	60	65	63	54	61.0	10.4	28	180
<b>Babe</b>	57	59	58	54	63.0	9.9	30	178
<i>WA 8131</i>				54	62.3	10.6	27	180
<b>IDO644</b>				54	61.3	9.6	30	177
<b>Nick</b>	57	57	54	51	61.9	10.0	28	178
<b>WA 8127</b>				51	62.9	10.2	29	178
<b>IDO687</b>				51	<b>63.7</b>	10.0	30	179
<b>WA 8128</b>				50	62.7	10.2	32	178
<b>Zak</b>	57	59	56	49	62.6	10.6	29	180
<b>Alturas</b>	62	66	62	49	62.2	9.9	29	179
<b>IDO686</b>				49	<b>63.5</b>	10.5	31	179
<b>IDO671</b>			60	48	62.6	10.0	29	178
<b>Alpowa</b>	56	55	53	47	63.2	10.1	29	179
<b>UI-Cataldo</b>	54	55	50	46	61.8	10.4	28	177
<b>WB-1035CL2</b>				43	61.6	11.1	28	178
<b>C.V. %</b>	7	7	6	4	0.6	2.1	4	0
<b>LSD (.10)</b>	2	3	3	2	0.4	0.2	1	1
<b>Average</b>	59	61	61	52	62.5	10.2	30	179
<b>Highest</b>	64	67	70	61	63.7	11.1	33	181
<b>Lowest</b>	54	55	50	43	61.0	9.6	27	177

1. Grain yield in the Endicott soft white spring wheat trial averaged 52 bushels/acre, 7 bushels/acre less than the 5-year average. The Endicott nursery was located about six miles east of Endicott, WA (M. Richter, cooperator). This trial was conducted in cooperation with the WSU Spring Wheat Breeding Program.

2. This nursery was seeded on 8 April, 2011 following fallow. Seed was placed at an 80#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 70 #N/acre. Spring seeding was late, but establishment was good.

3. Yields ranged from 43 to 61 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and only 1 of the 24 entries is in this group. Louise-G2 was the highest yielding entry in 2011 and Louise was the highest yielding over 5 years of results at this site. The Louise-G2 is a 2 oz/100lb of seed treatment of Gaucho. This treatment targets wire worms that may be causing yield losses and appears to be effective at this site. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be 10% or less effect on yield by stripe rust for susceptible entries.

4. Test weights were very good and averaged 62.5 lbs/bu, and ranged from 61.0 to 63.7 lbs/bu. Grain protein was good and averaged 10.2% with a range of 9.6 to 11.1%. The average plant height was 30 inches with no lodging.

**Table 77. 2011 WSU Variety Testing SW Spring Wheat Trial, Fairfield**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
Whit	--	--	--	<b>62</b>	60.8	9.4	35
Louise-G2	--	--	--	<b>59</b>	61.2	9.9	38
Babe	--	--	--	<b>58</b>	60.6	8.9	35
JD	--	--	--	<b>58</b>	<b>62.7</b>	10.2	37
Louise	--	--	--	55	61.3	10.1	38
IDO687	--	--	--	54	61.7	9.5	35
Diva	--	--	--	53	61.8	10.1	36
IDO644	--	--	--	53	59.7	9.1	32
Alturas	--	--	--	52	60.4	9.5	34
WA 8131	--	--	--	52	61.0	10.7	29
IDO671	--	--	--	49	60.7	9.6	34
WA 8128	--	--	--	49	61.9	10.4	37
IDO686	--	--	--	48	<b>62.3</b>	9.9	37
Wakanz	--	--	--	47	59.4	10.6	32
WA 8127	--	--	--	47	61.2	10.4	35
Nick	--	--	--	46	60.0	9.5	32
Alpowa	--	--	--	45	60.3	9.2	32
Eden	--	--	--	45	<b>62.4</b>	10.6	30
WA 8124	--	--	--	45	61.2	10.0	35
Zak	--	--	--	44	60.5	10.4	33
UI-Cataldo	--	--	--	43	60.2	9.9	33
WA 8149	--	--	--	43	59.7	9.6	34
WB-1035CL2	--	--	--	42	59.6	11.1	32
WA 8150	--	--	--	40	61.5	10.1	32
C.V. %	--	--	--	9	0.6	2.4	5
LSD (.10)	--	--	--	5	0.4	0.2	2
Average	--	--	--	50	60.9	9.9	34
Highest	--	--	--	62	62.7	11.1	38
Lowest	--	--	--	40	59.4	8.9	29

1. Grain yield in the Fairfield soft white spring wheat trial averaged 50 bushels/acre. The Fairfield nursery was located about four miles northwest of Fairfield, WA (Lonnie Green, cooperator). This was a new location with no data for the previous five years.
2. This nursery was seeded on 2 May, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was applied through the drill at 100 #N/acre. Spring seeding was late, but establishment was good.
3. Yields ranged from 40 to 62 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 24 entries are in this group. Whit was the highest yielding entry. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be 25% or more effect on yield by stripe rust for susceptible entries.
4. Test weights were good and averaged 60.9 lbs/bu, and ranged from 59.4 to 62.7 lbs/bu. Grain protein was good and averaged 9.9% with a range of 8.9 to 11.1%. The average plant height was 34 inches with no lodging.



**Table 78. 2011 WSU Variety Testing SW Spring Wheat Trial, Farmington**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
Louise	85	88	85	<b>74</b>	61.5	9.4	39	196
Louise-G2				<b>74</b>	61.4	9.5	39	196
Diva		89	83	<b>70</b>	61.5	9.4	37	196
Babe	86	90	85	67	61.5	9.4	35	196
Whit	80	81	76	66	61.1	10.0	34	194
WA 8124			84	66	61.0	9.7	35	200
Eden	82	84	80	64	61.6	9.8	32	195
JD	85	89	84	64	<b>61.8</b>	9.9	37	196
IDO671			79	63	61.0	8.9	32	196
WA 8127				63	61.6	9.9	35	196
WA 8150				62	<b>61.7</b>	10.1	33	199
WA 8131				61	60.3	10.0	30	196
Wakanz	81	83	79	60	59.9	10.0	32	200
Zak	79	77	71	59	60.8	10.1	35	197
WA 8128				59	61.5	10.8	37	195
IDO686				59	<b>62.1</b>	9.6	36	200
Alpowa	79	79	74	58	61.6	9.0	36	200
WB-1035CL2				56	61.5	10.5	31	192
IDO644				56	59.9	9.2	30	194
WA 8149				55	59.7	9.4	35	199
IDO687				55	<b>61.7</b>	9.4	34	198
UI-Cataldo	68	66	61	54	60.3	9.6	29	196
Alturas	76	78	72	53	60.2	9.2	34	198
Nick	73	70	61	51	61.4	10.2	32	196
C.V. %	6	6	7	7	0.5	4.7	6	1
LSD (.10)	2	3	4	5	0.4	0.5	2	1
Average	80	81	77	61	61.1	9.7	34	197
Highest	86	90	85	74	62.1	10.8	39	200
Lowest	68	66	61	51	59.7	8.9	29	192

1. Grain yield in the Farmington soft white spring wheat trial averaged 61 bushels/acre, 19 bushels/acre less than the 5-year average. The Farmington nursery was located about three miles south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 11 May, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 114 #N/acre applied at seeding. Spring seeding was late, but establishment was good.
3. Yields ranged from 51 to 74 bu/ac. 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 was the highest yielding entry in this trial and Babe was highest yielding across 5 years of results at this location. Stripe rust was a minor factor in this trial and no fungicide was applied. There appears to be up to 10% effect on yield by stripe rust for susceptible entries.
4. Test weights were good and averaged 61.1 lbs/bu, and ranged from 59.7 to 62.1 lbs/bu. Grain protein was good and averaged 9.7% with a range of 8.9 to 10.8%. The average plant height was 34 inches with no lodging.

**Table 79. 2011 WSU Variety Testing SW Spring Wheat Trial, Horse Heaven**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<i>JD</i>	34	39	51	<b>47</b>	<b>62.2</b>	10.2	28
<b>Louise</b>	33	35	46	40	60.7	9.7	29
<b>Diva</b>		36	45	40	61.0	9.7	29
<b>Louise-G2</b>				40	60.9	9.8	28
<b>Whit</b>	31	35	45	38	59.9	9.9	26
<b>Babe</b>	31	33	43	38	59.5	9.5	29
<b>WA 8128</b>				38	<b>61.8</b>	10.5	30
<i>Eden</i>	31	35	44	37	60.7	9.6	26
<b>WA 8127</b>				37	61.0	9.9	28
<b>Wakanz</b>	32	34	45	36	58.9	10.2	25
<b>WA 8124</b>			46	36	60.6	9.5	28
<i>WA 8131</i>				36	60.5	10.4	25
<b>WA 8149</b>				35	59.8	9.3	26
<b>IDO686</b>				35	61.2	9.9	27
<b>Nick</b>	31	32	42	34	58.9	10.0	27
<b>IDO671</b>			40	34	60.0	9.6	26
<b>Alpowa</b>	30	32	41	33	60.7	9.3	27
<b>IDO644</b>				33	59.8	9.4	28
<b>IDO687</b>				33	<b>61.7</b>	9.7	26
<b>Alturas</b>	29	31	40	32	59.2	9.8	26
<b>Zak</b>	32	32	41	31	59.9	10.0	27
<b>WA 8150</b>				31	60.8	8.9	26
<b>UI-Cataldo</b>	24	25	31	26	58.9	10.4	26
<b>WB-1035CL2</b>				26	58.8	10.9	25
<b>C.V. %</b>	8	7	7	8	0.9	3.8	4
<b>LSD (.10)</b>	1	1	2	3	0.6	0.4	1
<b>Average</b>	31	33	43	35	60.3	9.8	27
<b>Highest</b>	34	39	51	47	62.2	10.9	30
<b>Lowest</b>	24	25	31	26	58.8	8.9	25

1. Grain yield in the Horse Heaven soft white spring wheat trial averaged 35 bushels/acre, 4 bushels/acre higher than the 5-year average. The Horse Heaven spring nursery was located about 10 miles southwest of Prosser, WA (M. Schmitt, cooperator).
2. This nursery was seeded on 23 March, 2011 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 35#N/acre fall applied. Spring seeding conditions were good. Cool and wet weather occurred until anthesis when dry weather prevailed through the remainder of the growing season.
3. Yields ranged from 26 to 47 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 1 of the 24 entries is in this group. JD was the highest yielding entry in 2011 and was also highest yielding over 5 years of results at this site. Stripe rust was at moderate levels in the trial and incurred an estimated 20% yield impact on susceptible varieties.
4. Test weights were good and averaged 60.3 lbs/bu, and ranged from 58.8 to 62.2 lbs/bu. Grain protein averaged 9.8% with a range of 8.9 to 10.9%. The average plant height was 27 inches with no lodging.

**Table 80. 2011 WSU Variety Testing SW Spring Wheat Trial, Lamont**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Louise-G2</b>				<b>89</b>	61.2	10.1	36	168
<b>Louise</b>	57	71	80	<b>88</b>	61.6	9.6	37	168
<b>Babe</b>	53	63	71	<b>83</b>	61.3	9.8	34	167
<b>WA 8124</b>			91	<b>82</b>	61.8	9.6	34	172
<b>Diva</b>		71	79	81	61.5	9.5	35	170
<b>IDO671</b>			84	<b>81</b>	61.3	9.3	32	169
<i>WA 8131</i>				81	61.5	9.9	28	171
<b>Alturas</b>	55	71	85	<b>80</b>	60.7	9.4	31	168
<b>IDO644</b>				<b>80</b>	60.4	8.9	30	167
<b>Whit</b>	49	58	67	<b>78</b>	60.8	10.1	33	168
<i>JD</i>	53	65	75	<b>78</b>	<b>62.7</b>	10.4	35	171
<b>IDO686</b>				<b>78</b>	<b>62.4</b>	9.8	35	170
<b>IDO687</b>				<b>77</b>	<b>62.3</b>	9.4	31	170
<b>Wakanz</b>	56	66	76	<b>76</b>	59.7	10.5	33	174
<b>WA 8128</b>				<b>76</b>	62.0	10.7	37	168
<b>WA 8127</b>				<b>75</b>	61.6	9.7	33	168
<b>WA 8150</b>				<b>74</b>	62.0	9.8	32	170
<i>Eden</i>	50	58	67	<b>73</b>	<b>62.5</b>	9.9	31	167
<b>Alpowa</b>	51	61	72	<b>71</b>	61.6	8.9	34	172
<b>UI-Cataldo</b>	47	59	65	<b>71</b>	60.6	10.0	31	165
<b>WA 8149</b>				<b>71</b>	60.6	9.1	32	170
<b>Nick</b>	51	60	63	<b>68</b>	60.7	9.3	32	169
<b>Zak</b>	51	61	66	<b>67</b>	60.1	10.2	32	172
<b>WB-1035CL2</b>				<b>64</b>	60.9	11.1	31	168
<b>C.V. %</b>	11	11	11	6	0.6	5.9	4	0
<b>LSD (.10)</b>	3	5	6	5	0.4	0.6	1	1
<b>Average</b>	52	64	74	<b>77</b>	61.3	9.8	33	169
<b>Highest</b>	57	71	91	<b>89</b>	62.7	11.1	37	174
<b>Lowest</b>	47	58	63	<b>64</b>	59.7	8.9	28	165

1. Grain yield in the Lamont soft white spring wheat trial averaged 77 bushels/acre, 25 bushels/acre higher than the 5-year average. The Lamont nursery was located about five miles southeast of Lamont, WA (Gil White, cooperator).

2. This nursery was seeded on 18 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 70 #N/acre. Spring seeding was late, but establishment was good.

3. Yields ranged from 64 to 89 bu/ac. 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 entry in 2011 and Louise was the highest yielding over 5 years of results at this site. The Louise-G2 is a 2 oz/100lb of Gaucho seed treatment. This treatment targets wire worms that may be causing yield losses but was not different than Louise with the standard seed treatment. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be an impact on yield by stripe rust for susceptible entries of 20% or more.

4. Test weights were good averaging 61.3 lbs/bu, and ranged from 59.7 to 62.7 lbs/bu. Grain protein averaged 9.8% with a range of 8.9 to 11.1%. The average plant height was 33 inches with no lodging.

**Table 81. 2011 WSU Variety Testing SW Spring Wheat Trial, Lind**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>JD</i>	33	40	46	<b>44</b>	<b>61.9</b>	12.4	29	165
<b>Diva</b>		40	46	<b>43</b>	61.3	12.1	30	166
<i>WA 8131</i>				<b>43</b>	60.1	13.1	25	168
<b>Wakanz</b>	32	38	45	42	59.6	12.2	27	169
<b>WA 8124</b>			46	42	61.0	12.7	29	169
<b>WA 8149</b>				42	61.1	11.7	27	168
<b>Louise-G2</b>				42	60.8	11.8	32	165
<b>Louise</b>	33	39	44	41	61.4	12.0	31	166
<i>Eden</i>	30	36	41	40	<b>62.0</b>	11.5	27	161
<b>Babe</b>	31	37	42	40	61.2	11.6	28	166
<b>IDO686</b>				40	61.0	12.2	30	165
<b>IDO671</b>			43	39	60.3	12.0	29	165
<b>WA 8127</b>				39	61.5	12.1	27	165
<b>WA 8128</b>				39	61.0	13.0	30	164
<b>WA 8150</b>				39	<b>62.1</b>	11.4	27	166
<b>IDO644</b>				39	59.0	12.1	28	163
<b>IDO687</b>				39	61.3	12.6	29	167
<b>Alpowa</b>	31	37	42	37	61.2	11.5	28	167
<b>Alturas</b>	32	37	42	37	59.5	12.4	28	165
<b>Whit</b>	31	36	41	37	60.0	12.0	29	164
<b>Nick</b>	31	35	40	36	59.5	12.4	28	165
<b>UI-Cataldo</b>	28	31	35	35	58.4	12.6	26	162
<b>WB-1035CL2</b>				35	58.5	13.3	25	164
<b>Zak</b>	29	34	37	32	59.9	13.5	27	168
<b>C.V. %</b>	5	4	4	3	0.8	2.1	4	1
<b>LSD (.10)</b>	1	1	1	1	0.5	0.3	1	1
<b>Average</b>	31	37	42	39	60.6	12.3	28	166
<b>Highest</b>	33	40	46	44	62.1	13.5	32	169
<b>Lowest</b>	28	31	35	32	58.4	11.4	25	161

1. Grain yield in the Lind soft white spring wheat trial averaged 39 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. This nursery was conducted in cooperation with the WSU Spring Wheat Breeding Program.

2. This nursery was seeded on 18 March, 2011 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. Cool and wet weather occurred until anthesis when dry weather prevailed through the remainder of the growing season.

3. Yields ranged from 32 to 44 bu/ac. 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 club JD was the highest yielding named entry in 2011, and Louise and JD were the highest yielding over 5 years of results at this site. Stripe rust was at moderate levels in the trial and incurred an estimated 20% yield impact on susceptible varieties.

4. Test weights were good and averaged 60.6 lbs/bu, and ranged from 58.4 to 62.1 lbs/bu. Grain protein averaged 12.3% with a range of 11.4 to 13.5%. The average plant height was 28 inches with no lodging.

**Table 82. 2011 WSU Variety Testing SW Spring Wheat Trial, Mayview**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Louise-G2</b>				<b>62</b>	61.0	7.6	34	183
<b>Louise</b>	55	52	47	<b>61</b>	60.6	7.9	34	183
<b>Whit</b>	55	53	50	<b>58</b>	60.6	7.9	30	181
<i>JD</i>	53	51	48	<b>58</b>	<b>62.3</b>	8.2	33	184
<b>Diva</b>		52	48	<b>58</b>	61.1	8.4	33	183
<b>Wakanz</b>	54	52	49	56	61.0	8.8	31	184
<b>IDO644</b>				55	59.5	6.9	28	180
<i>Eden</i>	53	51	48	54	61.7	8.2	30	182
<b>WA 8127</b>				54	61.8	8.6	31	183
<b>WA 8150</b>				53	61.6	7.9	31	184
<b>IDO686</b>				53	61.5	8.0	32	183
<b>Alturas</b>	51	48	42	52	60.0	7.7	28	183
<b>Babe</b>	55	53	49	52	61.1	7.4	29	181
<b>WA 8128</b>				51	61.8	8.3	34	181
<b>IDO671</b>			40	50	60.4	8.3	31	182
<b>Alpowa</b>	51	48	44	49	61.8	7.7	32	184
<b>Zak</b>	49	47	42	49	61.2	8.7	31	184
<b>Nick</b>	54	52	49	49	60.2	7.5	28	181
<b>UI-Cataldo</b>	49	46	43	49	59.9	8.6	29	181
<b>WA 8124</b>			44	49	61.0	7.3	33	186
<i>WA 8131</i>				49	61.5	8.8	28	184
<b>WA 8149</b>				48	60.4	7.0	30	184
<b>IDO687</b>				48	61.3	7.0	29	183
<b>WB-1035CL2</b>				40	60.7	9.0	28	180
<b>C.V. %</b>	8	9	9	7	0.6	9.1	5	0
<b>LSD (.10)</b>	2	3	3	4	0.4	0.8	2	1
<b>Average</b>	53	50	46	52	61.0	8.0	31	183
<b>Highest</b>	55	53	50	62	62.3	9.0	34	186
<b>Lowest</b>	49	46	40	40	59.5	6.9	28	180

1. Grain yield in the Mayview soft white spring wheat trial averaged 52 bushels/acre, similar to the 5-year average. The Mayview nursery was located about four 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 29 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 90 #N/acre. Spring seeding was late, but establishment was good.
3. Yields ranged from 40 to 62 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 24 entries are in this group. Louise-G2 was the highest yielding entry in 2011 and Louise, Whit and Babe were the highest yielding over 5 years of results at this site. The Louise-G2 is a 2 oz/100lb of Gaucho seed treatment. This treatment targets wire worms that may be causing yield losses but was not different than Louise with the standard seed treatment. Stripe rust was a factor in this trial and fungicide was applied May 31 and June 27. There appears to be a slight impact on yield by stripe rust for susceptible entries.
4. Test weights were good averaging 61.0 lbs/bu, and ranged from 59.5 to 62.3 lbs/bu. Grain protein averaged 8.0% with a range of 6.9 to 9.0%. The average plant height was 31 inches with no lodging.

**Table 83. 2011 WSU Variety Testing SW Spring Wheat Trial, Moses Lake**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
Louise-G2	--			<b>121</b>	63.5	11.5	38	165	0
WA 8124	--		109	<b>120</b>	63.6	11.8	41	168	0
Louise	--	102	102	<b>116</b>	63.6	11.7	40	165	2
Babe	--	117	121	114	64.0	12.1	38	165	0
Diva	--	99	99	113	63.3	11.7	40	166	0
Wakanz	--	109	104	110	63.0	12.1	36	166	0
Zak	--	106	98	108	62.9	11.7	38	166	0
IDO687	--			108	63.9	11.4	38	166	0
Whit	--	115	111	107	63.0	11.9	38	164	0
WA 8149	--			107	63.1	11.5	38	167	0
WA 8128	--			106	63.8	12.0	39	163	0
WA 8131	--			104	62.3	11.1	36	167	0
Alpowa	--	107	104	103	63.6	11.7	38	166	0
IDO686	--			103	64.1	11.5	39	165	0
Nick	--	118	113	102	63.2	11.3	37	164	0
IDO644	--			102	60.9	11.3	35	163	0
JD	--	104	103	101	<b>64.4</b>	12.4	43	167	0
WA 8150	--			101	63.5	11.4	38	166	17
Alturas	--	117	114	100	62.6	11.2	37	166	0
WA 8127	--			100	62.8	11.7	37	165	0
IDO671	--		107	99	62.8	11.2	35	165	0
Eden	--	107	101	94	63.4	11.3	37	166	0
UI-Cataldo	--	110	104	94	61.7	12.1	36	163	0
WB-1035CL2	--			91	62.8	12.8	35	164	0
C.V. %	--	8	7	5	0.4	2.1	4	0	777
LSD (.10)	--	5	6	6	0.2	0.3	1	1	6
Average	--	109	106	105	63.2	11.7	38	165	1
Highest	--	118	121	121	64.4	12.8	43	168	17
Lowest	--	99	98	91	60.9	11.1	35	163	0

1. Grain yield in the Moses Lake soft white spring wheat trial averaged 105 bushels/acre, 4 bushels/acre less than the 3-year average. The Moses Lake nursery was located about two miles east of Quincy, WA (Russ Kehl, cooperator).
2. This nursery was seeded on 17 March, 2011 following Edamame beans. Seed was placed at a 100#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 100 #N/acre. Spring seeding was timely and establishment was good.
3. Yields ranged from 91 to 121 bu/ac. 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 entry in 2011 and Nick was the highest yielding over 3 years of results at this site. The Louise-G2 is a 2 oz/100lb of Gaucho seed treatment. This treatment targets wire worms that may be causing yield losses but was not significantly different than Louise with the standard seed treatment. Stripe rust was a minor factor in this trial and no fungicide was applied.
4. Test weights were very good averaging 63.2 lbs/bu, and ranged from 60.9 to 64.4 lbs/bu. Grain protein averaged 11.7% with a range of 11.1 to 12.8%. The average plant height was 38 inches with minor lodging.

**Table 84. 2011 WSU Variety Testing SW Spring Wheat Trial, Pullman**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>JD</i>	77	78	78	<b>79</b>	<b>62.9</b>	8.1	37	186
<i>Diva</i>		67	64	<b>77</b>	62.2	8.7	36	186
<b>WA 8128</b>				<b>76</b>	<b>63.0</b>	8.4	36	184
<b>WA 8124</b>			73	<b>75</b>	62.0	7.1	35	189
<i>Louise-G2</i>				<b>74</b>	61.6	7.4	37	186
<i>Louise</i>	73	68	62	<b>73</b>	61.9	8.0	36	186
<i>Alturas</i>	71	69	64	70	61.7	8.5	31	186
<b>WA 8127</b>				69	62.4	8.2	32	185
<b>WA 8150</b>				68	62.2	7.4	33	187
<i>Wakanz</i>	67	61	54	67	61.5	8.0	32	187
<b>WA 8149</b>				67	61.1	7.2	32	187
<b>IDO686</b>				67	<b>62.6</b>	7.8	34	185
<b>IDO687</b>				67	<b>62.8</b>	7.7	31	186
<i>Eden</i>	70	64	57	66	61.8	7.5	31	184
<i>WA 8131</i>				66	62.1	8.9	29	186
<i>Whit</i>	67	61	55	65	61.5	7.2	31	184
<b>IDO644</b>				63	60.7	6.9	30	183
<i>Babe</i>	70	63	56	62	61.9	8.0	32	184
<i>Alpowa</i>	68	61	52	61	<b>62.6</b>	7.2	33	188
<b>IDO671</b>			58	61	61.6	8.0	32	185
<i>Zak</i>	60	56	46	58	62.0	8.5	32	186
<i>UI-Cataldo</i>	61	55	46	55	61.1	8.9	30	183
<i>Nick</i>	60	51	38	45	60.6	7.9	29	184
<b>WB-1035CL2</b>				45	61.5	9.6	30	183
<b>C.V. %</b>	7	7	7	8	0.8	8.1	3	0
<b>LSD (.10)</b>	2	3	3	6	0.5	0.7	1	1
<b>Average</b>	68	63	57	66	61.9	8.0	33	185
<b>Highest</b>	77	78	78	79	63.0	9.6	37	189
<b>Lowest</b>	60	51	38	45	60.6	6.9	29	183

1. Grain yield in the Pullman soft white spring wheat trial averaged 66 bushels/acre, similar to the 5-year average. The Pullman nursery was located at WSU Spillman experimental farm about two miles south of Pullman, WA (Ryan Davis, farm manager). This trial was conducted in cooperation with the WSU Spring Wheat Breeding Program.
2. This nursery was seeded on 24 April, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 70 #N/acre. Spring seeding was late, but establishment was good.
3. Yields ranged from 45 to 79 bu/ac. 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 club JD was the highest yielding variety in 2011 and was also the highest yielding over 5 years of results at this site. Stripe rust was a factor in this trial and no fungicide was applied. There was an impact on yield by stripe rust with yields reduced by 25% or more for susceptible entries.
4. Test weights were good averaging 61.9 lbs/bu, and ranged from 60.6 to 63.0 lbs/bu. Grain protein averaged 8.0% with a range of 6.9 to 9.6%. The average plant height was 33 inches with no lodging.

**Table 85. 2011 WSU Variety Testing SW Spring Wheat Trial, Reardan**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Louise-G2</b>				<b>90</b>	63.3	10.5	40	186
<b>Louise</b>	63	80	91	<b>89</b>	63.4	10.9	39	186
<i>JD</i>	61	81	92	<b>88</b>	<b>64.4</b>	11.6	42	187
<b>Diva</b>		79	90	<b>85</b>	62.6	11.1	39	186
<i>WA 8131</i>				<b>85</b>	63.0	11.8	33	187
<b>WA 8128</b>				<b>84</b>	63.7	11.3	41	186
<b>WA 8124</b>			88	83	63.4	10.8	39	188
<b>IDO686</b>				82	<b>64.2</b>	11.0	39	187
<b>Alturas</b>	63	82	90	80	62.3	10.5	36	187
<b>IDO687</b>				80	<b>63.9</b>	10.9	37	187
<b>Wakanz</b>	60	75	88	79	61.9	11.3	34	187
<b>IDO644</b>				79	62.0	10.6	33	185
<b>IDO671</b>			89	77	62.5	10.6	36	186
<b>WA 8127</b>				77	63.1	11.6	35	186
<i>Eden</i>	56	71	84	76	63.5	11.1	35	187
<b>Babe</b>	66	81	90	76	62.6	10.8	37	186
<b>WA 8149</b>				76	61.9	10.4	36	187
<b>Alpowa</b>	62	76	88	74	62.7	10.6	37	188
<b>Whit</b>	62	78	86	74	62.7	10.9	36	185
<b>WA 8150</b>				74	62.8	10.3	36	187
<b>UI-Cataldo</b>	55	72	81	72	62.5	11.6	34	185
<b>Zak</b>	58	71	75	66	62.1	11.0	37	188
<b>Nick</b>	56	68	78	66	61.8	11.5	34	185
<b>WB-1035CL2</b>				61	61.9	13.2	33	185
<b>C.V. %</b>	8	7	6	7	0.7	3.6	2	0
<b>LSD (.10)</b>	2	3	4	6	0.5	0.4	1	1
<b>Average</b>	60	76	86	78	62.8	11.1	37	186
<b>Highest</b>	66	82	92	90	64.4	13.2	42	188
<b>Lowest</b>	55	68	75	61	61.8	10.3	33	185

1. Grain yield in the Reardan soft white spring wheat trial averaged 78 bushels/acre, 18 bushels/acre more than the 5-year average. The Reardan nursery was located about six miles west of Reardan, WA (Hal Johnson, cooperator). This trial was conducted in cooperation with the WSU Spring Wheat Breeding Program.
2. This nursery was seeded on 20 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was 70 #N/acre. Spring seeding was late, but establishment was good.
3. Yields ranged from 61 to 90 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. Louise-G2 was the highest yielding entry in 2011 and Babe was the highest yielding over 5 years of results at this site. The Louise-G2 is a 2 oz/100lb of Gaucho seed treatment. This treatment targets wire worms that may be causing yield losses, but was not different than Louise with the usual seed treatment. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be 25% or more effect on yield by stripe rust for susceptible entries.
4. Test weights were very good and averaged 62.8 lbs/bu, and ranged from 61.8 to 64.4 lbs/bu. Grain protein was good and averaged 11.1% with a range of 10.3 to 13.2%. The average plant height was 37 inches with no lodging.



