



2013 Small Grain and Grain Legume Report

Northern Idaho Small Grain and Grain Legume Research and Extension Program

Doug Finkelburg and Kurtis Schroeder

Cover photo: Participants in the 2013 Tammany Area Crop Tour assess variety trials southeast of Lewiston. Photo by Bill Loftus

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Research and Extension Program*

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Bert Henriksen – Lewiston
Russ Zenner – Genesee
Doug Bruce – Tensed
Tim Dillin – Bonners Ferry
Greg Branson - Nezperce

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Introduction

This report summarizes the performance of winter wheat, spring wheat, winter barley, spring barley, spring pea, lentil and chickpea cultivars tested in extension variety trials conducted in northern Idaho during the 2012-2013 crop season. The variety trials were located in cooperators' fields at 8 test sites in Lewis, Nez Perce, Latah, Benewah and Boundary counties and on the UI Palouse Research Extension and Education Center's Parker and Kambitsch Farms.

Plant breeding and extension testing programs strive to increase yield potential through enhanced disease and insect resistance, winter hardiness, straw strength and other agronomic factors. In addition, varieties are developed for improved end-use quality and new markets. A more detailed description of variety development, cooperative extension testing and evaluation, and seed production programs is given in the University of Idaho publication CIS 976 titled, "Small Grain Variety Development and Adaptation in Idaho". Additional variety performance data for northern Idaho and the rest of the state can be viewed at the website <http://www.extension.uidaho.edu/cereals>. The northern Idaho Extension variety-testing program evaluates the relative performance of cereal and legume varieties grown in various northern Idaho environments under a range of commercial production conditions. Breeding lines that have shown promise through regional, public, and private testing programs are evaluated along with leading commercially released varieties.

Increases in field crop yield are the result of a combination of improved agronomic practices and advances in variety development. Trials reported in this publication help producers compare new cultivars with widely grown cultivars using field production practices common for their area. The information provided represents crop performance results from specific locations, production practices, and environmental conditions. 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 varieties not included in the trials.

Cereal Test Procedures

Thirteen winter cereal trials were planted in northern Idaho during the fall of 2012 and eight spring cereal trials were planted in the spring of 2013. For each crop, the seeding rate for all entries was a common number of seeds planted per square foot (spsf). These rates were determined by weighing 300 seeds of each cereal cultivar. Winter wheat and spring barley were planted at 24 spsf, and spring wheat at 28 spsf. Winter wheat, spring wheat, and barley seed were treated with Dividend Extreme at 1 ounce/100 pounds. Plots in conventional tillage systems were planted 15 feet long on 5-foot centers with 7 rows, 7-inches apart. Direct-seeded trials had five paired rows with 3-inch spacing and 10-inch from center to center of pairs. Typical cereal seeding depth varied from 1 to 1.5 inches depending on soil texture and moisture conditions. All trials were replicated three or four times in a randomized complete block design. In some locations, a lattice analysis was used when trial design allowed. After plants were well established, the beds were cut back to a plot size of approximately 11.5 feet in length with an application of glyphosate using a tractor-mounted, shielded sprayer between plots. All trials were established and maintained primarily under "grower management" conditions. Fertilizers and pesticides used in the trials are listed in Table 1 for the sites where the information was provided. Planting and harvesting operations by University of Idaho personnel were timed to approximately coincide with the cooperator's operations.

Each small grain entry at each location was evaluated for grain yield, test weight, plant height, and lodging. Plot length was measured to determine each individual plot area. Cereal yields were reported in bushels per acre, using the standard 60 pounds per bushel conversion for wheat and 48 pounds per bushel for barley. Protein and kernel hardness were determined from a composite sample of three or four replications from each site for both winter and spring wheat. Wheat whole grain protein at 12% moisture was measured at the University of Idaho Wheat Quality Laboratory at Aberdeen using Near Infrared Spectrometry (NIRS) technology. Kernel hardness was also determined by NIRS. Values under 35 indicate soft wheat, and values above 35 indicate hard wheat. Cereal test weight is reported in pounds per standard bushel. Cereal plant height is the length of the plant from the soil surface to the tip of the head (awns excluded).

Lodging was determined for all cereals. Area affected was scored from 0% to 100%, with 0% equal to no lodging and 100% being completely lodged. Percentage grain plumps and thins were measured for barley. Plumpness is the

percent of the sample that stayed on top of a 6/64-inch slotted screen after shaking. Thin percentage is the portion of the sample that went through a 5.5/64-inch slotted screen.

Legume Test Procedures

In the spring of 2013, spring pea and lentil trials were seeded near Craigmont, Genesee, and Moscow. A chickpea trial was conducted at the University of Idaho's Kambitsch farm northwest of Genesee. For each legume cultivar, 300 seeds were weighed and seeding rates calculated to give a planting density of pea at 8 spsf, lentil at 9 spsf, and chickpea at 6 spsf. Spring pea and lentil seed were treated with an Apron, Cruiser, and Maxim mix at 2 ounces/100 pounds; and chickpea seed was treated with Garb mix (Apron, Cruiser, Maxim and LSP) at 2.5 ounces/100 pounds. Legume plots were established in beds similar to the cereal trials; they were planted on 20-ft beds that were cut back to 15-ft plots. Planting depths used were between 1 and 2 inches for lentils and between 1.5 and 2.5 inches for pea and chickpea. Sites were hand weeded to supplement chemical control. Legumes were evaluated for seed yield, plant height, and 100-seed weight. Seed yields were expressed as pounds per acre. Lentil or chickpea plant heights or pea vine lengths were measured from soil surface to end of growing point on the main tiller. Pea canopy heights were measured from the soil surface to the average tall point in the canopy approximately three weeks prior to harvest.

Statistical Interpretation

Crop class averages are shown within the body of the data tables and overall trial average is shown at the bottom of the table. The least significant difference (LSD) and the coefficient of variation (CV) are listed. The LSD is given at the 5 percent error level and is an aid in comparing varieties. If the measured values of any two varieties within a column differ by the LSD value or greater, they may be considered different with a confidence level of 95%. If the measured values are less than the LSD value, the differences may be due to random error rather than real differences. If no significant statistical differences were found among cultivars, NS is shown for the LSD. Where data represent cultivar means across locations, an approximation of combined LSD was calculated. CV is also included in the tables. This is given as a general measurement of the precision of each experiment. Lower CV percentage values indicate less experimental variation and greater precision. CV values were not averaged across trials or years. Wheat protein and hardness data are from composited samples, therefore no LSD or CV values are presented.

Cultivar choice should take into consideration as much performance data as possible with comparisons across years and locations. In addition to yield, end use quality, disease and insect resistance, lodging tendency, maturity, plant height, winter hardiness, test weight, and any observations from grower experience can be used in deciding on which cultivars to plant. The Idaho Wheat Commission website also provides a list of recommended varieties: www.idahowheat.org under "Preferred Varieties".

Growing Conditions and Factors Affecting Trials

Fall cereal trials were planted from September through October. Winter wheat stands were well established at all locations. Winter temperatures across northern Idaho were mild, and winter crops came through well. Spring was dry and warm, and moisture stress was widespread by the last week of May. Precipitation in late May or early June provided enough moisture to finish off most crops well. The rest of the summer was dry and warm with the exception of Bonners Ferry which did not experience drought conditions. September rains caused some reports of head sprout and low falling numbers. Stripe-rust was observed in winter wheat but prolonged warm and dry conditions were not favorable for promoting widespread infection. The average winter wheat yield over all locations in 2012-2013 was 9 bushels/acre higher than the average yield over the previous three crop years.

Spring trials were seeded between March 29th and May 5th (see Table 1). Dry and warm conditions allowed for an atypically early planting season. Spring wheat yields in 2013 were 5 bushels/acre higher than the previous 3-year average. Spring barley yields were 15 bushels/acre lower than the previous 3-year average. Specific management practices for individual trials are listed in Table 1.

Trial Locations, Management and Varieties Tested

Table 1. 2012-2013 Northern Idaho Extension variety trial site management information.

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer ¹ N-P-K-S(lb/A)	----Chemical---- Name(s)	Rates(s)
<u>Winter Cereals - Soft White Winter Wheat</u>										
Lewis	Nezperce	22"	3200'	Direct Seed	10/18/12	8/15/13	W. Wheat	120-30-0-20	Powerflex	
Nez Perce	Lewiston Tammany	14"	1660'	Conventional Tillage	10/18/12	7/19/13	S. Fallow	100-10-0-10 (f)	Powerflex Brox-M Orion Tilt	3.0 oz/A 6 oz/A 17 oz/A 4 oz/A
Nez Perce	Genesee Rim area	20"	2700'	Conventional Tillage	10/5/12	7/25/13	W.Wheat	155-20-20-10 (f) 40-0-0-0 (s)	Truslate Pro Propocon Powerflex	1 1/2 P/A 4 oz/A 2 oz/A
Latah	Moscow Parker Farm	24"	2630'	Direct Seed	10/17/12	8/13/13	S. Pea	120-38-0-25 (f) 42- 0-0-10 (s)	Roundup RT Huskey Affinity Broad Axial-XL Quilt	20 oz/A Pre 12 oz/A 0.8 oz/A 16.4 oz/A 7 oz/A
Benewah	Tensed	27"	2600'	Conventional Tillage	10/2/12	8/28/13	Lentils	120-38-0-25 (f) 30-0-0-5 (s)	Bronate Ospray Tilt Peak Bumper	12 oz/A 4.75 oz/A 4 oz/A (once) 0.3 oz/A 4 oz/A
Boundary	B. Ferry	25"	1750'	Direct Seed	10/3/12	8/29/13	S. Canola	120-38-0-25(f) 43-18-18-6(s)	Powerflex Headline Tilt	3.5 oz/A 9 oz/A 4oz/a
<u>Winter Cereals - Hard Winter Wheat</u>										
Lewis	Nezperce	22"	3200'	Direct Seed	10/18/12	8/15/13	W. Wheat	150-30-0-20	Powerflex	

1- (f)-fall applied, (s)-spring applied

2- BMP - Recommended best management practice rates of chemical application.

Table 1 (continued). 2012-2013 Northern Idaho Extension variety trial site management information.

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer ¹ N-P-K-S(lb/A)	----Chemical---- Name(s)	Rates(s)
Winter Cereals - Hard Winter Wheat										
Nez Perce	Lewiston Tammany	14"	1660'	Conventional Tillage	10/18/12	7/19/13	S. Fallow	100-10-0-10 (f) 30-10-0-7 (s)	Powerflex Brox-M Orion Tilt	3.0 oz/A 6 oz/A 17 oz/A 4 oz/A
Nez Perce	Genesee Rim area	20"	2700'	Conventional Tillage	10/5/12	7/25/13	W. Wheat	155-20-20-10 (f) 40-0-0-0 (s)	Truslate Pro Propocon Powerflex	1 1/2 P/A 4 oz/A 2 oz/A
Latah	Moscow Parker Farm	24"	2630'	Conventional Tillage	10/17/12	8/8/13	S. Pea	173-42-0-40	Roundup RT Huskey Affinity Broad Spectrum Puma Quilt	20 oz/A Pre 12 oz/A 0.8 oz/A 11 oz/A 7oz/A
Benewah	Tensed	27"	2600'	Conventional Tillage	10/2/12	8/28/13	Lentils	120-32-0-22 (f) 60-0-0-7 (s)	Bronate Ospray Tilt Peak	12 oz/A 4.5 oz/A 4 oz/A (twice) 3 oz/A
Boundary	B.Ferry	25"	1750'	Direct Seed	10/3/12	8/29/13	S. Canola	100-10-0-15(f) 43-18-18-6(s)	Powerflex Headline Tilt	3.5 oz/A 9 oz/A 4oz/a
Spring Cereals - Soft Spring Wheat										
Lewis	Craigmont	22"	3650'	Conventional Tillage	4/12/13	8/22/13	W. Wheat	104-8-0-6	Orion Ally	17 oz./A 0.10 oz./A
Nez Perce	Genesee Rim area	20"	2650'	Direct Seed	3/29/13	8/13/13	W. Wheat	60-0-0-0 (f) 30-10-0-8 (s)	Roundup (RT-3) Orion MCPA Ester Tilt	1 pt/A Pre (F+S) 17 oz/A 8 oz/A 4 oz/A
Latah	Moscow	24"	2630'	Conventional Tillage	4/18/13		W. Wheat			
Boundary	B. Ferry	25"	1750'	Direct Seed	4/25/13	8/29/13	S. Canola	100-32-0-21	BMP	

1- (f)-fall applied, (s)-spring applied

2- BMP - Recommended best management practice rates of chemical application.