**Table 86. 2011 WSU Variety Testing SW Spring Wheat Trial, St. John**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Louise-G2</b>				<b>78</b>	62.1	10.4	37	182
<b>Diva</b>		69	57	<b>72</b>	62.6	10.6	36	183
<b>Louise</b>	67	68	55	71	61.7	10.1	37	183
<i>WA 8131</i>				68	62.0	10.9	30	185
<i>JD</i>	62	66	57	66	<b>63.4</b>	11.7	34	183
<b>Babe</b>	63	65	51	65	61.6	9.9	33	182
<b>WA 8124</b>			53	65	<b>62.9</b>	10.8	33	185
<b>WA 8128</b>				65	62.5	11.5	36	180
<b>WA 8127</b>				64	62.1	10.9	30	183
<b>Alturas</b>	60	64	52	63	61.1	10.2	32	183
<i>Eden</i>	63	63	52	63	62.8	10.6	30	182
<b>Whit</b>	66	66	53	63	61.2	10.0	33	181
<b>IDO686</b>				62	62.8	10.8	34	183
<b>Wakanz</b>	66	64	52	60	60.7	11.1	30	184
<b>IDO687</b>				60	62.8	10.5	31	183
<b>IDO671</b>			48	58	61.7	9.8	33	182
<b>WA 8149</b>				58	61.2	10.3	34	184
<b>WA 8150</b>				56	62.5	10.2	30	184
<b>Alpowa</b>	62	58	45	55	61.9	10.0	32	184
<b>Zak</b>	62	59	44	55	60.8	10.9	33	184
<b>IDO644</b>				55	60.5	10.1	30	179
<b>UI-Cataldo</b>	51	50	38	49	60.6	11.1	31	179
<b>Nick</b>	55	54	40	48	60.4	10.6	29	181
<b>WB-1035CL2</b>				40	60.0	11.9	29	180
<b>C.V. %</b>	9	9	11	10	0.7	4.1	5	1
<b>LSD (.10)</b>	3	3	4	6	0.5	0.5	2	1
<b>Average</b>	61	62	50	61	61.8	10.6	32	182
<b>Highest</b>	67	69	57	78	63.4	11.9	37	185
<b>Lowest</b>	51	50	38	40	60.0	9.8	29	179

1. Grain yield in the St. John soft white spring wheat trial averaged 61 bushels/acre, equal to the 5-year average. The St. John nursery was located about three miles east of St. John, WA (Mac Mills, cooperator).
2. This nursery was seeded on 20 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 80 #N/acre. Spring seeding was late, but establishment was good.
3. Yields ranged from 40 to 78 bu/ac. 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 entry in 2011 and Louise was the highest yielding over 5 years of results at this site. The Louise-G2 is a 2 oz/100lb of Gaucho seed treatment. This treatment targets wire worms that may be causing yield losses and was 7 bu/ac higher yielding with higher test weight and protein than Louise with the standard seed treatment. This is consistent with a better root system when wire worms are controlled. Wire worm distribution is not uniform and can contribute to variation in the trial. Significant Hessian fly infestation was observed and could impact yields. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be 25% or more effect on yield by stripe rust for susceptible entries.
4. Test weights were good averaging 61.8 lbs/bu, and ranged from 60.0 to 63.4 lbs/bu. Grain protein averaged 10.6% with a range of 9.8 to 11.9%. The average plant height was 32 inches with no lodging.

**Table 87. 2011 WSU Variety Testing SW Spring Wheat Trial, Walla Walla**

Variety Name <i>*Club Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Louise</b>	69	83	76	<b>79</b>	59.7	13.1	38	170
<i>WA 8131</i>				<b>78</b>	60.1	14.5	33	172
<b>Nick</b>	67	80	72	<b>74</b>	59.3	13.9	35	168
<i>Eden</i>	68	83	77	<b>74</b>	<b>61.2</b>	12.9	34	169
<b>IDO644</b>				<b>74</b>	57.8	13.6	33	166
<b>Louise-G2</b>				73	60.0	13.2	37	169
<b>Whit</b>	66	80	72	71	57.3	14.5	34	168
<b>Diva</b>		85	80	71	60.2	13.3	35	170
<b>UI-Cataldo</b>	65	79	74	70	59.3	14.3	35	166
<b>Babe</b>	67	84	74	70	59.4	13.9	36	169
<b>Zak</b>	64	72	60	69	<b>60.6</b>	15.0	34	171
<b>Alturas</b>	70	90	86	69	59.3	13.3	33	170
<b>WA 8127</b>				69	60.0	14.0	34	170
<b>WA 8128</b>				67	59.2	14.3	38	167
<b>WB-1035CL2</b>				67	58.5	15.2	36	167
<b>IDO686</b>				66	60.0	13.1	35	170
<b>IDO687</b>				66	<b>60.6</b>	13.7	34	170
<b>IDO671</b>			80	65	59.8	13.2	35	169
<b>Alpowa</b>	63	77	65	64	59.4	14.4	34	171
<b>Wakanz</b>	64	76	65	63	56.4	14.7	31	171
<i>JD</i>	65	80	74	61	<b>61.3</b>	14.5	38	170
<b>WA 8124</b>			77	61	60.2	14.3	35	172
<b>WA 8150</b>				61	<b>60.5</b>	14.3	32	171
<b>WA 8149</b>				57	59.7	12.9	33	171
<b>C.V. %</b>	8	9	10	7	1.5	5.0	5	1
<b>LSD (.10)</b>	3	4	5	5	0.9	0.7	2	1
<b>Average</b>	66	81	74	68	59.6	13.9	35	169
<b>Highest</b>	70	90	86	79	61.3	15.2	38	172
<b>Lowest</b>	63	72	60	57	56.4	12.9	31	166

1. Grain yield in the Walla Walla soft white spring wheat trial averaged 68 bushels/acre, 2 bushels/acre more than the 5-year average. The Walla Walla nursery was located about one mile east of Waitsburg, WA (Glen Smith, cooperator).

2. This nursery was seeded on 25 March, 2011 following hard red spring wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 112 #N/acre. Spring seeding was late, but establishment was good.

3. Yields ranged from 57 to 79 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 24 entries are in this group. Louise was the highest yielding entry in 2011 and Alturas was the highest yielding over 5 years of results at this site. Stripe rust was a factor in this trial and fungicide was applied on May 18 and June 12. The fungicide appears to be effective with no apparent yield loss for susceptible entries. Significant Hessian fly infestation was observed and could impact yields.

4. Test weights averaged 59.6 lbs/bu, and ranged from 56.4 to 61.3 lbs/bu. Grain protein was high due to high soil residual N and averaged 13.9% with a range of 12.9 to 15.2%. The average plant height was 35 inches with no lodging.

**Table 88.**

**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), AND WHITLOW (LOC 4) FARMS NEAR PULLMAN, MT VERNON (LOC 5); AND LIND (LOC 7), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2011 UNDER NATURAL INFECTION.**

NAME	CLASS	Spillman Farm (Pullman)	Whitlow Farm (Pullman)	Mt. Vernon		Lind	Reaction Type
		LOC1	LOC4	LOC5		LOC7	
		7/22	7/14	6/27	7/14	6/7	
		Flowering	Flowering	Ste elong.	Heading	Milk	
		IT %	IT %	IT %	IT %	IT %	
<b>LEMHI (S CHECK)</b>		<b>8 90</b>	<b>8 90</b>	<b>8 100</b>	<b>8 80</b>	<b>8 90</b>	<b>S</b>
Alpowa	SWS	2 5	3 30	5 80	2 30	5 90	MS
Alturas	SWS	2 2	2 30	5 60	2 20	5 30	MR
Babe	SWS	2 5	3 50	4 30	3 40	8 70	MS
Diva	SWS	2 5	2 20	5 40	3 30	3 20	MR
Eden	SC	2 5	2 30	8 80	3 30	5 30	MR
JD	SC	2 1	2 5	2 30	2 5	2 5	R
Louise	SWS	2 5	2 30	5 60	2 30	3 30	MR
Nick	SWS	8 80	8 90	8 80	3 40	8 80	S
Wakanz	SWS	2 5	2 40	5 60	3 40	8 50	MR
Whit	SWS	2 10	2 30	5 60	4 40	3 30	MR
Zak	SWS	3 10	5 60	8 80	3 40	8 70	MS
UI-Cataldo	SWS	5 10	8 50	8 100	8,3 80,20	8 40	MS
Louise-G2	SWS	2 5	2 25	6 40	3 40	5 30	MR
IDO671	SWS	2 10	2 30	2 30	2 10	5 20	MR
IDO644	SWS	5 10	8 20	5 30	2 20	5 40	MR
IDO686	SWS	2 2	2 15	2 30	3 20	5 20	MR
IDO687	SWS	2 5	3 20	5 60	3 40	5 20	MR
WA 8124	SWS	2 2	2 15	2 20	2 30	3 10	R
WA 8127	SWS	2 20	3 30	2 40	2 40	5 30	MR
<b>LEMHI (S CHECK)</b>		<b>8 90</b>	<b>8 90</b>	<b>8 100</b>	<b>8 80</b>	<b>8 90</b>	<b>S</b>
WA 8128	SWS	2 2	2 10	5 40	2 20	2 20	R
WA 8149	SWS	5,8 20	8 60	2 30	4 40	8 50	MS
WA 8150	SWS	2 10	5 50	5 40	4 40	5 40	MR
WA 8131	SC	<b>2 2</b>	<b>2 5</b>	<b>2 10</b>	<b>1 5</b>	<b>2 20</b>	R
WB-1035CL2	SWS	8 80	8 90	8 60	3 40	8 80	S

\* 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 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

## 2011 Hard Spring Wheat

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**2011 WSU Hard Spring Wheat Trial Summary**  
**Precipitation Zone >20"**

1. Hard red and white spring wheat grain yield across three locations and 24 entries in the >20" precipitation zone averaged 55 bushels/acre; that is 10 bushels/acre lower than the average in the 16-20" zone and similar to the 2010 average. The C.V. for the average data is 9, lower than the 2010 C.V. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 41 to 69 bu/ac. Patwin 515, a hard white, was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (3 bushels/acre) of the highest yield are shown in bold and this included 1 of the 24 entries. Stripe rust significantly reduced yields at these locations and influenced yield rankings based on susceptibility. No fungicide applications were made on these trials and stripe rust yield impacts in percent are: 10% impact at Farmington, 25% at Fairfield, and 25% at Pullman.
3. Test weight averaged 60.9 lbs/bu across locations and entries and was higher than last year's 55.2 lbs/bu average. Grain protein averaged 11.4% and was lower than last year's 14.6% protein value.

**2011 WSU Hard Spring Wheat Trial Summary**  
**Precipitation Zone 16-20"**

1. Hard red and white spring wheat grain yield across five locations and 24 entries in the 16-20" precipitation zone averaged 65 bushels/acre; that is 10 bushels/acre higher than the average in the >20" zone and 8 bushels/acre higher than the 2010 average of 57 bushels/acre. The C.V. for the average data is 7, lower than the 2010 C.V. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 55 to 74 bu/ac. Lassik was the highest yielding named entry averaged across locations. 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 a factor at all locations and influenced yield rankings based on susceptibility. The number of fungicide applications made on these trials and stripe rust yield impacts in percent are: 2 applications and 10% impact at Dayton, 2 and minimal at Mayview, 0 and 25% at Reardan, 0 and 25% at St. John, and 2 and minimal at Walla Walla.
3. Test weight averaged 61.0 lbs/bu across locations and entries and was higher than last year's 54.7 lbs/bu average. Grain protein averaged 12.5% and was lower than last year's 14.5% protein value.

**2011 WSU Hard Spring Wheat Trial Summary**  
**Precipitation Zone 12-16"**

1. Hard red and white spring wheat grain yield across three locations and 24 entries in the 12-16" precipitation zone averaged 60 bushels/acre; that is 5 bushels/acre higher than the average in the >20" zone and 5 bushels/acre higher than the 2010 average of 55 bushels/acre. The C.V. for the average data is 6, lower than the 2010 C.V. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 52 to 69 bu/ac. Lassik was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (2 bushels/acre) of the highest yield are shown in bold and this included 1 of the 24 entries. Stripe rust significantly reduced yields at these locations and influenced yield rankings based on susceptibility. No fungicide applications were made on these trials and stripe rust yield impacts in percent are: 20% impact at Almira, 10% at Endicott, and 20% at Lamont.
3. Test weight averaged 61.0 lbs/bu across locations and entries and was higher than last year's 57.9 lbs/bu average. Grain protein averaged 11.8% and was lower than last year's 14.6% protein value.

**2011 WSU Hard Spring Wheat Trial Summary**  
**Precipitation Zone <12"**

1. Hard red and white spring wheat grain yield across four locations and 24 entries in the <12" precipitation zone averaged 30 bushels/acre and is lower than the 2010 average of 36 bushels/acre. The C.V. for the average data is 11, higher than the 2010 C.V.
2. Yields among entries averaged across locations ranged narrowly from 28 to 34 bu/ac. Lassik was the highest yielding named entry averaged across locations. 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 a factor at most locations and influenced yield rankings based on susceptibility. The only fungicide application made on these trials was one at Connell and stripe rust yield impacts in percent are: minimal impact at Bickleton, minimal at Connell, 20% at Horse Heaven, and 20% at Lind.
3. Test weight averaged 60.6 lbs/bu across locations and entries and was higher than last year's 58.2 lbs/bu average. Grain protein averaged 13.5% and was lower than last year's 14.9% protein value.

Table 89.

## 2011 WSU Variety Testing Hard Spring Wheat Trial Summary

### Precipitation Zone >20"

Variety Name	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average
<b>Hard Red Spring</b>	<b>Yield (Lbs/A)</b>				<b>Test Wt (Lbs/Bu)</b>				<b>Protein (%)</b>			
Lassik	52	60	74	62	61.2	61.1	63.0	61.8	12.1	11.2	9.3	10.9
UI Winchester	49	60	72	60	60.9	61.5	62.8	61.7	12.5	11.9	9.4	11.3
WA 8074	47	60	74	60	60.4	61.3	62.7	61.5	13.0	11.7	8.6	11.1
Buck Pronto	47	59	72	59	60.3	61.4	62.7	61.5	14.1	12.9	10.6	12.6
Hollis	51	61	65	59	60.2	60.8	61.6	60.9	13.1	12.1	10.5	11.9
Scarlet	42	57	69	56	60.4	60.5	62.3	61.1	12.4	11.9	9.2	11.2
Bullseye	39	59	66	55	62.1	62.7	63.6	62.8	13.1	11.5	7.7	10.8
WA 8148	40	51	74	55	59.3	59.7	61.5	60.2	13.8	11.9	9.4	11.7
Kelse	48	54	60	54	61.1	61.0	62.6	61.6	14.2	12.8	11.3	12.8
Tara 2002	56	53	52	54	59.7	60.3	58.8	59.6	12.1	11.5	10.8	11.4
10Fx Inc.1	51	47	57	52	60.9	61.4	61.1	61.2	12.1	12.1	8.5	10.9
Westbred 926	45	53	60	52	59.6	59.3	60.3	59.8	13.4	12.9	10.3	12.2
Jefferson	39	53	62	51	60.8	60.6	61.5	61.0	12.9	12.4	8.6	11.3
Cerere	45	53	54	51	58.6	58.9	61.8	59.8	11.8	11.2	8.1	10.3
IDO702	39	46	51	46	59.2	59.3	60.3	59.6	12.5	12.1	9.6	11.4
WB-Fuzion	43	42	47	44	59.7	60.2	60.6	60.2	12.9	11.7	10.0	11.5
Hank	36	47	40	41	55.5	59.3	58.0	57.6	13.4	12.5	10.9	12.3
<b>Hard White Spring</b>												
WA 8123	55	68	84	69	61.2	61.3	63.8	62.1	12.2	12.2	9.9	11.4
WA 8133	57	53	80	63	61.5	62.2	63.5	62.4	12.4	12.4	9.0	11.3
Patwin 515	52	59	78	63	59.8	60.2	62.2	60.7	13.5	12.2	10.4	12.0
BR7030	49	60	74	61	61.1	61.7	63.8	62.2	12.1	11.5	9.3	11.0
Clear White 515	57	47	65	56	59.1	60.2	61.2	60.2	12.7	12.3	9.5	11.5
Macon	46	59	61	55	57.9	60.7	61.7	60.1	11.5	11.2	8.5	10.4
Otis	44	54	51	49	60.0	61.9	62.9	61.6	11.6	10.3	9.3	10.4
<b>C.V. %</b>	11	11	6	9	1.1	1.0	0.6	0.9	3.0	5.2	10.6	6.3
<b>LSD (0.10)</b>	5	6	4	3	0.7	0.6	0.4	0.3	0.4	0.7	1.1	0.4
<b>Average</b>	47	55	64	55	60.0	60.7	61.9	60.9	12.7	11.9	9.5	11.4
<b>Highest</b>	57	68	84	69	62.1	62.7	63.8	62.8	14.2	12.9	11.3	12.8
<b>Lowest</b>	36	42	40	41	55.5	58.9	58.0	57.6	11.5	10.3	7.7	10.3

Table 90.

## 2011 WSU Variety Testing Hard Spring Wheat Trial Summary

## Precipitation Zone 16-20"

Variety Name	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							Yield (Lbs/A)						Test Wt (Lbs/Bu)						Protein (%)					
Lassik	92	55	85	68	66	73	63.1	62.6	62.2	62.4	57.6	61.6	12.4	8.7	12.5	12.4	14.8	12.1						
WA 8074	88	53	80	64	69	71	62.9	62.1	62.0	62.3	56.9	61.3	12.7	8.8	12.7	11.9	15.3	12.3						
Scarlet	91	51	71	67	68	70	62.0	61.5	60.8	61.7	58.0	60.8	13.1	8.9	13.2	12.1	15.3	12.5						
Kelse	90	51	67	59	67	67	63.0	62.5	61.7	62.3	58.5	61.6	14.0	10.1	13.4	12.2	16.5	13.3						
Buck Pronto	85	53	67	63	66	67	62.3	62.0	61.3	61.8	57.5	61.0	14.9	10.6	14.7	13.0	16.9	14.0						
Bullseye	87	46	65	57	69	65	64.5	63.7	63.0	63.4	60.7	63.1	12.7	8.5	12.5	11.1	15.0	12.0						
UI Winchester	83	50	70	60	64	65	63.1	62.1	62.1	62.2	57.6	61.4	13.0	8.3	12.5	11.8	15.3	12.2						
10Fx Inc.1	84	49	69	52	62	63	64.1	62.0	62.8	62.2	57.8	61.8	13.4	9.0	12.3	11.7	15.6	12.4						
Jefferson	82	47	69	55	63	63	62.5	61.3	61.5	61.1	58.1	60.9	13.9	9.4	13.1	11.9	15.8	12.8						
Hollis	79	47	69	56	60	62	62.0	61.1	61.2	61.6	58.1	60.8	14.4	9.1	13.3	13.4	16.8	13.4						
Tara 2002	79	50	64	51	66	62	62.6	61.9	60.9	60.2	57.7	60.7	13.1	8.2	13.3	12.3	14.9	12.4						
WB-Fuzion	84	46	64	52	63	62	61.9	61.2	61.4	60.8	57.4	60.5	14.1	8.9	13.4	12.2	16.9	13.1						
WA 8148	76	48	70	54	64	62	61.7	61.4	60.6	61.3	56.4	60.3	13.3	9.3	12.9	13.0	16.4	13.0						
Westbred 926	80	47	67	50	65	62	61.6	61.0	60.3	60.5	56.6	60.0	13.6	10.2	13.2	12.2	15.9	13.0						
Cerere	86	46	64	53	57	61	61.7	61.6	61.1	60.8	59.6	61.0	12.6	8.3	11.4	10.8	15.0	11.6						
IDO702	83	47	63	46	60	60	61.3	60.6	60.0	59.0	56.1	59.4	13.7	9.2	13.3	12.1	16.0	12.9						
Hank	79	43	56	36	60	55	61.6	60.1	59.7	58.1	56.8	59.3	13.2	8.8	12.8	12.5	15.4	12.5						
Hard White Spring																								
WA 8123	95	50	82	68	72	74	63.2	63.3	62.5	62.5	59.2	62.1	12.6	9.1	12.4	12.0	14.9	12.2						
BR7030	97	55	79	54	69	71	63.6	63.4	62.7	62.6	57.1	61.9	12.2	8.8	12.2	11.7	15.1	12.0						
WA 8133	88	49	80	62	68	70	63.8	63.1	63.2	62.7	58.6	62.3	12.1	9.1	12.3	12.0	14.0	11.9						
Patwin 515	85	52	71	62	63	67	62.0	62.0	60.4	61.1	55.3	60.2	13.3	9.5	13.5	13.3	15.8	13.1						
Macon	91	53	64	53	64	65	62.3	61.7	61.1	61.0	56.5	60.5	11.8	8.1	11.5	10.7	15.0	11.4						
Clear White 515	80	52	67	63	63	65	62.1	61.3	60.6	60.8	56.2	60.2	12.8	9.7	13.6	12.9	15.0	12.8						
Otis	93	45	65	48	64	63	62.8	62.0	62.6	61.8	60.2	61.9	12.0	8.6	10.9	10.1	14.3	11.2						
C.V. %	5	7	4	12	6	7	0.4	0.4	0.5	1.0	1.0	0.7	1.8	8.2	2.7	5.3	3.2	4.2						
LSD (0.10)	5	4	3	7	8	2	0.3	0.3	0.3	0.6	1.2	0.2	0.2	0.8	0.4	0.7	1.0	0.2						
Average	86	49	70	56	65	65	62.6	61.9	61.5	61.4	57.7	61.0	13.1	9.1	12.8	12.1	15.5	12.5						
Highest	97	55	85	68	72	74	64.5	63.7	63.2	63.4	60.7	63.1	14.9	10.6	14.7	13.4	16.9	14.0						
Lowest	76	43	56	36	57	55	61.3	60.1	59.7	58.1	55.3	59.3	11.8	8.1	10.9	10.1	14.0	11.2						



Table 91.

## 2011 WSU Variety Testing Hard Spring Wheat Trial Summary

### Precipitation Zone 12-16"

Variety Name	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average	Almira	Endicott	Lamont	Average
<b>Hard Red Spring</b>	<b>Yield (Lbs/A)</b>				<b>Test Wt (Lbs/Bu)</b>				<b>Protein (%)</b>			
Lassik	70	54	75	66	61.4	62.3	61.8	61.9	10.6	12.5	11.9	11.7
WA 8074	73	51	68	64	60.9	61.5	61.8	61.4	10.5	12.7	10.9	11.4
Scarlet	64	50	71	62	60.0	60.9	61.1	60.7	11.4	12.8	11.7	12.0
WA 8148	68	48	65	61	60.7	60.8	61.1	60.9	11.1	13.5	11.8	12.1
Kelse	62	49	67	60	60.9	61.9	61.7	61.5	12.0	13.5	11.4	12.3
Jefferson	69	47	64	60	61.0	61.1	61.0	61.0	11.4	13.5	10.7	11.9
10Fx Inc.1	63	49	65	59	61.0	62.4	62.2	61.9	10.8	12.7	10.9	11.5
Hollis	67	48	62	59	60.6	60.8	60.6	60.7	12.1	13.3	13.5	13.0
UI Winchester	64	47	66	59	59.6	60.6	61.8	60.7	11.5	12.6	10.8	11.6
Bullseye	63	45	66	58	63.2	63.4	63.1	63.2	11.0	12.5	10.4	11.3
Buck Pronto	67	43	65	58	61.7	60.8	61.3	61.3	12.1	14.1	12.6	12.9
Tara 2002	64	44	65	58	59.8	61.3	61.1	60.7	11.4	13.1	11.2	11.9
WB-Fuzion	69	43	59	57	61.9	60.4	60.6	61.0	11.1	13.1	11.5	11.9
Westbred 926	60	47	62	56	59.9	60.3	60.0	60.1	11.7	13.6	11.9	12.4
IDO702	60	46	62	56	59.6	60.0	60.1	59.9	11.1	13.2	11.3	11.9
Cerere	55	48	59	54	60.2	61.1	60.2	60.5	10.5	12.8	10.1	11.2
Hank	61	41	54	52	58.5	59.1	58.8	58.8	11.5	12.8	10.7	11.7
<b>Hard White Spring</b>												
WA 8123	78	52	77	69	61.8	61.9	61.8	61.8	11.3	12.4	10.8	11.5
BR7030	68	53	77	66	61.8	62.6	62.4	62.3	10.7	12.5	11.3	11.5
WA 8133	72	50	70	64	61.3	61.0	62.2	61.5	11.5	12.5	11.4	11.8
Patwin 515	68	46	68	61	60.9	61.0	60.7	60.9	11.6	13.6	12.5	12.6
Clear White 515	69	45	69	61	59.2	60.4	60.8	60.2	11.5	13.2	12.0	12.2
Macon	64	46	70	60	61.1	60.2	60.8	60.7	10.0	11.7	10.5	10.7
Otis	63	44	64	57	62.0	62.3	61.2	61.8	10.0	11.9	10.2	10.7
<b>C.V. %</b>	7	5	5	6	1.3	1.0	0.4	1.0	5.8	2.3	6.8	5.1
<b>LSD (0.10)</b>	5	5	3	2	0.8	1.3	0.2	0.4	0.7	0.6	0.8	0.4
<b>Average</b>	66	48	66	60	60.8	61.2	61.2	61.0	11.2	12.9	11.3	11.8
<b>Highest</b>	78	54	77	69	63.2	63.4	63.1	63.2	12.1	14.1	13.5	13.0
<b>Lowest</b>	55	41	54	52	58.5	59.1	58.8	58.8	10.0	11.7	10.1	10.7

Table 92.

## 2011 WSU Variety Testing Hard Spring Wheat Trial Summary

## Precipitation Zone &lt;12"

Variety Name	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average	Bickleton	Connell	Horse Heaven	Lind	Average
<b>Hard Red Spring</b>	<b>Yield (Lbs/A)</b>					<b>Test Wt (Lbs/Bu)</b>					<b>Protein (%)</b>				
Lassik	25	20	37	54	<b>34</b>	61.5	61.8	62.0	61.1	61.6	13.0	14.6	11.5	12.8	13.0
Hollis	25	25	34	44	<b>32</b>	61.6	61.5	60.6	59.7	60.9	14.4	15.7	12.3	14.6	14.3
WA 8148	24	22	34	48	<b>32</b>	60.8	61.3	59.9	59.9	60.5	14.5	14.8	12.1	13.5	13.7
Scarlet	17	27	38	48	<b>32</b>	59.8	59.7	59.9	59.5	59.7	13.2	15.6	12.2	14.1	13.8
WA 8074	21	21	34	49	31	61.6	61.9	60.8	61.5	61.4	13.4	15.3	11.4	13.3	13.4
Kelse	20	24	35	42	31	61.4	61.9	60.4	61.1	61.2	14.4	16.1	12.4	14.3	14.3
Buck Pronto	23	19	36	46	31	60.7	61.3	59.8	60.6	60.6	14.5	16.5	13.1	14.5	<b>14.6</b>
Bullseye	21	20	32	46	30	62.7	63.0	62.5	62.7	<b>62.7</b>	13.0	15.4	10.9	12.8	13.0
UI Winchester	21	17	36	47	30	60.3	62.1	61.5	61.2	61.3	13.0	15.7	11.8	12.8	13.3
Westbred 926	22	21	32	44	30	60.8	61.3	59.9	59.7	60.4	15.3	16.0	12.0	13.7	14.3
Jefferson	19	22	31	49	30	60.6	61.1	59.6	60.3	60.4	13.8	14.8	11.4	13.2	13.3
Tara 2002	25	21	33	42	30	60.9	60.4	59.1	59.5	60.0	13.7	15.9	11.8	13.3	13.7
Cerere	25	21	30	43	30	59.7	59.6	59.7	60.1	59.8	13.4	14.3	11.2	12.9	13.0
IDO702	16	24	30	45	29	59.5	60.8	58.5	58.7	59.4	13.9	15.2	11.6	13.5	13.5
10Fx Inc.1	19	23	27	43	28	60.8	61.7	59.6	60.8	60.7	14.2	15.0	11.8	13.8	13.7
WB-Fuzion	17	19	31	44	28	60.3	61.5	59.3	59.8	60.2	14.0	16.2	12.1	13.6	14.0
Hank	18	23	29	40	28	60.2	60.8	58.3	59.1	59.6	13.9	14.8	11.8	13.2	13.4
<b>Hard White Spring</b>															
BR7030	17	27	36	53	<b>33</b>	61.4	62.4	61.9	61.6	61.8	13.3	13.8	11.2	12.5	12.7
WA 8123	20	23	37	52	<b>33</b>	60.3	61.9	61.7	60.8	61.2	12.8	14.3	11.8	13.3	13.1
WA 8133	21	21	36	50	<b>32</b>	61.3	62.2	61.7	61.6	61.7	13.0	14.3	11.7	13.2	13.0
Patwin 515	20	20	35	47	30	57.7	59.8	59.5	60.6	59.4	13.2	14.7	12.0	13.5	13.3
Otis	22	23	25	45	29	61.9	61.7	60.6	61.2	61.4	12.2	13.6	10.9	12.5	12.3
Macon	22	21	30	42	29	59.1	60.9	59.3	59.8	59.8	12.9	13.5	10.9	12.0	12.3
Clear White 515	22	17	29	43	28	58.9	59.4	59.0	59.0	59.1	12.9	15.2	13.1	14.5	13.9
<b>C.V. %</b>	26	8	8	5	11	1.5	0.6	1.2	0.9	1.1	4.4	2.0	3.3	1.9	3.0
<b>LSD (0.10)</b>	N.S. <sup>1</sup>	2	5	3	2	1.0	0.4	1.0	0.7	0.3	0.6	0.3	0.5	0.4	0.2
<b>Average</b>	21	22	33	46	30	60.6	61.2	60.2	60.4	60.6	13.6	15.1	11.8	13.4	13.5
<b>Highest</b>	25	27	38	54	34	62.7	63.0	62.5	62.7	62.7	15.3	16.5	13.1	14.6	14.6
<b>Lowest</b>	16	17	25	40	28	57.7	59.4	58.3	58.7	59.1	12.2	13.5	10.9	12.0	12.3