Table 1 (continued). 2012-2013 Northern Idaho Extension variety trial site management information.

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer ¹ N-P-K-S(lb/A)	----Chemical---- Name(s)	Rates(s)
<u>Spring Cereals - Hard Spring Wheat</u>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	4/12/13	8/22/13	W. Wheat	128-15-0-12	Orion	17 oz./A
									Ally	0.10 oz./A
Nez Perce	Genesee Rim area	20"	2650'	Direct Seed	4/15/12	8/16/13	W. Wheat	60-0-0-0 (f)	Roundup (RT-3)	1 pt/A Pre (F+S)
								62-20-0-15(s)	Orion	17 oz/A
									MCPA Ester	8 oz/A
									Tilt	4 oz/A
Latah	Moscow	24"	2630'	Conventional Tillage	4/18/13		W. Wheat			
Boundary	B. Ferry	25"	1750'	Direct Seed	5/11/12	8/29/13	Canola	106-18-0-14	Axial	
									Headline	8 oz/A
									Tilt	4oz/A
									Affinity Broad Spec	
									Wildcard	
<u>Spring Cereals - Spring Barley</u>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	4/12/13	8/22/13	W. Wheat	80-0-0-0	Orion	17 oz./A
									Ally	0.10 oz./A
Nez Perce	Genesee Rim area	20"	2650'	Direct Seed	3/29/13	8/15/13	W. Wheat	60-0-0-0(f)	Roundup (RT-3)	1 pt/A Pre (F+S)
								31-10-0-8(s)	Orion	17 oz/A
									MCPA Ester	8 oz/A
									Tilt	4 oz/A
Latah	Moscow Parker Farm	24"	2630'	Direct Seed	5/6/13	8/27/13	W. Wheat	80-26-0-20	Roundup	20 oz/A Pre
									Huskie	13 oz./A
Boundary	B. Ferry	25"	1750'	Direct Seed	5/11/12	8/29/13	S. Canola	75-8-0-6	Axial	
									Headline	8 oz/A
									Tilt	4oz/A
									Affinity Broad Spec	
									Wildcard	
									Wildcard	

1- (f)-fall applied, (s)-spring applied

Table 1 (continued). 2012-2013 Northern Idaho Extension variety trial site management information.

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer¹ N-P-K-S(lb/A)	----Chemical---- Name(s)	Rates(s)
<u>Legumes - Spring Peas</u>										
Latah	Moscow Parker Farm	24"	2630'	Direct Seed	5/2/13	8/22/13	S. Barley	None	Roundup Tricor Warrior II	32 oz/A Pre 1/4 lb. A 1.9 oz/A
Latah	Genesee Kambitsch Farm	20"	2800'	Conventional Tillage	4/24/13	8/21/13	S. Barley	None	Roundup Tricor Prowl Warrior II	20 oz/A Pre 1/4 lb. A 2 pt./A 1.9 oz/A
Lewis	Craigmont	22"	3300'	Conventional Tillage	5/6/13	8/27/13	S. Wheat	None	Sharpen Sencor	2 oz/A
<u>Legumes - Spring Lentils</u>										
Latah	Moscow Parker Farm	24"	2615'	Conventional Tillage	4/24/13	8/28/13	S. Barley	None	Roundup Tricor Warrior II	32 oz/A Pre 1/4 lb./A 1.9 oz/A
Latah	Genesee Kambitsch Farm	20"	2800'	Direct Seed	4/24/13	8/21/13	S. Barley	None	Roundup Tricor Prowl Warrior II	20 oz/A Pre 1/4 lb. A 2 pt./A 1.9 oz./A
Nez Perce	Genesee Zenner Farm	20"	2600'	Direct Seed	4/3/13	8/21/13	Barley	None	Roundup Dimethoate Select Warrior II	16 oz/A Pre 16 Oz/A 10 oz./A 1.9 oz/A
Lewis	Craigmont	22"	3300'	Conventional Tillage	5/6/13	8/27/13	S. Wheat	None	Sharpen Sencor	2 oz/A

Table 1 (continued). 2012-2013 Northern Idaho Extension variety trial site management information.

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S(lb/A)	----Chemical---- Name(s)	Rates(s)
Legumes - Spring Chickpeas										
Latah	Genesee Kambitsch Farm	20"	2800'	Conventional Tillage	4/24/13	9/12/13	S. Barley	None	Roundup Tricor Prowl	20 oz/A Pre 1/4 lb. A 2 pt./A
Latah	Moscow Parker Farm	24"	2615'	Conventional Tillage	4/30/13	9/12/13	S. Barley	None	Roundup Tricor Prowl	20 oz/A Pre 1/4 lb. A 2 pt./A

1- (f)-fall applied, (s)-spring applied

2- BMP - Recommended best management practice rates of chemical application.

Table 2. Varieties tested in Northern Idaho Extension variety trials in 2012-2013

Variety	Experimental No.	Released	Developer(s) of variety
Soft white winter wheat			
ARS-Amber	ARS960277L	2011	Washington AES, USDA
Bitterroot	ID 92-22407A	2007	Idaho AES, USDA
Bobtail	OR08047P94	2013	Oregon AES, USDA
Brundage-96	ID-B-96	2001	Idaho AES, USDA
Bruneau	ID 93-64901A	2009	Idaho AES, USDA
Kaseberg	OR2071628	2012	Oregon State University
LCS-Artdeco	NSA-2153A	2011	Limagrain Cereal Seeds
Madsen	WA 7163	1988	Washington AES, USDA
Stephens	OR 65-116	1977	Oregon AES, USDA
SY-Ovation	30PN-108#21	2011	Syngenta Cereals
UICF-Brundage	ID 02-859	2009	Idaho AES, USDA
WB-1066CL			WestBred/Monsanto
WB-1070CL	BZ6WM04-1070	2012	WestBred/Monsanto
WB-456	BU6W99-456	1994	WestBred/Monsanto
WB-523	BU6W00-523		WestBred/Monsanto
WB-528	BZ 6W98-528	2004	WestBred/Monsanto
WB-Junction	BZ-6W02-616	2012	WestBred/Monsanto
Winter club wheat			
ARS-Chrystal	ARS-970075-3C	2012	Washington State University/USDA-ARS
ARS-Crescent	ARS-970163-4C	2012	Washington State University/USDA-ARS
Cara	ARS97135-9	2007	Washington State University/USDA-ARS
Hard winter wheat			
Boundary (R)	IDO 467	1997	Idaho AES, USDA
Eddy (HRW)	BZ9W96-788-e	2005	WestBred/Monsanto
Genesis (HRW)			AllStar Seeds
LCS-Azimut (HRW)		2012	Limagrain Cereal Seeds Oregon State AES, USDA-ARSARS,
Norwest-553 (R)	ORN00B553	2007	Nickerson, UK
UI-Silver (W)	IDO 658	2011	Idaho AES, USDA
UI-SRG (R)	IDO 656	2011	Idaho AES, USDA
WB-Arrowhead (HRW)	ML9W05-2501	2011	WestBred/Monsanto
WB-Rimrock (HRW)	ACS 52025		WestBred/Monsanto
Soft white spring wheat			
Alturas	IDO 526	2002	Idaho AES, USDA
Babe	WA 8039	2009	Washington AES, USDA
Diva	WA 8090	2009	Washington AES, USDA
Eden (club)	WA 7902	2004	Washington AES, USDA
UI-Stone	IDO599	2012	Idaho AES
JD (club)	WA 8047	2009	Washington AES, USDA
Penawawa	WA6920	1985	Washington AES, USDA
WB-1035CL+			WestBred/Monsanto
Whit	WA 8008	2008	Washington AES, USDA

Table 2 (cont.) Varieties tested in Northern Idaho Extension variety trials in 2012-2013**Hard spring wheat**

AP-Bullseye	AP-81	2009	AgriPro
Buck-Pronto	T 1052	2001	Limagrain Cereal Seed, LLC
Cabernet	95WVI0616	2008	Resource Seeds
Glee	WA 8074	2012	Washington AES, USDA
Jefferson	IDO 462	1998	Idaho AES, USDA
Kelse	WA 7954	2009	Washington AES, USDA
UI-Winchester	IDO 578	2009	Idaho AES, USDA
WB-Expresso	DA984-034SRR	2007	WestBred/Monsanto
WB-Fuzion	BZ901-717	2008	WestBred/Monsanto
WB-Hartline (white)	BZ903-445WP	2010	WestBred/Monsanto
WB-Volt	ACS 52610	2008	WestBred/Monsanto

Two-row winter barley

Charles (malt)	94Ab1274	2005	USDA-ARS, Aberdeen
Endeavor (malt)	95Ab2299	2008	Idaho AES, USDA

Six-row winter barley

Alba (malt)	OR77	2010	Oregon AES, USDA
Eight-Twelve	79Ab812	1988	Idaho AES, USDA
Maja (feed/malt)	OR81	2009	Oregon AES, USDA
Sprinter (facultative feed)*	BU583-50	1987	WestBred/Monsanto
Strider (feed)	ORW6	1998	Oregon AES, USDA
Sunstar-Pride (feed)	SDM204-B	1995	Sunderman Breeding

Two-row spring barley

Baronesse (feed)	NS 078054	1992	WestBred/Monsanto
Camas (feed)	ND 9147	1998	Idaho AES, USDA
CDC-Copeland (malt)	TR150	1999	University of Saskatchewan, Canada
CDC-Meredith (malt)	TR05104	2008	University of Saskatchewan, Canada
Champion (feed)	YU-501-385D	2008	WestBred/Monsanto
Clearwater (low phytate, hulless feed)	01ID435H	2008	Idaho AES, USDA
Lenetah (feed)	01Ab11107	2007	Idaho AES, USDA
Spaulding (feed)	PB1-95-2R-522	2005	Plant Breeders 1, Moscow, ID
Tetonia (feed)	98Ab11720	2007	Idaho AES, USDA

Six-row spring barley

Tradition (malt)	6B95-2482	2003	Busch Ag. Resources, Inc.
Aquila (feed)	UT97B1480-1632	2003	Utah Agricultural Experimental Station
Millennium (feed)	UT004603	1999	Utah Agricultural Experimental Station

* can be planted in spring or winter

Winter Wheat

Table 3. Soft white winter wheat variety performance results at Nezperce, 2013

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				Hardness Score
			Seed Yield	Test Weight	Plant Height	Seed Protein	
			bu/A	lb/bu	inches	%	
Soft White							
ARS-Crescent (club)		102	97	59.4	31	10.3	35
Bruneau	90	89	94	59.4	31	9.8	23
02-10606A			92	59.9	31	9.9	26
Bobtail (OR08047P94)		100	92	56.0	30	9.5	26
Madsen	87	86	88	59.3	31	11.9	43
UICF-Brundage	89	87	87	58.2	27	10.4	26
YS261			87	59.6	34	10.5	46
ARS-Amber		91	86	60.2	30	10.5	40
99-06202A			85	59.8	30	10.2	27
LCS-Artdeco		90	84	57.5	27	10.2	31
LWW10-1018			84	58.4	32	10.8	45
Rosalyn-OR2071071			84	56.6	29	10.1	35
Puma-WA8134			83	59.7	34	11.3	40
03-29902A			81	61.2	31	9.9	26
ARS-Chrysal (club)		94	80	60.1	31	11.0	35
Brundage-96	86	82	80	58.6	28	9.7	27
Kaseberg		88	80	58.3	29	10.2	29
OR2080924			80	57.1	31	10.6	35
SY-Ovation		89	79	59.7	30	10.4	40
Bitterroot	88	82	78	60.4	34	11.2	28
WB-523	88	88	78	60.4	30	11.5	37
Stephens		70	77	59.2	31	10.5	31
WA8153			76	60.6	33	10.9	42
WBEXP-436			76	61.7	30	11.7	33
YS221			76	60.9	31	10.7	33
LWW-04-4009		78	75	60.4	29	10.9	28
WB-1066CL	81	80	75	60.8	32	12.2	51
WB-Junction	85	77	74	60.9	30	11.1	34
WB-Trifecta			74	60.9	29	11.2	39
ARS-Selbu			72	61.1	31	11.0	47
WB-528	84	75	72	60.4	29	11.2	39
WBEXP-458			72	60.7	30	11.4	38
WB-456		77	71	60.8	28	12.4	40
Cara (club)	87	85	70	58.0	29	11.2	41
WB-1070CL		68	67	62.3	28	12.8	39
Cashup			65	60.6	29	10.6	31
Average	86	85	80	59.7	30	10.8	35
LSD (0.05)	7	8	13	0.9	2	--	--
CV (%)	9	8	10	0.9	3	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 4. Soft white winter wheat variety performance results at Lewiston (Tammany), 2013

Variety or Selection	2012-2013 Crop Year						
	3-Year Yield	2-Year Yield	Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft White							
LCS-Artdeco		104	117	59.5	35	10.5	34
WBEXP-436			116	61.5	36	10.5	33
Bobtail (OR08047P94)		103	115	58.4	37	10.2	33
ARS-Crescent (club)		92	114	59.7	40	9.4	34
03-29902A			113	60.4	39	11.1	34
Puma-WA8134			113	60.0	40	10.9	39
99-06202A			110	59.9	38	10.4	34
Bruneau	110	91	110	60.4	39	9.7	28
SY-Ovation		95	110	59.7	38	10.4	32
YS221			106	61.0	38	10.2	28
Cara (club)	111	88	105	57.9	34	9.6	32
ARS-Selbu			102	60.8	37	10.4	37
Kaseberg		89	101	58.5	36	9.9	29
WA8153			101	59.8	39	10.3	31
WB-Trifecta			101	61.0	35	10.4	35
WB-1070CL		91	99	60.9	33	11.3	38
WB-456		84	99	61.0	35	11.1	35
WB-523	111	91	99	60.7	37	10.5	31
Rosalyn-OR2071071			98	57.2	34	10.4	37
UICF-Brundage	103	88	98	58.9	35	10.3	31
Bitterroot	105	87	96	60.1	39	11.0	31
Cashup			96	60.8	34	10.2	25
LWW10-1018			96	57.8	37	11.0	46
WBEXP-458			96	59.4	34	10.5	33
Madsen	104	81	95	59.8	37	11.2	44
OR2080924			95	57.7	36	10.0	38
WB-528	108	89	95	59.9	37	10.7	38
ARS-Amber		79	94	58.8	36	9.4	30
Brundage-96	97	80	93	59.7	35	10.5	35
WB-1066CL	94	77	93	61.4	40	11.8	49
WB-Junction	108	87	93	59.9	34	10.2	26
02-10606A			91	60.1	35	10.7	33
ARS-Chrysal (club)		84	86	60.0	36	9.4	29
Stephens		75	86	57.8	38	11.1	40
YS261			86	59.4	38	10.5	43
LWW-04-4009		72	81	60.1	34	11.2	36
Average	105	87	100	59.7	37	10.5	34
LSD (0.05)	7	10	15	1.0	--	--	2
CV (%)	7	10	10	1.0	--	--	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 5. Soft white winter wheat variety performance results at Genesee (Rim area), 2013

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft White							
LCS-Artdeco		109	107	62.1	31	10.7	40
03-29902A			106	62.9	33	11.1	27
UICF-Brundage	116	105	106	61.5	32	11.2	33
Bruneau	122	107	105	61.7	33	11.1	30
WB-Trifecta			105	63.4	34	12.0	34
02-10606A			104	61.6	33	11.6	33
Kaseberg		104	104	61.4	32	10.8	28
Rosalyn-OR2071071			102	59.4	31	10.4	33
Bobtail (OR08047P94)		102	101	58.8	30	10.5	30
Brundage-96	116	102	101	61.7	32	11.1	35
LWW-04-4009		106	101	62.5	32	11.9	34
LWW10-1018			101	59.4	32	12.5	45
ARS-Amber		97	99	61.7	32	11.9	40
OR2080924			99	59.7	32	12.1	41
Stephens		95	99	61.8	34	12.0	37
ARS-Selbu			98	62.7	34	12.4	47
WB-456		91	98	63.6	31	12.1	35
Bitterroot	114	102	97	61.2	36	11.8	34
WA8153			96	62.7	35	12.3	41
WB-1070CL		97	96	64.5	33	12.6	41
Madsen	108	93	95	61.2	33	12.5	44
Puma-WA8134			95	62.1	36	11.9	41
SY-Ovation		95	95	63.3	33	11.5	44
WBEXP-436			94	64.0	32	12.3	35
99-06202A			92	61.2	32	11.7	31
ARS-Chrystal		90	91	62.2	32	11.3	36
WB-1066CL	113	92	91	63.9	34	13.4	51
WB-528	114	93	90	63.5	34	12.6	42
WB-Junction	113	93	90	63.1	33	11.7	33
WB-523	108	91	89	63.0	32	12.0	34
ARS-Crescent		91	86	61.5	31	11.2	37
YS261			85	60.2	32	12.1	44
Cara	114	89	84	60.2	29	12.0	43
WBEXP-458			84	63.2	30	11.8	38
Cashup			83	62.7	30	11.5	31
YS221			82	63.0	31	11.9	33
Average	114	97	96	62.0	32	11.8	37
LSD (0.05)	9	13	15	1.0	--	--	2
CV (%)	9	11	10	1.0	--	--	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 6. Soft white winter wheat variety performance results at Moscow, 2013

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft Wheat							
Brundage-96	103	111	104	58.8	30	9.1	29
Rosalyn-OR2071071			104	55.5	28	8.9	28
WB-Trifecta			104	60.8	31	9.7	36
99-06202A			103	59.3	32	9.3	30
ARS-Amber		107	103	59.6	32	8.7	41
Bruneau	107	98	103	59.3	34	9.1	28
LWW10-1018			103	57.8	33	9.4	47
ARS-Chrysal (club)		88	102	59.5	34	9.4	31
OR2080924			102	56.8	31	8.9	32
WB-Junction	104	105	102	60.2	31	8.4	24
03-29902A			101	60.5	33	8.4	26
Kaseberg		111	101	58.0	29	9.0	26
LCS-Artdeco		103	101	57.9	28	9.0	25
Bitterroot	104	100	100	59.5	35	9.8	29
Cara (club)	101	98	100	58.2	32	9.7	39
SY-Ovation		102	100	60.4	33	9.7	40
WB-528	107	108	100	60.6	32	9.0	34
02-10606A			99	58.9	33	8.3	28
Madsen	106	102	99	58.4	32	9.4	42
UICF-Brundage	103	103	99	58.2	28	8.9	21
ARS-Crescent (club)		109	98	58.6	33	7.8	32
WBEXP-458			98	60.0	29	10.3	31
Bobtail (OR08047P94)		103	97	55.5	28	8.5	24
Puma-WA8134			97	58.5	33	8.4	33
WA8153			97	60.6	32	9.0	33
WB-1070CL		96	97	62.0	31	10.6	33
YS261			97	58.9	33	9.1	43
LWW-04-4009		97	96	59.8	32	8.6	28
Stephens		98	96	59.8	34	9.5	34
Cashup			95	60.0	31	10.0	32
WBEXP-436			95	61.2	32	9.7	32
WB-523	102	94	93	59.5	31	9.1	27
YS221			93	60.1	33	8.7	26
WB-1066CL	98	95	87	61.9	36	10.5	53
WB-456		87	85	60.9	28	9.5	36
ARS-Selbu			84	60.5	30	9.1	44
Average	104	101	98	59.3	32	9.2	33
LSD (0.05)	8	14	13	0.6	--	--	2
CV (%)	8	11	8	0.7	--	--	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 7. Soft white winter wheat variety performance results at Tensed, 2013

Variety or Selection	2012-2013 Crop Year						
	3-Year Yield	2-Year Yield	Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft Wheat							
SY-Ovation		140	176	58.6	40	11.4	37
OR2080924			161	55.1	41	11.3	34
Rosalyn-OR2071071			159	56.8	40	10.4	29
WB-Junction	126	122	158	59.8	40	11.3	29
LCS-Artdeco		118	157	56.1	38	11.0	28
Bobtail (OR08047P94)		129	156	54.7	39	11.5	30
Puma-WA8134			153	56.7	46	11.2	32
Kaseberg		121	152	55.6	40	10.9	25
WA8153			150	57.7	45	11.8	37
LWW10-1018			149	55.5	42	11.7	45
Madsen	128	120	148	56.6	43	11.8	36
WB-Trifecta			147	59.2	40	11.9	36
Bruneau	128	121	146	55.9	41	10.4	19
WB-523	115	105	145	58.4	40	10.7	29
WB-528	117	106	145	58.8	40	11.6	37
WBEXP-436			145	60.3	39	11.9	37
LWW-04-4009		113	144	57.6	42	11.4	29
WB-456		116	143	59.1	39	12.9	44
03-29902A			142	57.5	45	11.4	27
ARS-Amber		113	142	57.4	43	11.1	35
WB-1066CL	105	97	141	59.6	45	13.7	52
Brundage-96	119	113	140	56.0	42	11.7	34
ARS-Selbu			139	58.7	42	11.3	40
YS261			138	55.4	44	12.0	36
ARS-Crescent		120	137	55.5	44	11.4	27
UICF-Brundage	117	110	135	56.1	39	11.3	24
WB-1070CL		94	135	60.1	38	11.6	37
Stephens		101	133	56.9	42	11.6	31
WBEXP-458			132	57.9	36	11.3	28
Cara	125	114	126	56.9	40	11.9	37
02-10606A			125	55.8	39	10.3	18
Bitterroot	116	112	124	56.1	43	11.3	23
99-06202A			120	55.6	40	10.9	26
ARS-Chrystal		104	118	56.2	45	11.5	28
YS221			116	54.8	42	11.9	26
Cashup			106	57.0	40	11.3	30
Average	119	114	141	57.1	41	11.5	32
LSD (0.05)	14	18	13	0.6	--	--	2
CV (%)	13	14	8	0.7	--	--	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 8. Soft white winter wheat variety performance results at Bonners Ferry, 2013

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft Wheat							
99-06202A			115	57.1	31	9.9	21
LWW10-1018			115	56.3	31	10.7	41
ARS-Selbu			111	57.9	30	10.8	33
WB-528	98	87	111	58.5	30	10.4	32
OR2080924			108	55.6	31	9.9	23
WA8153			107	59.3	32	10.6	33
WBEXP-436			107	59.0	29	10.5	26
YS221			105	57.3	30	9.5	16
YS261			105	57.1	31	9.6	30
Rosalyn-OR2071071			104	54.4	30	9.7	24
02-10606A			103	57.0	32	9.4	16
ARS-Crescent		76	103	56.2	34	10.3	26
03-29902A			102	58.6	30	9.8	18
Kaseberg		77	102	56.6	28	9.8	22
ARS-Amber		82	101	58.0	33	10.8	35
ARS-Chrystal		91	101	57.8	34	10.3	20
WB-1066CL	84	70	99	59.6	32	12.1	42
WB-523	84	67	98	57.6	29	10.4	23
Bitterroot	98	78	97	57.5	32	9.9	24
Stephens		74	97	57.6	29	10.0	27
Bruneau	90	73	94	56.8	31	10.1	17
LCS-Artdeco		80	93	55.8	28	9.0	15
SY-Ovation		70	92	57.9	31	10.8	33
WBEXP-458			91	57.6	28	11.0	26
Bobtail (OR08047P94)		69	90	53.2	26	9.5	18
Brundage-96	85	75	89	56.5	32	10.2	25
Puma-WA8134			86	57.2	30	10.5	31
WB-1070CL		66	86	59.9	28	11.3	27
WB-Trifecta			84	58.3	30	10.8	31
UICF-Brundage	85	72	83	56.4	29	9.8	14
LWW-04-4009		78	81	58.1	29	10.1	24
WB-456		62	81	59.5	29	11.2	34
Cashup			78	55.6	27	10.3	22
Madsen	88	71	78	57.0	30	10.0	28
WB-Junction	91	75	75	58.1	27	10.3	23
Cara	79	51	48	55.1	32	11.2	30
Average	88	73	95	57.3	30	10.3	26
LSD (0.05)	15	15	35	5.0	4	--	--
CV (%)	15	18	17	4.1	6	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 9. Soft white winter wheat performance comparison across northern Idaho, 2013.