<sup>1</sup> - No Significant Differences

**Table 93. WSU Hard Spring Wheat Trial Multi-Year Summary**

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

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 5 loc/yr			2009-2011, 7 loc/yr			2007-2011, 12 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Spring</i></b>									
Buck Pronto	66	59.5	13.9	67	59.7	14.4	66	59.6	14.4
WA 8074	65	59.2	12.7	68	59.9	13.1			
Lassik	64	58.9	12.6	66	59.6	13.0			
UI Winchester	62	59.0	12.8	66	59.7	13.2			
Scarlet	58	58.4	12.9	63	58.9	13.5	66	58.9	13.5
Hollis	57	58.6	13.2	61	59.2	13.9	61	59.4	14.1
Bullseye	56	60.1	12.6	61	60.9	13.1			
Jefferson	56	59.1	12.8	61	59.7	13.4	63	59.8	13.6
Kelse	54	58.3	14.3	58	59.0	14.5	61	59.4	14.4
Westbred 926	52	56.4	13.7	57	57.5	14.1	61	57.9	14.2
Tara 2002	51	56.3	12.9	57	57.6	13.4	63	58.6	13.6
WB-Fuzion	49	58.0	12.9						
Hank	41	54.4	13.6	49	55.9	13.8	57	57.1	13.8
<b><i>Hard White Spring</i></b>									
WA 8123	72	60.0	12.6						
BR7030	66	59.8	12.1						
Macon	52	57.1	12.0	57	58.0	12.2			
Otis	48	59.4	12.0	57	60.1	12.1			
C.V. %	9	1.8	5.9	9	1.6	5.1	8	1.3	4.3
LSD (.10)	2	0.5	0.4	2	0.4	0.3	2	0.2	0.2
Average	57	58.4	12.9	61	59.0	13.4	62	58.9	13.9
Highest	72	60.1	14.3	68	60.9	14.5	66	59.8	14.4
Lowest	41	54.4	12.0	49	55.9	12.1	57	57.1	13.5

**Table 94. WSU Hard Spring Wheat Trial Multi-Year Summary**

**Precipitation Zone = 16-20"**  
**(Dayton, Mayview, Reardan, St. John, Walla Walla)**

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 10 loc/yrs			2009-2011, 15 loc/yrs			2007-2011, 25 loc/yrs		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Spring</i></b>									
Lassik	69	58.5	13.1	67	59.3	13.4			
Buck Pronto	66	58.3	14.9	63	58.9	15.4	57	58.8	15.6
WA 8074	66	58.2	13.4	63	59.1	13.9			
Scarlet	65	57.6	13.5	64	58.2	14.0	59	58.3	14.4
UI Winchester	64	58.5	13.3	63	59.4	13.7			
Bullseye	62	60.0	13.2	62	60.8	13.5			
Jefferson	61	58.3	13.8	61	59.2	14.2	57	59.3	14.7
WB-Fuzion	61	57.8	14.0						
Westbred 926	61	56.9	14.0	59	57.9	14.6	54	58.1	15.0
Kelse	60	57.9	14.5	60	58.8	14.8	57	59.0	15.1
Tara 2002	58	57.1	13.3	57	58.2	13.9	54	58.8	14.4
Hollis	56	57.6	14.3	56	58.5	14.7	53	58.8	15.1
Hank	52	55.9	13.6	55	57.3	14.0	53	57.7	14.4
<b><i>Hard White Spring</i></b>									
BR7030	70	58.9	12.8						
WA 8123	69	59.3	13.1						
Macon	58	57.0	12.6	59	58.2	12.8			
Otis	55	58.6	12.5	60	59.4	12.7			
C.V. %	8	1.7	4.5	8	1.5	3.9	8	1.3	3.5
LSD (.10)	2	0.3	0.2	1	0.2	0.1	1	0.2	0.1
Average	62	58.0	13.5	61	58.8	14.0	56	58.6	14.8
Highest	70	60.0	14.9	67	60.8	15.4	59	59.3	15.6
Lowest	52	55.9	12.5	55	57.3	12.7	53	57.7	14.4

**Table 95. WSU Hard Spring Wheat Trial Multi-Year Summary**

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

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 6 loc/yr			2009-2011, 9 loc/yr			2007-2011, 15 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Spring</i></b>									
Lassik	64	60.3	13.2	61	60.4	13.7			
WA 8074	62	59.9	13.2	59	60.2	13.9			
Scarlet	61	58.9	13.8	61	59.2	14.4	57	59.0	14.2
UI Winchester	60	59.7	13.2	57	60.1	14.0			
Jefferson	59	59.8	13.4	57	60.0	14.0	52	59.7	14.2
Buck Pronto	58	60.0	14.6	55	59.8	15.5	49	59.6	15.3
Hollis	57	59.4	14.3	56	59.8	14.8	51	59.5	14.8
Bullseye	56	61.7	12.9	54	61.7	13.4			
Kelse	56	59.7	14.1	55	59.9	14.8	51	59.9	14.7
Westbred 926	56	58.6	13.8	53	59.0	14.6	49	58.9	14.7
WB-Fuzion	55	59.3	13.2						
Tara 2002	54	58.7	13.4	52	59.1	14.3	50	59.2	14.3
Hank	49	57.2	13.1	51	58.3	13.8	48	58.3	14.0
<b><i>Hard White Spring</i></b>									
BR7030	68	60.6	12.7						
WA 8123	66	60.5	13.1						
Otis	56	60.4	12.3	57	60.7	12.8			
Macon	55	59.0	12.1	53	59.4	12.5			
C.V. %	8	1.5	5.7	8	1.3	4.7	8	1.2	4.2
LSD (.10)	2	0.4	0.4	2	0.3	0.3	1	0.2	0.2
Average	58	59.6	13.3	56	59.8	14.0	51	59.3	14.5
Highest	68	61.7	14.6	61	61.7	15.5	57	59.9	15.3
Lowest	49	57.2	12.1	51	58.3	12.5	48	58.3	14.0

**Table 96. WSU Hard Spring Wheat Trial Multi-Year Summary**

**Precipitation Zone = <12"**  
**(Bickleton, Connell, Horse Heaven, Lind)**

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 8 loc/yr			2009-2011, 12 loc/yr			2007-2011, 19 loc/yr		
	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %	Yield Bu/A	TW Lbs/Bu	Protein %
<b><i>Hard Red Spring</i></b>									
Lassik	36	59.8	13.9	31	60.2	14.1			
Scarlet	35	58.2	14.3	31	58.9	14.7	29	58.9	15.2
Bullseye	34	61.2	13.8	29	61.7	14.1			
Hollis	34	59.3	15.1	29	59.9	15.2	27	59.9	15.5
Jefferson	34	59.6	14.1	29	60.1	14.6	27	60.1	15.3
UI Winchester	34	60.3	14.3	29	60.6	14.5			
WA 8074	34	60.5	14.3	30	60.8	14.5			
Kelse	33	59.8	15.3	29	60.2	15.6	26	60.1	16.1
WB-Fuzion	33	59.5	14.7						
Buck Pronto	32	59.7	15.6	27	59.8	15.9	25	59.8	16.3
Westbred 926	32	59.3	15.1	28	59.7	15.4	25	59.7	15.9
Tara 2002	31	58.7	14.5	27	59.1	14.9	25	59.1	15.5
Hank	30	58.7	14.3	27	59.2	14.7	26	59.3	15.3
<b><i>Hard White Spring</i></b>									
BR7030	34	60.6	13.6						
WA 8123	34	59.8	13.9						
Macon	32	59.0	12.9	28	59.4	13.4			
Otis	31	59.6	13.0	29	60.3	13.3			
C.V. %	9	1.1	2.6	9	1.0	2.8	9	1.0	2.7
LSD (.10)	1	0.2	0.1	1	0.2	0.1	1	0.1	0.1
Average	33	59.6	14.3	29	60.0	14.6	26	59.6	15.6
Highest	36	61.2	15.6	31	61.7	15.9	29	60.1	16.3
Lowest	30	58.2	12.9	27	58.9	13.3	25	58.9	15.2

**Table 97. 2011 WSU Variety Testing Hard Spring Wheat Trial, Almira**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<i>WA 8123</i>			62	<b>78</b>	<b>61.8</b>	11.3	35
<b>WA 8074</b>		58	62	<b>73</b>	60.9	10.5	37
<i>WA 8133</i>				72	61.3	11.5	35
<b>Lassik</b>		57	58	70	61.4	10.6	30
<b>Jefferson</b>	53	58	60	69	61.0	11.4	35
<b>WB-Fuzion</b>			63	69	<b>61.9</b>	11.1	36
<i>Clear White 515</i>				69	59.2	11.5	33
<i>BR7030</i>			59	68	<b>61.8</b>	10.7	34
<i>Patwin 515</i>				68	60.9	11.6	26
<b>WA 8148</b>				68	60.7	11.1	33
<b>Hollis</b>	51	55	57	67	60.6	12.1	45
<b>Buck Pronto</b>	50	54	60	67	<b>61.7</b>	12.1	36
<i>Macon</i>		52	55	64	61.1	10.0	34
<b>Scarlet</b>	53	54	54	64	60.0	11.4	37
<b>Tara 2002</b>	52	54	57	64	59.8	11.4	35
<b>UI Winchester</b>		55	57	64	59.6	11.5	32
<i>Otis</i>		50	52	63	<b>62.0</b>	10.0	40
<b>Bullseye</b>		56	58	63	<b>63.2</b>	11.0	31
<b>10Fx Inc.1</b>				63	61.0	10.8	35
<b>Kelse</b>	52	54	56	62	60.9	12.0	36
<b>Hank</b>	52	56	58	61	58.5	11.5	33
<b>Westbred 926</b>	51	54	57	60	59.9	11.7	34
<b>IDO702</b>				60	59.6	11.1	34
<b>Cerere</b>				55	60.2	10.5	31
<b>C.V. %</b>	9	8	8	7	1.3	5.8	5
<b>LSD (.10)</b>	2	3	4	5	0.8	0.9	2
<b>Average</b>	52	55	58	66	60.8	11.2	34
<b>Highest</b>	53	58	63	78	63.2	12.1	45
<b>Lowest</b>	50	50	52	55	58.5	10.0	26

1. Grain yield in the Almira hard spring wheat trial averaged 66 bushels/acre, 14 bushels/acre less than the 5-year average. The Almira nursery was located about 10 miles north of Almira, WA (Dan McKay, cooperator).
2. This nursery was seeded on 22 April, 2011 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 65#N/acre. A soil test before planting showed 202#N/acre available and no additional N was applied based on yield projections. Spring seeding was late but establishment was good.
3. Yields ranged from 55 to 78 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. Lassik was the highest yielding named entry and Jefferson and Scarlet were highest yielding over 5 years at this location. Stripe rust was a factor in this trial and no fungicide was applied. There appears to be 20% or more effect on yield by stripe rust for susceptible entries.
4. Test weights were good with an average of 60.8 lbs/bu, and ranged from 58.5 to 63.2 lbs/bu. Grain protein averaged 11.2% with a range of 10.0 to 12.1%. The average plant height was 34 inches with no lodging.

**Table 98. 2011 WSU Variety Testing Hard Spring Wheat Trial, Bickleton**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
Hollis	--	24	24	25	61.6	14.4	26
Tara 2002	--	25	27	25	60.9	13.7	25
Lassik	--	21	22	25	61.5	13.0	23
Cerere	--			25	59.7	13.4	24
WA 8148	--			24	60.8	14.5	22
Buck Pronto	--	22	23	23	60.7	14.5	22
<i>Macon</i>	--	22	23	22	59.1	12.9	24
<i>Otis</i>	--	22	19	22	<b>61.9</b>	12.2	26
Westbred 926	--	25	28	22	60.8	15.3	22
<i>Clear White 515</i>	--			22	58.9	12.9	21
Bullseye	--	23	23	21	<b>62.7</b>	13.0	21
UI Winchester	--	23	23	21	60.3	13.0	21
WA 8074	--	24	25	21	61.6	13.4	24
<i>WA 8133</i>	--			21	61.3	13.0	27
Kelse	--	22	22	20	61.4	14.4	24
<i>WA 8123</i>	--		21	20	60.3	12.8	25
<i>Patwin 515</i>	--			20	57.7	13.2	21
Jefferson	--	21	21	19	60.6	13.8	23
10Fx Inc.1	--			19	60.8	14.2	20
Hank	--	24	24	18	60.2	13.9	22
<i>BR7030</i>	--		20	17	61.4	13.3	24
Scarlet	--	21	20	17	59.8	13.2	23
WB-Fuzion	--		25	17	60.3	14.0	23
IDO702	--			16	59.5	13.9	19
C.V. %	--	17	19	26	1.5	4.4	13
LSD (.10)	--	2	3	N.S. <sup>1</sup>	1.0	0.6	3
Average	--	23	23	21	60.6	13.6	23
Highest	--	25	28	25	62.7	15.3	27
Lowest	--	21	19	16	57.7	12.2	19

<sup>1</sup> -No Significant Difference

1. Grain yield in the Bickleton hard spring wheat trial averaged 21 bushels/acre, 2 bushels/acre less than the 3-year average. The Bickleton nursery was located about four miles east of Bickleton, WA (Steve Matsen, cooperator).

2. This nursery was seeded on 12 May, 2011 following spring wheat. Seed was placed at a 60#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was applied at 30 #N/acre at planting. A soil test before planting showed 300#N/acre available and no additional N was applied based on yield projections. Seeding was late and emergence was slow due to cool temperatures.

3. Yields ranged from 16 to 25 bu/ac. Due to low yields and high variability at this site, yield was not significantly different among entries. Westbred 926 and Tara 2002 were highest yielding across 3 years at this location. Stripe rust was a minor factor in this trial and no fungicide was applied.

4. Test weights were good with an average of 60.6 lbs/bu, and ranged from 57.7 to 62.7 lbs/bu. Grain protein averaged 13.6% with a range of 12.2 to 15.3%. The average plant height was 23 inches with no lodging.



**Table 99. 2011 WSU Variety Testing Hard Spring Wheat Trial, Connell**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>BR7030</i>			33	<b>27</b>	62.4	13.8	25	158
<b>Scarlet</b>	28	33	34	<b>27</b>	59.7	15.6	27	158
<b>Hollis</b>	26	29	31	<b>25</b>	61.5	15.7	30	158
<b>Kelse</b>	24	27	30	24	61.9	16.1	29	158
<b>IDO702</b>				24	60.8	15.2	24	160
<i>Otis</i>		30	29	23	61.7	13.6	27	159
<b>Hank</b>	23	26	26	23	60.8	14.8	25	158
<i>WA 8123</i>			31	23	61.9	14.3	25	158
<b>10Fx Inc.1</b>				23	61.7	15.0	25	158
<b>Jefferson</b>	26	29	31	22	61.1	14.8	24	157
<b>WA 8148</b>				22	61.3	14.8	25	157
<i>Macon</i>		27	28	21	60.9	13.5	25	157
<b>Tara 2002</b>	22	24	25	21	60.4	15.9	26	155
<b>Westbred 926</b>	22	25	28	21	61.3	16.0	24	157
<b>WA 8074</b>		28	31	21	61.9	15.3	25	157
<i>WA 8133</i>				21	62.2	14.3	24	159
<b>Cerere</b>				21	59.6	14.3	22	162
<b>Bullseye</b>		28	29	20	<b>63.0</b>	15.4	21	159
<b>Lassik</b>		30	31	20	61.8	14.6	22	159
<i>Patwin 515</i>				20	59.8	14.7	20	159
<b>Buck Pronto</b>	22	26	27	19	61.3	16.5	23	155
<b>WB-Fuzion</b>			28	19	61.5	16.2	24	156
<b>UI Winchester</b>		27	28	17	62.1	15.7	24	156
<i>Clear White 515</i>				17	59.4	15.2	23	156
<b>C.V. %</b>	7	7	7	8	0.6	2.0	6	0
<b>LSD (.10)</b>	1	1	1	2	0.4	0.3	2	1
<b>Average</b>	24	28	29	22	61.3	15.1	25	158
<b>Highest</b>	28	33	34	27	63.0	16.5	30	162
<b>Lowest</b>	22	24	25	17	59.4	13.5	20	155

1. Grain yield in the Connell hard spring wheat trial averaged 22 bushels/acre, 2 bushels/acre less than the 5-year average. The Connell nursery was located about six miles east of Connell, WA (D. Bauermeister farm).
2. This nursery was seeded on 18 March, 2011 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 58#N/acre and soil test analysis showed ample N available to meet the hard protein target at projected yield levels. Spring seeding and establishment were good, but plants did not grow or tiller well.
3. Yields ranged from 17 to 27 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. Scarlet was the highest yielding named entry for 2011 and also highest yielding over 5 years at this location. Stripe rust was not a factor in this trial and a fungicide was applied June 1.
4. Test weights were good with an average of 61.3 lbs/bu, and ranged from 59.4 to 63.0 lbs/bu. Grain protein averaged 15.1% with a range of 13.5 to 16.5%. The average plant height was 25 inches with no lodging.

**Table 100. 2011 WSU Variety Testing Hard Spring Wheat Trial, Dayton**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>BR7030</i>			80	<b>97</b>	63.6	12.2	32	178
<i>WA 8123</i>			79	<b>95</b>	63.2	12.6	31	177
<i>Otis</i>		57	65	<b>93</b>	62.8	12.0	38	182
<b>Lassik</b>		65	78	<b>92</b>	63.1	12.4	30	180
<i>Macon</i>		57	68	91	62.3	11.8	32	178
<b>Scarlet</b>	64	60	72	91	62.0	13.1	34	178
<b>Kelse</b>	62	61	71	90	63.0	14.0	34	179
<b>WA 8074</b>		60	75	88	62.9	12.7	32	176
<i>WA 8133</i>				88	63.8	12.1	32	178
<b>Bullseye</b>		60	70	87	<b>64.5</b>	12.7	29	178
<b>Cerere</b>				86	61.7	12.6	30	185
<b>Buck Pronto</b>	59	61	74	85	62.3	14.9	31	176
<i>Patwin 515</i>				85	62.0	13.3	24	178
<b>WB-Fuzion</b>			70	84	61.9	14.1	33	176
<b>10Fx Inc.1</b>				84	64.1	13.4	31	178
<b>UI Winchester</b>		58	71	83	63.1	13.0	29	176
<b>IDO702</b>				83	61.3	13.7	33	180
<b>Jefferson</b>	60	58	69	82	62.5	13.9	30	180
<b>Westbred 926</b>	57	54	67	80	61.6	13.6	30	176
<i>Clear White 515</i>				80	62.1	12.8	29	175
<b>Hollis</b>	56	53	63	79	62.0	14.4	46	180
<b>Tara 2002</b>	56	50	62	79	62.6	13.1	34	175
<b>Hank</b>	59	56	64	79	61.6	13.2	29	177
<b>WA 8148</b>				76	61.7	13.3	32	179
<b>C.V. %</b>	6	7	6	5	0.4	1.8	4	0
<b>LSD (.10)</b>	2	3	3	5	0.3	0.2	1	1
<b>Average</b>	59	58	70	86	62.6	13.1	32	178
<b>Highest</b>	64	65	80	97	64.5	14.9	46	185
<b>Lowest</b>	56	50	62	76	61.3	11.8	24	175

1. Grain yield in the Dayton hard spring wheat trial averaged 86 bushels/acre, 27 bushels/acre higher than the 5-year average. The Dayton nursery was located about five miles north of Dayton, WA (Jay Penner, cooperator).

2. This nursery was seeded on 18 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 160#N/acre and soil test analysis showed an adequate level of N available. No additional N was applied to meet the hard protein target at projected yield levels. Spring seeding was late but establishment was good.

3. Yields ranged from 76 to 97 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 24 entries are in this group. Otis, a hard white entry, was the highest yielding named entry for 2011 and Scarlet was highest yielding over 5 years at this location. Stripe rust was a factor in this trial and fungicide was applied on May 31 and June 27. There appears to be a slight effect on yield by stripe rust for susceptible entries of 10% or more.

4. Test weights were good with an average of 62.6 lbs/bu, and ranged from 61.3 to 64.5 lbs/bu. Grain protein averaged 13.1% with a range of 11.8 to 14.9%. The average plant height was 32 inches with no lodging.

**Table 101. 2011 WSU Variety Testing Hard Spring Wheat Trial, Endicott**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Lassik</b>		62	62	<b>54</b>	62.3	12.5	27	178
<i>BR7030</i>			64	<b>53</b>	62.6	12.5	29	179
<i>WA 8123</i>			62	<b>52</b>	61.9	12.4	29	177
<b>WA 8074</b>		58	57	51	61.5	12.7	30	178
<b>Scarlet</b>	61	64	59	50	60.9	12.8	32	178
<i>WA 8133</i>				50	61.0	12.5	30	178
<b>Kelse</b>	55	56	53	49	61.9	13.5	32	178
<b>10Fx Inc.1</b>				49	62.4	12.7	29	178
<b>Hollis</b>	54	57	54	48	60.8	13.3	38	178
<b>WA 8148</b>				48	60.8	13.5	30	179
<b>Cerere</b>				48	61.1	12.8	27	182
<b>Jefferson</b>	54	54	50	47	61.1	13.5	31	179
<b>Westbred 926</b>	50	51	51	47	60.3	13.6	29	177
<b>UI Winchester</b>		57	54	47	60.6	12.6	29	178
<i>Macon</i>		53	49	46	60.2	11.7	29	178
<i>Patwin 515</i>				46	61.0	13.6	21	178
<b>IDO702</b>				46	60.0	13.2	30	178
<b>Bullseye</b>		52	48	45	<b>63.4</b>	12.5	27	179
<i>Clear White 515</i>				45	60.4	13.2	27	177
<i>Otis</i>		61	53	44	62.3	11.9	31	179
<b>Tara 2002</b>	53	53	49	44	61.3	13.1	30	177
<b>Buck Pronto</b>	49	52	50	43	60.8	14.1	29	176
<b>WB-Fuzion</b>			46	43	60.4	13.1	32	177
<b>Hank</b>	51	50	43	41	59.1	12.8	28	178
<b>C.V. %</b>	7	7	7	5	1.0	2.3	4	0
<b>LSD (.10)</b>	2	2	3	2	0.7	0.3	1	1
<b>Average</b>	53	56	53	47	61.2	12.9	29	178
<b>Highest</b>	61	64	64	54	63.4	14.1	38	182
<b>Lowest</b>	49	50	43	41	59.1	11.7	21	176

1. Grain yield in the Endicott hard spring wheat trial averaged 47 bushels/acre, 6 bushels/acre less than the 5-year average. The Endicott nursery was located about six miles east of Endicott, WA (M. Richter, cooperator). This trial was conducted in cooperation with the WSU Spring Wheat Breeding Program.
2. This nursery was seeded on 8 April, 2011 following fallow. Seed was placed at an 80#/acre seeding rate using a no-till drill set on 10-inch spacing. Base fertilizer was 70#N/acre and soil test analysis showed 106#N/acre available. An additional 106#N/acre was applied to meet the hard protein target at projected yield levels. Spring seeding was late but establishment was good.
3. Yields ranged from 41 to 54 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. Lassik was the highest yielding named entry for 2011 and Scarlet was highest yielding over 5 years at this location. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be in the range of 10% effect on yield by stripe rust for susceptible entries.
4. Test weights were good with an average of 61.2 lbs/bu, and ranged from 59.1 to 63.4 lbs/bu. Grain protein averaged 12.9% with a range of 11.7 to 14.1%. The average plant height was 29 inches with no lodging.

**Table 102. 2011 WSU Variety Testing Hard Spring Wheat Trial, Fairfield**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<i>Clear White 515</i>	--	--	--	<b>57</b>	59.1	12.7	32
<i>WA 8133</i>	--	--	--	<b>57</b>	<b>61.5</b>	12.4	35
<b>Tara 2002</b>	--	--	--	<b>56</b>	59.7	12.1	37
<i>WA 8123</i>	--	--	--	<b>55</b>	61.2	12.2	35
<b>Lassik</b>	--	--	--	<b>52</b>	61.2	12.1	31
<i>Patwin 515</i>	--	--	--	<b>52</b>	59.8	13.5	23
<b>Hollis</b>	--	--	--	51	60.2	13.1	43
<b>10Fx Inc.1</b>	--	--	--	51	60.9	12.1	32
<i>BR7030</i>	--	--	--	49	61.1	12.1	31
<b>UI Winchester</b>	--	--	--	49	60.9	12.5	33
<b>Kelse</b>	--	--	--	48	61.1	14.2	35
<b>Buck Pronto</b>	--	--	--	47	60.3	14.1	33
<b>WA 8074</b>	--	--	--	47	60.4	13.0	37
<i>Macon</i>	--	--	--	46	57.9	11.5	37
<b>Westbred 926</b>	--	--	--	45	59.6	13.4	34
<b>Cerere</b>	--	--	--	45	58.6	11.8	30
<i>Otis</i>	--	--	--	44	60.0	11.6	39
<b>WB-Fuzion</b>	--	--	--	43	59.7	12.9	34
<b>Scarlet</b>	--	--	--	42	60.4	12.4	34
<b>WA 8148</b>	--	--	--	40	59.3	13.8	34
<b>Bullseye</b>	--	--	--	39	<b>62.1</b>	13.1	30
<b>Jefferson</b>	--	--	--	39	60.8	12.9	32
<b>IDO702</b>	--	--	--	39	59.2	12.5	33
<b>Hank</b>	--	--	--	36	55.5	13.4	32
<b>C.V. %</b>	--	--	--	11	1.1	3.0	4
<b>LSD (.10)</b>	--	--	--	5	0.7	0.4	1
<b>Average</b>	--	--	--	47	60.0	12.7	34
<b>Highest</b>	--	--	--	57	62.1	14.2	43
<b>Lowest</b>	--	--	--	36	55.5	11.5	23

1. Grain yield in the Fairfield hard spring wheat trial averaged 47 bushels/acre. The Fairfield nursery was located about four miles northwest of Fairfield, WA (Lonnie Green, cooperator). This was a new location with no data for the previous five years.

2. This nursery was seeded on 2 May, 2011 following winter wheat. Due to wet conditions and a stuck planter, some of the trial was not planted and was compensated by missing values in the analysis. Seed was placed at an 80#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was applied through the drill at 115 #N/acre. A soil test before planting showed 72#N/acre available and no additional N was applied. Spring seeding was late but establishment was good.

3. Yields ranged from 36 to 57 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. Clear White 515 was the highest yielding entry. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be 25% or more effect on yield by stripe rust for susceptible entries.

4. Test weights were good with an average of 60.0 lbs/bu, and ranged from 55.5 to 62.1 lbs/bu. Grain protein averaged 12.7% with a range of 11.5 to 14.2%. The average plant height was 34 inches with no lodging.

**Table 103. 2011 WSU Variety Testing Hard Spring Wheat Trial, Farmington**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>WA 8123</i>			71	<b>68</b>	61.3	12.2	31	193
<b>Hollis</b>	65	68	62	61	60.8	12.1	46	193
<i>BR7030</i>			69	60	61.7	11.5	30	194
<b>UI Winchester</b>		72	66	60	61.5	11.9	32	193
<b>WA 8074</b>		73	68	60	61.3	11.7	34	193
<b>Lassik</b>		67	61	60	61.1	11.2	30	195
<i>Macon</i>		65	57	59	60.7	11.2	34	194
<b>Buck Pronto</b>	67	69	66	59	61.4	12.9	33	191
<b>Bullseye</b>		70	64	59	<b>62.7</b>	11.5	30	195
<i>Patwin 515</i>				59	60.2	12.2	24	195
<b>Scarlet</b>	67	67	59	57	60.5	11.9	36	194
<i>Otis</i>		66	55	54	61.9	10.3	38	195
<b>Kelse</b>	63	64	59	54	61.0	12.8	35	193
<b>Tara 2002</b>	66	65	56	53	60.3	11.5	36	192
<b>Jefferson</b>	67	68	61	53	60.6	12.4	33	195
<b>Westbred 926</b>	65	65	57	53	59.3	12.9	33	192
<i>WA 8133</i>				53	<b>62.2</b>	12.4	33	194
<b>Cerere</b>				53	58.9	11.2	30	199
<b>WA 8148</b>				51	59.7	11.9	33	197
<b>Hank</b>	63	59	50	47	59.3	12.5	30	194
<i>Clear White 515</i>				47	60.2	12.3	29	193
<b>10Fx Inc.1</b>				47	61.4	12.1	31	194
<b>IDO702</b>				46	59.3	12.1	33	196
<b>WB-Fuzion</b>			55	42	60.2	11.7	32	193
<b>C.V. %</b>	10	10	12	11	1.0	5.2	6	1
<b>LSD (.10)</b>	3	4	5	6	0.6	0.7	2	1
<b>Average</b>	65	67	61	55	60.7	11.9	33	194
<b>Highest</b>	67	73	71	68	62.7	12.9	46	199
<b>Lowest</b>	63	59	50	42	58.9	10.3	24	191

1. Grain yield in the Farmington hard spring wheat trial averaged 55 bushels/acre, 10 bushels/acre less than the 5-year average. The Farmington nursery was located about three miles south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 11 May, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till plot drill set on 10-inch spacing. Base fertilizer was applied through the drill at 114 #N/acre. A soil test before planting showed 111#N/acre available and no additional N was applied based on yield projections. Spring seeding was late but establishment was good.
3. Yields ranged from 42 to 68 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 1 of the 24 entries is in this group. Hollis was the highest yielding named entry. Stripe rust was a minor factor in this trial and no fungicide was applied. There appears to be up to 10% effect on yield by stripe rust for susceptible entries.
4. Test weights were good with an average of 60.7 lbs/bu, and ranged from 58.9 to 62.7 lbs/bu. Grain protein averaged 11.9% with a range of 10.3 to 12.9%. The average plant height was 33 inches with no lodging.

**Table 104. 2011 WSU Variety Testing Hard Spring Wheat Trial, Horse Heaven**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011			
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT
<b>Scarlet</b>	31	32	42	<b>38</b>	59.9	12.2	30
<b>Lassik</b>		32	41	<b>37</b>	<b>62.0</b>	11.6	25
<i>WA 8123</i>			40	<b>37</b>	<b>61.7</b>	11.7	27
<i>BR7030</i>			37	<b>36</b>	<b>61.9</b>	11.2	28
<b>Buck Pronto</b>	25	28	37	<b>36</b>	59.8	13.2	27
<b>UI Winchester</b>		31	40	<b>36</b>	61.5	11.8	26
<i>WA 8133</i>				<b>36</b>	<b>61.7</b>	11.6	29
<b>Kelse</b>	27	30	38	<b>35</b>	60.4	12.5	30
<i>Patwin 515</i>				<b>35</b>	59.5	11.9	21
<b>Hollis</b>	28	30	39	34	60.6	12.2	33
<b>WA 8074</b>		31	38	34	60.8	11.6	28
<b>WA 8148</b>				34	59.9	12.1	28
<b>Tara 2002</b>	25	27	34	33	59.1	11.9	29
<b>Westbred 926</b>	25	28	36	32	59.9	11.9	28
<b>Bullseye</b>		31	40	32	<b>62.5</b>	10.8	25
<b>Jefferson</b>	28	30	38	31	59.6	11.4	26
<b>WB-Fuzion</b>			37	31	59.3	12.1	28
<i>Macon</i>		29	37	30	59.3	10.8	28
<b>IDO702</b>				30	58.5	11.6	27
<b>Cerere</b>				30	59.7	11.4	25
<b>Hank</b>	27	27	34	29	58.3	11.8	27
<i>Clear White 515</i>				29	59.0	13.0	26
<b>10Fx Inc.1</b>				27	59.6	11.9	27
<i>Otis</i>		28	36	25	60.6	11.1	28
<b>C.V. %</b>	9	8	7	8	1.2	3.6	5
<b>LSD (.10)</b>	1	1	2	3	0.8	0.4	1
<b>Average</b>	27	30	38	33	60.2	11.8	27
<b>Highest</b>	31	32	42	38	62.5	13.2	33
<b>Lowest</b>	25	27	34	25	58.3	10.8	21

1. Grain yield in the Horse Heaven Hard spring wheat trial averaged 33 bushels/acre, 6 bushels/acre higher than the 5-year average. The Horse Heaven spring nursery was located about 10 miles southwest of Prosser, WA (M. Schmitt, cooperator).
2. This nursery was seeded on 23 March, 2011 following fallow. Seed was placed at a 60#/acre/acre seeding rate using a double-disc plot drill set on 6-inch spacing. Base fertilizer was 35#N/acre fall applied and soil test analysis showed adequate N available to meet the hard protein target at projected yield levels. Spring seeding conditions were good. Cool and wet weather occurred until anthesis when dry weather prevailed through the remainder of the growing season.
3. Yields ranged from 25 to 38 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 9 of the 24 entries are in this group. Scarlet was the highest yielding entry in 2011 and was also highest yielding over 5 years of results at this site. Stripe rust was at moderate levels in the trial and incurred an estimated 20% yield impact on susceptible varieties.
4. Test weights were good and averaged 60.2 lbs/bu, and ranged from 58.3 to 62.5 lbs/bu. Grain protein was lower than desired as a result of the above average yields and averaged 11.8% with a range of 10.8 to 13.2%. The average plant height was 27 inches with no lodging.

**Table 105. 2011 WSU Variety Testing Hard Spring Wheat Trial, Lamont**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>BR7030</i>			82	<b>77</b>	62.4	11.3	32	167
<i>WA 8123</i>			74	<b>77</b>	61.8	10.8	32	168
<b>Lassik</b>		63	72	<b>75</b>	61.8	11.9	29	169
<b>Scarlet</b>	56	66	71	71	61.1	11.7	35	169
<i>Macon</i>		55	62	70	60.8	10.5	34	169
<i>WA 8133</i>				70	62.2	11.4	32	168
<i>Clear White 515</i>				69	60.8	12.0	31	165
<b>WA 8074</b>		59	68	68	61.8	10.9	33	168
<i>Patwin 515</i>				68	60.7	12.5	24	169
<b>Kelse</b>	46	53	59	67	61.7	11.4	34	166
<b>Bullseye</b>		55	62	66	<b>63.1</b>	10.4	29	168
<b>UI Winchester</b>		59	68	66	61.8	10.8	31	167
<b>Tara 2002</b>	44	50	55	65	61.1	11.2	34	167
<b>Buck Pronto</b>	48	58	62	65	61.3	12.6	33	167
<b>WA 8148</b>				65	61.1	11.8	32	168
<b>10Fx Inc.1</b>				65	62.2	10.9	31	169
<i>Otis</i>		60	63	64	61.2	10.2	36	169
<b>Jefferson</b>	49	58	66	64	61.0	10.7	32	168
<b>Hollis</b>	48	56	61	62	60.6	13.5	42	166
<b>Westbred 926</b>	46	53	58	62	60.0	11.9	32	166
<b>IDO702</b>				62	60.1	11.3	33	169
<b>WB-Fuzion</b>			54	59	60.6	11.5	33	166
<b>Cerere</b>				59	60.2	10.1	28	171
<b>Hank</b>	42	46	47	54	58.8	10.7	29	167
<b>C.V. %</b>	8	8	8	4	0.4	6.8	4	0
<b>LSD (.10)</b>	2	3	4	3	0.2	0.8	1	1
<b>Average</b>	47	57	64	66	61.2	11.3	32	168
<b>Highest</b>	56	66	82	77	63.1	13.5	42	171
<b>Lowest</b>	42	46	47	54	58.8	10.1	24	165

1. Grain yield in the Lamont hard spring wheat trial averaged 66 bushels/acre, 19 bushels/acre higher than the 5-year average. The Lamont nursery was located about five miles southeast of Lamont, WA (Gil White, cooperator).

2. This nursery was seeded on 18 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 70#N/acre and soil test analysis showed an adequate level of N available. No additional N was applied to meet the hard protein target at projected, historical yield levels. Spring seeding was late but establishment was good.

3. Yields ranged from 54 to 77 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. Lassik was the highest yielding named entry for 2011 and Scarlet was highest yielding over 5 years at this location. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be a stripe rust effect on yield for susceptible entries of 20% or more.

4. Test weights were good with an average of 61.2 lbs/bu, and ranged from 58.8 to 63.1 lbs/bu. Grain protein averaged 11.3% with a range of 10.1 to 13.5%. Protein was lower than desired because of the higher than anticipated yield. The average plant height was 32 inches with no lodging.

**Table 106. 2011 WSU Variety Testing Hard Spring Wheat Trial, Lind**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Lassik</b>		41	50	<b>54</b>	61.1	12.8	25	165
<i>BR7030</i>			44	<b>53</b>	61.6	12.4	29	164
<i>WA 8123</i>			46	<b>52</b>	60.8	13.3	28	164
<i>WA 8133</i>				50	61.6	13.2	30	164
<b>Jefferson</b>	30	38	47	49	60.3	13.3	29	164
<b>WA 8074</b>		37	44	49	61.5	13.3	28	162
<b>Scarlet</b>	32	39	45	48	59.5	14.1	31	166
<b>WA 8148</b>				48	59.9	13.5	28	165
<b>UI Winchester</b>		36	44	47	61.2	12.7	27	163
<i>Patwin 515</i>				47	60.6	13.5	21	165
<b>Buck Pronto</b>	27	34	42	46	60.6	14.5	27	162
<b>Bullseye</b>		36	43	46	<b>62.7</b>	12.8	26	165
<i>Otis</i>		35	41	45	61.2	12.5	32	166
<b>IDO702</b>				45	58.7	13.5	28	163
<b>Hollis</b>	28	34	41	44	59.7	14.6	34	165
<b>Westbred 926</b>	26	32	38	44	59.7	13.7	27	162
<b>WB-Fuzion</b>			41	44	59.8	13.6	30	163
<i>Clear White 515</i>				43	59.0	14.5	26	161
<b>10Fx Inc.1</b>				43	60.8	13.9	28	165
<b>Cerere</b>				43	60.1	12.9	26	172
<i>Macon</i>		35	41	42	59.8	12.0	29	163
<b>Tara 2002</b>	26	33	39	42	59.5	13.3	29	162
<b>Kelse</b>	29	36	41	42	61.1	14.3	31	165
<b>Hank</b>	27	32	37	40	59.1	13.2	28	164
<b>C.V. %</b>	6	6	6	5	0.9	2.0	5	0
<b>LSD (.10)</b>	1	1	2	2	0.6	0.3	1	1
<b>Average</b>	28	36	43	46	60.4	13.4	28	164
<b>Highest</b>	32	41	50	54	62.7	14.6	34	172
<b>Lowest</b>	26	32	37	40	58.7	12.0	21	161

1. Grain yield in the Lind hard spring wheat trial averaged 46 bushels/acre, 18 bushels/acre higher 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 18 March, 2011 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 good. Cool and wet weather occurred until anthesis when dry weather prevailed through the remainder of the growing season.
3. Yields ranged from 40 to 54 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 24 entries are in this group. Lassik was the highest yielding named entry for 2011 and Scarlet was highest yielding over 5 years at this location. Stripe rust was at moderate levels in the trial and incurred an estimated 20% yield impact on susceptible varieties.
4. Test weights were good with an average of 60.4 lbs/bu, and ranged from 58.7 to 62.7 lbs/bu. Grain protein averaged 13.4% with a range of 12.0 to 14.6%. The average plant height was 28 inches with no lodging.



**Table 107. 2011 WSU Variety Testing Hard Spring Wheat Trial, Mayview**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>BR7030</i>			49	<b>55</b>	<b>63.4</b>	8.8	31	181
<b>Lassik</b>		49	46	<b>55</b>	62.6	8.7	29	182
<i>Macon</i>		46	42	<b>53</b>	61.7	8.1	32	181
<b>Buck Pronto</b>	48	46	43	<b>53</b>	62.0	10.6	31	179
<b>WA 8074</b>		47	44	<b>53</b>	62.1	8.8	32	180
<i>Clear White 515</i>				<b>52</b>	61.3	9.7	28	179
<i>Patwin 515</i>				<b>52</b>	62.0	9.5	23	181
<b>Scarlet</b>	49	48	42	51	61.5	8.9	34	181
<b>Kelse</b>	47	44	43	51	62.5	10.1	33	182
<b>Tara 2002</b>	48	45	44	50	61.9	8.2	31	179
<b>UI Winchester</b>		47	43	50	62.1	8.3	29	180
<i>WA 8123</i>			41	50	63.3	9.1	30	180
<i>WA 8133</i>				49	63.1	9.1	33	181
<b>10Fx Inc.1</b>				49	62.0	9.0	30	180
<b>WA 8148</b>				48	61.4	9.3	30	182
<b>Hollis</b>	45	42	39	47	61.1	9.1	39	182
<b>Jefferson</b>	48	45	41	47	61.3	9.4	32	182
<b>Westbred 926</b>	46	44	42	47	61.0	10.2	31	179
<b>IDO702</b>				47	60.6	9.2	32	182
<b>Bullseye</b>		49	45	46	<b>63.7</b>	8.5	29	181
<b>WB-Fuzion</b>			43	46	61.2	8.9	30	179
<b>Cerere</b>				46	61.6	8.3	27	188
<i>Otis</i>		44	36	45	62.0	8.6	36	184
<b>Hank</b>	46	44	40	43	60.1	8.8	29	180
<b>C.V. %</b>	7	8	8	7	0.4	8.2	3	0
<b>LSD (.10)</b>	2	2	3	4	0.3	0.8	1	1
<b>Average</b>	47	46	43	49	61.9	9.1	31	181
<b>Highest</b>	49	49	49	55	63.7	10.6	39	188
<b>Lowest</b>	45	42	36	43	60.1	8.1	23	179

1. Grain yield in the Mayview hard spring wheat trial averaged 49 bushels/acre and was similar to the 5-year average. The Mayview nursery was located about four 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 29 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 90#N/acre and soil test analysis showed an adequate level of N available. No additional N was applied to meet the hard protein target at projected, historical yield levels. Spring seeding was late but establishment was good.

3. Yields ranged narrowly from 43 to 55 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 7 of the 24 entries are in this group. Lassik was the highest yielding named entry for 2011 and Scarlet was highest yielding over 5 years at this location. Stripe rust was a factor in this trial and fungicide was applied May 31 and April 27. There appears to be a slight stripe rust effect on yield for susceptible entries.

4. Test weights were good with an average of 61.9 lbs/bu, and ranged from 60.1 to 63.7 lbs/bu. Grain protein averaged 9.1% with a range of 8.1 to 10.6% and was much lower than desired. The average plant height was 31 inches with no lodging.

**Table 108. 2011 WSU Variety Testing Hard Spring Wheat Trial, Moses Lake**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011					
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE	LODGING (%)
<i>Otis</i>	--	118	112	<b>113</b>	64.1	13.2	42	166	0
<i>WA 8123</i>	--		122	<b>113</b>	63.8	14.0	36	164	0
<i>Macon</i>	--	104	102	105	<b>64.5</b>	13.0	39	165	0
<b>WA 8148</b>	--			105	62.4	14.5	36	167	0
<b>WA 8074</b>	--	114	111	103	64.1	14.4	38	163	0
<i>WA 8133</i>	--			103	64.1	13.3	38	166	0
<b>Bullseye</b>	--	113	108	102	64.1	14.5	34	165	0
<b>Lassik</b>	--	117	110	102	63.3	13.6	30	167	0
<b>H0900053</b>	--			101	64.2	14.3	37	165	0
<b>Jefferson</b>	--	110	106	100	63.4	14.3	38	166	0
<b>Malbec</b>	--	112	110	100	63.4	15.6	33	163	0
<b>IDO702</b>	--			100	63.6	14.8	39	166	0
<b>UI Winchester</b>	--	110	108	99	64.3	15.3	36	165	0
<b>Cerere</b>	--			99	63.0	13.0	37	167	0
<i>BR7030</i>	--		112	97	63.7	12.9	35	164	0
<b>Scarlet</b>	--	100	96	97	63.3	14.7	43	165	15
<b>Hank</b>	--	114	110	97	62.2	14.8	36	165	0
<b>Hollis</b>	--	97	99	96	63.6	14.9	44	166	0
<b>Tara 2002</b>	--	110	106	95	63.4	14.1	38	163	0
<b>H0800103L</b>	--			95	63.5	15.1	39	166	0
<b>H0800315</b>	--			95	63.6	15.0	34	164	0
<b>Kelse</b>	--	106	100	94	63.4	16.3	40	166	0
<b>Cabernet</b>	--	114	109	93	64.0	15.0	31	164	0
<b>Westbred 926</b>	--	108	107	92	62.8	14.9	36	163	0
<b>WB-Fuzion</b>	--		111	91	63.8	15.4	39	164	0
<b>Buck Pronto</b>	--	107	102	87	63.4	15.9	37	161	0
<i>Clear White 515</i>	--			87	62.7	14.5	33	162	0
<b>10Fx Inc.1</b>	--			87	<b>64.7</b>	15.0	38	165	0
<b>WB-Rockland</b>	--			81	63.0	17.1	29	164	0
<i>Patwin 515</i>	--			80	61.8	15.3	27	166	0
<b>C.V. %</b>	--	6	5	4	0.3	1.7	3	0	796
<b>LSD (.10)</b>	--	4	4	5	0.2	0.3	1	1	4
<b>Average</b>	--	110	107	97	63.5	14.6	36	165	1
<b>Highest</b>	--	118	122	113	64.7	17.1	44	167	15
<b>Lowest</b>	--	97	96	80	61.8	12.9	27	161	0

1. Grain yield in the Moses Lake hard spring wheat trial averaged 97 bushels/acre, 13 bushels/acre less than the 3-year average. The Moses Lake nursery was located about two miles east of Quincy, WA (Russ Kehl, cooperator).
2. This nursery was seeded on 17 March, 2011 following Edamame beans. Seed was placed at a 100#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 100#N/acre and soil test analysis showed 372#N/acre available. An additional 50#N/acre was applied to meet the hard protein target at projected, historical yield levels. Spring seeding was timely and establishment was good.
3. Yields ranged from 80 to 113 bu/ac. 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 Otis was the highest yielding entry for 2011 and was highest yielding over 3 years at this location. Stripe rust was a minor factor in this trial and no fungicide was applied.
4. Test weights were very good with an average of 63.5 lbs/bu, and ranged from 61.8 to 64.7 lbs/bu. Grain protein averaged 14.6% with a range of 12.9 to 17.1%. The average plant height was 36 inches with minor lodging.

**Table 109. 2011 WSU Variety Testing Hard Spring Wheat Trial, Pullman**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>WA 8123</i>			81	<b>84</b>	<b>63.8</b>	9.9	32	182
<i>WA 8133</i>				<b>80</b>	<b>63.5</b>	9.0	33	182
<i>Patwin 515</i>				78	62.2	10.4	25	184
<i>BR7030</i>			72	74	<b>63.8</b>	9.3	31	183
<b>WA 8074</b>		70	71	74	62.7	8.6	32	183
<b>Lassik</b>		71	72	74	63.0	9.3	29	185
<b>WA 8148</b>				74	61.5	9.4	33	184
<b>Buck Pronto</b>	71	71	75	72	62.7	10.6	33	182
<b>UI Winchester</b>		64	64	72	62.8	9.4	32	183
<b>Scarlet</b>	70	67	67	69	62.3	9.2	35	184
<b>Bullseye</b>		60	56	66	<b>63.6</b>	7.7	29	185
<b>Hollis</b>	61	57	54	65	61.6	10.5	43	184
<i>Clear White 515</i>				65	61.2	9.5	30	182
<b>Jefferson</b>	65	61	60	62	61.5	8.6	34	184
<i>Macon</i>		53	49	61	61.7	8.5	33	184
<b>Westbred 926</b>	60	54	50	60	60.3	10.3	32	182
<b>Kelse</b>	63	55	51	60	62.6	11.3	33	184
<b>10Fx Inc.1</b>				57	61.1	8.5	31	183
<b>Cerere</b>				54	61.8	8.1	31	191
<b>Tara 2002</b>	59	49	43	52	58.8	10.8	34	182
<i>Otis</i>		52	43	51	62.9	9.3	35	186
<b>IDO702</b>				51	60.3	9.6	33	184
<b>WB-Fuzion</b>			47	47	60.6	10.0	32	182
<b>Hank</b>	55	43	34	40	58.0	10.9	30	183
<b>C.V. %</b>	6	7	5	6	0.6	10.6	3	0
<b>LSD (.10)</b>	2	3	2	4	0.4	1.1	1	1
<b>Average</b>	63	59	58	64	61.9	9.5	32	184
<b>Highest</b>	71	71	81	84	63.8	11.3	43	191
<b>Lowest</b>	55	43	34	40	58.0	7.7	25	182

1. Grain yield in the Pullman hard spring wheat trial averaged 64 bushels/acre and was similar to the 5-year average. The Pullman nursery was located at the WSU Spillman experimental farm about two miles south of Pullman, WA (Ryan Davis, farm manager). This trial was conducted in cooperation with the WSU Spring Wheat Breeding Program.

2. This nursery was seeded on 24 April, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 70#N/acre and soil test analysis showed 99#N/acre available. An additional 50#N/acre was applied to meet the hard protein target at projected, historical yield levels. Spring seeding was late but establishment was good.

3. Yields ranged from 40 to 84 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. Patwin 515 was the highest yielding named entry for 2011 and Buck Pronto was highest yielding over 5 years at this location. Stripe rust was a factor in this trial and no fungicide was applied. There was an impact on yield by stripe rust with yields reduced by 30% or more for susceptible entries.

4. Test weights were good with an average of 61.9 lbs/bu, and ranged from 58.0 to 63.8 lbs/bu. Grain protein averaged 9.5% with a range of 7.7 to 11.3% and was much lower than desired. The average plant height was 32 inches with no lodging.

**Table 110. 2011 WSU Variety Testing Hard Spring Wheat Trial, Reardan**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Lassik</b>		72	88	<b>85</b>	62.2	12.5	33	187
<i>WA 8123</i>			86	<b>82</b>	62.5	12.4	35	186
<b>WA 8074</b>		68	78	80	62.0	12.7	36	186
<i>WA 8133</i>				80	<b>63.2</b>	12.3	36	186
<i>BR7030</i>			88	79	62.7	12.2	35	186
<b>Scarlet</b>	55	69	80	71	60.8	13.2	38	186
<i>Patwin 515</i>				71	60.4	13.5	25	186
<b>UI Winchester</b>		70	80	70	62.1	12.5	34	186
<b>WA 8148</b>				70	60.6	12.9	34	187
<b>Hollis</b>	49	59	66	69	61.2	13.3	47	186
<b>Jefferson</b>	52	66	75	69	61.5	13.1	36	186
<b>10Fx Inc.1</b>				69	62.8	12.3	35	186
<b>Westbred 926</b>	53	66	76	67	60.3	13.2	34	185
<b>Buck Pronto</b>	53	67	77	67	61.3	14.7	34	184
<b>Kelse</b>	55	67	76	67	61.7	13.4	37	187
<i>Clear White 515</i>				67	60.6	13.6	32	184
<i>Otis</i>		68	74	65	62.6	10.9	41	187
<b>Bullseye</b>		69	78	65	<b>63.0</b>	12.5	31	186
<i>Macon</i>		66	72	64	61.1	11.5	35	186
<b>Tara 2002</b>	48	62	69	64	60.9	13.3	37	184
<b>WB-Fuzion</b>			76	64	61.4	13.4	36	184
<b>Cerere</b>				64	61.1	11.4	34	188
<b>IDO702</b>				63	60.0	13.3	36	187
<b>Hank</b>	51	63	69	56	59.7	12.8	33	186
<b>C.V. %</b>	7	7	6	4	0.5	2.7	3	0
<b>LSD (.10)</b>	2	3	3	3	0.3	0.4	1	1
<b>Average</b>	52	67	77	70	61.5	12.8	35	186
<b>Highest</b>	55	72	88	85	63.2	14.7	47	188
<b>Lowest</b>	48	59	66	56	59.7	10.9	25	184

1. Grain yield in the Reardan hard spring wheat trial averaged 70 bushels/acre, 18 bushels/acre more than the 5-year average. The Reardan nursery was located about six miles west of Reardan, WA (Hal Johnson, cooperator). This trial was conducted in cooperation with the WSU Spring Wheat Breeding Program.
2. This nursery was seeded on 20 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a no-till drill set on 10-inch spacing. Base fertilizer was 100#N/acre and soil test analysis showed 102#N/acre available. No additional N was applied to meet the hard protein target at projected yield levels. Spring seeding was late but establishment was good.
3. Yields ranged from 56 to 85 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 24 entries are in this group. Lassik was the highest yielding named entry for 2011 and Scarlet and Kelse were highest yielding over 5 years at this location. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be about 25% yield loss due to stripe rust for susceptible entries.
4. Test weights were good with an average of 61.5 lbs/bu, and ranged from 59.7 to 63.2 lbs/bu. Grain protein averaged 12.8% with a range of 10.9 to 14.7%. The average plant height was 35 inches with no lodging.

**Table 111. 2011 WSU Variety Testing Hard Spring Wheat Trial, St. John**

Variety Name <i>*Hard White Italized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<b>Lassik</b>		67	58	<b>68</b>	62.4	12.4	30	182
<i>WA 8123</i>			53	<b>68</b>	62.5	12.0	34	180
<b>Scarlet</b>	62	62	54	<b>67</b>	61.7	12.1	35	182
<b>WA 8074</b>		56	52	<b>64</b>	62.3	11.9	33	181
<b>Buck Pronto</b>	59	59	51	<b>63</b>	61.8	13.0	34	178
<i>Clear White 515</i>				<b>63</b>	60.8	12.9	30	181
<i>Patwin 515</i>				<b>62</b>	61.1	13.3	28	181
<i>WA 8133</i>				<b>62</b>	62.7	12.0	32	183
<b>UI Winchester</b>		59	50	60	62.2	11.8	31	179
<b>Kelse</b>	57	57	46	59	62.3	12.2	34	183
<b>Bullseye</b>		57	46	57	<b>63.4</b>	11.1	29	185
<b>Hollis</b>	58	54	45	56	61.6	13.4	43	183
<b>Jefferson</b>	58	57	47	55	61.1	11.9	32	184
<i>BR7030</i>			49	54	62.6	11.7	32	181
<b>WA 8148</b>				54	61.3	13.0	31	181
<i>Macon</i>		52	41	53	61.0	10.7	33	181
<b>Cerere</b>				53	60.8	10.8	30	185
<b>WB-Fuzion</b>			44	52	60.8	12.2	33	179
<b>10Fx Inc.1</b>				52	62.2	11.7	30	183
<b>Tara 2002</b>	57	53	43	51	60.2	12.3	35	180
<b>Westbred 926</b>	54	51	43	50	60.5	12.2	32	179
<i>Otis</i>		54	38	48	61.8	10.1	35	185
<b>IDO702</b>				46	59.0	12.1	33	182
<b>Hank</b>	51	46	31	36	58.1	12.5	29	180
<b>C.V. %</b>	10	11	13	12	1.0	5.3	6	0
<b>LSD (.10)</b>	3	4	5	7	0.6	0.7	2	0
<b>Average</b>	57	56	47	56	61.4	12.1	32	182
<b>Highest</b>	62	67	58	68	63.4	13.4	43	185
<b>Lowest</b>	51	46	31	36	58.1	10.1	28	178

1. Grain yield in the St. John hard spring wheat trial averaged 56 bushels/acre, nearly equal to the 5-year average. The St. John nursery was located about three miles east of St. John, WA (Mac Mills, cooperator).
2. This nursery was seeded on 20 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 80#N/acre and soil test analysis showed an adequate level of N available. No additional N was applied to meet the hard protein target at projected yield levels. Spring seeding was late but establishment was good.
3. Yields ranged from 36 to 68 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 8 of the 24 entries are in this group. Lassik was the highest yielding named entry for 2011 and Scarlet was highest yielding over 5 years at this location. Wire worm was a factor in this trial as evident by the high rate Gaucho treatment in the soft trial. Wire worm distribution is not uniform and can contribute to variation in the trial. Significant Hessian fly infestation was observed and could impact yields. Stripe rust was a factor in this trial but no fungicide was applied. There appears to be 25% or more effect on yield by stripe rust for susceptible entries.
4. Test weights were good with an average of 61.4 lbs/bu, and ranged from 58.1 to 63.4 lbs/bu. Grain protein averaged 12.1% with a range of 10.1 to 13.4%. The average plant height was 32 inches with no lodging.

**Table 112. 2011 WSU Variety Testing Hard Spring Wheat Trial, Walla Walla**

Variety Name <i>*Hard White Italicized</i>	5 YEAR AVERAGE (BU/A)	3 YEAR AVERAGE (BU/A)	2 YEAR AVERAGE (BU/A)	2011				
				YIELD (BU/A)	TEST WT (LBS/BU)	PROTEIN (%)	PLANT HT	HEAD DATE
<i>WA 8123</i>			87	<b>72</b>	59.2	14.9	35	167
<i>BR7030</i>			81	<b>69</b>	57.1	15.1	35	167
<b>Bullseye</b>		77	70	<b>69</b>	<b>60.7</b>	15.0	32	168
<b>WA 8074</b>		83	83	<b>69</b>	56.9	15.3	35	167
<b>Scarlet</b>	67	79	75	<b>68</b>	58.0	15.3	38	169
<i>WA 8133</i>				<b>68</b>	58.6	14.0	36	168
<b>Kelse</b>	62	72	64	67	58.5	16.5	36	168
<b>Tara 2002</b>	62	76	70	66	57.7	14.9	37	164
<b>Buck Pronto</b>	67	84	85	66	57.5	16.9	35	165
<b>Lassik</b>		80	76	66	57.6	14.8	32	169
<b>Westbred 926</b>	62	77	74	65	56.6	15.9	35	165
<i>Macon</i>		73	66	64	56.5	15.0	35	167
<i>Otis</i>		75	65	64	<b>60.2</b>	14.3	39	170
<b>UI Winchester</b>		81	79	64	57.6	15.3	33	167
<b>WA 8148</b>				64	56.4	16.4	34	169
<b>Jefferson</b>	66	79	75	63	58.1	15.8	35	168
<b>WB-Fuzion</b>			72	63	57.4	16.9	37	166
<i>Clear White 515</i>				63	56.2	15.0	33	166
<i>Patwin 515</i>				63	55.3	15.8	27	168
<b>10Fx Inc.1</b>				62	57.8	15.6	35	168
<b>Hollis</b>	60	72	69	60	58.1	16.8	46	169
<b>Hank</b>	57	67	57	60	56.8	15.4	34	167
<b>IDO702</b>				60	56.1	16.0	35	168
<b>Cerere</b>				57	59.6	15.0	33	175
<b>C.V. %</b>	7	7	8	6	1.0	3.2	3	0
<b>LSD (.10)</b>	2	3	4	4	0.6	0.5	1	1
<b>Average</b>	63	77	73	65	57.7	15.5	35	168
<b>Highest</b>	67	84	87	72	60.7	16.9	46	175
<b>Lowest</b>	57	67	57	57	55.3	14.0	27	164

1. Grain yield in the Walla Walla hard spring wheat trial averaged 65 bushels/acre, 2 bushels/acre more than the 5-year average. The Walla Walla nursery was located about one mile east of Waitsburg, WA (Glen Smith, cooperator).
2. This nursery was seeded on 25 March, 2011 following hard red spring wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base fertilizer was 112#N/acre and soil test analysis showed a high level of N available. No additional N was applied to meet the hard protein target at projected yield levels. Spring seeding was late but establishment was good.
3. Yields ranged from 57 to 72 bu/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. Bullseye was the highest yielding named entry for 2011 and Scarlet and Buck Pronto were highest yielding over 5 years at this location. Stripe rust was a factor in this trial and fungicide was applied on May 18 and June 12. The fungicide appears to be effective with no apparent yield loss for susceptible entries. Significant Hessian fly infestation was observed and could impact yields.
4. Test weights were low with an average of 57.7 lbs/bu, and ranged from 55.3 to 60.7 lbs/bu. Grain protein averaged 15.5% with a range of 14.0 to 16.9%. The average plant height was 35 inches with no lodging.