Variety or Selection	Three-Year Yield bu/A	Two-Year Yield bu/A	N. Idaho Average bu/A	Yield of "Stephens" %	Nezperce	Tammany	Genesee	Moscow	Tensed	Bonnars Ferry	Test Weight lb/bu	Protein %	Plant Height inches
	-----bu/A-----												
Soft Wheat													
LCS-Artdeco		101	110	112	84	117	107	101	157	93	58.1	10.1	31
Bruneau	108	96	109	111	94	110	105	103	146	94	58.9	10.0	35
03-29902A			108	110	81	113	106	101	142	102	60.2	10.3	35
Bobtail-OR08047P94		101	108	111	92	115	101	97	156	90	56.1	10.0	32
LWW10-1018			108	110	84	96	101	103	149	115	57.5	11.0	35
OR2080924			108	110	80	95	99	102	161	108	57.0	10.5	34
Rosalyn-OR2071071			108	111	84	98	102	104	159	104	56.7	10.0	32
SY-Ovation		97	108	111	79	110	95	100	176	92	59.9	10.7	34
Kaseberg		98	107	109	80	101	104	101	152	102	58.1	10.1	32
ARS-Crescent-club		98	106	108	97	114	86	98	137	103	58.5	10.1	36
WBEXP-436			106	108	76	116	94	95	145	107	61.3	11.1	33
Puma-WA8134			105	107	83	113	95	97	153	86	59.0	10.7	36
99-06202A			104	106	85	110	92	103	120	115	58.8	10.4	34
ARS-Amber		95	104	106	86	94	99	103	142	101	59.3	10.4	34
WA8153			104	107	76	101	96	97	150	107	60.1	10.8	36
02-10606A			102	105	92	91	104	99	125	103	58.9	10.0	34
WB-528	105	93	102	104	72	95	90	100	145	111	60.3	10.9	34
WB-Trifecta			102	105	74	101	105	104	147	84	60.6	11.0	33
ARS-Selbu			101	103	72	102	98	84	139	111	60.3	10.8	34
Brundage-96	101	94	101	104	80	93	101	104	140	89	58.6	10.4	33
UICF-Brundage	102	94	101	104	87	98	106	99	135	83	58.2	10.3	32
Madsen	104	92	100	103	88	95	95	99	148	78	58.7	11.1	34
WB-523	101	89	100	103	78	99	89	93	145	98	59.9	10.7	33
YS261			100	102	87	86	85	97	138	105	58.4	10.6	35
Bitterroot	104	94	99	101	78	96	97	100	124	97	59.1	10.8	37
WB-Junction	104	93	99	101	74	93	90	102	158	75	60.3	10.5	32
Stephens		85	98	100	77	86	99	96	133	97	58.8	10.8	35
WB-1066CL	96	85	98	100	75	93	91	87	141	99	61.2	12.3	37
WB-1070CL		85	97	99	67	99	96	97	135	86	61.6	11.7	32
ARS-Chrysal-club		92	96	99	80	86	91	102	118	101	59.3	10.5	35
LWW-04-4009		91	96	98	75	81	101	96	144	81	59.7	10.7	33
WB-456		86	96	98	71	99	98	85	143	81	60.8	11.5	32
YS221			96	98	76	106	82	93	116	105	59.5	10.5	34
WBEXP-458			95	97	72	96	84	98	132	91	59.8	11.1	31
Cara-club	103	87	89	91	70	105	84	100	126	48	57.7	10.9	33
Cashup			87	89	65	96	83	95	106	78	59.4	10.7	32
Average	103	93	102	--	80	100	96	98	141	95	59.2	10.7	34
LSD (0.05)	9	5	6	--	13	15	15	13	13	35	0.4	--	1
CV (%)	11	12	6	--	10	10	10	8	8	17	6	--	6
Site Years	18	12	6		1	1	1	1	1	1	6	6	6

Table 10. Hard winter wheat variety performance results at Nezperce, 2013

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
IDO-1108 (SW)			95	57.8	36	9.8	45
OR-208229H (W)			95	60.0	32	10.4	90
LCS-Colonia			94	57.3	29	10.1	61
OR-2080227H (W)			90	60.1	31	9.9	85
LCS-Azimut		81	88	56.1	26	10.5	76
NSA06-4663			88	56.1	27	10.6	75
WB-Keldin			88	60.6	31	10.4	66
IDO-1101			87	60.5	28	11.3	86
UI-SRG	88	87	86	60.4	37	11.1	90
Boundary	90	91	86	58.8	30	11.0	75
IDO-1102			85	59.2	31	10.9	84
IDO-1103			85	59.4	31	10.9	86
WB-Arrowhead		74	85	60.7	32	10.9	71
IDO-816		85	84	60.1	35	11.1	85
Eddy		85	83	60.5	29	11.0	71
Genesis		82	83	58.6	26	11.7	66
UI-Silver (W)	86	90	82	62.0	34	11.1	86
WB-Rimrock	91	88	82	59.7	31	10.9	83
Norwest-553	78	79	81	60.8	28	11.9	73
OR-2080236H (W)			77	58.3	30	11.2	93
Average	87	84	86	59.3	31	10.8	77
LSD (0.05)	7	8	7	0.6	2	--	--
CV (%)	9	8	5	0.6	4	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

W-hard white wheat

Table 11. Hard winter wheat variety performance results at Lewiston (Tammany), 2013

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
LCS-Colonia			124	59.6	37	11.2	59
LCS-Azimut		95	113	59.4	32	10.8	84
NSA06-4663			111	58.3	33	10.7	77
Boundary	91	79	107	60.5	37	11.1	81
IDO-1108 (SW)			106	59.3	36	9.5	37
WB-Keldin			106	62.0	39	10.4	75
Genesis		86	104	59.7	31	10.6	71
WB-Rimrock	88	77	103	61.0	36	11.4	78
Norwest-553	108	88	101	61.3	35	11.0	72
OR-2080227H (W)			98	60.4	37	10.6	90
IDO-1101			96	62.1	35	10.8	78
OR-2080236H (W)			95	61.3	37	11.3	94
OR-208229H (W)			92	62.2	37	10.4	91
Eddy		82	89	62.8	35	11.2	73
WB-Arrowhead		78	87	61.1	37	11.3	69
UI-SRG	90	69	81	58.7	44	11.9	89
UI-Silver (W)	86	69	78	59.6	40	11.7	88
IDO-1102			77	60.9	38	12.2	85
IDO-1103			77	60.6	38	11.4	86
IDO-816		65	75	59.7	39	11.7	82
Average	93	79	96	60.5	37	11.1	78
LSD (0.05)	7	10	15	1.0	--	--	2
CV (%)	7	10	10	1.0	--	--	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

W-hard white wheat

Table 12. Hard winter wheat variety performance results at Genesee (Rim area), 2013

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
OR-208229H			107	64.5	35	11.1	100
IDO-1108 (SW)			103	59.8	37	10.3	44
UI-Silver	110	95	103	63.7	34	11.2	83
Genesis		94	102	62.5	29	11.7	79
WB-Keldin			100	63.6	35	11.3	76
WB-Rimrock	112	95	100	63.6	36	11.1	85
LCS-Colonia			99	61.0	31	11.2	60
LCS-Azimut		95	98	60.1	28	11.1	76
IDO-816		95	96	61.1	36	11.6	87
OR-2080236H			96	62.1	32	12.2	100
OR-2080227H			94	64.3	35	10.6	98
IDO-1103			92	63.5	32	11.8	85
NSA06-4663			92	61.0	27	10.6	80
WB-Arrowhead		94	91	63.6	36	11.5	70
Eddy		91	90	64.3	33	11.6	75
Norwest-553	111	95	90	63.6	28	12.1	84
IDO-1102			90	63.1	36	11.7	89
IDO-1101			88	63.9	29	11.2	89
UI-SRG	99	82	79	62.3	38	12.2	89
Boundary	106	84	77	61.5	30	11.2	78
Average	108	92	94	62.6	33	11.4	81
LSD (0.05)	9	13	17	3	3	--	--
CV (%)	9	11	11	5	5	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

W-hard white wheat

Table 13. Hard winter wheat variety performance results at Moscow, 2013

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
NSA06-4663			141	58.1	31	10.3	80
LCS-Colonia			138	57.2	34	10.0	55
Boundary	113	124	134	59.6	37	10.9	76
LCS-Azimut		115	132	57.8	30	10.7	76
WB-Rimrock	108	127	132	59.9	37	11.4	87
WB-Keldin			132	61.3	37	10.9	70
Genesis		119	131	59.2	32	11.6	66
OR-208229H			127	59.7	36	10.8	91
Norwest-553	109	114	126	61.4	31	11.6	76
UI-Silver	117	122	123	59.2	35	11.4	67
WB-Arrowhead		108	123	60.5	39	10.9	74
OR-2080227H			122	60.0	36	9.9	90
IDO-1108 (SW)			121	54.3	38	10.0	37
IDO-816		113	115	59.0	39	11.5	84
IDO-1102			115	59.6	39	11.2	88
IDO-1101			114	61.4	36	11.9	92
IDO-1103			113	59.3	38	11.7	84
UI-SRG	115	115	113	59.0	45	11.8	87
OR-2080236H			102	54.8	33	12.0	93
Eddy		104	101	61.4	36	11.3	69
Average	112	116	123	59	36	11	77
LSD (0.05)	8	14	17	1.2	3	--	--
CV (%)	8	11	11	1.2	5	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

H-hard white wheat

Table 14. Hard winter wheat variety performance results at Tensed, 2013

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
LCS-Colonia			168	56.0	39	11.4	64
OR-208229H			157	60.3	44	10.8	100
IDO-1108 (SW)			154	56.5	44	9.8	41
IDO-1103			154	59.8	44	11.0	87
WB-Keldin			153	60.0	40	10.9	77
WB-Arrowhead		126	152	59.9	44	11.1	78
NSA06-4663			150	55.9	36	11.4	82
OR-2080227H			148	57.7	42	11.0	95
Norwest553	122	127	147	60.9	37	12.3	81
IDO-1101			146	60.3	39	11.0	90
UI-SRG	124	121	146	59.1	48	11.8	96
Genesis		121	145	58.5	35	12.1	82
IDO-1102			143	59.8	45	11.6	92
UI-Silver	119	119	143	60.6	42	11.1	91
LCS-Azimut		119	137	54.9	34	11.6	78
OR-2080236H			136	56.6	42	12.1	99
IDO-816		113	129	59.4	45	11.3	95
Boundary	114	116	127	58.8	41	11.0	87
Eddy		98	114	57.7	40	10.9	73
WB-Rimrock	107	105	104	56.4	42	10.9	76
Average	117	116	143	58	41	11	83
LSD (0.05)	14	18	16	1.5	2	--	--
CV (%)	13	14	7	1.6	2	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