**Table 113.**

**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), AND WHITLOW (LOC 4) FARMS NEAR PULLMAN, MT VERNON (LOC 5); AND LIND (LOC 7), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2011 UNDER NATURAL INFECTION.**

NAME	CLASS	Spillman Farm (Pullman)	Whitlow Farm (Pullman)	Mt. Vernon		Lind	Reaction Type
		LOC1	LOC4	LOC5		LOC7	
		7/22	7/14	6/27	7/14	6/7	
		Flowering	Flowering	Ste elong.	Heading	Milk	
		IT %	IT %	IT %	IT %	IT %	
<b>LEMHI (S CHECK)</b>		<b>8 90</b>	<b>8 90</b>	<b>8 100</b>	<b>8 80</b>	<b>8 90</b>	<b>S</b>
BR7030	HWS	2 10	3 20	2 30	2 30	5 20	MR
Buck Pronto	HRS	3 10	3 10	2 20	2 30	5 30	MR
Bullseye	HRS	3 10	5 50	8 80	3 50	8 70	MS
Hank	HRS	8 90	8 95	8 80	7 80	8 90	S
Hollis	HRS	5 20	5 20	8 80	2 30	8 30	MS
Jefferson	HRS	5,8 20	8 40	2 40	3 40	8 50	MS
Kelse	HRS	5 10	3 20	5 60	6 40	5 40	MR
Lassik	HRS	2 1	2 2	2 10	2 2	2 10	R
Macon	HWS	5 10	6 30	8 80	6 60	8 90	S
Otis	HWS	5,8 20	8 100	8 80	4 30	8 50	S
Scarlet	HRS	3 5	3 20	5 60	2 40	3 20	MR
Tara 2002	HRS	8 60	8 70	8 60	4 60	8 90	S
UI Winchester	HRS	3 5	3 20	5 40	2 30	3 30	MR
<b>LEMHI (S CHECK)</b>		<b>8 90</b>	<b>8 90</b>	<b>8 100</b>	<b>8 80</b>	<b>8 90</b>	<b>S</b>
WA 8074	HRS	2 5	2 20	5 40	2 30	3 40	MR
WA 8123	HWS	2 1	2 5	2 20	2 2	2 10	R
WB-Fuzion	HRS	8 90	8 80	8 80	8 80	8 80	S
Westbred 926	HRS	3 10	5 30	5 40	6 60	8 60	MS
Clear White 515	HWS	2 1	2 2	0 0	2 2	2 10	R
Patwin 515	HWS	2 1	2 5	0 0	1 5	2 10	R
WA 8148	HRS	<b>3 5</b>	<b>3 20</b>	<b>5 30</b>	<b>2 40</b>	<b>5 30</b>	MR
WA 8133	HWS	2 5	2 20	2 20	2 10	2 20	R
IDO702	HRS	8 40	8 60	5 80	6 60	8 60	MS
10Fx Inc.1	HRS	<b>8 30</b>	<b>5 40</b>	<b>8 100</b>	<b>6 80</b>	<b>8 60</b>	MS
Cerere	HRS	5 20	5 50	8 100	4 40	8 40	MS
Cabernet	HRS	2 5	3 30	5 60	3 30	5 50	MR
Malbec	HRS	2,5 10	3 40	2 40	2 30	3 30	MR
WB-Rockland	HRS	2 1	2 2	2 10	2 2	2 5	R
H0800103L	HRS	2 2	2 10	5 80	3 30	2 10	MR
H0900053	HRS	2 5	2 15	5 80	3 40	5 40	MR
H0800315	HRS	3 10	2 15	2 40	3 30	8 30	MS
<b>LEMHI (S CHECK)</b>		<b>8 90</b>	<b>8 90</b>	<b>8 80</b>	<b>8 80</b>	<b>8 90</b>	<b>S</b>

\* 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 may indicate that they have high-temperature, adult-plant (HTAP) resistance.

## 2011 Spring Barley

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**2011 WSU Spring Barley Trial Summary**  
**Precipitation Zone >20"**

1. Hulled and hulless spring barley grain yield across three locations and 36 entries in the >20" precipitation zone averaged 3890 lbs/acre, and that is 1770 lbs/acre lower than the 2010 average of 5660 lbs/acre. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 2770 to 4490 lbs/ac. Radiant 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 6 of the 36 entries.
3. Test weight averaged 53.2 lbs/bu across locations and entries and was higher than last year's 49.8 lbs/bu average. Grain protein averaged 11.0% and was lower than last year's 13.2% protein value. Plump, heading date, plant height, and lodging data can be found on individual site summaries.

**2011 WSU Spring Barley Trial Summary**  
**Precipitation Zone 16-20"**

1. Hulled and hulless spring barley grain yield across five locations and 36 entries in the 16-20" precipitation zone averaged 4830 lbs/acre, and that is 370 lbs/acre higher than the 2010 average of 4460 lbs/acre. The C.V. for the average data is 10 due to higher variability from severe lodging at Walla Walla. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 3660 to 5410 lbs/ac. Lenetah and Champion tied as the highest yielding named entries averaged across locations. Average yield values within the 10% LSD range (220 lbs/acre) of the highest yield are shown in bold and this included 6 of the 36 entries.
3. Test weight averaged 54.1 lbs/bu across locations and entries and was higher than last year's 49.8 lbs/bu average. Grain protein averaged 12.0% and was lower than last year's 12.9% protein value. Plump, heading date, plant height, and lodging data can be found on individual site summaries.

**2011 WSU Spring Barley Trial Summary**  
**Precipitation Zone <16"**

1. Hulled and hulless spring barley grain yield across three locations and 36 entries in the <16" precipitation zone averaged 3900 lbs/acre, and that is 500 lbs/acre lower than the 2010 average of 4400 lbs/acre. The C.V. for the average data is 10 due to high variability at Bickleton. In general the trials had good establishment after late seeding.
2. Yields among entries averaged across locations ranged from 3060 to 4400 lbs/ac. Lenetah was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (230 lbs/acre) of the highest yield are shown in bold and this included 4 of the 36 entries.
3. Test weight averaged 53.2 lbs/bu across locations and entries and was higher than last year's 49.2 lbs/bu average. Grain protein averaged 11.6% and was lower than last year's 13.8% protein value. Plump, heading date, plant height, and lodging data can be found on individual site summaries.

Table 114.

## 2011 WSU Variety Testing Barley Trial Summary

## Precipitation Zone &gt;20"

Variety Name ( <i>Hulless Italicized</i> )	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average	Fairfield	Farmington	Pullman	Average
Yield (Lbs/A)					Test Wt (Lbs/Bu)				Protein (%)			
07WA-682.1	3420	4810	5250	<b>4490</b>	53.0	53.8	53.3	53.4	11.7	10.5	8.8	10.3
05WA-316.K	3480	4230	5140	<b>4280</b>	52.0	52.7	53.9	52.9	12.0	10.5	8.1	10.2
2Ab04-X01084-27	3420	4570	4810	<b>4270</b>	50.7	51.3	53.3	51.8	12.2	10.5	8.6	10.4
Radiant	3130	4210	5470	<b>4270</b>	52.0	53.3	54.1	53.1	11.9	10.5	9.3	10.6
AC Metcalfe	3200	3940	5620	<b>4250</b>	52.2	53.3	53.6	53.0	12.3	10.9	8.9	10.7
CDC Meredith	3390	4250	5040	<b>4230</b>	50.3	51.0	53.0	51.4	12.2	11.4	8.9	10.8
07WA-614.4	2830	4070	5740	4210	50.2	51.9	51.0	51.0	12.4	11.1	9.5	11.0
2004NZ151	2950	3920	5720	4200	52.4	53.8	54.5	53.6	13.2	11.5	9.4	11.4
Champion	3290	3850	5370	4170	52.7	54.1	54.0	53.6	13.1	10.8	8.6	10.9
Baronesse	2830	4790	4870	4160	51.1	52.7	53.3	52.4	13.0	10.3	8.6	10.6
07MB-390	3270	4030	5060	4120	51.6	52.7	54.7	53.0	12.2	11.4	9.7	11.1
07WA-684.17	3220	3830	5320	4120	52.2	52.7	55.7	53.5	11.9	10.6	9.0	10.5
07WA-677.1	3220	3450	5580	4080	52.7	52.3	53.4	52.8	12.0	11.5	9.3	10.9
2004NZ163	3140	3820	5180	4050	52.3	53.2	57.0	54.2	12.6	11.4	9.0	11.0
2004NZ170	2770	3960	5270	4000	52.1	52.9	52.7	52.6	12.4	10.9	9.9	11.1
Harrington	3100	4060	4770	3970	51.3	53.3	52.3	52.3	13.1	11.9	9.1	11.3
06WA-458.14	3170	4150	4490	3940	52.5	53.5	54.7	53.6	13.1	10.7	7.9	10.6
CDC Copeland	3290	4100	4390	3930	50.6	51.7	51.3	51.2	12.5	10.7	8.6	10.6
07WA-649.7	3210	3570	5030	3930	53.9	53.9	53.9	53.9	12.2	10.9	8.8	10.6
04WA-113.22	3110	4010	4580	3900	51.0	53.6	53.5	52.7	14.0	11.2	9.6	11.6
07WA-630.19	2620	3590	5450	3890	52.4	53.3	53.0	52.9	13.3	11.4	9.8	11.5
07WA-601.6	2700	4000	4940	3880	52.0	53.3	53.2	52.8	12.6	11.1	8.3	10.7
Bob	2810	3900	4860	3860	52.4	53.5	53.8	53.2	13.6	11.5	8.5	11.2
Lenetah	3350	3800	4410	3850	52.8	53.0	54.4	53.4	12.2	11.2	8.9	10.7
05WA-316.99	2750	4560	4160	3820	51.8	52.5	55.2	53.2	12.8	11.4	9.5	11.3
Tetonia	3290	3560	4500	3780	52.2	53.0	55.0	53.4	12.3	10.6	8.6	10.5
Bentley	3050	3020	5000	3690	50.1	51.2	52.0	51.1	12.3	10.9	8.3	10.5
Newdale	3300	3340	4400	3680	51.1	51.4	52.3	51.6	12.5	11.5	9.3	11.1
07WA-658.8	2930	3630	4130	3570	51.5	53.4	53.5	52.8	13.2	11.7	8.8	11.2
2004NZ223	2720	3550	4450	3570	52.2	53.6	52.9	52.9	13.3	12.2	9.1	11.6
<i>Clearwater</i>	2240	3020	5390	3550	58.7	57.7	56.1	57.5	13.7	12.1	8.1	11.3
WAS 4	2290	3730	4450	3490	60.5	61.3	58.8	<b>60.2</b>	13.8	11.6	9.0	11.4
2Ab17271	2960	3250	4140	3450	50.3	51.8	51.1	51.1	12.7	10.5	9.0	10.8
Spaulding	3410	2170	4550	3380	54.0	53.6	53.4	53.7	11.6	11.3	9.2	10.7
WAS 2	2530	3360	4170	3350	50.9	52.6	53.1	52.2	12.4	11.8	9.7	11.3
<i>Meresse</i>	1700	2620	3990	2770	58.7	58.2	54.8	57.2	15.4	13.0	9.4	<b>12.6</b>
C.V. %	9	12	11	11	1.2	0.7	3.3	2.1	4.6	7.1	4.4	5.6
LSD (.10)	280	460	580	260	0.7	0.4	1.9	0.7	0.6	0.8	0.4	0.4
Average	3000	3800	4880	3890	52.5	53.4	53.8	53.2	12.7	11.2	9.0	11.0
Highest	3480	4810	5740	4490	60.5	61.3	58.8	60.2	15.4	13.0	9.9	12.6
Lowest	1700	2160	3990	2770	50.1	51.0	51.0	51.0	11.6	10.3	7.9	10.2

Table 115.

## 2011 WSU Variety Testing Barley Trial Summary

## Precipitation Zone 16-20"

Variety Name (Hulless <i>Italicized</i> )	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average	Dayton	Mayview	Reardan	St. John	Walla Walla	Average
Yield (Lbs/A)							Test Wt (Lbs/Bu)						Protein (%)					
05WA-316.K	5660	4440	6130	6270	4550	<b>5410</b>	54.6	55.2	54.8	53.1	48.6	53.3	12.9	7.5	11.8	12.1	15.1	11.9
Lenetah	5430	4090	6080	6180	4660	<b>5290</b>	55.7	56.2	55.7	54.2	49.8	54.3	12.6	7.1	12.0	12.2	14.7	11.7
Champion	4830	4150	6220	6610	4620	<b>5290</b>	56.4	56.9	56.3	55.4	50.1	55.0	12.4	7.3	11.7	12.4	14.5	11.7
07WA-649.7	4950	3880	6060	6580	4740	<b>5240</b>	55.7	55.0	56.2	54.6	48.8	54.1	12.5	7.9	11.7	12.5	13.3	11.6
Tetonia	5310	3960	6170	6090	4620	<b>5230</b>	55.1	54.4	55.3	53.5	49.2	53.5	12.0	6.7	11.6	12.3	14.4	11.4
07WA-682.1	5510	3900	6080	6400	4150	<b>5210</b>	56.2	55.8	55.0	54.3	50.3	54.3	12.0	6.7	12.1	12.0	14.7	11.5
Spaulding	5260	3960	6070	6290	4310	5180	56.7	56.3	56.2	55.7	50.5	55.1	11.9	6.8	11.4	11.6	12.8	10.9
Baronesse	5200	4270	6220	6020	4170	5170	54.6	55.4	55.2	53.3	49.3	53.6	12.7	6.9	11.8	12.1	14.7	11.6
07WA-614.4	5460	4300	5810	5520	4570	5130	53.9	53.8	53.6	52.2	50.0	52.7	13.0	8.1	12.4	13.5	14.4	12.3
06WA-458.14	5290	4560	5720	5830	4230	5120	54.7	56.0	54.5	54.2	48.9	53.6	12.7	7.2	12.4	12.6	15.5	12.1
07WA-601.6	5180	4060	5820	6200	4180	5080	55.0	55.7	55.2	53.1	47.3	53.3	12.7	7.8	12.2	11.8	15.1	11.9
07WA-684.17	4970	3920	6240	5420	4820	5070	54.8	55.1	55.3	53.2	48.7	53.4	12.1	7.2	11.6	11.9	14.9	11.5
07WA-677.1	4640	4200	6000	5760	4680	5050	55.9	56.0	56.2	53.9	48.0	54.0	11.7	7.1	11.4	12.5	13.9	11.3
2004NZ151	4930	4000	5670	5320	4980	4980	56.0	55.9	56.1	54.6	49.3	54.4	12.9	8.0	12.6	14.0	14.6	12.4
2004NZ163	5010	3780	5740	6210	4170	4980	56.0	55.5	56.0	54.3	50.6	54.5	12.7	7.2	12.5	12.9	15.1	12.1
2004NZ170	5130	3800	6060	5600	4180	4950	55.4	55.0	55.2	53.7	49.6	53.8	12.5	7.3	11.7	12.1	14.9	11.7
04WA-113.22	4830	3920	5390	5820	4750	4940	55.6	56.0	55.0	53.4	50.3	54.1	13.9	6.8	12.8	13.1	14.4	12.2
07WA-658.8	4300	3480	5610	5890	5080	4870	54.9	55.2	55.2	53.2	50.4	53.8	13.3	6.5	12.4	13.2	14.5	12.0
05WA-316.99	4320	4040	5750	6190	4010	4860	54.2	54.6	54.7	52.1	48.1	52.8	12.9	7.3	12.2	12.6	14.0	11.8
07MB-390	4670	3470	5690	5970	4270	4820	54.3	54.4	54.8	53.1	48.8	53.1	13.1	7.6	12.3	13.1	14.6	12.1
07WA-630.19	4440	3670	5510	5590	4440	4730	56.0	55.7	56.1	54.1	51.2	54.6	13.1	6.7	13.2	13.1	14.4	12.1
Newdale	5020	3490	5640	5770	3620	4710	54.6	53.6	54.8	52.6	48.7	52.8	13.0	7.7	12.5	12.8	14.6	12.1
2Ab17271	4670	3920	5730	5730	3430	4700	54.8	53.2	53.5	52.9	50.4	53.0	12.9	6.9	11.1	12.4	14.0	11.5
2004NZ223	5000	3500	5210	5470	4230	4680	56.2	55.2	55.6	54.7	50.0	54.3	12.5	8.0	13.3	12.7	14.0	12.1
CDC Copeland	4990	3550	5100	5620	4110	4670	53.6	52.7	53.4	52.0	48.3	52.0	12.8	7.5	12.5	13.0	14.5	12.1
Harrington	4400	3470	5500	5650	4330	4670	54.4	54.3	54.3	53.0	49.3	53.1	13.1	7.5	12.7	12.3	14.4	12.0
AC Metcalfe	4830	3530	5530	5720	3610	4650	54.7	55.3	55.1	53.1	49.7	53.6	13.2	8.4	12.6	13.6	14.9	12.5
2Ab04-X01084-27	4830	3510	5660	5300	3860	4630	53.7	54.1	53.4	50.4	47.0	51.7	12.2	7.3	12.1	12.4	14.7	11.7
Radiant	4960	3640	5380	4960	4170	4620	54.1	54.5	54.3	52.2	48.2	52.7	12.7	7.1	11.8	12.8	14.5	11.8
CDC Meredith	5090	3550	5760	5530	3150	4610	53.8	53.2	53.2	50.6	47.9	51.7	11.9	8.1	11.9	12.3	14.7	11.8
Bentley	4880	3500	5590	5680	3320	4590	53.3	53.9	54.0	52.2	46.6	52.0	12.9	7.7	12.1	12.3	14.7	11.9
WAS 2	4200	3510	5030	5200	4940	4580	55.6	55.2	55.1	53.8	50.0	53.9	13.9	7.6	13.3	13.7	15.0	12.7
Bob	4220	3390	5150	5050	4040	4370	55.8	55.9	55.5	53.9	50.1	54.2	13.8	7.8	13.2	13.3	15.2	12.6
<i>Clearwater</i>	3770	3260	4780	5230	3840	4180	61.6	62.2	61.8	60.1	54.3	<b>60.0</b>	12.8	6.8	13.0	12.5	15.5	12.1
WAS 4	3710	3060	4510	5450	3710	4090	61.7	62.4	62.3	61.4	51.5	<b>59.9</b>	13.7	7.4	12.9	13.3	15.4	12.5
<i>Meresse</i>	3780	2890	4030	3970	3630	3660	61.3	61.9	60.9	59.5	54.9	<b>59.7</b>	15.5	7.2	15.4	13.8	16.3	<b>13.6</b>
C.V. %	8	9	5	11	15	10	0.6	1.1	0.8	1.4	2.1	1.3	3.6	12.0	3.5	7.8	3.6	5.8
LSD (0.10)	390	370	310	640	690	220	0.3	0.7	0.5	0.8	1.1	0.3	0.5	0.9	0.5	1.0	0.6	0.3
Average	4820	3770	5630	5720	4230	4830	55.6	55.6	55.6	53.9	49.6	54.1	12.8	7.4	12.3	12.7	14.6	12.0
Highest	5660	4550	6240	6610	5080	5410	61.7	62.4	62.3	61.4	54.9	60.0	15.5	8.4	15.4	14.0	16.3	13.6
Lowest	3710	2890	4030	3970	3150	3660	53.3	52.7	53.2	50.4	46.6	51.7	11.7	6.5	11.1	11.6	12.8	10.9

Table 116.

## 2011 WSU Variety Testing Barley Trial Summary

## Precipitation Zone &lt;16"

Variety Name ( <i>Hulless Italicized</i> )	Almira	Bickleton	Lamont	Average	Almira	Bickleton	Lamont	Average	Almira	Bickleton	Lamont	Average
Yield (Lbs/A)					Test Wt (Lbs/Bu)				Protein (%)			
07WA-601.6	5900	1460	5850	<b>4400</b>	53.2	50.1	53.0	52.1	12.1	13.1	11.0	<b>12.1</b>
05WA-316.99	6050	1200	5590	<b>4280</b>	54.5	49.5	52.4	52.1	8.6	12.9	10.9	10.8
2004NZ151	5580	1300	5930	<b>4270</b>	54.9	51.8	54.3	53.7	11.5	14.0	11.0	<b>12.2</b>
07WA-682.1	5220	1430	5900	<b>4180</b>	55.2	51.2	54.3	53.6	9.8	13.3	10.3	11.2
2004NZ170	5370	1390	5730	4160	54.6	51.0	53.5	53.0	9.7	13.6	10.8	11.4
Lenetah	5580	1310	5520	4140	54.5	51.0	54.2	53.3	11.4	14.1	10.6	<b>12.0</b>
07WA-684.17	5330	1170	5870	4120	55.0	49.7	53.1	52.6	10.5	12.6	10.8	11.3
05WA-316.K	5530	1030	5760	4110	53.6	50.7	52.6	52.3	10.9	13.2	10.5	11.5
Champion	5260	1400	5640	4100	55.5	51.0	54.7	53.7	10.0	13.3	11.0	11.5
07WA-614.4	5100	1480	5680	4090	51.0	49.3	51.2	50.5	12.7	13.2	11.1	<b>12.3</b>
Bob	5660	1220	5320	4070	55.3	49.9	53.9	53.0	9.8	13.7	11.9	<b>11.8</b>
Spaulding	5430	1160	5590	4060	55.3	52.0	54.8	54.1	10.8	12.2	10.7	11.3
CDC Meredith	5190	1030	5870	4030	52.5	49.1	51.7	51.1	8.6	13.5	10.5	10.8
04WA-113.22	5410	1280	5400	4030	54.9	50.6	53.3	52.9	9.0	14.0	11.8	11.6
07WA-677.1	5320	1050	5720	4030	55.8	50.7	53.9	53.4	8.6	12.4	10.6	10.5
Tetonia	5180	1310	5460	3980	55.0	50.2	53.3	52.8	11.2	12.1	10.2	11.2
06WA-458.14	4900	1190	5830	3970	53.3	49.3	54.5	52.4	10.0	14.3	10.1	11.4
CDC Copeland	4930	1490	5300	3910	51.9	49.9	51.8	51.2	13.4	12.6	11.5	<b>12.5</b>
Bentley	4950	1420	5290	3890	53.8	49.0	52.2	51.7	9.6	13.1	10.5	11.1
07WA-649.7	5080	980	5610	3890	54.8	51.5	54.5	53.6	10.5	13.4	10.5	11.5
Radiant	4990	1000	5620	3870	54.7	50.2	53.3	52.7	8.5	12.9	9.9	10.4
2004NZ163	4920	1050	5650	3870	56.7	51.6	54.3	54.2	10.2	14.1	10.9	<b>11.7</b>
2Ab17271	4930	990	5590	3840	53.1	49.7	52.5	51.8	11.7	13.8	11.0	<b>12.2</b>
07WA-658.8	5070	1240	5220	3840	55.1	49.2	53.3	52.5	10.3	13.1	11.4	11.6
Baronesse	4920	880	5700	3830	54.2	49.2	53.0	52.2	10.6	14.0	11.2	<b>11.9</b>
2Ab04-X01084-27	5200	860	5400	3820	53.6	47.8	52.1	51.2	9.1	12.7	11.3	11.0
AC Metcalfe	4790	1160	5440	3800	53.3	49.5	53.3	52.1	12.6	13.3	11.2	<b>12.4</b>
07WA-630.19	4770	1290	5150	3740	55.3	51.5	53.6	53.5	9.9	13.8	11.6	<b>11.8</b>
Newdale	4930	1370	4860	3720	54.6	49.8	52.4	52.3	8.9	13.6	10.9	11.1
07MB-390	5190	1010	4940	3710	54.9	49.5	52.3	52.2	9.8	14.2	11.2	<b>11.7</b>
WAS 2	5050	1450	4540	3680	55.1	51.3	53.3	53.2	9.9	12.7	11.8	11.5
2004NZ223	5020	1100	4940	3680	54.8	51.0	54.0	53.3	10.9	13.1	10.7	11.6
Harrington	4730	1180	5070	3660	54.5	49.5	53.3	52.4	12.0	13.6	11.5	<b>12.4</b>
<i>Clearwater</i>	4910	910	4670	3500	62.7	56.5	59.9	<b>59.7</b>	11.1	12.9	10.8	11.6
WAS 4	4270	1000	4290	3190	61.8	56.9	61.3	<b>60.0</b>	11.3	12.6	10.5	11.5
<i>Meresse</i>	3780	1460	3940	3060	62.6	55.5	58.6	58.9	9.4	14.2	12.5	<b>12.0</b>
C.V. %	9	32	5	10	2.2	2.0	0.8	1.8	19.4	4.6	5.2	10.9
LSD (0.10)	480	400	280	230	1.3	1.1	0.5	0.6	2.1	0.6	0.6	0.8
Average	5120	1200	5390	3900	55.1	50.7	53.8	53.2	10.4	13.3	11.0	11.6
Highest	6040	1490	5930	4400	62.7	56.9	61.3	60.0	13.4	14.3	12.5	12.5
Lowest	3780	860	3940	3060	51.0	47.8	51.2	50.5	8.5	12.1	9.9	10.4

**Table 117. WSU Spring Barley Trial Multi-Year Summary**

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

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 5 loc/yr			2009-2011, 7 loc/yr			2007-2011, 11 loc/yr		
	Yield	TW	Protein	Yield	TW	Protein	Yield	TW	Protein
	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%
2004NZ163	5220	53.4	11.8						
05WA-316.K	5210	51.9	11.2	5270	51.5	11.6			
2004NZ151	5200	52.0	11.7						
Lenetah	5060	53.6	11.4	5380	53.0	11.8			
Champion	5020	52.9	11.6	5290	52.7	11.9	5450	52.3	12.1
Baronesse	4960	51.9	11.6	5150	51.5	11.9	5030	50.4	12.3
04WA-113.22	4940	52.2	12.3	5160	51.8	12.7			
Radiant	4920	51.6	11.4	5090	51.3	11.7	4990	50.1	12.0
05WA-316.99	4890	51.6	11.6	5100	51.2	11.8			
Bob	4860	52.9	12.1	4930	52.3	12.4	4920	51.5	12.6
CDC Meredith	4830	49.8	11.6						
07MB-390	4800	51.1	12.0						
06WA-458.14	4780	52.6	11.6						
AC Metcalfe	4710	51.7	11.9	4710	51.4	12.4	4640	50.6	12.8
CDC Copeland	4630	50.0	11.8	4880	50.3	12.1			
WAS 2	4560	52.6	11.9						
Harrington	4550	50.4	12.4	4850	50.6	12.6	4830	49.5	12.7
Tetonia	4470	52.6	11.5	4780	52.3	11.6			
Bentley	4280	49.9	11.6						
Spaulding	4200	52.8	11.4	4600	52.8	11.7	4540	52.5	11.9
<b>Hulless</b>									
WAS 4 <sup>1</sup>	4300	58.6	12.0						
Meresse <sup>1</sup>	4100	57.0	12.4	4250	56.4	12.6			
Clearwater	4010	57.2	13.4	3960	56.8	13.8	3980	56.6	14.1
C.V. %	11	2.1	5.5	10	1.9	5.0	10	2.1	5.0
LSD (.10)	220	0.5	0.3	180	0.4	0.2	140	0.4	0.2
Average	4720	52.6	11.8	4830	52.4	12.2	4800	51.7	12.6
Highest	5220	58.6	13.4	5380	56.8	13.8	5450	56.6	14.1
Lowest	4010	49.8	11.2	3960	50.3	11.6	3980	49.5	11.9

<sup>1</sup> Waxy, High Beta-Glucan

**Table 118. WSU Spring Barley Trial Multi-Year Summary**

**Precipitation Zone = 16-20"**  
**(Dayton, Mayview, Reardan, St. John, Walla Walla)**

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 10 loc/yr			2009-2011, 15 loc/yr			2007-2011, 24 loc/yr		
	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>
	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%
Lenetah	5260	52.7	12.1	5170	52.2	12.4	4740	52.2	12.0
05WA-316.K	5120	51.0	12.2	4990	50.5	12.5			
Champion	5120	53.6	11.7	5090	52.9	12.2			
2004NZ163	5080	52.1	12.7						
Tetonia	5000	51.3	12.0	4940	51.1	12.4			
06WA-458.14	4980	51.6	12.4				4510	51.8	11.8
Spaulding	4970	52.9	11.4	4920	52.6	11.8			
Baronesse	4950	51.0	12.4	4820	50.6	12.7			
2004NZ151	4900	50.7	12.7						
WAS 2	4810	53.2	12.7						
04WA-113.22	4810	52.1	12.6	4760	51.5	12.9	4360	49.6	12.4
05WA-316.99	4800	50.5	11.9	4750	50.0	12.4			
Radiant	4540	50.8	12.2	4630	50.5	12.4			
07MB-390	4460	50.2	12.9						
Bob	4400	52.7	12.8	4480	52.0	13.0			
CDC Meredith	4360	48.8	12.4				3990	48.8	13.0
Harrington	4360	50.1	12.7	4360	49.8	13.0			
CDC Copeland	4270	49.5	12.6	4330	49.3	12.8			
AC Metcalfe	4260	50.7	12.9	4220	50.6	13.2			
Bentley	4120	49.8	12.4						
<b>Hulless</b>							3310	57.9	14.5
WAS 4 <sup>1</sup>	4110	58.5	12.8						
Clearwater	3960	58.6	13.1	3950	58.0	13.2			
Meresse <sup>1</sup>	3940	59.7	13.7	3760	58.9	14.1			
C.V. %	9	2.0	5.7	9	1.9	5.0	9	1.8	4.8
LSD (.10)	150	0.3	0.2	110	0.3	0.2	80	0.2	0.1
Average	4630	52.3	12.5	4620	52.1	12.7	4180	51.4	12.8
Highest	5260	59.7	13.7	5170	58.9	14.1	4740	57.9	14.5
Lowest	3940	48.8	11.4	3760	49.3	11.8	3310	48.8	11.8

<sup>1</sup> Waxy, High Beta-Glucan

**Table 119. WSU Spring Barley Trial Multi-Year Summary**

**Precipitation Zone = <16"**  
**(Almira, Bickleton, Lamont)**

Variety Name	<b>2 Years</b>			<b>3 Years</b>			<b>5 Years</b>		
	2010-2011, 6 loc/yr			2009-2011, 9 loc/yr			2007-2011, 13 loc/yr		
	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>	<b>Yield</b>	<b>TW</b>	<b>Protein</b>
	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%	Lbs/A	Lbs/Bu	%
05WA-316.99	4670	50.2	11.8	4090	49.2	12.4	3860	50.7	12.4
Champion	4510	52.2	12.4	4070	51.4	12.8			
04WA-113.22	4470	51.7	12.5	4020	50.7	13.3			
06WA-458.14	4430	50.6	12.5						
Tetonia	4430	50.9	12.4	3940	49.9	12.8			
Lenetah	4410	51.7	12.7	3980	50.7	13.0	3590	48.7	12.2
Radiant	4290	50.6	12.0	3860	49.6	12.4			
Bob	4270	51.5	12.7	3800	50.6	13.2			
05WA-316.K	4230	49.6	12.4	3870	49.1	12.9			
2004NZ151	4220	50.6	13.0						
2004NZ163	4200	51.5	12.9				3510	48.8	12.9
Baronesse	4140	50.4	12.8	3780	49.6	13.2			
Spaulding	4120	51.5	12.1	3800	51.1	12.5			
CDC Copeland	4090	49.0	13.1	3570	48.3	13.3			
Harrington	4040	49.8	13.0	3640	49.0	13.3			
WAS 2	4040	51.9	12.8				3180	48.0	13.2
Bentley	4020	49.6	12.5						
CDC Meredith	3960	47.7	12.4						
07MB-390	3930	49.1	13.1						
AC Metcalfe	3900	49.9	13.0	3460	49.3	13.4			
<b>Hulless</b>							2760	55.9	14.4
Clearwater	3680	58.5	13.1	3420	57.4	13.2			
WAS 4 <sup>1</sup>	3620	58.3	12.9						
Meresse <sup>1</sup>	3380	58.3	13.9	2980	56.8	14.5			
C.V. %	9	2.2	8.2	10	2.1	6.9	10	2.2	6.6
LSD (.10)	160	0.5	0.4	140	0.4	0.3	110	0.3	0.3
Average	4130	51.5	12.7	3700	50.9	13.1	3420	50.0	12.9
Highest	4670	58.5	13.9	4090	57.4	14.5	3860	55.9	14.4
Lowest	3380	47.7	11.8	2980	48.3	12.4	2760	47.9	12.1

<sup>1</sup> Waxy, High Beta-Glucan



**Table 120. 2011 WSU Variety Testing Barley Trial, Almira**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011				
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.
05WA-316.99		5080	5600	<b>6050</b>	54.5	8.6	94	36
07WA-601.6				<b>5900</b>	53.2	12.1	71	36
Bob	4190	4700	5040	<b>5660</b>	55.3	9.8	97	35
Lenetah		4990	5230	<b>5580</b>	54.5	11.4	72	37
2004NZ151			4810	<b>5580</b>	54.9	11.5	82	28
05WA-316.K		4520	4740	5530	53.6	10.9	80	34
Spaulding	4040	4700	4800	5430	55.3	10.8	76	35
04WA-113.22		5160	5560	5410	54.9	9.0	97	32
2004NZ170		4670		5370	54.6	9.7	90	29
07WA-684.17				5330	55.0	10.5	82	32
07WA-677.1				5320	55.8	8.6	91	32
Champion	4160	4620	5050	5260	55.5	10.0	87	37
07WA-682.1				5220	55.2	9.8	91	35
2Ab04-X01084-27				5200	53.6	9.1	95	31
07MB-390			4380	5190	54.9	9.8	94	34
CDC Meredith			4210	5190	52.5	8.6	96	37
Tetonia		4510	4870	5180	55.0	11.2	87	34
07WA-614.4				5100	51.0	12.7	66	34
07WA-649.7				5080	54.8	10.5	77	34
07WA-658.8				5070	55.1	10.3	96	35
WAS 2			4760	5050	55.1	9.9	96	30
2004NZ223		4310		5020	54.8	10.9	73	30
Radiant	3940	4470	4830	4990	54.7	8.5	91	31
Bentley			4470	4950	53.8	9.6	97	40
CDC Copeland		3890	4350	4930	51.9	13.4	70	39
2Ab17271				4930	53.1	11.7	80	36
Newdale				4930	54.6	8.9	97	35
Baronesse	3810	4470	4640	4920	54.2	10.6	80	31
2004NZ163			4810	4920	56.7	10.2	82	27
<i>Clearwater</i>		4090	4350	4910	<b>62.7</b>	11.1	83	34
06WA-458.14			4890	4900	53.3	10.0	84	32
AC Metcalfe	3350	3930	4200	4790	53.3	12.6	70	35
07WA-630.19				4770	55.3	9.9	96	34
Harrington	3710	4280	4560	4730	54.5	12.0	82	35
WAS 4			4330	4270	<b>61.8</b>	11.3	69	32
<i>Meresse</i>	3080	3490	3850	3780	<b>62.6</b>	9.4	80	30
C.V. %	9	10	10	9	2.2	19.4	20	7
LSD (.10)	190	270	350	480	1.3	2.1	18	3
Average	3780	4460	4710	5120	55.0	10.4	85	34
Highest	4190	5160	5600	6050	62.7	13.4	97	40
Lowest	3080	3490	3850	3780	51.0	8.5	66	27

### Almira Spring Barley

1. Grain yield in the Almira spring barley trial averaged 5120 lbs/acre and was 1340 lbs/acre higher the 5-year average. The Almira nursery was located about 10 miles north of Almira, WA (Dan McKay, cooperator).
2. This nursery was seeded on 22 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 65# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 3780 to 6050 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 36 entries are in this top group. Bob was the highest yielding named entry and Bob 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 with an average of 55.0 lbs/bu, and ranged from 51.0 to 62.7 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 10.4%, grain plumpness averaged 93%, and the average plant height was 34 inches.