W-hard white wheat

Table 15. Hard winter wheat variety performance results at Bonners Ferry, 2013

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
LCS-Colonia			122	57.1	28	9.7	56
WB-Keldin			119	60.7	33	10.7	68
OR-208229H			114	60.1	35	10.0	88
OR-2080236H			114	59.2	31	10.3	91
Eddy		79	113	59.7	31	10.5	64
IDO-1101			111	58.4	29	10.4	76
Boundary	75	64	107	57.6	32	10.3	71
WB-Arrowhead		70	105	59.6	35	10.6	68
IDO-1103			105	58.6	34	10.9	75
NSA06-4663			100	55.9	28	10.2	76
Norwest-553	95	87	98	60.7	28	10.8	80
WB-Rimrock	77	70	94	59.3	29	10.4	79
IDO-1108 (SW)			91	54.5	32	9.3	35
OR-2080227H			91	58.2	32	10.2	86
UI-SRG	92	81	90	59.9	38	10.4	84
IDO-816		64	85	52.2	33	10.2	76
Genesis		65	84	58.6	25	10.3	67
IDO-1102			75	58.5	31	10.6	77
UI-Silver	75	62	71	59.1	32	10.1	81
LCS-Azimut		58	61	56.0	26	9.8	69
Average	83	70	98	58	31	10	73
LSD (0.05)	15	15	35	5.0	4	--	--
CV (%)	15	18	17	4.1	6	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

W-hard white wheat

Table 16. Hard winter wheat performance comparison across northern Idaho, 2013.

Variety or Selection	Three-Year Yield bu/A	Two-Year Yield bu/A	N. Idaho Average bu/A	Yield of "Boundary" %	2012-2013 Crop Year								
					Craigmont	Tammany	Genesee	Moscow	Tensed	Bonnors Ferry	Test Weight lb/bu	Protein %	Plant Height inches
Hard Wheat													
LCS-Colonia			124	117	94	124	99	138	168	122	58.0	10.6	37
WB-Keldin			116	109	88	106	100	132	153	119	61.4	10.8	39
OR-208229H			116	109	95	92	107	127	157	114	61.1	10.6	40
NSA06-4663			114	107	88	111	92	141	150	100	57.5	10.6	33
IDO-1108 (SW)			112	105	95	106	103	121	154	91	57.0	9.8	41
Genesis		94	108	102	83	104	102	131	145	84	59.5	11.3	34
OR-2080227H			107	101	90	98	94	122	148	91	60.1	10.4	39
WB-Arrowhead		92	107	101	85	87	91	123	152	105	60.9	11.1	42
Norwest553	104	98	107	101	81	101	90	126	147	98	61.4	11.6	34
IDO-1101			107	101	87	96	88	114	146	111	61.1	11.1	37
Boundary	98	93	106	100	86	107	77	134	127	107	59.5	10.9	14
LCS-Azimut		94	105	99	88	113	98	132	137	61	57.4	10.8	32
IDO-1103			104	98	85	77	92	113	154	105	60.2	11.3	41
OR-2080236H			103	97	77	95	96	102	136	114	58.7	11.5	38
WB-Rimrock	97	94	102	96	82	103	100	132	104	94	60.0	11.0	40
UI-Silver	100	93	100	94	82	78	103	123	143	71	60.7	11.1	39
UI-SRG	99	92	99	93	86	81	79	113	146	90	59.9	11.5	47
Eddy		90	98	93	83	89	90	101	114	113	61.0	11.1	38
IDO-1102			97	92	85	77	90	115	143	75	60.2	11.4	42
IDO-816		89	97	91	84	75	96	115	129	85	58.6	11.2	42
Average	100	93	107		86	96	94	123	143	98	59.7	11.0	37
LSD (0.05)	9	5	6		7	12	17	17	16	35	0.8		1
CV (%)	11	12	6		5	8	11	11	7	17	--	--	--
Site Years	18	12	6		1	1	1	1	1	1	6	6	6

* Varieties in bold were statistically equal to the top yielding variety in 2013.

SW-soft white wheat

W-hard white wheat

Spring Wheat

Table 17. Soft white spring wheat variety performance results at Craigmont, 2013.

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft Wheat							
Babe	66	60	65	60.9	33	9.6	17
UI-Stone	68	64	64	60.7	34	10.7	17
WB-6341			62	61.6	33	10.4	20
WA8162			61	60.4	32	11.0	20
Cataldo			60	60.2	35	11.6	18
IDO854		58	60	61.1	34	11.5	20
WA8189			60	59.4	31	10.5	19
WB-1035CL+	59	61	60	62.2	33	11.7	26
Diva	71	62	59	61.5	32	9.7	25
IDO852		62	59	61.1	34	10.6	13
WB-6121			58	60.5	33	11.8	24
IDO851		60	57	60.2	34	10.7	19
JD	70	60	56	60.3	33	11.0	35
Alturas	65	63	55	61.8	35	11.1	17
Whit	61	57	54	62.4	32	11.8	21
Penawawa	54	54	51	61.8	36	11.9	23
Average	64	60	59	61.0	34	11.0	21
LSD (0.05)	6	7	6	1.1	1	--	--
CV (%)	11	11	7	1.3	3	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 18. Soft white spring wheat variety performance results at Genesee (Rim area), 2013.

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft Wheat							
Babe	76	77	85	61.8	30	11.2	25
WB-6121			84	61.8	29	11.3	33
Diva	79	81	83	61.1	36	10.8	31
IDO851		82	83	60.2	32	10.7	28
WB-6341			83	60.7	31	11.1	28
Whit	78	79	83	60.2	33	10.7	26
IDO852		83	81	61.1	31	10.8	24
WA8189			80	62.2	33	11.0	30
Alturas	80	81	79	60.3	33	10.8	28
IDO854		82	79	61.5	34	11.2	35
UI-Stone	75	79	79	60.9	30	10.9	28
WA8162			79	61.6	33	11.2	31
WB-1035CL+	71	74	79	60.5	32	12.6	37
JD	73	71	70	62.4	35	11.6	36
Penawawa	72	73	70	60.4	33	11.5	26
Cataldo			68	59.4	30	11.9	26
Average	76	78	79	61.0	32	11.2	30
LSD (0.05)	5	6	9	1.1	2	--	--
CV (%)	8	8	8	1.3	5	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 19. Soft white spring wheat variety performance results at Moscow, 2013.

Variety or Selection	2012-2013 Crop Year				
	Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	lb/bu	inches	%	0-100
Soft Wheat					
WA8162	90	61.3	31	10.3	31
Diva	88	61.6	33	10.3	34
UI-Stone	88	60.5	32	10.0	23
WB-6341	87	59.5	29	9.3	29
IDO854	84	60.8	32	11.1	34
Penawawa	83	60.8	32	10.5	29
WA8189	83	61.3	30	10.5	27
Whit	83	59.6	31	10.8	29
IDO852	82	60.7	31	10.0	22
IDO851	81	60.0	30	10.1	27
Cataldo	78	59.1	30	10.3	24
JD	78	61.7	32	10.8	5
Alturas	77	59.9	30	9.9	25
Babe	76	60.6	32	9.9	25
WB-1035CL+	76	60.5	31	12.0	39
WB-6121	76	60.7	30	11.4	32
Average	65	60.1	29	10.5	27
LSD (0.05)	11	0.5	2	--	--
CV (%)	11	0.6	4	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 20. Soft white spring wheat variety performance results at Bonners Ferry, 2013.

Variety or Selection	3-Year Yield	2-Year Yield	2012-2013 Crop Year				Hardness Score
			Seed Yield	Test Weight	Plant Height	Seed Protein	
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Soft Wheat							
WA8162			117	59.9	36	11.5	33
WA8189			116	60.3	33	11.5	28
WB-6341			115	59.4	33	10.2	25
Whit	87	95	105	59.7	37	13.1	34
WB-6121			103	60.6	34	13.0	33
Diva	88	94	102	60.4	38	11.7	37
IDO851		92	93	58.8	34	10.4	29
JD	86	88	93	60.9	41	12.6	41
IDO852		88	91	60.3	35	10.9	29
WB-1035CL+	77	88	91	59.6	35	13.2	36
Alturas	78	90	89	58.9	33	10.4	25
Babe	76	90	87	59.5	35	10.7	27
UI-Stone	76	84	87	59.9	34	10.6	24
Cataldo			83	58.0	33	11.2	26
IDO854		82	83	59.1	36	11.7	37
Penawawa	68	81	73	59.2	35	11.5	28
Average	79	88	95	59.6	35	11.5	31
LSD (0.05)	7	7	10	0.4	2	--	--
CV (%)	11	8	7	0.5	3	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 21. Soft white spring wheat variety performance comparison across Northern Idaho, 2013.

2012-2013 Crop Year											
Variety or Selection	Three-Year Yield bu/A	Two-Year Yield bu/A	N. Idaho Average bu/A	Yield of "Penawawa" %	Craigmont -----bu/A-----	Genesee -----bu/A-----	Moscow -----bu/A-----	Bonnors Ferry -----bu/A-----	Test Weight lb/bu	Protein %	Plant Height inches
Soft Wheat											
WA8162			87	125	61	79	90	117	60.8	11.0	33
WB-6341			87	125	62	83	87	115	60.3	10.3	31
WA8189			85	122	60	80	83	116	60.8	10.9	32
Diva	80	80	83	119	59	83	88	102	61.2	10.6	35
Whit	78	78	81	117	54	83	83	105	60.4	11.6	34
WB-6121			80	116	58	84	76	103	60.9	11.9	31
UI-Stone	77	77	79	114	64	79	88	87	60.5	10.6	32
IDO851	78	78	78	113	57	83	81	93	59.8	10.5	32
Babe	76	76	78	113	65	85	76	87	60.7	10.4	32
IDO852	78	78	78	113	59	81	82	91	60.8	10.6	32
WB-1035CL+	75	75	76	110	60	79	76	91	60.7	12.4	33
IDO854	75	75	76	110	60	79	84	83	60.6	11.4	34
Alturas	78	78	75	108	55	79	77	89	60.2	10.6	32
JD	74	74	74	107	56	70	78	93	61.3	11.5	36
Cataldo			72	105	60	68	78	83	59.2	11.3	31
Penawawa	71	71	69	100	51	70	83	73	60.5	11.4	33
Average	76	76	79	114	59	79	82	95	60.5	11.0	33
LSD (0.05)	4	4	4	--	6	9	10	10	0.4	--	1
CV (%)	9	9	--	--	7	8	8	7	--	--	--
Site Years	11	7	4	--	1	1	1	1	4	4	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 22. Hard spring wheat variety performance results at Craigmont, 2013.

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year				
			Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
AP-Bullseye	63	64	63	58.8	29	13.3	88
WB-Hartline(w)	70	67	63	55.5	32	12.8	55
Glee		67	62	55.9	34	13.0	69
WB-9879CLP			62	58.6	33	13.5	74
WB-Fuzion	64	65	62	56.3	33	13.8	80
WB-Expresso	67	61	61	56.3	31	13.7	74
11SB0096			59	57.9	29	14.2	79
Cabernet	59	55	59	55.5	27	13.0	57
Buck-Pronto	67	59	58	55.8	32	14.2	78
WA8166		65	58	54.8	33	13.0	71
Jefferson	63	60	57	54.9	31	13.7	74
UI-Winchester	65	60	57	55.1	31	13.1	62
WB-9518			57	55.5	29	13.9	81
WB-Volt		60	57	58.1	30	13.6	90
LCS-Star(w)**			56	52.5	29	14.2	70
Kelse	58	56	55	55.0	33	14.0	69
Average	64	61	59	56.0	31	13.6	73
LSD (0.05)	5	6	8	1.8	2	--	--
CV (%)	9	11	10	2.2	5	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

w - hard white wheat

** was 08SB06568-B

Table 23. Hard spring wheat variety performance results at Genesee, 2013.