**Table 121. 2011 WSU Variety Testing Barley Trial, Bickleton**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011				
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.
CDC Copeland	--	1890	2040	1490	49.9	12.6	91	21
07WA-614.4	--			1480	49.3	13.2	84	20
07WA-601.6	--			1460	50.1	13.1	81	21
<i>Meresse</i>	--	1890	2000	1460	55.5	14.2	66	18
WAS 2	--		2140	1450	51.3	12.7	87	20
07WA-682.1	--			1430	51.2	13.3	85	18
Bentley	--		2170	1420	49.0	13.1	83	20
Champion	--	2250	2400	1400	51.0	13.3	87	20
2004NZ170	--	1330		1390	51.0	13.6	88	17
Newdale	--			1370	49.8	13.6	71	18
Lenetah	--	1920	2120	1310	51.0	14.1	87	18
Tetonia	--	1890	2070	1310	50.2	12.1	71	19
2004NZ151	--		1890	1300	51.8	14.0	80	18
07WA-630.19	--			1290	51.5	13.8	88	17
04WA-113.22	--	1870	2070	1280	50.6	14.0	82	17
07WA-658.8	--			1240	49.2	13.1	82	20
Bob	--	1880	2080	1220	49.9	13.7	87	18
05WA-316.99	--	2000	2110	1200	49.5	12.9	87	17
06WA-458.14	--		2060	1190	49.3	14.3	72	18
Harrington	--	1810	1960	1180	49.5	13.6	82	19
07WA-684.17	--			1170	49.7	12.6	75	16
Spaulding	--	2020	2020	1160	52.0	12.2	87	19
AC Metcalfe	--	1700	1850	1160	49.5	13.3	87	18
2004NZ223	--	1260		1100	51.0	13.1	85	19
07WA-677.1	--			1050	50.7	12.4	76	17
2004NZ163	--		1860	1050	51.6	14.1	72	19
05WA-316.K	--	1870	2000	1030	50.7	13.2	84	17
CDC Meredith	--		1870	1030	49.1	13.5	77	17
07MB-390	--		1910	1010	49.5	14.2	80	17
<i>WAS 4</i>	--		1740	1000	<b>56.9</b>	12.6	61	18
Radiant	--	1840	1890	1000	50.2	12.9	69	17
2Ab17271	--			990	49.7	13.8	74	18
07WA-649.7	--			980	51.5	13.4	87	21
<i>Clearwater</i>	--	1680	1720	910	<b>56.5</b>	12.9	66	19
Baronesse	--	1740	1840	880	49.2	14.0	79	17
2Ab04-X01084-27	--			860	47.8	12.7	79	17
C.V. %	--	17	18	31	2.0	4.6	9	9
LSD (.10)	--	190	240	N.S. <sup>1</sup>	1.1	0.6	8	2
Average	--	1810	1990	1200	50.7	13.3	80	18
Highest	--	2250	2400	1490	56.9	14.3	91	21
Lowest	--	1260	1720	860	47.8	12.1	61	16

<sup>1</sup>-No Significant Difference

### Bickleton Spring Barley

1. Grain yield in the Bickleton spring barley trial averaged 1200 lbs/acre, 610 lbs/acre less than the 3-year average at this site. The Bickleton nursery was located about four miles east of Bickleton, WA (Steve Matsen, cooperator).
2. This nursery was seeded on 12 May, 2011 following spring wheat. Seed was placed at an 80#/acre seeding rate using a no-till drill equipped with Cross-Slot openers set on 10-inch spacing. Base applied fertilizer was 30# N/acre. Spring seeding was delayed due to high moisture and cold temperatures, but spring growing conditions were mostly favorable.
3. Yields ranged from 860 to 1490 lbs/ac. Yields were not significantly different due to high variability and generally poor site conditions. CDC Copeland was the highest yielding named entry and Champion was the highest yielding over 3 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 50.7 lbs/bu, and ranged from 47.8 to 56.9 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 13.3%, grain plumpness averaged 80%, and the average plant height was 18 inches.

**Table 122. 2011 WSU Variety Testing Barley Trial, Dayton**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011					
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.	Head Date
05WA-316.K		4700	5590	5660	54.6	12.9	85	30	176
07WA-682.1				5510	56.2	12.0	94	32	180
07WA-614.4				5460	53.9	13.0	92	28	179
Lenetah		4700	5430	5430	55.7	12.6	95	29	178
Tetonia		4420	5000	5310	55.1	12.0	90	30	179
06WA-458.14			5030	5290	54.7	12.7	83	27	178
Spaulding	4300	4340	5240	5260	56.7	11.9	93	32	177
Baronesse	4150	4310	4880	5200	54.6	12.7	87	30	178
07WA-601.6				5180	55.0	12.7	94	32	177
2004NZ170		3950		5130	55.4	12.5	92	24	182
CDC Meredith			4610	5090	53.8	11.9	89	31	181
Newdale				5020	54.6	13.0	89	31	179
2004NZ163			5480	5010	56.0	12.7	92	25	182
2004NZ223		3870		5000	56.2	12.5	95	26	184
CDC Copeland		3440	4090	4990	53.6	12.8	93	32	182
07WA-684.17				4970	54.8	12.1	88	29	177
Radiant	4290	4280	4850	4960	54.1	12.7	79	29	179
07WA-649.7				4950	55.7	12.5	92	31	177
2004NZ151			5060	4930	56.0	12.9	91	25	182
Bentley			4230	4880	53.3	12.9	90	34	178
2Ab04-X01084-27				4830	53.7	12.2	91	29	178
Champion	4360	4320	5010	4830	56.4	12.4	88	32	177
04WA-113.22		4180	4940	4830	55.6	13.9	94	28	177
AC Metcalfe	3460	3600	4340	4830	54.7	13.2	91	33	180
07MB-390			4560	4670	54.3	13.1	90	29	179
2Ab17271				4670	54.8	12.9	91	30	185
07WA-677.1				4640	55.9	11.7	89	27	177
07WA-630.19				4440	56.0	13.1	95	30	177
Harrington	3600	3520	4060	4400	54.4	13.1	92	30	179
05WA-316.99		3980	4770	4320	54.2	12.9	95	30	177
07WA-658.8				4300	54.9	13.3	88	27	178
Bob	3970	3970	4280	4220	55.8	13.8	96	30	177
WAS 2			4560	4200	55.6	13.9	96	25	178
<i>Meresse</i>	3330	3500	4270	3780	61.3	15.5	76	26	178
<i>Clearwater</i>		3030	3580	3770	61.6	12.8	83	30	180
WAS 4			4090	3710	61.7	13.7	74	28	177
C.V. %	8	8	8	8	0.6	3.6	4	6	1
LSD (.10)	150	210	270	390	0.3	0.5	4	2	1
Average	3930	4010	4690	4820	55.6	12.9	90	29	179
Highest	4360	4700	5590	5660	61.7	15.5	96	34	185
Lowest	3330	3030	3580	3710	53.3	11.7	74	24	176

### Dayton Spring Barley

1. Grain yield in the Dayton spring barley trial averaged 4820 lbs/acre and was 890 lbs/acre higher than the 5-year average. The Dayton nursery was located about five miles north of Dayton, WA (Jay Penner, cooperator).
2. This nursery was seeded on 18 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 160# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 3710 to 5660 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 36 entries are in this top group. Lenetah was the highest yielding named entry 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 were very good with an average of 55.6 lbs/bu, and ranged from 53.3 to 61.7 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 12.9%, grain plumpness averaged 90%, and the average plant height was 29 inches.

**Table 123. 2011 WSU Variety Testing Barley Trial, Fairfield**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011				
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.
05WA-316.K	--	--	--	3480	52.0	12.0	98	27
2Ab04-X01084-27	--	--	--	3420	50.7	12.2	97	28
07WA-682.1	--	--	--	3420	53.0	11.7	97	33
Spaulding	--	--	--	3410	54.0	11.6	97	28
CDC Meredith	--	--	--	3390	50.3	12.2	97	29
Lenetah	--	--	--	3350	52.8	12.2	97	31
Newdale	--	--	--	3300	51.1	12.5	96	30
CDC Copeland	--	--	--	3290	50.6	12.5	97	34
Tetonia	--	--	--	3290	52.2	12.3	97	28
Champion	--	--	--	3290	52.7	13.1	97	27
07MB-390	--	--	--	3270	51.6	12.2	97	28
07WA-677.1	--	--	--	3220	52.7	12.0	96	29
07WA-684.17	--	--	--	3220	52.2	11.9	97	28
07WA-649.7	--	--	--	3210	53.9	12.2	98	31
AC Metcalfe	--	--	--	3200	52.2	12.3	98	31
06WA-458.14	--	--	--	3170	52.5	13.1	98	27
2004NZ163	--	--	--	3140	52.3	12.6	97	25
Radiant	--	--	--	3130	52.0	11.9	95	29
04WA-113.22	--	--	--	3110	51.0	14.0	98	27
Harrington	--	--	--	3100	51.3	13.1	96	28
Bentley	--	--	--	3050	50.1	12.3	97	33
2Ab17271	--	--	--	2960	50.3	12.7	94	30
2004NZ151	--	--	--	2950	52.4	13.2	96	24
07WA-658.8	--	--	--	2930	51.5	13.2	96	28
07WA-614.4	--	--	--	2830	50.2	12.4	96	30
Baronesse	--	--	--	2830	51.1	13.0	97	26
Bob	--	--	--	2810	52.4	13.6	98	29
2004NZ170	--	--	--	2770	52.1	12.4	97	26
05WA-316.99	--	--	--	2750	51.8	12.8	98	28
2004NZ223	--	--	--	2720	52.2	13.3	97	27
07WA-601.6	--	--	--	2700	52.0	12.6	97	26
07WA-630.19	--	--	--	2620	52.4	13.3	98	29
WAS 2	--	--	--	2530	50.9	12.4	97	25
WAS 4	--	--	--	2290	60.5	13.8	91	27
<i>Clearwater</i>	--	--	--	2240	58.7	13.7	88	29
<i>Meresse</i>	--	--	--	1700	58.7	15.4	84	25
C.V. %	--	--	--	9	1.2	4.6	1	5
LSD (.10)	--	--	--	280	0.7	0.6	1	2
Average	--	--	--	3000	52.5	12.7	96	28
Highest	--	--	--	3480	60.5	15.4	98	34
Lowest	--	--	--	1700	50.1	11.6	84	24

### Fairfield Spring Barley

1. Grain yield in the Fairfield spring barley trial averaged 3000 lbs/acre. The Fairfield nursery was located about four miles northwest of Fairfield, WA (L. Green, cooperator). This location has no data from the previous five years.
2. This nursery was seeded on 2 May, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till drill equipped with Cross-Slot openers set on 10-inch spacing. Base applied fertilizer was 100# N/acre. Spring seeding conditions were variable due to high moisture, but spring growing conditions were favorable.
3. Yields ranged from 1700 to 3480 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 15 of the 36 entries are in this top group. Spaulding was the highest yielding named entry. All entries were 2-row and hulless entries are listed in italics.
4. Test weights were good with an average of 52.5 lbs/bu, and ranged from 50.1 to 60.5 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 12.7%, grain plumpness averaged 96%, and the average plant height was 28 inches.



**Table 124. 2011 WSU Variety Testing Barley Trial, Farmington**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011					
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.	Head Date
<b>07WA-682.1</b>				<b>4810</b>	53.8	10.5	97	33	197
<b>Baronesse</b>	5470	5970	5780	<b>4790</b>	52.7	10.3	96	24	197
<b>2Ab04-X01084-27</b>				<b>4570</b>	51.3	10.5	97	25	198
<b>05WA-316.99</b>		6210	6170	<b>4560</b>	52.5	11.4	96	28	197
<b>CDC Meredith</b>			5430	4250	51.0	11.4	96	32	197
<b>05WA-316.K</b>		5850	5890	4230	52.7	10.5	98	28	194
<b>Radiant</b>	5540	5860	5700	4210	53.3	10.5	96	26	197
<b>06WA-458.14</b>			5640	4150	53.5	10.7	97	29	197
<b>CDC Copeland</b>		5590	5330	4100	51.7	10.7	98	35	197
<b>07WA-614.4</b>				4070	51.9	11.1	96	30	198
<b>Harrington</b>	5250	5390	5070	4060	53.3	11.9	98	32	197
<b>07MB-390</b>			5310	4030	52.7	11.4	97	30	197
<b>04WA-113.22</b>		5910	5710	4010	53.6	11.2	97	27	195
<b>07WA-601.6</b>				4000	53.3	11.1	97	28	196
<b>2004NZ170</b>		4770		3960	52.9	10.9	97	25	199
<b>AC Metcalfe</b>	4860	5120	5130	3940	53.3	10.9	97	32	196
<b>2004NZ151</b>			5680	3920	53.8	11.5	96	22	199
<b>Bob</b>	5190	5360	5320	3900	53.5	11.5	96	27	196
<b>Champion</b>	6060	6110	5710	3850	54.1	10.8	96	28	196
<b>07WA-684.17</b>				3830	52.7	10.6	95	26	197
<b>2004NZ163</b>			5700	3820	53.2	11.4	97	23	199
<b>Lenetah</b>		5850	5430	3800	53.0	11.2	97	30	196
<i>WAS 4</i>			4940	3730	<b>61.3</b>	11.6	94	27	197
<b>07WA-658.8</b>				3630	53.4	11.7	97	27	196
<b>07WA-630.19</b>				3590	53.3	11.4	98	27	196
<b>07WA-649.7</b>				3570	53.9	10.9	97	30	197
<b>Tetonia</b>		5580	5060	3560	53.0	10.6	96	27	199
<b>2004NZ223</b>		4630		3550	53.6	12.2	98	27	199
<b>07WA-677.1</b>				3450	52.3	11.5	93	24	197
<b>WAS 2</b>			5060	3360	52.6	11.8	98	22	197
<b>Newdale</b>				3340	51.4	11.5	96	29	197
<b>2Ab17271</b>				3250	51.8	10.5	95	30	200
<i>Clearwater</i>		4600	4440	3020	57.7	12.1	88	29	198
<b>Bentley</b>			4270	3020	51.2	10.9	97	30	196
<i>Meresse</i>	4000	4180	4320	2620	58.2	13.0	88	24	196
<b>Spaulding</b>	4390	4760	4300	2170	53.6	11.3	93	28	197
<b>C.V. %</b>	9	9	10	11	0.7	7.1	1	10	1
<b>LSD (.10)</b>	210	270	360	460	0.4	0.8	1	3	1
<b>Average</b>	5090	5400	5280	3800	53.4	11.2	96	28	197
<b>Highest</b>	6060	6210	6170	4810	61.3	13.0	98	35	200
<b>Lowest</b>	4000	4180	4270	2170	51.0	10.3	88	22	194

### Farmington Spring Barley

1. Grain yield in the Farmington spring barley trial averaged 3800 lbs/acre and was 1290 lbs/acre lower than the 5-year average. The Farmington nursery was located about one mile south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 11 May, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till drill equipped with Cross-Slot openers set on 10-inch spacing. Base applied fertilizer was 114# N/acre. Spring seeding was late and growing conditions were favorable.
3. Yields ranged from 2170 to 4810 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 36 entries are in this top group. Baronesse was the highest yielding named entry 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 were very good with an average of 53.4 lbs/bu, and ranged from 51.0 to 61.3 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 11.2%, grain plumpness averaged 96%, and the average plant height was 28 inches.

**Table 125. 2011 WSU Variety Testing Barley Trial, Lamont**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011					
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.	Head Date
2004NZ151			5970	5930	54.3	11.0	97	30	170
07WA-682.1				5900	54.3	10.3	98	35	168
CDC Meredith			5800	5870	51.7	10.5	97	35	167
07WA-684.17				5870	53.1	10.8	97	32	167
07WA-601.6				5850	53.0	11.0	97	32	165
06WA-458.14			6340	5830	54.5	10.1	98	32	167
05WA-316.K		5210	5960	5760	52.6	10.5	98	31	167
2004NZ170		4240		5730	53.5	10.8	98	26	170
07WA-677.1				5720	53.9	10.6	96	31	168
Baronesse	3940	5130	5960	5700	53.0	11.2	97	32	167
07WA-614.4				5680	51.2	11.1	97	32	168
2004NZ163			5930	5650	54.3	10.9	98	29	171
Champion	4100	5350	6080	5640	54.7	11.0	97	35	166
Radiant	3970	5280	6140	5620	53.3	9.9	94	34	167
07WA-649.7				5610	54.5	10.5	98	34	167
2Ab17271				5590	52.5	11.0	96	34	171
Spaulding	3600	4680	5540	5590	54.8	10.7	98	32	166
05WA-316.99		5190	6310	5590	52.4	10.9	98	32	168
Lenetah		5020	5890	5520	54.2	10.6	98	34	169
Tetonia		5410	6360	5460	53.3	10.2	96	31	167
AC Metcalfe	3510	4740	5660	5440	53.3	11.2	98	38	166
2Ab04-X01084-27				5400	52.1	11.3	97	31	167
04WA-113.22		5030	5780	5400	53.3	11.8	98	33	166
Bob	3740	4830	5690	5320	53.9	11.9	98	33	168
CDC Copeland		4920	5870	5300	51.8	11.5	98	36	168
Bentley			5410	5290	52.2	10.5	98	39	166
07WA-658.8				5220	53.3	11.4	96	33	165
07WA-630.19				5150	53.6	11.6	98	34	166
Harrington	3570	4820	5610	5070	53.3	11.5	98	33	168
07MB-390			5490	4940	52.3	11.2	97	33	167
2004NZ223		4060		4940	54.0	10.7	98	27	171
Newdale				4860	52.4	10.9	97	34	167
<i>Clearwater</i>		4490	4970	4670	59.9	10.8	87	34	166
WAS 2			5230	4540	53.3	11.8	98	31	168
WAS 4			4800	4290	61.3	10.5	75	31	167
<i>Meresse</i>	2700	3560	4280	3940	58.6	12.5	76	31	166
C.V. %	8	8	6	5	0.8	5.2	2	6	0
LSD (.10)	160	240	240	280	0.5	0.6	2	2	1
Average	3640	4820	5700	5390	53.8	11.0	96	33	167
Highest	4100	5410	6360	5930	61.3	12.5	98	39	171
Lowest	2700	3560	4280	3940	51.2	9.9	75	26	165

### Lamont Spring Barley

1. Grain yield in the Lamont spring barley trial averaged 5390 lbs/acre and was 1750 lbs/acre higher the 5-year average. The Lamont nursery was located about five miles southeast of Lamont, WA (Gil White, cooperator).
2. This nursery was seeded on 18 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 70# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 3940 to 5930 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 12 of the 36 entries are in this top group. CDC Meredith was the highest yielding named entry 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 were very good with an average of 53.8 lbs/bu, and ranged from 51.2 to 61.3 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 11.0%, grain plumpness averaged 96%, and the average plant height was 33 inches.

**Table 126. 2011 WSU Variety Testing Barley Trial, Mayview**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011				
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.
06WA-458.14			4280	<b>4560</b>	56.0	7.2	94	29
05WA-316.K		4090	4170	<b>4440</b>	55.2	7.5	96	29
07WA-614.4				<b>4300</b>	53.8	8.1	94	30
Baronesse	3920	3690	3630	<b>4270</b>	55.4	6.9	91	29
07WA-677.1				<b>4200</b>	56.0	7.1	89	29
Champion	4450	4280	4180	4150	56.9	7.3	89	30
Lenetah		4160	4170	4090	56.2	7.1	96	29
07WA-601.6				4060	55.7	7.8	95	30
05WA-316.99		3800	3870	4040	54.6	7.3	95	30
2004NZ151			3460	4000	55.9	8.0	91	25
Tetonia		3830	3550	3960	54.4	6.7	87	28
Spaulding	3860	3720	3650	3960	56.3	6.8	92	29
07WA-684.17				3920	55.1	7.2	88	28
04WA-113.22		3790	3820	3920	56.0	6.8	94	28
2Ab17271				3920	53.2	6.9	84	30
07WA-682.1				3900	55.8	6.7	93	31
07WA-649.7				3880	55.0	7.9	95	30
2004NZ170		3890		3800	55.0	7.3	92	24
2004NZ163			3720	3780	55.5	7.2	93	26
07WA-630.19				3670	55.7	6.7	94	30
Radiant	4000	3770	3480	3640	54.5	7.1	76	29
CDC Meredith			3300	3550	53.2	8.1	94	31
CDC Copeland		3220	2760	3550	52.7	7.5	92	32
AC Metcalfe	3390	3350	3270	3530	55.3	8.4	93	30
2Ab04-X01084-27				3510	54.1	7.3	93	28
WAS 2			3930	3510	55.2	7.6	96	26
Bentley			3110	3500	53.9	7.7	93	32
2004NZ223		3700		3500	55.2	8.0	94	25
Newdale				3490	53.6	7.7	93	30
07WA-658.8				3480	55.2	6.5	84	29
Harrington	3680	3550	3270	3470	54.3	7.5	95	29
07MB-390			3240	3470	54.4	7.6	93	29
Bob	3720	3520	3420	3390	55.9	7.8	95	30
<i>Clearwater</i>		3090	2960	3260	<b>62.2</b>	6.8	74	31
<i>WAS 4</i>			3220	3060	<b>62.4</b>	7.4	65	27
<i>Meresse</i>	3100	3160	3240	2890	<b>61.9</b>	7.2	59	27
C.V. %	9	10	11	9	1.1	12.0	3	4
LSD (.10)	160	230	300	370	0.7	0.9	3	1
Average	3760	3680	3550	3770	55.6	7.4	90	29
Highest	4450	4280	4280	4560	62.4	8.4	96	32
Lowest	3100	3090	2760	2890	52.7	6.5	59	24

### Mayview Spring Barley

1. Grain yield in the Mayview spring barley trial averaged 3770 lbs/acre and was similar to the 5-year average. The Mayview nursery was located about four 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 29 April, 2011 following winter wheat. Seed was placed at an 80#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 90# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 2890 to 4560 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 36 entries are in this top group. Baronesse was the highest yielding named entry 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 were very good with an average of 55.6 lbs/bu and ranged from 52.7 to 62.4 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 7.4%, grain plumpness averaged 90%, and the average plant height was 29 inches.

**Table 127. 2011 WSU Variety Testing Barley Trial, Pullman**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011				
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Head Date
07WA-614.4				5740	51.0	9.5	95	187
2004NZ151			5840	5720	54.5	9.4	96	186
AC Metcalfe	4710	4800	5060	5620	53.6	8.9	95	186
07WA-677.1				5580	53.4	9.3	95	185
Radiant	4820	4980	5030	5470	54.1	9.3	93	186
07WA-630.19				5450	53.0	9.8	97	186
<i>Clearwater</i>		4570	4690	5390	56.1	8.1	84	185
Champion	5270	5140	5200	5370	54.0	8.6	93	186
07WA-684.17				5320	55.7	9.0	92	185
2004NZ170		5180		5270	52.7	9.9	95	185
07WA-682.1				5250	53.3	8.8	95	185
2004NZ163			5770	5180	57.0	9.0	91	186
05WA-316.K		5300	5380	5140	53.9	8.1	97	186
07MB-390			5050	5060	54.7	9.7	92	186
CDC Meredith			4950	5040	53.0	8.9	95	187
07WA-649.7				5030	53.9	8.8	92	185
Bentley			4910	5000	52.0	8.3	95	186
07WA-601.6				4940	53.2	8.3	94	185
Baronesse	5030	5110	5190	4870	53.3	8.6	92	186
Bob	5060	5210	5420	4860	53.8	8.5	91	186
2Ab04-X01084-27				4810	53.3	8.6	97	186
Harrington	4770	4880	4760	4770	52.3	9.1	96	186
04WA-113.22		5100	5090	4580	53.5	9.6	95	186
Spaulding	4910	4830	4510	4550	53.4	9.2	96	185
Tetonia		4460	4460	4500	55.0	8.6	84	186
06WA-458.14			4730	4490	54.7	7.9	97	185
<i>WAS 4</i>			4660	4450	58.8	9.0	78	186
2004NZ223		4600		4450	52.9	9.1	96	187
Lenetah		5590	5540	4410	54.4	8.9	97	186
Newdale				4400	52.3	9.3	91	188
CDC Copeland		4700	4600	4390	51.3	8.6	97	186
WAS 2			5080	4170	53.1	9.7	96	187
05WA-316.99		4770	4670	4160	55.2	9.5	86	186
2Ab17271				4140	51.1	9.0	89	186
07WA-658.8				4130	53.5	8.8	93	186
<i>Meresse</i>	4420	4480	4850	3990	54.8	9.4	87	186
C.V. %	10	11	11	11	3.3	3.4	7	1
LSD (.10)	230	320	410	580	1.9	0.3	7	1
Average	4870	4920	5020	4880	53.8	9.0	93	186
Highest	5270	5590	5840	5740	58.8	9.9	97	188
Lowest	4420	4460	4460	3990	51.0	7.9	78	185

### Pullman Spring Barley

1. Grain yield in the Pullman spring barley trial averaged 4880 lbs/acre and was equivalent to the 5-year average. The Pullman nursery was located about two miles south of Pullman, WA on the Spillman Agronomy Farm (Ryan Davis, farm manager). This trial was conducted in cooperation with the WSU Barley Breeding Program.
2. This nursery was seeded on 27 April, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 70# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 3990 to 5740 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 12 of the 36 entries are in this top group. AC Metcalfe was the highest yielding named entry 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 were very good with an average of 53.8 lbs/bu, and ranged from 51.0 to 58.8 lbs/bu with the high values produced by hulless cultivars. Grain plumpness averaged 93%.



**Table 128. 2011 WSU Variety Testing Barley Trial, Reardan**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011						
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.	Head Date	Lodging (%)
07WA-684.17	--			6270	55.3	11.6	94	33	185	10
Champion	--	5710	6090	6230	56.3	11.7	97	37	184	0
Baronesse	--	5510	5930	6220	55.2	11.8	96	35	185	7
Tetonia	--	5390	6050	6170	55.3	11.6	98	36	186	0
07WA-649.7	--			6130	56.2	11.7	98	37	184	8
05WA-316.K	--	5480	5740	6110	54.8	11.8	97	33	184	0
2004NZ170	--	5400		6110	55.2	11.7	98	31	186	0
Lenetah	--	5870	6100	6090	55.7	12.0	97	38	185	18
07WA-682.1	--			6080	55.0	12.1	95	39	186	62
Spaulding	--	5660	5910	6050	56.2	11.4	96	37	185	5
07WA-677.1	--			5970	56.2	11.4	96	36	185	3
07WA-601.6	--			5850	55.2	12.2	95	34	184	17
07WA-614.4	--			5820	53.6	12.4	94	36	185	0
2Ab17271	--			5780	53.5	11.1	94	38	188	2
2004NZ163	--		6000	5770	56.0	12.5	97	31	187	0
05WA-316.99	--	5200	5510	5770	54.7	12.2	97	38	184	7
CDC Meredith	--		5260	5760	53.2	11.9	95	37	186	63
2Ab04-X01084-27	--			5670	53.4	12.1	92	35	185	10
2004NZ151	--		5650	5650	56.1	12.6	97	32	187	0
06WA-458.14	--		5720	5650	54.5	12.4	93	35	185	27
Newdale	--			5650	54.8	12.5	97	38	186	0
07MB-390	--		5000	5640	54.8	12.3	94	38	184	7
Bentley	--		4680	5600	54.0	12.1	97	42	186	23
07WA-658.8	--			5540	55.2	12.4	96	36	184	0
Harrington	--	4720	4950	5520	54.3	12.7	96	36	185	27
AC Metcalfe	--	4640	4800	5520	55.1	12.6	96	39	185	43
07WA-630.19	--			5510	56.1	13.2	98	36	184	2
Radiant	--	4930	5200	5320	54.3	11.8	86	37	185	13
04WA-113.22	--	5060	5210	5320	55.0	12.8	97	35	185	0
2004NZ223	--	4610		5260	55.6	13.3	97	32	188	0
CDC Copeland	--	4770	5050	5140	53.4	12.5	95	42	186	2
Bob	--	4860	4950	5110	55.5	13.2	98	35	184	30
WAS 2	--		4900	4980	55.1	13.3	98	32	185	0
<i>Clearwater</i>	--	4450	4640	4820	61.8	13.0	91	36	185	28
<i>WAS 4</i>	--		4460	4560	62.3	12.9	90	35	185	10
<i>Meresse</i>	--	3650	3880	4020	60.9	15.4	86	33	185	2
C.V. %	--	6	5	2	0.8	3.5	2	3	0	85
LSD (.10)	--	190	200	130	0.5	0.5	2	1	0	11
Average	--	5050	5290	5630	55.6	12.3	95	36	185	12
Highest	--	5870	6100	6270	62.3	15.4	98	42	188	63
Lowest	--	3650	3880	4020	53.2	11.1	86	31	184	0

### Reardan Spring Barley

1. Grain yield in the Reardan spring barley trial averaged 5630 lbs/acre and was 580 lbs/acre higher than the 3-year average. The Reardan nursery was located about six miles west of Reardan, WA (Hal Johnson, cooperator).
2. This nursery was seeded on 21 April, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a no-till drill set on 10-inch spacing. Base applied fertilizer was 80# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 4030 to 6240 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 36 entries are in this top group. Baronesse was the highest yielding named entry and Lenetah was the highest yielding over 3 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 55.6 lbs/bu, and ranged from 53.2 to 62.3 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 12.3% and grain plumpness averaged 95%. Plant height averaged 36 inches and lodging averaged 12%, but ranged from 0 to 63%.

**Table 129. 2011 WSU Variety Testing Barley Trial, St. John**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011						
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.	Head Date	Lodging (%)
Champion	5200	5410	5300	<b>6610</b>	55.4	12.4	96	37	176	3
07WA-649.7				<b>6580</b>	54.6	12.5	94	38	176	8
07WA-682.1				<b>6400</b>	54.3	12.0	95	34	180	0
Spaulding	4850	5190	5110	<b>6290</b>	55.7	11.6	96	35	177	0
05WA-316.K		5280	5390	<b>6270</b>	53.1	12.1	97	34	179	0
2004NZ163			5120	<b>6210</b>	54.3	12.9	81	29	182	0
07WA-601.6				<b>6200</b>	53.1	11.8	97	34	181	0
05WA-316.99		5300	5210	<b>6190</b>	52.1	12.6	94	35	175	30
Lenetah		5350	5450	<b>6180</b>	54.2	12.2	97	34	179	0
Tetonia		5190	5090	<b>6090</b>	53.5	12.3	92	34	176	0
Baronesse	4900	5000	5100	<b>6020</b>	53.3	12.1	92	35	176	0
07MB-390			4830	<b>5970</b>	53.1	13.1	92	34	175	0
07WA-658.8				5890	53.2	13.2	86	36	175	32
06WA-458.14			5030	5830	54.2	12.6	92	34	177	25
04WA-113.22		5150	5110	5820	53.4	13.1	91	33	176	20
Newdale				5770	52.6	12.8	92	37	177	25
07WA-677.1				5760	53.9	12.5	86	34	176	0
2Ab17271				5730	52.9	12.4	91	35	184	17
AC Metcalfe	4310	4550	4740	5720	53.1	13.6	87	36	176	0
Bentley			4750	5680	52.2	12.3	93	40	178	0
Harrington	4530	4740	4790	5650	53.0	12.3	92	35	175	0
CDC Copeland		4770	4770	5620	52.0	13.0	91	39	180	3
2004NZ170		5270		5600	53.7	12.1	96	28	182	0
07WA-630.19				5590	54.1	13.1	95	33	176	10
CDC Meredith			4710	5530	50.6	12.3	91	34	179	17
07WA-614.4				5520	52.2	13.5	91	35	181	0
2004NZ223		5180		5470	54.7	12.7	96	31	184	0
WAS 4			4650	5450	<b>61.4</b>	13.3	82	36	174	13
07WA-684.17				5420	53.2	11.9	95	31	180	0
2004NZ151			4780	5320	54.6	14.0	78	27	180	0
2Ab04-X01084-27				5300	50.4	12.4	87	34	177	0
Clearwater		4360	4360	5230	60.1	12.5	81	35	175	0
WAS 2			4820	5200	53.8	13.7	95	34	176	33
Bob	4890	4790	4710	5050	53.9	13.3	94	35	174	13
Radiant	4780	4820	4600	4960	52.2	12.8	71	33	179	33
Meresse	3430	3740	3770	3970	59.5	13.8	76	30	177	10
C.V. %	9	9	10	10	1.4	7.8	9	9	0	252
LSD (.10)	210	280	360	640	0.8	1.0	9	3	1	22
Average	4610	4950	4880	5720	53.9	12.7	90	34	178	8
Highest	5200	5410	5450	6610	61.4	14.0	97	40	184	33
Lowest	3430	3740	3770	3970	50.4	11.6	71	27	174	0

### St. John Spring Barley

1. Grain yield in the St. John spring barley trial averaged 5720 lbs/acre and was 1110 lbs/acre higher than the 5-year average. The St. John nursery was located about three miles east of St. John, WA (Mac Mills, cooperator).
2. This nursery was seeded on 20 April, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 80# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 3970 to 6610 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 12 of the 36 entries are in this top group. *Champion* was the highest yielding entry 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 were very good with an average of 53.9 lbs/bu, and ranged from 50.4 to 61.4 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 12.7% and grain plumpness averaged 90%. Plant height averaged 34 inches and lodging averaged 8%.

**Table 130. 2011 WSU Variety Testing Barley Trial, Walla Walla**

Variety Name <i>*Hulless Italicized</i>	5 Year Average (Lbs/A)	3 Year Average (Lbs/A)	2 Year Average (Lbs/A)	2011						
				Yield (Lbs/A)	Test Wt (Lbs/Bu)	Protein (%)	Plump (%)	Plant Ht.	Head Date	Lodging (%)
07WA-658.8				5080	50.4	14.5	45	30	175	67
2004NZ151			5550	4980	49.3	14.6	40	26	177	83
WAS 2			5840	4940	50.0	15.0	54	28	167	83
07WA-684.17				4820	48.7	14.9	37	28	169	70
04WA-113.22		5610	4960	4750	50.3	14.4	51	30	169	67
07WA-649.7				4740	48.8	13.3	46	31	168	87
07WA-677.1				4680	48.0	13.9	27	29	169	90
Lenetah		5790	5170	4660	49.8	14.7	50	31	175	93
Champion	4780	5750	5000	4620	50.1	14.5	43	30	170	95
Tetonia		5880	5290	4620	49.2	14.4	36	31	174	86
07WA-614.4				4570	50.0	14.4	39	31	176	47
05WA-316.K		5420	4730	4550	48.6	15.1	37	29	173	82
07WA-630.19				4440	51.2	14.4	58	30	172	72
Harrington	4080	5250	4760	4330	49.3	14.4	50	29	176	62
Spaulding	4670	5700	4950	4310	50.5	12.8	46	29	173	87
07MB-390			4670	4270	48.8	14.6	48	30	175	70
2004NZ223		5310		4230	50.0	14.0	42	27	177	88
06WA-458.14			4870	4230	48.9	15.5	32	28	175	98
2004NZ170		5560		4180	49.6	14.9	36	28	175	72
07WA-601.6				4180	47.3	15.1	39	29	167	77
Baronesse	4600	5570	5200	4170	49.3	14.7	50	29	171	70
Radiant	4440	5340	4550	4170	48.2	14.5	28	29	175	86
2004NZ163			5080	4170	50.6	15.1	38	27	177	90
07WA-682.1				4150	50.3	14.7	43	29	177	90
CDC Copeland		5440	4680	4110	48.3	14.5	43	33	176	65
Bob	4530	5260	4650	4040	50.1	15.2	56	31	175	85
05WA-316.99		5480	4630	4010	48.1	14.0	42	31	173	90
2Ab04-X01084-27				3860	47.0	14.7	48	29	176	78
<i>Clearwater</i>		4790	4250	3840	54.3	15.5	33	32	171	77
WAS 4			4110	3710	51.5	15.4	24	29	169	99
<i>Meresse</i>	3510	4760	4530	3630	54.9	16.3	30	28	169	90
Newdale				3620	48.7	14.6	31	31	176	70
AC Metcalfe	4000	4970	4140	3610	49.7	14.9	44	30	174	96
2Ab17271				3430	50.4	14.0	48	29	179	73
Bentley			3840	3320	46.6	14.7	40	32	176	81
CDC Meredith			3950	3150	47.9	14.7	45	28	178	98
C.V. %	10	11	14	15	2.1	3.6	18	7	1	22
LSD (.10)	230	340	470	690	1.1	0.6	8	2	2	19
Average	4330	5410	4760	4230	49.6	14.6	42	29	173	81
Highest	4780	5880	5840	5080	54.9	16.3	58	33	179	99
Lowest	3510	4760	3840	3150	46.6	12.8	24	26	167	47

### Walla Walla Spring Barley

1. Grain yield in the Walla Walla spring barley trial averaged 4230 lbs/acre and was 100 lbs/acre lower than the 5-year average. The Walla Walla nursery was located about one mile east of Waitsburg, WA (Glen Smith, cooperator).
2. This nursery was seeded on 25 March, 2011 following winter wheat. Seed was placed at a 90#/acre seeding rate using a double-disc drill set on 6-inch spacing. Base applied fertilizer was 112# N/acre. Spring seeding and growing conditions were favorable.
3. Yields ranged from 3150 to 5080 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 13 of the 36 entries are in this top group. Lenetah was the highest yielding named entry 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 were adequate with an average of 49.6 lbs/bu, and ranged from 46.6 to 54.9 lbs/bu with the high values produced by hulless cultivars. Grain protein averaged 14.6% and grain plumpness averaged 42%. Plant height averaged 29 inches and lodging averaged 81%. High N fertility at this site caused early lodging, reduced grain filling, and high protein.

**Table 131.**

STRIPE RUST INFECTION TYPE (IT\*) AND PERCENT (%) ON CULTIVARS AND LINES IN THE SPRING BARLEY EXTENSION NURSERY (EXP52) AT SPILLMAN (LOC01) AND WHITLOW FARM (LOC04) NEAR PULLMAN, MT VERNON (LOC05), AND LIND (LOC07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH, 2011 UNDER NATURAL INFECTION. NOTE: STRIPE RUST WAS LOW AND NOT UNIFORM IN ALL LOCATIONS. ENTRIES WITH IT 8 SHOULD BE CONSIDERED SUCEPTIBLE NO MATTER OF SEVERITY, WHILE ENTRIES WITH IT 0 OR 2 SHOULD NOT BE NECESSARILY CONSIDERED RESISTANT.

NAME	Type	Stripe Rust								Other diseases (%)			
		Spillman Farm (Pullman)		Whitlow Farm (Pullman)		Mt. Vernon		Lind					
		LOC1		LOC4		LOC5		LOC 7					
		7/25		7/19		6/27		7/15				7/8	
		S. dough		Flowering		Stem elong.		Milk		Milk			
IT %		IT %		IT %		IT %		IT %		PM	LR		
04WA-113.22	S2	8	5	8	2	0	0	0	0	2,3	5	20	5
05WA-316.99	S2	8	30	8	30	0	0	2	5	2	2	20	
05WA-316.K	S2	8	30	8	40	0	0	0	0	2,3	5	20	
06WA-458.14	S2	5	10	2	1	0	0	0	0	2	2	20	
07MB-390	S2	2	1	2	1	0	0	0	0	2	2		
2004NZ151	S2	8	5	2	2	0	0	0	0	2	2		
2004NZ163	S2	8	2	2	2	0	0	0	0	2	2		
AC Metcalfe	S2	2	1	2	5	0	0	0	0	2	2		
Baronesse	S2	8	5	2	5	0	0	0	0	2,3	5		
Bentley	S2	8	10	8	10	8	5	3	2	2	2		
Bob	S2	2	1	2	1	0	0	0	0	2	2		
CDC Copeland	S2	5	5	8	5	0	0	0	0	2	2		
CDC Meredith	S2	3	2	8	2	0	0	0	0	2	2		
Champion	S2	8	15	8	20	8	20	8	20	2	2	30	
Clearwater	S2NLp	8	2	2	2	0	0	0	0	2	2		
Harrington	S2	2	1	2	1	0	0	0	0	2	2		
Lenetah	S2	2	1	8	1	0	0	0	0	2	2	40	
Meresse	S2NWx	8	5	8	10	0	0	0	0	2	2	30	
Radiant	S2A	8	1	8	5	0	0	0	0	2	2	30	20
Spaulding	S2	8	30	8	20	0	0	0	0	2	2	50	
STEPTOE (S Check)		8	30	8	10	0	0	8	10	2,3	5	50	
Tetonia	S2	8	20	8	10	0	0	0	0	2	2		
WAS 2	S2Wx	8	20	2	5	0	0	0	0	2	2		
WAS 4	S2NWx	2	1	2	5	0	0	0	0	2	2		
2004NZ170	S2	8	5	2	1	0	0	0	0	2	2		
2004NZ223	S2	2	1	2	1	0	0	0	0	2	2		
2Ab04-X01084-27	S2	3	2	2	5	0	0	0	0	2	2		
2Ab17271	S2	3	2	2	1	0	0	0	0	2	2		
Newdale	S2	2	1	2	5	0	0	0	0	2	2		
07WA-601.6	S2	2	1	2	2	0	0	0	0	2	2		
07WA-630.19	S2	8	10	8	1	0	0	8	20	2	2		
07WA-684.17	S2	8	2	2	1	0	0	0	0	2	2		
07WA-677.1	S2	2	1	2	1	0	0	0	0	2	2		
07WA-649.7	S2	8	30	8	5	0	0	0	0	2	2		
07WA-658.8	S2	3	2	2	1	0	0	0	0	2	2		
07WA-682.1	S2	5	5	2	2	0	0	0	0	2	2		
07WA-614.4	S2	2	2	2	1	0	0	0	0	2	2		40
STEPTOE (S Check)		8	20	8	10	0	0	8	5	2	2		50
STEPTOE (S Check)		8	20	8	5	0	0	0	0	2	2		50

\* PM = powdery mildew and LR = leaf rust.

**Table 132. 2011 Western Washington State  
Soft White Spring Wheat**

Variety	Mkt Cl	Yield	T. wt.	Protein	Head date	Ht (in.)	Rust
WA 8131	SC	96.5	55.3	11.1	4-Jul	32	1/10
IDO687	SWS	91.3	59.3	10.6	5-Jul	36	5/20
JD	SC	82.5	58.3	11.7	2-Jul	40	0/0
WA 8128	SWS	82.0	57.3	11.5	28-Jun	38	3/20
ML EM 118-2-G	SWS	79.7	57.7	11.5	8-Jul	38	0/0
WA 8124	SWS	77.8	53.8	10.2	6-Jul	38	1/10
Babe	SWS	75.4	58.1	11.3	2-Jul	36	5/40
WA 8149	SWS	68.8	54.6	9.8	3-Jul	36	5/40
IDO671	SWS	66.2	57.1	10.2	3-Jul	36	3/20
IDO686	SWS	64.7	56.3	10.8	5-Jul	38	2/10
Louise-G2	SWS	59.3	56.7	10.5	4-Jul	39	5/40
Wakanz	SWS	57.0	54.9	11.0	5-Jul	34	1/60
Alpowa	SWS	56.4	54.7	10.9	8-Jul	36	5/40
Louise	SWS	56.2	57.7	10.7	30-Jun	36	5/40
Diva	SWS	50.2	56.9	10.7	30-Jun	37	5/40
Alturas	SWS	49.7	55.7	10.4	4-Jul	34	1/10
IDO644	SWS	46.2	56.4	11.0	28-Jun	31	8/40
Zak	SWS	46.0	55.0	10.9	3-Jul	36	3/90
Whit	SWS	44.5	55.4	11.0	28-Jun	33	3/90
WA 8150	SWS	43.6	56.2	10.7	3-Jul	34	8/60
WA 8127	SWS	38.7	53.9	10.7	2-Jul	32	8/60
Eden	SC	33.1	53.5	10.1	30-Jun	31	8/60
ML Skookum	SWS	27.4	52.5	11.0	5-Jul	32	8/80
UI-Cataldo	SWS	25.0	50.7	11.3	28-Jun	32	8/10
Nick	SWS	24.1	52.2	11.1	30-Jun	32	8/90
WB-1035CL2	SWS	20.8	50.7	12.7	28-Jun	28	8/80
averages		56.3	55.4	10.9			

Planted 4/26/11.

80 lbs/ac N applied preplant.

100 lbs/ac seeding rate.

Harvested 9/17/11.

No fungicides applied. Yields generally followed severity of rust infection.

Only reported average of three replications due to high CV.



**Table 133. 2011 Western Washington State  
Hard Spring Wheat**

Variety	Mkt Cl	Yield	T. wt.	Protein	Head date	Ht (in.)	Rust
Schafer W3	HRS	128.0	50.9	11.5	19-Jul	37	0/0
Schafer BAL 6-4	HRS	127.6	53.8	10.9	19-Jul	34	0/0
Schafer BAL 4B	HRS	120.6	50.4	11.7	19-Jul	32	0/0
Schafer W4	HRS	118.9	52.7	12.0	19-Jul	35	0/0
Schafer W7	HRS	115.9	53.1	11.7	19-Jul	40	0/0
Patwin 515	HWS	82.3	58.1	14.2	4-Jul	28	0/0
Espresso	HRS	79.8	55.3	15.4	4-Jul	32	0/0
WA 8123	HWS	63.9	56.4	13.2	28-Jun	30	0/0
WA 8133	HWS	63.3	57.6	12.9	29-Jun	32	0/0
WA 8148	HRS	61.3	56.2	12.5	3-Jul	34	3/20
WA 8074	HRS	58.3	57.8	12.9	29-Jun	36	5/20
UI Winchester	HRS	56.5	58.4	12.9	30-Jun	34	1/5
Clear White 515	HWS	54.8	57.7	14.2	28-Jun	35	1/10
BR7030	HWS	54.2	57.3	11.9	3-Jul	32	1/5
Buck Pronto	HRS	47.3	57.9	13.6	28-Jun	36	3/30
ML EM357-2-1	HWS	47.3	57.7	13.1	5-Jul	36	2/20
Solano	HRS	45.9	57.4	14.0	3-Jul	29	1/40
Kelse	HRS	45.0	57.8	14.1	11-Jul	37	5/80
Lassik	HRS	41.5	57.3	11.7	5-Jul	30	0/0
Hollis	HRS	40.9	50.4	13.0	28-Jun	41	3/50
Scarlet	HRS	40.4	52.6	13.1	1-Jul	36	3/30
Macon	HWS	40.0	56.3	12.9	2-Jul	34	5/80
Cerere	HRS	39.5	51.3	11.6	19-Jul	24	8/75
Bullseye	HRS	38.1	53.8	13.0	29-Jun	27	3/20
Jefferson	HRS	36.6	56.7	12.5	2-Jul	38	3/40
Otis	HWS	35.5	56.2	12.0	3-Jul	36	3/50
10Fx Inc.1	HRS	31.9	55.0	12.9	28-Jun	28	5/80
Westbred 926	HRS	31.0	53.0	13.9	28-Jun	33	5/90
IDO702	HRS	28.8	x	12.6	3-Jul	31	8/90
Tara 2002	HRS	24.1	x	14.2	28-Jun	31	8/90
WB-Fuzion	HRS	23.7	x	13.0	28-Jun	34	9/90
Hank	HRS	12.9	x	13.5	28-Jun	31	9/90
average		57.4	54.6	12.9			

Planted 4/26/11.

80 lbs/ac N applied preplant, 30 lbs/ac N applied late boot.

100 lbs/ac seeding rate.

Harvested 9/17/11.

No fungicides applied. Yields generally followed severity of rust infection.

Only reported average of three replications due to high CV.

## 2011 Legume Trials

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### **2011 WSU Spring Pea Entry Trial Summary**

1. Pea seed yield across four locations and 30 entries in Eastern Washington averaged 2470 lbs/acre and ranged from 2110 to 2980 lbs/acre among locations across entries.
2. Yields among entries averaged across locations ranged from 1850 to 2900 lbs/acre. Banner was the highest yielding named green pea entry and Carousel the highest yielding named yellow pea entry averaged across locations. Average yield values within the 10% LSD range (130 lbs/acre) of the highest yield are shown in bold and this included 1 of the 30 entries.
3. Seed weight averaged 20.9 grams/100 seed across locations and entries, and ranged from 17.7 to 24.8 grams/100 seed among entries.

### **2011 WSU Lentil Entry Trial Summary**

1. Lentil seed yield across four locations and 24 entries in Eastern Washington averaged 1690 lbs/acre and ranged from 1040 to 2360 lbs/acre among locations across entries.
2. Yields among entries averaged across locations ranged from 1040 to 2160 lbs/acre. Pardina was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (100 lbs/acre) of the highest yield are shown in bold and this included 2 of the 24 entries.
3. Seed weight averaged 4.9 grams/100 seed across locations and entries, and ranged from 3.3 to 8.0 grams/100 seed among entries.

### **2011 WSU Chickpea Entry Trial Summary**

1. Chickpea seed yield across four locations and 11 entries in Eastern Washington averaged 2530 lbs/acre and ranged from 2220 to 2870 lbs/acre among locations across entries.
2. Yields among entries averaged across locations ranged from 1940 to 2920 lbs/acre. CDC Frontier was the highest yielding named entry averaged across locations. Average yield values within the 10% LSD range (150 lbs/acre) of the highest yield are shown in bold and this included 2 of the 11 entries.
3. Seed weight averaged 49.7 grams/100 seed across locations and entries, and ranged from 39.6 to 61.8 grams/100 seed among entries.

**Table 134. 2011 WSU SPRING PEA TRIAL SUMMARY**

VARIETY NAME	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	AVERAGE YIELD	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	AVERAGE SEED WEIGHT
<b>Green pea</b>	<b>YIELD (LBS/A)</b>					<b>100 SEED WEIGHT (g)</b>				
PS07100471	2560	3080	2830	2530	2750	20.0	21.5	21.6	21.6	21.2
Banner	2290	2950	3180	2360	2700	18.4	20.0	19.2	18.8	19.1
PS05100736	2720	2970	2850	2190	2680	20.7	20.6	19.7	21.9	20.7
PS05100840	2470	3020	2800	2390	2670	19.5	21.4	19.9	21.6	20.6
PS03101445	2270	3390	2510	2500	2670	20.0	22.3	19.9	21.7	21.0
NDP080111	2480	2740	2800	2330	2590	18.6	19.3	20.3	19.9	19.5
Pacifica	2460	3040	2750	2100	2590	21.5	23.3	19.5	22.3	21.7
PS07100470	2060	3090	2850	2290	2570	20.2	22.0	20.9	22.0	21.3
Monarch	2130	3140	2760	2050	2520	17.6	19.5	19.2	20.5	19.2
Pro 081-7116	2010	3010	2980	1780	2450	20.9	22.6	20.0	22.6	21.5
PS05ND0232	2210	3120	2160	2260	2440	21.4	23.7	22.5	23.0	22.6
Ariel	2160	2890	2350	2330	2430	17.1	19.4	16.7	19.3	18.1
Pro 091-7137	2060	3100	2420	2140	2430	20.1	22.0	18.0	22.5	20.7
Stirling	2000	2950	2490	2030	2370	18.7	21.0	17.1	19.8	19.1
PS05100632	2060	3090	2490	1760	2350	17.4	21.5	17.3	19.7	19.0
Aragorn	2070	2610	2400	2230	2330	18.6	22.0	18.2	22.0	20.2
Prodigy	1910	2690	2420	1930	2240	17.6	18.8	16.5	18.5	17.8
Pro 081-7155	1960	2730	2150	1800	2160	18.3	19.5	16.0	20.5	18.6
Cruiser	1620	2600	2150	2110	2120	17.9	21.6	17.6	21.9	19.8
Joel	1580	2360	2200	1790	1980	19.9	22.0	19.9	20.2	20.5
Columbian	1320	2650	2000	1450	1850	16.3	18.6	17.9	18.1	17.7
<b>Yellow pea</b>										
<b>PS03101822</b>	2400	3350	3490	2360	<b>2900</b>	21.4	24.7	21.3	23.7	22.8
Pro 822	2250	3460	2950	2310	2740	22.8	25.2	21.7	24.7	23.6
Carousel	2000	3270	3050	2550	2720	22.5	24.6	22.5	24.3	23.5
Universal	2230	3310	3100	2150	2700	20.0	23.2	19.6	22.0	21.2
PS06101119	2140	3050	3050	2070	2580	22.8	24.4	22.6	23.1	23.2
PRL 415	2400	2890	2420	2300	2500	19.5	22.7	21.2	22.5	21.5
PS02101137	1990	2870	2400	2230	2370	21.3	24.7	21.2	24.0	22.8
PS04100710	1630	2870	2840	1960	2330	22.1	24.9	22.6	24.6	23.5
Solstice	1880	3150	2180	1890	2280	23.9	26.8	23.3	25.4	<b>24.8</b>
C.V. (%)	11	7	14	9	10	4.2	3.0	3.8	4.2	3.8
LSD (0.10)	240	230	380	200	130	0.9	0.7	1.0	0.8	0.4
Average	2110	2980	2630	2140	2470	19.9	22.1	19.8	21.8	20.9
Highest	2720	3460	3490	2550	2900	23.9	26.8	23.3	25.4	24.8
Lowest	1320	2360	2000	1450	1850	16.3	18.6	16.0	18.1	17.7

**Table 135. 2011 WSU LENTIL TRIAL SUMMARY**

VARIETY NAME	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	AVERAGE YIELD	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	AVERAGE SEED WEIGHT
	YIELD (LBS/A)					100 SEED WEIGHT (g)				
<b>LC01602300R</b>	1470	2670	2790	1700	<b>2160</b>	5.1	5.2	5.1	5.7	5.3
<b>Pardina</b>	1520	2510	2530	1700	<b>2060</b>	3.8	3.8	4.0	4.4	4.0
Essex	1410	2390	2650	1610	2020	4.4	4.2	4.3	5.1	4.5
Morena	1730	2250	2600	1450	2000	3.9	4.0	3.9	4.2	4.0
LC01602273E	1380	2430	2670	1340	1950	3.8	3.7	3.7	3.9	3.8
LC08600113P	1130	2610	2550	1380	1920	4.7	4.9	4.9	5.3	4.9
Brewer	710	2450	2650	1590	1850	6.5	5.8	5.9	6.3	6.2
Merrit	1090	2230	2460	1480	1820	6.8	6.4	6.5	7.1	6.7
LC05600812E	1360	2300	2470	1110	1810	4.4	4.2	4.2	4.7	4.4
LC01602062T	1080	2120	2570	1430	1800	4.6	4.5	4.7	5.2	4.8
LC06601734L	820	2520	2580	1270	1800	7.3	6.8	7.2	7.8	7.3
LC08600005E	1230	2030	2460	1390	1780	4.8	5.0	5.1	5.3	5.1
LC08600114P	1140	2400	2400	1010	1740	5.3	5.2	5.3	5.4	5.3
LC7ND055R	880	2060	2440	1500	1720	3.9	3.8	3.8	4.2	3.9
LC7ND068E	1120	2140	2430	1050	1690	4.1	4.0	3.9	4.6	4.1
Crimson	1450	1570	2350	1140	1630	3.4	3.7	3.4	3.7	3.6
LC06600839L	1070	1970	2050	1340	1610	8.2	7.4	7.9	8.7	<b>8.0</b>
Eston	920	2020	2300	1020	1560	3.5	3.4	3.4	3.9	3.5
Shasta	410	2000	2130	1320	1470	5.8	5.8	5.4	6.2	5.8
Cedar	880	1820	2220	840	1440	4.6	4.3	4.4	4.9	4.5
LC07ND0176T	720	1870	1850	640	1270	3.6	3.3	3.5	3.6	3.5
LC7ND202T	670	1700	1600	790	1190	3.3	3.2	3.1	3.5	3.3
LC0660939YZ	370	1380	2040	830	1160	6.2	6.0	5.8	6.7	6.2
LC99602585RZ	440	1430	1760	520	1040	4.6	4.0	3.9	4.6	4.3
C.V.(%)	15	9	8	17	11	4.1	3.0	3.1	3.8	3.6
LSD (0.10)	160	200	210	220	100	0.2	0.2	0.2	0.2	0.1
Average	1040	2120	2360	1230	1690	4.9	4.7	4.7	5.2	4.9
Highest	1730	2670	2780	1700	2160	8.2	7.4	7.9	8.7	8.0
Lowest	370	1380	1600	520	1040	3.3	3.2	3.1	3.5	3.3