Variety or Selection*	2012-2013 Crop Year						
	3-Year Yield	2-Year Yield	Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
Glee		83	85	61.5	32	12.2	80
Jefferson	63	81	80	60.9	33	12.7	81
WB-Hartline(w)	70	83	78	60.0	32	12.2	65
AP-Bullseye	63	77	77	62.6	29	13.1	92
WB-Fuzion	64	72	77	61.5	33	13.0	88
UI-Winchester	65	78	76	61.3	31	12.7	72
WB-Expresso	67	73	75	61.2	29	13.7	88
WB-Volt		77	75	62.8	31	12.6	100
LCS-Star(w)**			74	60.0	28	12.6	84
WB-9518			74	61.2	28	13.6	90
Kelse	58	76	73	61.6	36	13.1	80
WB-9879CLP			72	61.6	32	13.5	82
WA8166		77	70	61.0	34	12.5	83
Cabernet	59	71	69	60.8	27	12.9	68
11SB0096			67	61.5	28	13.5	83
Buck-Pronto	67	72	66	60.4	30	13.3	80
Average	64	77	74	61.3	31	13.0	82
LSD (0.05)	5	8	7	0.9	2	--	--
CV (%)	9	10	6	1.0	4	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

w - hard white wheat

** was 08SB06568-B

Table 24. Hard spring wheat variety performance results at Moscow, 2013.

Variety or Selection*	2012-2013 Crop Year				
	Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	lb/bu	inches	%	0-100
Hard Wheat					
LCS-Star(w)**	81	59.2	28	11.6	75
Hartline (w)	78	59.2	30	12	67
WA8166	75	61.0	33	12	74
Glee	72	60.5	33	12.4	75
Jefferson	69	60.4	31	12.7	80
AP-Bullseye	67	61.2	28	12.6	87
Kelse	67	60.7	32	12.9	76
UI-Winchester	64	60.4	30	12.5	67
WB-Volt	63	60.8	30	11.9	90
Cabernet	62	59.7	25	12.5	65
WB-9879CL+	61	59.7	30	12.9	77
Buck-Pronto	60	59.5	30	13.8	78
WB-Fuzion	58	59.8	31	13.5	85
WB-9518	57	60.1	27	13.4	83
11SB0096	55	59.2	26	13.5	78
WB-Expresso	52	59.9	27	13.4	82
Average	65	60.1	29	12.7	77
LSD (0.05)	11	0.5	2	--	--
CV (%)	11	0.6	4	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

w - hard white wheat

** was 08SB06568-B

Table 25. Hard spring wheat variety performance results at Bonners Ferry, 2013.

Variety or Selection*	2012-2013 Crop Year						
	3-Year Yield	2-Year Yield	Seed Yield	Test Weight	Plant Height	Seed Protein	Hardness Score
	bu/A	bu/A	bu/A	lb/bu	inches	%	0-100
Hard Wheat							
LCS-Star**			110	59.6	31	13.0	83
WB-Hartline	84	96	102	58.7	35	14.3	74
Glee		94	101	60.4	36	14.5	88
WB-9518			101	59.5	31	15.1	94
WB-Volt		92	99	59.8	34	12.9	98
WB-Expresso	82	88	98	59.5	32	15.1	97
AP-Bullseye	73	84	95	60.3	31	14.4	91
Cabernet	69	83	89	59.1	29	14.0	71
Jefferson	72	84	88	60.1	35	13.9	83
Kelse	71	80	88	59.7	36	15.2	88
WA8166		84	88	60.4	34	14.0	84
WB-9879CLP			86	58.6	34	14.2	83
WB-Fuzion	65	84	83	59.8	36	14.0	89
11SB0096			82	59.3	32	15.3	88
UI-Winchester	68	78	78	59.9	32	14.7	80
Buck-Pronto	67	69	72	59.1	33	15.3	86
Average	72	85	91	59.6	33	14.4	86
LSD (0.05)	6	5	9	0.4	1	--	--
CV (%)	10	6	6	0.5	3	--	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

* w - hard white wheat

** was 08SB06568-B

Table 26. Hard spring wheat variety performance comparison across northern Idaho, 2013.

Variety or Selection*	Three-Year Yield bu/A	Two-Year Yield bu/A	N. Idaho Average bu/A	Yield of "Cabernet" %	Craigmont	Genesee	Moscow	Bonnors Ferry	Test Weight lb/bu	Protein %	Plant Height inches
	-----bu/A-----										
Hard Wheat											
LCS-Star(w)**			80	115	56	74	81	110	57.8	12.9	29
Glee		80	80	115	62	85	72	101	59.6	13.0	33
WB-Hartline(w)	79	81	80	115	63	78	78	102	58.3	12.8	32
AP-Bullseye	71	74	75	108	63	77	67	95	60.7	13.4	29
Jefferson	71	74	74	106	57	80	69	88	59.1	13.3	32
WB-Volt		74	73	106	57	75	63	99	60.4	12.8	31
WA8166		75	72	104	58	70	75	88	59.3	12.9	33
WB-9518			72	104	57	74	57	101	59.1	14.0	29
WB-Expresso	71	71	72	103	61	75	52	98	59.2	14.0	30
Kelse	68	70	71	102	55	73	67	88	59.2	13.8	34
Cabernet	65	68	70	100	59	69	62	89	58.8	13.1	27
WB-9879CLP			70	101	62	72	61	86	59.6	13.5	32
WB-Fuzion	66	71	70	100	62	77	58	83	59.3	13.6	33
UI-Winchester	70	71	69	98	57	76	64	78	59.2	13.3	31
11SB0096			66	95	59	67	55	82	59.5	14.1	29
Buck-Pronto	68	66	64	92	58	66	60	72	58.7	14.2	31
Average	70	72	72	104	59	74	65	91	60.3	13.4	31
LSD (0.05)	3	3	4	--	8	7	11	9	0.5	--	1
CV (%)	10	9	--	--	10	6	11	6	--	--	--
Site Years	10	7	4	--	1	1	1	1	4	4.0	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

w - hard white wheat

** was 08SB06568-B

Spring Barley

Table 27. Spring barley variety performance results at Craigmont, 2013.

Variety or Selection*	2012-2013 Crop Year							
	3-Year Yield	2-Year Yield	Seed Yield	Test Weight	Plant Height	Plumps	Thins	Lodging
	-----bu/A-----		lb/bu	inches	%	%	%	
Feed								
Spaulding	100	92	86	52.1	28	55	11	0
08ID02661[#]		98	85	49.3	27	34	20	0
Lenetah	99	86	83	50.6	27	72	6	0
Camas	97	85	83	52.1	28	72	5	0
Champion	105	89	82	50.9	28	47	13	0
Radiant			81	49.3	26	44	17	0
Vespa			77	49.6	24	70	6	0
Tetonia	93	87	77	49.8	28	48	15	0
Baronesse	91	84	76	49.5	27	55	12	0
Aquila	95	84	76	50.1	32	81	3	0
Clearwater [#]	81	79	70	55.4	27	37	17	0
08ID1549[#]			67	55.3	29	25	32	0
Millennium		79	67	47.3	30	39	15	0
Food								
2Ab09-X06F084512			67	47.8	26	62	9	0
2AB09-F058HL212			65	54.9	29	34	20	0
2Ab09-F052HL-39			53	53.0	27	24	37	0
Malt								
Genie			82	50.5	22	79	4	0
1820			80	49.2	24	66	7	0
Odyssey			79	48.0	24	66	5	0
CDC-Meredith		89	78	47.0	27	64	7	0
Overture			77	48.3	24	67	7	0
2Ab08-M010-82			72	49.0	27	60	13	0
CDC-Copeland	88	83	70	47.2	29	58	10	0
2Ab07-M219-46			66	44.7	27	33	25	0
Tradition	79	73	62	49.7	33	50	7	0
Average	88	85	74	50.0	27	54	13	0
LSD (0.05)	8	12	9	1.1	1	12	6	--
CV (%)	11	14	8	1.6	4	15	32	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Low phytate varieties for minimal phosphorous throughput.

Table 28. Spring barley variety performance results at Genesee, 2013.

Variety or Selection*	2012-2013 Crop Year							
	3-Year Yield	2-Year Yield	Seed Yield	Test Weight	Plant Height	Plumps	Thins	Lodging
	-----bu/A-----			lb/bu	inches	%	%	%
Feed								
Vespa			112	52.1	24	96	1	0
Champion	114	102	107	53.2	28	90	3	0
Radiant			101	52.6	26	90	2	0
Tetonia	114	103	100	52.5	27	90	3	0
Spaulding	107	95	98	52.8	26	81	5	0
Clearwater [#]	95	91	97	56.9	31	78	5	0
Lenetah	101	92	97	52.1	27	90	3	0
Baronesse	104	95	95	52.0	27	93	2	0
Camas	104	93	95	53.0	26	90	3	0
Aquila	93	84	92	52.5	28	92	2	0
08ID1549 [#]			88	58.8	28	66	9	0
08ID02661 [#]		89	87	53.5	28	87	3	0
Millennium		88	86	49.7	26	74	6	0
Food								
2Ab09-X06F084512			87	49.9	29	81	5	0
2AB09-F058HL212			75	56.4	29	83	5	0
2Ab09-F052HL-39			63	57.3	28	70	11	0
Malt								
Odyssey			109	51.0	25	95	1	0
Genie			102	52.0	24	95	2	0
Overture			99	52.2	25	96	1	0
2Ab07-M219-46			98	46.1	29	87	3	0
CDC-Meredith		93	97	50.9	28	92	2	0
2Ab08-M010-82			96	51.6	28	90	3	0
CDC-Copeland	97	90	92	51.3	30	94	2	0
1820			89	51.3	26	95	1	0
Tradition	87	83	87	51.3	32	87	2	0
Average	102	92	94	52.5	27	87	3	0
LSD (0.05)	8	9	11	2.5	2	5	2	--
CV (%)	10	10	8	3.4	6	4	39	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Low phytate varieties for minimal phosphorous throughput.

Table 29. Spring barley variety performance results at Moscow, 2013.

Variety or Selection*	Three-Year Yield	Two-Year Yield	2012-2013 Crop Year					
			Seed Yield	Test Weight	Plant Height	Plumps	Thins	Lodging
	-----bu/A-----		lb/bu	inches	%	%	%	
Feed								
Baronesse	78	85	80	49.3	22	95	1	0
Spaulding	80	85	76	49.5	22	95	1	0
Vespa			73	50.9	24	88	2	0
Lenetah	75	80	73	49.1	25	92	1	0
Tetonia	81	84	73	50.7	23	91	2	0
Camas	86	83	72	51.3	24	90	2	0
08ID02661 [#]		82	71	50.3	21	96	1	0
Champion	82	88	70	58.5	26	59	9	0
Millennium		72	70	52.8	22	88	2	0
Aquila	77	78	69	51.3	23	91	1	0
Radiant			68	49.3	23	86	2	0
Clearwater [#]	67	75	67	50.6	21	96	1	0
08ID1549 [#]			66	50.3	22	89	2	0
Food								
2Ab09-X06F084512			65	50.7	21	97	1	0
2AB09-F058HL212			65	50.1	22	89	2	0
2Ab09-F052HL-39			64	50.6	28	97	0	0
Malt								
CDC-Meredith		79	75	50.2	22	92	2	0
Tradition	70	74	63	48.5	25	95	1	0
Genie			63	47.3	24	93	2	0
1820			62	47.3	27	74	5	0
Odyssey			60	49.1	28	88	1	0
Overture			58	54.9	25	62	10	0
CDC-Copeland	77	80	49	54.9	22	58	10	0
2Ab07-M219-46			47	49.1	25	95	1	0
2Ab08-M010-82			40	54.3	23	48	17	0
Average	77	80	66	51	24	86	3	0
LSD (0.05)	7	6	8	0.9	2	3	1	--
CV (%)	12	8	9	1.3	5	3	28	--

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Low phytate varieties for minimal phosphorous throughput.

Table 30. Spring barley variety performance results at Bonners Ferry, 2013.

Variety or Selection*	2012-2013 Crop Year							
	Three-Year Yield	Two-Year Yield	Seed Yield	Test Weight	Plant Height	Plumps	Thins	Lodging
	-----bu/A-----			lb/bu	inches	%	%	%
Feed								
Spaulding	105	137	140	52.4	35	95	6	48
Tetonia	104	132	137	52.4	36	97	4	58
Vespa			136	50.7	30	97	4	38
Aquila	95	122	131	50.4	37	97	2	30
Baronesse	99	125	130	51.5	33	98	2	60
Lenetah	99	127	129	51.3	34	97	3	83
08ID02661 [#]		128	128	51.8	37	96	4	33
Camas	103	130	127	51.9	36	94	6	63
Champion	106	125	124	52.1	34	96	5	68
Millennium		120	122	47.5	31	88	11	0
Radiant			121	51.3	35	94	7	65
08ID1549 [#]			98	58.4	35	91	8	63
Clearwater [#]	83	95	95	57.6	33	90	10	70
Food								
2Ab09-X06F084512			104	50.9	37	96	4	20
2AB09-F058HL212			89	53.8	37	95	6	85
2Ab09-F052HL-39			83	55.5	34	92	7	73
Malt								
Tradition	92	119	138	50.0	38	98	1	78
1820			137	52.4	33	99	0	83
Overture			132	51.5	32	99	2	55
CDC-Copeland	97	127	128	51.1	38	97	4	68
Odyssey			127	50.7	33	98	3	75
CDC-Meredith		122	126	49.6	34	94	7	75
Genie			126	51.5	29	97	3	65
2Ab08-M010-82			122	50.8	36	94	6	83
2Ab07-M219-46			121	49.9	36	93	9	63
Average	98	124	122	51.9	34	95	5	60
LSD (0.05)	6	9	15	0.9	6	2	1	22
CV (%)	16	7	9	1.2	11	2	48	25

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Low phytate varieties for minimal phosphorous throughput.

Table 31. Spring barley performance comparison across northern Idaho, 2013.

Variety or Selection*	2012-2013 Crop Year												
	Three-Year Yield	Two-Year Yield	N. Idaho Average	Yield of "Baronesse"	Craigmont	Genesee	Moscow	Bonnors Ferry	Test Weight	Plant Height	Lodging	Plumps	Thins
	-----bu/A-----			%			-----bu/A-----		lb/bu	inches	%	%	%
Feed													
Spaulding	105	102	100	105	86	98	76	140	52.5	28	12	80	6
Vespa			99	104	77	112	73	136	50.7	25	9	90	3
Tetonia	104	101	97	102	77	100	73	137	51.3	28	14	81	6
Champion	106	101	96	101	82	107	70	124	51.9	28	17	81	6
Lenetah	99	96	96	100	83	97	73	129	51.0	27	21	87	3
Baronesse	99	97	95	100	76	95	80	130	50.8	27	15	84	4
Camas	103	98	94	99	83	95	72	127	52.1	28	16	87	4
08ID02661 [#]		99	93	97	85	87	71	128	51.0	29	8	76	7
Radiant			93	97	81	101	68	121	51.0	28	16	79	7
Aquila	95	92	92	97	76	92	69	131	50.9	31	8	92	2
Millennium		90	86	90	67	86	70	122	48.0	28	0	69	9
Clearwater [#]	83	85	82	87	70	97	67	95	56.2	29	18	67	10
08ID1549 [#]			80	84	67	88	66	98	57.8	29	16	60	15
Food													
2Ab09-X06F084512			81	85	67	87	65	104	49.4	29	5	84	5
2AB09-F058HL212			73	77	65	75	65	89	55.0	29	21	67	10
2Ab09-F052HL-39			66	69	53	63	64	83	55.0	28	18	58	18
Malt													
CDC-Meredith		96	94	99	78	97	75	126	48.7	28	19	86	5
Odyssey			94	98	79	109	60	127	49.8	26	19	89	3
Genie			93	98	82	102	63	126	51.1	24	16	92	2
1820			92	97	80	89	62	137	50.9	26	21	89	2
Overture			92	96	77	99	58	132	50.4	26	14	89	3
Tradition	92	87	87	92	62	87	63	138	50.0	33	19	81	3
CDC-Copeland	97	95	85	89	70	92	49	128	49.5	31	17	86	4
2Ab07-M219-46			83	87	66	98	47	121	47.4	29	16	77	10
2Ab08-M010-82			82	87	72	96	40	122	50.4	28	21	83	6
Average	99	95	89	93	74	94	66	122	51.3	28	15	80	6
LSD (0.05)	6	7	5	--	9	11	8	15	0.7	1	3	3	1
CV (%)	16	15	--	--	8	8	9	9	--	--	--	--	--
Site Years	12	8	4		1	1	1	1	4	4	4	4	4

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Low phytate varieties for minimal phosphorous throughput.

Winter Barley

Table 32. Winter barley variety performance results at Bonners Ferry, 2011-2013.

Variety or Selection	Class	Three-Year Yield	Two-Year Yield	2012-2013 Crop Year				
				Seed Yield	Test Weight	Plant Height	Plumps	Thins
		lb/A	lb/A	lb/A	lb./bu	inches	%	%
Charles	Malt	76	95	105	47.3	26	89	3
Eight-Twelve	Feed			103	47.8	28	89	3
Alba	Feed		95	95	48.7	31	92	2
Maja	Feed		95	91	48.3	26	91	3
6Ab08-X03W047-28	Feed			89	46.2	29	90	3
02Ab671	Malt			88	48.1	32	95	2
Strider	Feed	84	95	87	46.9	25	90	3
FB6R01-4-3	Feed			86	46.7	23	88	4
02Ab669	Malt			74	47.7	34	93	2
Endeavor	Malt	59	74	72	47.0	29	91	4
2Ab08-X05W061-42	Malt			71	47.9	31	92	3
02Ab431	Malt			66	46.9	30	91	4
Sprinter	Feed	89	86	64	46.5	26	89	5
Sunstar-Pride	Feed	100	66	46	45.7	31	90	4
Average		82	87	81	47.3	29	91	3
LSD (0.05)		22	36	24	1.7	6	5	2
CV (%)		30	34	17	2.1	12	3	32
Site Years		3	2	1	1.0	1	1	1

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Spring Peas

Table 33. Dry pea variety performance results at Craigmont, 2013.

Variety or Selection*	2-Year Yield	Seed Yield	Seed Weight	Canopy Height	Market Class
	lb/A	lb/A	g/100	inches	
PS08101022		2967	21.6	28	Yellow
PS08101004	2338	2908	19.8	35	Yellow
Pro822		2843	21.0	31	Yellow
PS08100133		2788	18.9	30	Green
Pro793	2054	2692	23.6	34	Yellow
Banner	2112	2629	16.4	33	Green
Universal	2173	2619	19.1	32	Yellow
Pro091-7137		2564	17.5	34	Green
Carousel	2173	2555	21.8	32	Yellow
Greenwood(7040)	2244	2538	18.0	32	Green
PS08100582		2496	18.5	33	Green
Pro081-7161		2486	16.5	31	Green
PS03101445	2174	2483	18.4	32	Green
Aragorn	1979	2459	18.6	32	Green
PS07100470	2245	2437	18.0	17	Green
Pacifica	2095	2412	19.7	32	Green
Hampton**	1950	2246	18.0	35	Green
PS07100471	2100	2242	18.4	32	Green
Columbian	1859	2149	15.8	17	Green
PS07100925	1953	2138	22.1	32	Yellow
Ariel	1863	2118	15.6	30	Green
PS05100840	2103	1992	18.9	28	Green
Trial Average	2088	2489	19	30	
LSD (0.05)	339	330	0.9	3	
CV (%)	15	9	3.6	6	

* Varieties in bold were statistically equal to the top yielding variety in 2013.

** was PS05100736

Table 34. Dry pea variety performance results northwest of Genesee, 2013.

Variety or Selection*	3-Year Yield	2-Year Yield	2012-2013 Crop Year					Erect Index	Market Class
			Seed Yield	Seed Weight	Canopy Height	Vine Length			
	-----lb/A-----		g/100	inches	inches	0.1-1.0			
PS07100925	3846.8	4346.9	4506	23.7	34	35	1.0	Yellow	
PS07100471	3879.4	4222.4	4490	19.6	36	40	0.9	Green	
Pro793		4188	4366	24.3	38	42	0.9	Yellow	
Pro822		4129.3	4365	24.9	37	42	0.9	Yellow	
Carousel	3878.2	4165.9	4353	24.3	42	47	0.9	Yellow	
Pro091-7137			4325	19.4	37	40	0.9	Green	
PS03101445	4120.7	4116.4	4261	20.7	31	37	0.9	Green	
Pro081-7161			4255	17.8	36	39	0.9	Green	
PS08101004		3996.9	4222	24.4	31	38	0.8	Yellow	
PS07100470	3814.1	4075.6	4209	20.1	38	40	0.9	Green	
Banner	4073.3	4044.4	4164	19.1	35	39	0.9	Green	
PS08101022			4102	23.1	33	46	0.7	Yellow	
Universal	3935.3	3908.6	4098	22.7	37	40	0.9	Yellow	
PS08100582			4059	21.5	37	41	0.9	Green	
PS08100133			4055	23.0	36	42	0.9	Green	
Pacifica	3981.5	3911	3908	21.9	27	35	0.8	Green	
PS05100840	3854.9	3849.9	3877	22.6	34	37	0.9	Green	
Ariel	3567.6	3680	3876	18.9	36	39	0.9	Green	
Aragorn	3539.8	3523.4	3711	19.8	34	45	0.8	Green	
Hampton**		3843.7	3705	21.1	37	39	0.9	Green	
Greenwood(7040)		3659.3	3701	20.5	35	36	1.0	Green	
Columbian	2959.2	2861.5	3008	19.1	15	46	0.3	Green	
Trial Average	3788	3913	4073	21.5	34	40	0.1		
LSD (0.05)	319	442	627	2.3	5	5	0.1		
CV (%)	10	11	11	10	10	11	10.4		

* Varieties in bold were statistically equal to the top yielding variety in 2013.

** was PS05100736

Table 35. Dry pea variety performance results at Moscow, 2013.

Variety or Selection*	Two-Year Yield	Seed Yield	Seed Weight	Canopy Height	Market Class
	lb/A	lb/A	g/100	inches	
Pro822	2864	2800	22.3	32	Yellow
Pro081-7161		2794	18.7	29	Green
Pro091-7137		2786	19.9	32	Green
Pro793	2906	2745	22.5	31	Yellow
PS07100925	3138	2744	23.6	25	Yellow
PS08101004	2861	2703	23.7	27	Yellow
Universal	2691	2642	20.2	30	Yellow
PS08101022		2640	23.2	26	Yellow
Ariel	2777	2625	17.9	29	Green
PS07100470	2697	2623	22.4	31	Green
Banner	2750	2608	19.8	31	Green
Hampton**	2844	2568	19.7	29	Green
PS03101445	2781	2545	22.2	27	Green
Pacifica	2795	2495	20.2	23	Green
PS07100471	2722	2437	18.1	26	Green
PS08100582		2368	22.1	27	Green
Columbian	2376	2353	18.0	13	Green
Greenwood(7040)	2673	2258	19.8	27	Green
Carousel	2634	2222	23.1	30	Yellow
PS05100840	2515	2221	19.5	21	Green
PS08100133		2175	22.8	26	Green
Aragorn	2368	2078	21.3	29	Green
Trial Average	2729	2519	21.0	27	
LSD (0.05)	268	344	2.9	4	
CV (%)	9	10	9.6	9	

* Varieties in bold were statistically equal to the top yielding variety in 2013.