**Table 136. 2011 WSU CHICKPEA TRIAL SUMMARY**

VARIETY NAME	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	AVERAGE YIELD	DUSTY	FARMINGTON	PALOUSE	WALLA WALLA	AVERAGE SEED WEIGHT
	YIELD (LBS/A)					100 SEED WEIGHT (g)				
CDC Frontier	2600	2470	3170	3420	<b>2920</b>	39.5	38.1	39.5	43.6	40.2
OR491-11	2500	2640	3380	3020	<b>2890</b>	43.1	44.6	46.6	54.0	47.1
CA04900421C	2470	2340	2930	3010	2690	45.1	48.1	50.5	57.9	50.4
Sawyer	2270	2400	2890	2840	2600	41.6	43.2	45.4	50.4	45.2
CA04900843C	2400	2340	2620	3050	2600	58.2	59.8	62.0	67.4	<b>61.8</b>
CA0690B0250C	2090	2180	3240	2640	2540	51.2	52.6	54.3	57.3	53.8
AL007-11	2450	2910	2800	1950	2530	36.3	40.1	37.4	44.7	39.6
CA0390B007C	2160	1950	2730	3120	2490	46.9	49.8	53.4	55.7	51.5
Sierra	2030	1930	2830	2640	2360	48.1	52.8	53.0	56.8	52.7
CA0690B0409C	1940	1950	2630	2570	2270	50.4	50.2	53.0	58.7	53.1
Dwelley	1920	1290	2330	2220	1940	48.0	51.8	53.6	53.8	51.8
C.V. (%)	11	13	7	13	11	6.6	4.5	2.8	5.0	4.9
LSD (0.10)	260	320	220	400	150	3.3	2.4	1.5	3.0	1.3
Average	2260	2220	2870	2770	2530	46.2	48.3	49.9	54.6	49.7
Highest	2600	2910	3380	2410	2920	58.2	59.8	62.0	67.4	61.8
Lowest	1920	1290	2330	3420	1940	36.3	38.1	37.4	43.6	39.6

**Table 137. 2011 WSU Variety Testing Peas Trial, Dusty**

Variety Name	Type	2011				
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)	Canopy Height (In)	Erect Index
<b>PS05100736</b>	<i>Green</i>	<b>2720</b>	20.7	20	20	1.00
<b>PS07100471</b>	<i>Green</i>	<b>2560</b>	20.0	26	26	1.00
<b>NDP080111</b>	<i>Green</i>	2480	18.6	27	25	0.90
<b>PS05100840</b>	<i>Green</i>	2470	19.5	24	24	1.00
<b>Pacifica</b>	<i>Green</i>	2460	21.5	24	21	0.90
<b>PRL 415</b>	<i>Yellow</i>	2400	19.5	23	22	0.90
<b>PS03101822</b>	<i>Yellow</i>	2400	21.4	18	18	1.00
<b>Banner</b>	<i>Green</i>	2290	18.4	22	19	0.90
<b>PS03101445</b>	<i>Green</i>	2270	20.0	22	22	1.00
<b>Pro 822</b>	<i>Yellow</i>	2250	22.8	24	24	1.00
<b>Universal</b>	<i>Yellow</i>	2230	20.0	24	24	1.00
<b>PS05ND0232</b>	<i>Green</i>	2210	21.4	31	19	0.70
<b>Ariel</b>	<i>Green</i>	2160	17.1	24	24	1.00
<b>PS06101119</b>	<i>Yellow</i>	2140	22.8	22	21	1.00
<b>Monarch</b>	<i>Green</i>	2130	17.6	19	18	0.90
<b>Aragorn</b>	<i>Green</i>	2070	18.6	24	24	1.00
<b>PS07100470</b>	<i>Green</i>	2060	20.2	21	21	1.00
<b>PS05100632</b>	<i>Green</i>	2060	17.4	22	22	1.00
<b>Pro 091-7137</b>	<i>Green</i>	2060	20.1	26	26	1.00
<b>Pro 081-7116</b>	<i>Green</i>	2010	20.9	23	24	1.00
<b>Stirling</b>	<i>Green</i>	2000	18.7	17	17	1.00
<b>Carousel</b>	<i>Yellow</i>	2000	22.5	24	24	1.00
<b>PS02101137</b>	<i>Yellow</i>	1990	21.3	24	23	1.00
<b>Pro 081-7155</b>	<i>Green</i>	1960	18.3	24	24	1.00
<b>Prodigy</b>	<i>Green</i>	1910	17.6	21	21	1.00
<b>Solstice</b>	<i>Yellow</i>	1880	23.9	25	25	1.00
<b>PS04100710</b>	<i>Yellow</i>	1630	22.1	20	20	1.00
<b>Cruiser</b>	<i>Green</i>	1620	17.9	23	23	1.00
<b>Joel</b>	<i>Green</i>	1580	19.9	40	10	0.20
<b>Columbian</b>	<i>Green</i>	1320	16.3	34	7	0.20
<b>C.V. %</b>		11	4.2	9	11	9.30
<b>LSD (.10)</b>		240	0.9	2	3	0.10
<b>Average</b>		2110	19.9	24	21	0.90
<b>Highest</b>		2720	23.9	40	26	1.00
<b>Lowest</b>		1320	16.3	17	7	0.20

1. Seed yield in the Dusty spring dry pea entry trial averaged 2110 lbs/acre. The Dusty nursery was located about six miles west of Dusty, WA (Steve Camp farm).
2. This nursery was seeded on 20 April, 2011. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lbs/acre for average seed weight) using a hoe-opener drill set on 9-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1320 to 2720 lbs/ac. 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 named entry and Universal was the highest yielding named yellow entry in this trial.
4. Seed weights were good and averaged 19.9 grams/100 seed and ranged from 16.3 to 23.9 grams/100 seed. The average plant height was 24 inches and the plant erect index (0-1.0) averaged 0.90.

**Table 138. 2011 WSU Variety Testing Peas Trial, Farmington**

Variety Name	Type	2011				
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)	Canopy Height (In)	Erect Index
Pro 822	Yellow	<b>3460</b>	25.2	37	30	0.80
PS03101445	Green	<b>3390</b>	22.3	31	21	0.70
PS03101822	Yellow	<b>3350</b>	24.7	30	25	0.90
Universal	Yellow	<b>3310</b>	23.2	36	35	1.00
Carousel	Yellow	<b>3270</b>	24.6	37	32	0.90
Solstice	Yellow	3150	<b>26.8</b>	32	31	1.00
Monarch	Green	3140	19.5	26	23	0.90
PS05ND0232	Green	3120	23.7	37	27	0.70
Pro 091-7137	Green	3100	22.0	31	27	0.90
PS05100632	Green	3090	21.5	35	35	1.00
PS07100470	Green	3090	22.0	35	26	0.70
PS07100471	Green	3080	21.5	33	24	0.70
PS06101119	Yellow	3050	24.4	31	19	0.60
Pacifica	Green	3040	23.3	37	18	0.50
PS05100840	Green	3020	21.4	30	28	0.90
Pro 081-7116	Green	3010	22.6	32	30	0.90
PS05100736	Green	2970	20.6	31	18	0.60
Banner	Green	2950	20.0	31	25	0.80
Stirling	Green	2950	21.0	29	14	0.50
Ariel	Green	2890	19.4	37	29	0.80
PRL 415	Yellow	2890	22.7	37	25	0.70
PS04100710	Yellow	2870	24.9	32	17	0.60
PS02101137	Yellow	2870	24.7	34	29	0.90
NDP080111	Green	2740	19.3	37	26	0.70
Pro 081-7155	Green	2730	19.5	33	32	0.90
Prodigy	Green	2690	18.8	29	17	0.60
Columbian	Green	2650	18.6	42	13	0.30
Aragorn	Green	2610	22.0	32	28	0.90
Cruiser	Green	2600	21.6	34	32	0.90
Joel	Green	2360	22.0	47	14	0.30
C.V. %		7	3.0	11	20	21.60
LSD (.10)		290	0.7	4	5	0.20
Average		2980	22.1	34	25	0.80
Highest		3460	26.8	47	35	1.00
Lowest		2360	18.6	26	13	0.30

1. Seed yield in the Farmington spring pea entry trial averaged 2980 lbs/acre. The Farmington nursery was located about one mile south of Farmington, WA (Bruce Nelson, cooperator).
  2. This nursery was seeded on 25 May, 2011. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lbs/acre for average seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
  3. Yields ranged from 2360 to 3460 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 24 entries are in this group. Monarch was the highest yielding green named entry and Universal was the highest yielding named yellow in this trial.
- Seed weights were good and averaged 22.1 grams/100 seed and ranged from 18.6 to 26.8 grams/100 seed. The average plant height was 34 inches and the plant erect index (0-1.0) averaged 0.80



**Table 139. 2011 WSU Variety Testing Peas Trial, Palouse**

Variety Name	Type	2011				
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)	Canopy Height (In)	Erect Index
PS03101822	Yellow	<b>3490</b>	23.7	21	22	1.00
Banner	Green	<b>3180</b>	18.8	27	20	0.80
Universal	Yellow	3100	22.0	25	26	1.00
PS06101119	Yellow	3050	23.1	23	17	0.80
Carousel	Yellow	3050	24.3	28	28	1.00
Pro 081-7116	Green	2980	22.6	25	25	1.00
Pro 822	Yellow	2950	<b>24.7</b>	25	23	0.90
PS07100470	Green	2850	22.0	24	23	1.00
PS05100736	Green	2850	21.9	23	22	1.00
PS04100710	Yellow	2840	<b>24.6</b>	21	20	1.00
PS07100471	Green	2830	21.6	27	26	1.00
NDP080111	Green	2800	19.9	32	33	1.00
PS05100840	Green	2800	21.6	26	25	1.00
Monarch	Green	2760	20.5	18	17	1.00
Pacifica	Green	2750	22.3	25	23	0.90
PS03101445	Green	2510	21.7	21	23	1.00
Stirling	Green	2490	19.8	21	21	1.00
PS05100632	Green	2490	19.7	24	23	1.00
Pro 091-7137	Green	2420	22.5	25	24	1.00
PRL 415	Yellow	2420	22.5	28	20	0.70
Prodigy	Green	2420	18.5	23	23	1.00
PS02101137	Yellow	2400	24.0	25	26	1.00
Aragorn	Green	2400	22.0	24	24	1.00
Ariel	Green	2350	19.3	24	24	1.00
Joel	Green	2200	20.2	32	7	0.30
Solstice	Yellow	2180	<b>25.4</b>	25	24	1.00
PS05ND0232	Green	2160	23.0	26	20	0.80
Cruiser	Green	2150	21.9	25	24	1.00
Pro 081-7155	Green	2150	20.5	25	25	1.00
Columbian	Green	2000	18.1	31	8	0.30
C.V. %		14	4.2	11	16	13.50
LSD (.10)		490	1.0	3	4	0.10
Average		2630	21.8	25	22	0.90
Highest		3490	25.4	32	33	1.00
Lowest		1990	18.1	18	8	0.20

1. Seed yield in the Palouse spring dry pea entry trial averaged 2630 lbs/acre. The Palouse nursery was located about five miles south of Palouse, WA (Chris Fleener, cooperator).
2. This nursery was seeded on 11 May, 2011. Seed was placed at an 8 seed/sq.ft. rate (approximately 150 lbs/acre for average seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1990 to 3490 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 30 entries are in this group. Banner was the highest yielding green named entry and Universal was the highest yielding named yellow entry in this trial.
4. Seed weights were good and averaged 21.8 grams/100 seed and ranged from 18.1 to 25.4 grams/100 seed. The average plant height was 25 inches and the plant erect index (0-1.0) averaged 0.90.

**Table 140. 2011 WSU Variety Testing Peas Trial, Walla Walla**

Variety Name	Type	2011				
		Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)	Canopy Height (In)	Erect Index
Carousel	Yellow	<b>2550</b>	<b>22.5</b>	26	26	1.00
PS07100471	Green	<b>2530</b>	21.6	25	23	0.90
PS03101445	Green	<b>2500</b>	19.9	23	21	0.90
PS05100840	Green	<b>2390</b>	19.9	22	22	1.00
Banner	Green	<b>2360</b>	19.2	26	24	0.90
PS03101822	Yellow	<b>2360</b>	21.3	19	19	1.00
NDP080111	Green	2330	20.3	28	24	0.90
Ariel	Green	2330	16.7	23	24	1.00
Pro 822	Yellow	2310	21.7	24	24	1.00
PRL 415	Yellow	2300	21.2	25	22	0.90
PS07100470	Green	2290	20.9	21	21	1.00
PS05ND0232	Green	2260	<b>22.5</b>	29	18	0.70
Aragorn	Green	2230	18.2	24	19	0.80
PS02101137	Yellow	2230	21.2	24	23	1.00
PS05100736	Green	2190	19.7	18	19	1.00
Universal	Yellow	2150	19.6	22	22	1.00
Pro 091-7137	Green	2140	18.0	23	22	1.00
Cruiser	Green	2110	17.6	22	21	1.00
Pacifica	Green	2100	19.5	23	18	0.80
PS06101119	Yellow	2070	<b>22.6</b>	21	16	0.80
Monarch	Green	2050	19.2	19	16	0.80
Stirling	Green	2030	17.1	17	17	1.00
PS04100710	Yellow	1960	<b>22.6</b>	20	12	0.60
Prodigy	Green	1930	16.5	26	12	0.50
Solstice	Yellow	1890	<b>23.3</b>	21	22	1.00
Pro 081-7155	Green	1800	16.0	25	25	1.00
Joel	Green	1790	19.9	26	9	0.40
Pro 081-7116	Green	1780	20.0	22	20	0.90
PS05100632	Green	1760	17.3	21	21	1.00
Columbian	Green	1450	17.9	26	8	0.30
C.V. %		9	3.8	10	14	13.10
LSD (.10)		200	0.8	3	3	0.10
Average		2140	19.8	23	20	0.90
Highest		2550	23.3	29	26	1.00
Lowest		1450	16.0	17	8	0.30

1. Seed yield in the Walla Walla spring dry pea entry trial averaged 2140 lbs/acre. The Walla Walla nursery was located about one mile southeast of Walla Walla, WA (Dwelley Jones, cooperator).
2. This nursery was seeded on 19 April, 2011. Seed was placed at an 8 seed/sq. ft. rate (approximately 150 lbs/acre for average seed weight) using a double-disc plot drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1450 to 2550 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 30 entries are in this group. Banner was the highest yielding named green entry and Carousel was the highest yielding yellow entry and in this trial.
4. Seed weights were good and averaged 19.8 grams/100 seed and ranged from 16.0 to 23.3 grams/100 seed. The average plant height was 23 inches and the plant erect index (0-1.0) averaged 0.90.

**Table 141. 2011 WSU Variety Testing Lentil Trial, Dusty**

Variety Name	Type	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
Morena	<i>Pardina</i>	<b>1730</b>	3.9	12
Pardina	<i>Pardina</i>	1520	3.8	11
LC01602300R	<i>Laird</i>	1470	5.1	13
Crimson	<i>Turkish Red</i>	1450	3.4	11
Essex	<i>Eston</i>	1410	4.4	12
LC01602273E	<i>Eston</i>	1380	3.8	12
LC05600812E	<i>Eston</i>	1360	4.4	12
LC08600005E	<i>Eston</i>	1230	4.8	14
LC08600114P	<i>Pardina</i>	1140	5.3	12
LC08600113P	<i>Pardina</i>	1130	4.7	12
LC7ND068E	<i>Eston</i>	1120	4.1	11
Merrit	<i>Laird</i>	1100	6.8	11
LC01602062T	<i>Turkish Red</i>	1090	4.6	13
LC06600839L	<i>Laird</i>	1070	<b>8.2</b>	12
Eston	<i>Eston</i>	920	3.5	12
LC7ND055R	<i>Laird</i>	880	3.9	13
Cedar	<i>0 tannin</i>	880	4.6	13
LC06601734L	<i>Laird</i>	820	<b>7.3</b>	13
LC07ND0176T	<i>Turkish Red</i>	720	3.6	12
Brewer	<i>Laird</i>	710	6.5	12
LC7ND202T	<i>Turkish Red</i>	670	3.3	11
LC99602585RZ	<i>0 tannin</i>	440	4.6	11
Shasta	<i>0 tannin</i>	410	5.8	13
LC0660939YZ	<i>0 tannin</i>	370	6.2	12
C.V. %		15	4.1	9
LSD (.10)		210	0.2	1
Average		1040	4.9	12
Highest		1730	8.2	14
Lowest		370	3.3	11

1. Seed yield in the Dusty spring lentil entry trial averaged 1040 lbs/acre. The Dusty nursery was located about six miles west of Dusty, WA (Steve Camp farm).
2. This nursery was seeded on 20 April, 2011. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lbs/acre for average 'Laird' seed weight) using a hoe-opener drill set on 9-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 370 to 1730 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and only 1 of the 24 entries are in this group. Morena, a newly released Spanish-brown type, was the highest yielding named entry in this trial.
4. Seed weights were good and averaged 4.9 grams/100 seed and ranged from 3.3 to 8.2 grams/100 seed. The average plant height was 12 inches.

**Table 142. 2011 WSU Variety Testing Lentil Trial, Farmington**

Variety Name	Type	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
LC01602300R	<i>Laird</i>	<b>2670</b>	5.2	15
LC08600113P	<i>Pardina</i>	<b>2610</b>	4.9	13
LC06601734L	<i>Laird</i>	<b>2520</b>	6.8	13
<b>Pardina</b>	<i>Pardina</i>	<b>2510</b>	3.8	12
Brewer	<i>Laird</i>	2450	5.8	13
LC01602273E	<i>Eston</i>	2430	3.7	15
LC08600114P	<i>Pardina</i>	2400	5.2	13
Essex	<i>Eston</i>	2390	4.2	13
LC05600812E	<i>Eston</i>	2300	4.2	14
Morena	<i>Pardina</i>	2250	4.0	14
Merrit	<i>Laird</i>	2230	6.4	13
LC7ND068E	<i>Eston</i>	2140	4.0	14
LC01602062T	<i>Turkish Red</i>	2120	4.5	16
LC7ND055R	<i>Laird</i>	2060	3.8	15
LC08600005E	<i>Eston</i>	2030	5.0	16
Eston	<i>Eston</i>	2020	3.4	13
Shasta	<i>0 tannin</i>	2000	5.8	15
LC06600839L	<i>Laird</i>	1970	<b>7.4</b>	14
LC07ND0176T	<i>Turkish Red</i>	1870	3.3	14
Cedar	<i>0 tannin</i>	1820	4.3	14
LC7ND202T	<i>Turkish Red</i>	1700	3.2	12
Crimson	<i>Turkish Red</i>	1570	3.7	12
LC99602585RZ	<i>0 tannin</i>	1430	4.0	14
LC0660939YZ	<i>0 tannin</i>	1380	6.0	15
C.V. %		9	3.0	10
LSD (.10)		260	0.2	1
Average		2120	4.7	14
Highest		2670	7.4	16
Lowest		1380	3.2	12

1. Seed yield in the Farmington spring lentil entry trial averaged 2120 lbs/acre. The Farmington nursery was located about one mile south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 25 May, 2011. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lbs/acre for average 'Laird' seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1380 to 2670 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 24 entries are in this group. Pardina was the highest yielding named entry in this trial.
4. Seed weights were good and averaged 4.7 grams/100 seed and ranged from 3.2 to 7.4 grams/100 seed. The average plant height was 14 inches.

**Table 143. 2011 WSU Variety Testing Lentil Trial, Palouse**

Variety Name	Type	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
LC01602300R	<i>Laird</i>	<b>2790</b>	5.1	15
LC01602273E	<i>Eston</i>	<b>2670</b>	3.7	13
Brewer	<i>Laird</i>	<b>2650</b>	5.9	15
Essex	<i>Eston</i>	<b>2650</b>	4.3	14
Morena	<i>Pardina</i>	<b>2600</b>	3.9	15
LC06601734L	<i>Laird</i>	<b>2580</b>	7.2	17
LC01602062T	<i>Turkish Red</i>	2570	4.7	14
LC08600113P	<i>Pardina</i>	2550	4.9	13
Pardina	<i>Pardina</i>	2530	4.0	13
LC05600812E	<i>Eston</i>	2470	4.2	12
LC08600005E	<i>Eston</i>	2460	5.1	16
Merrit	<i>Laird</i>	2460	6.5	14
LC7ND055R	<i>Laird</i>	2440	3.8	16
LC7ND068E	<i>Eston</i>	2430	3.9	15
LC08600114P	<i>Pardina</i>	2400	5.3	12
Crimson	<i>Turkish Red</i>	2350	3.4	12
Eston	<i>Eston</i>	2300	3.4	12
Cedar	<i>0 tannin</i>	2220	4.4	15
Shasta	<i>0 tannin</i>	2130	5.4	14
LC06600839L	<i>Laird</i>	2050	<b>7.9</b>	16
LC0660939YZ	<i>0 tannin</i>	2040	5.8	16
LC07ND0176T	<i>Turkish Red</i>	1850	3.5	14
LC99602585RZ	<i>0 tannin</i>	1760	3.9	13
LC7ND202T	<i>Turkish Red</i>	1600	3.1	11
C.V. %		8	3.1	7
LSD (.10)		210	0.2	1
Average		2360	4.7	14
Highest		2780	7.9	17
Lowest		1600	3.1	11

1. Seed yield in the Palouse spring lentil entry trial averaged 2360 lbs/acre. The Palouse nursery was located about five miles south of Palouse, WA (Chris Fleener, cooperator).
2. This nursery was seeded on 11 May, 2011. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lbs/acre for average 'Laird' seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1600 to 2780 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 6 of the 24 entries are in this group. Brewer was the highest yielding named entry in this trial.
4. Seed weights were good and averaged 4.7 grams/100 seed and ranged from 3.1 to 7.9 grams/100 seed. The average plant height was 14 inches.

**Table 144. 2011 WSU Variety Testing Lentil Trial, Walla Walla**

Variety Name	Type	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
LC01602300R	<i>Laird</i>	<b>1700</b>	5.7	12
Pardina	<i>Pardina</i>	<b>1700</b>	4.4	11
Essex	<i>Eston</i>	<b>1610</b>	5.1	13
Brewer	<i>Laird</i>	<b>1590</b>	6.3	11
LC7ND055R	<i>Laird</i>	<b>1500</b>	4.2	12
Merrit	<i>Laird</i>	1480	7.1	12
Morena	<i>Pardina</i>	1450	4.2	13
LC01602062T	<i>Turkish Red</i>	1430	5.2	12
LC08600005E	<i>Eston</i>	1390	5.3	14
LC08600113P	<i>Pardina</i>	1380	5.3	12
LC01602273E	<i>Eston</i>	1340	3.9	12
LC06600839L	<i>Laird</i>	1340	<b>8.7</b>	11
Shasta	<i>0 tannin</i>	1320	6.2	14
LC06601734L	<i>Laird</i>	1270	7.8	12
Crimson	<i>Turkish Red</i>	1140	3.7	11
LC05600812E	<i>Eston</i>	1110	4.7	11
LC7ND068E	<i>Eston</i>	1050	4.6	12
Eston	<i>Eston</i>	1020	3.9	12
LC08600114P	<i>Pardina</i>	1010	5.4	11
Cedar	<i>0 tannin</i>	840	4.9	12
LC0660939YZ	<i>0 tannin</i>	830	6.7	12
LC7ND202T	<i>Turkish Red</i>	790	3.5	10
LC07ND0176T	<i>Turkish Red</i>	640	3.6	11
LC99602585RZ	<i>0 tannin</i>	520	4.6	13
C.V. %		17	3.8	9
LSD (.10)		290	0.2	1
Average		1230	5.2	12
Highest		1700	8.7	14
Lowest		520	3.5	10

1. Seed yield in the Walla Walla spring lentil entry trial averaged 1230 lbs/acre. The Walla Walla nursery was located about one mile southeast of Walla Walla, WA (Dwelley Jones, cooperator).
2. This nursery was seeded on 19 April, 2011. Seed was placed at a 9 seed/sq.ft. rate (approximately 60 lbs/acre for average 'Laird' seed weight) using a double-disc plot drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 520 to 1700 lbs/ac. 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 named entry in this trial. There was some seed shattering observed prior to harvest.
4. Seed weights were good and averaged 5.2 grams/100 seed and ranged widely due to class seed size differences from 3.5 to 8.7 grams/100 seed. The average plant height was 12 inches.

**Table 145. 2011 WSU Variety Testing Chickpeas Trial, Dusty**

Variety Name	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
CDC Frontier	<b>2610</b>	39.5	17
OR491-11	<b>2500</b>	43.1	16
CA04900421C	<b>2470</b>	45.1	16
AL007-11	<b>2450</b>	36.3	14
CA04900843C	<b>2400</b>	<b>58.2</b>	18
Sawyer	2270	41.6	19
CA0390B007C	2160	46.9	17
CA0690B0250C	2090	51.2	20
Sierra	2030	48.1	18
CA0690B0409C	1940	50.4	17
Dwelley	1920	48.0	17
C.V. %	11	6.6	6
LSD (.10)	260	3.3	1
Average	2260	46.2	17
Highest	2600	58.2	20
Lowest	1920	36.3	14

1. Seed yield in the Dusty Chickpea entry trial averaged 2260 lbs/acre. The Dusty nursery was located about six miles west of Dusty, WA (Steve Camp farm).
  2. This nursery was seeded on 20 April, 2011. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lbs/acre for average seed weight) using a hoe-opener drill set on 9-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
  3. Yields ranged from 1920 to 2600 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 5 of the 11 entries are in this group. CDC Frontier was the highest yielding named entry in this trial.
- Seed weights were good and averaged 46.2 grams/100 seed and ranged from 36.3 to 58.2 grams/100 seed. The average plant height was 17 inches

**Table 146. 2011 WSU Variety Testing Chickpeas Trial, Farmington**

Variety Name	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
AL007-11	<b>2910</b>	40.1	19
OR491-11	<b>2640</b>	44.6	21
CDC Frontier	2470	38.1	21
Sawyer	2400	43.2	23
CA04900843C	2340	<b>59.8</b>	21
CA04900421C	2340	48.1	21
CA0690B0250C	2180	52.6	24
CA0390B007C	1950	49.8	23
CA0690B0409C	1950	50.2	23
Sierra	1930	52.8	22
Dwelley	1290	51.8	23
C.V. %	13	4.5	7
LSD (.10)	320	2.4	2
Average	2220	48.3	22
Highest	2910	59.8	24
Lowest	1290	38.1	19

1. Seed yield in the Farmington chickpea entry trial averaged 2220 lbs/acre. The Farmington nursery was located about one mile south of Farmington, WA (Bruce Nelson, cooperator).
2. This nursery was seeded on 25 May, 2011. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lbs/acre for average seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1290 to 2910 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 2 of the 11 entries are in this group. CDC Frontier was the highest yielding named entry in this trial.
4. Seed weights were good and averaged 48.3 grams/100 seed and ranged from 38.1 to 59.8 grams/100 seed. The average plant height was 22 inches.



**Table 147. 2011 WSU Variety Testing Chickpeas Trial, Palouse**

Variety Name	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
OR491-11	3380	46.6	19
CA0690B0250C	3240	54.3	23
CDC Frontier	3170	39.5	19
CA04900421C	2930	50.5	17
Sawyer	2890	45.4	17
Sierra	2830	53.0	18
AL007-11	2800	37.4	15
CA0390B007C	2730	53.4	20
CA0690B0409C	2630	53.0	19
CA04900843C	2620	<b>62.0</b>	18
Dwelley	2330	53.6	20
C.V. %	7	2.8	7
LSD (.10)	220	1.5	1
Average	2870	49.9	19
Highest	3380	62.0	23
Lowest	2330	37.4	15

1. Seed yield in the Palouse chickpea entry trial averaged 2870 lbs/acre. The Palouse nursery was located about five miles south of Palouse, WA (Chris Fleener, cooperator).
2. This nursery was seeded on 11 May, 2011. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lbs/acre for average seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 2330 to 3380 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 3 of the 11 entries are in this group. CDC Frontier was the highest yielding named entry in this trial.
4. Seed weights were good and averaged 49.9 grams/100 seed and ranged from 37.4 to 62.0 grams/100 seed. The average plant height was 19 inches.

**Table 148. 2011 WSU Variety Testing Chickpeas Trial, Walla Walla**

Variety Name	Yield (Lbs/A)	100 Seed Weight (Grams)	Plant Height (In)
CDC Frontier	<b>3420</b>	43.6	19
CA0390B007C	<b>3120</b>	55.7	20
CA04900843C	<b>3050</b>	<b>67.4</b>	19
OR491-11	<b>3020</b>	54.0	19
CA04900421C	3010	57.9	17
Sawyer	2840	50.4	18
Sierra	2640	56.8	19
CA0690B0250C	2640	57.3	25
CA0690B0409C	2570	58.7	20
Dwelley	2220	53.8	19
AL007-11	1950	44.7	16
C.V. %	13	5.0	8
LSD (.10)	400	3.0	2
Average	2770	54.6	19
Highest	3420	67.4	25
Lowest	1950	43.6	16

1. Seed yield in the Walla Walla chickpea entry trial averaged 2770 lbs/acre. The Walla Walla nursery was located about one mile southeast of Walla Walla, WA (Dwelley Jones, cooperator).
2. This nursery was seeded on 19 April, 2011. Seed was placed at a 5 seed/sq.ft. rate (approximately 240 lbs/acre for average seed weight) using a double-disc drill set on 6-inch spacing. Although seeding was later than normal, plants established and grew well due to favorable weather. Weeds, insects, and diseases were not a factor in this trial.
3. Yields ranged from 1950 to 3420 lbs/ac. Yield values within the LSD range of the highest yield are shown in bold and 4 of the 11 entries are in this group. CDC Frontier was the highest yielding named entry in this trial.
4. Seed weights were good and averaged 54.6 grams/100 seed and ranged from 43.6 to 67.4 grams/100 seed. The average plant height was 19 inches.