** was PS05100736

Table 36. Dry pea performance comparison across northern Idaho, 2013.

Variety or Selection*	2012-2013 Crop Year									
	Three-Year Yield	Two-Year Yield	N. Idaho Average	Yield of "Columbian"	Craigmont	Genesee (northwest)	Moscow	Seed Weight	Canopy Height	Market Class
	-----lb/A-----			%	-----lb/A-----			--4-site Average-- g/100	inches	
Pro822		2974	3336	133	2843	4365	2800	22.7	30	Yellow
PS08101004		3003	3277	131	2908	4222	2703	22.7	30	Yellow
Pro793		2940	3268	131	2692	4366	2745	23.5	31	Yellow
PS08101022			3236	129	2967	4102	2640	22.6	28	Yellow
Pro091-7137			3225	129	2564	4325	2786	18.9	30	Green
Pro081-7161			3178	127	2486	4255	2794	17.7	29	Green
Banner	2892	2828	3134	125	2629	4164	2608	18.4	29	Green
PS07100925		3069	3129	125	2138	4506	2744	23.1	30	Yellow
Universal	2887	2772	3120	125	2619	4098	2642	20.7	30	Yellow
PS03101445	2976	2959	3096	124	2483	4261	2545	20.4	28	Green
PS07100470	2859	2885	3090	123	2437	4209	2623	20.1	26	Green
PS07100471	2921	2958	3056	122	2242	4490	2437	18.7	29	Green
Carousel	2837	2900	3043	122	2555	4353	2222	23.1	32	Yellow
PS08100133			3006	120	2788	4055	2175	21.5	30	Green
PS08100582			2974	119	2496	4059	2368	20.7	31	Green
Pacifica	2974	2870	2938	117	2412	3908	2495	20.6	26	Green
Ariel	2601	2642	2873	115	2118	3876	2625	17.5	28	Green
Hampton**	2650	2756	2840	113	2246	3705	2568	19.6	30	Green
Greenwood(7040)		2768	2832	113	2538	3701	2258	19.4	29	Green
Aragorn	2585	2484	2749	110	2459	3711	2078	19.9	29	Green
PS05100840	2820	2770	2697	108	1992	3877	2221	20.3	27	Green
Columbian	2289	2589	2503	100	2149	3008	2353	17.6	16	Green
Trial Average	2774	2833	2678	121	2489	4073	2519	20.4	28	
LSD (0.05)	158	277	235	--	330	627	344	1.2	2	
CV (%)	12	17	--	--	9	11	10	--	--	
Site Years	10	7	3		1	1	1	3.0	3	

* Varieties in bold were statistically equal to the top yielding variety in 2013.

** was PS05100736

Spring Lentils

Table 37. Spring lentil variety performance results at Craigmont, 2013

Variety or Selection	Market Class	2-Year Yield	2012-2013 Crop Year		
			Seed Yield	Seed Weight	Canopy Height
		lb/A	lb/A	g/100	inches
Avondale(2300R)	Richlea	963	1165	4.6	14
Pardina	Pardina	1131	1144	3.3	11
LC01602062T	Turkish Red	969	1052	4.3	11
LC01602273E	Eston	860	1031	3.0	13
LC08600113P	Pardina	881	990	4.0	10
Eston	Eston	648	963	2.9	12
Richlea	Richlea	785	893	4.7	13
Viceroy	Eston		863	2.9	12
Riveland	Laird	709	859	6.4	12
Morena	Pardina	922	848	3.5	11
LC0860B130L	Laird		829	6.6	13
Red Chief	Turkish Red		772	4.9	11
Merrit	Laird	723	744	5.3	11
LC0860B123L	Laird		657	7.5	13
LC06601734L	Laird	631	644	6.2	13
Morton	Pardina		229	3.2	13
Trial Average		838	855	4.6	12
LSD (0.05)		251	235	0.4	2
CV (%)		30	19	6.6	10
Site Years		2	1	1.0	1

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 38. Spring lentil variety performance results southeast of Genesee, 2013.

Variety or Selection*	Market Class	3-Year Yield lb/A	2-Year Yield lb/A	2012-2013 Crop Year		
				Seed Yield lb/A	Seed Weight g/100	Canopy Height inches
Avondale(2300R)	Richlea	1807	1640	1276	5.3	15
Richlea	Richlea	1577	1416	1096	5.6	15
Morena	Pardina	1579	1380	939	4.2	14
LC08600113P	Pardina	1478	1362	926	5.0	13
Viceroy	Eston			815	3.5	13
Eston	Eston	1412	1187	813	3.6	13
Pardina	Pardina	1478	1162	807	4.0	12
Riveland	Laird	1484	1304	753	7.9	15
LC01602062T	Turkish Red	1356	1187	736	5.0	12
LC06601734L	Laird	1458	1221	724	7.7	14
LC0860B130L	Laird			710	8.3	14
LC01602273E	Eston	1443	1222	690	4.0	12
Merrit	Laird	1384	1139	674	7.0	13
LC0860B123L	Laird			643	9.1	14
Morton	Pardina			442	3.6	13
Red Chief	Turkish Red			370	6.1	13
Trial Average		1496	1293	776	5.6	13
LSD (0.05)		142	157	221	0.5	2
CV (%)		12	12	20	6.7	9
Site Years		3	2	1	1	1

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 39. Spring lentil variety performance results northwest of Genesee, 2013.

Variety or Selection*	Market Class	3-Year Yield	2-Year Yield	2012-2013 Crop Year		
				Seed Yield	Seed Weight	Canopy Height
		lb/A	lb/A	lb/A	g/100	inches
Eston	Eston	2056	1723	1629	3.2	17
LC01602273E	Eston	2165	1889	1580	3.5	16
Merrit	Laird	2106	1813	1360	6.1	11
Avondale(2300R)	Richlea	2184	1745	1354	4.7	14
LC08600113P	Pardina	2020	1739	1319	4.6	13
Pardina	Pardina	2084	1766	1261	3.5	13
LC01602062T	Turkish Red	1956	1551	1173	4.5	14
Red Chief	Turkish Red			1019	5.1	12
Richlea	Richlea	1898	1436	956	4.7	13
Viceroy	Eston			950	3.0	18
LC0860B130L	Laird			919	6.7	11
LC06601734L	Laird	1799	1346	864	6.3	10
LC0860B123L	Laird			826	7.5	10
Riveland	Laird	1830	1489	818	6.2	11
Morena	Pardina	1972	1584	758	3.6	16
Morton	Pardina			116	3.0	16
Trial Average		2006	1644	1056	4.8	13
LSD (0.05)		185	249	294	0.4	3
CV (%)		11	15	19	5.8	14
Site Years		3	2	1	1	1

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 40. Spring lentil variety performance results at Moscow, 2013.

Variety or Selection*	Market Class	3-Year Yield lb/A	2-Year Yield lb/A	2012-2013 Crop Year		
				Seed Yield lb/A	Seed Weight g/100	Canopy Height inches
LC01602273E	Eston	1746	1539	1354	3.3	16
Eston	Eston	1398	1252	1320	3.1	17
Morena	Pardina	1652	1245	1261	4.6	18
Pardina	Pardina	1588	1373	1251	4.2	16
Avondale(2300R)	Richlea	1733	1512	1249	4.7	17
Riveland	Laird	1510	1412	1235	6.7	17
Richlea	Richlea	1475	1314	1227	4.6	17
Merrit	Laird	1609	1388	1216	6.1	16
LC01602062T	Turkish Red	1213	1139	1210	4.5	16
LC08600113P	Pardina	1458	1364	1175	4.5	16
LC06601734L	Laird	1589	1424	1065	6.4	16
LC0860B130L	Laird			1055	6.8	17
Viceroy	Eston			1009	2.8	18
LC0860B123L	Laird			949	8.1	17
Red Chief	Turkish Red			903	5.4	17
Morton	Pardina			66	3.3	18
Trial Average		1543	1360	1096	4.9	17
LSD (0.05)		223	304	338	1.3	2
CV (%)		18	22	16	13.5	5
Site Years		3	2	1	1	1

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Table 41. Spring lentil performance comparison across North Idaho, 2013.

Variety or Selection*	Market Class	2012-2013 Crop Year									
		Three-Year Yield	Two-Year Yield	N. Idaho Average	Yield of "Pardina"	Craigmont	Genesee (southeast)	Genesee (northwest)	Moscow	Seed Weight	Canopy Height
		-----lb/A-----			%	-----lb/A-----				g/100	inches
Avondale(2300R)	Richlea	1754	1481	1261	100	1165	1276	1354	1249	4.8	15
Eston	Eston	1445	1203	1181	94	963	813	1629	1320	3.2	14
LC01602273E	Eston	1616	1377	1164	92	1031	690	1580	1354	3.4	14
Pardina	Pardina	1610	1358	1116	88	1144	807	1261	1251	3.7	13
LC08600113P	Pardina	1512	1337	1102	87	990	926	1319	1175	4.5	13
LC01602062T	Turkish Red	1410	1212	1043	83	1052	736	1173	1210	4.6	13
Richlea	Richlea	1493	1238	1043	83	893	1096	956	1227	4.9	15
Merrit	Laird	1522	1266	998	79	744	674	1360	1216	6.1	13
Morena	Pardina	1585	1284	951	75	848	939	758	1261	4.0	15
Riveland	Laird	1445	1229	916	73	859	753	818	1235	6.8	14
Viceroy	Eston			909	72	863	815	950	1009	3.0	15
LC0860B130L	Laird			878	70	829	710	919	1055	7.1	14
LC06601734L	Laird	1436	1147	824	65	644	724	864	1065	6.6	13
LC0860B123L	Laird			769	61	657	643	826	949	8.0	13
Red Chief	Turkish Red			766	61	772	370	1019	903	5.4	13
Morton	Pardina			213	17	229	442	116	66	3.3	15
Trial Average		1530	1284	946	75	855	776	1056	1096	5.0	14
LSD (0.05)		98	120	136	--	235	221	294	338	0.3	1
CV (%)		15	19	--	--	19	20	19	16	--	--
Site Years		11	8	4		1	1	1	1	2	2

* Varieties in bold were statistically equal to the top yielding variety in 2013.

Chickpeas

Table 42. Spring chickpea variety performance results in Latah County, 2011-2013.

Variety or Selection	Bean Size	2012-2013 Crop Year						Seed Weight g/100	Canopy Height inches
		3-Year Yield lb/A	2-Year Yield lb/A	Yield Average lb/A	Moscow lb/A	Genesee lb/A			
CDC-Orion	large	3352	3103	2963	2861	3065	44.7	22	
CDC-Frontier	medium/large	2999	2856	2851	2854	2849	39.0	24	
Billy Beans	small/medium	3173	2991	2803	2746	2859	31.3	25	
Sawyer	large	3125	2918	2700	2524	2875	45.8	24	
CA0790B0034C	large			2682	2599	2764	55.2	25	
CA04900843C	large	3235	2960	2535	2442	2627	62.9	23	
CDC-Alma	small/medium	2837	2629	2436	2723	2148	34.6	20	
Sierra	large	2649	2605	2336	2342	2331	50.0	23	
CA0790B0043C	large		2708	2322	2320	2324	51.4	26	
CA0890B0429C	large			2205	2221	2189	55.0	22	
CA0790B0054C	large			2169	2207	2131	52.0	24	
Dwelley	large	2588	2362	2162	2071	2254	52.2	24	
Trial Average		2995	2792	2514	2493	2535	47.8	23	
LSD (0.05)		190	227	339	344	278	2.2	2	
CV (%)		9	10	--	9	7	--	--	
Site Years		4	3	2	1	1	2	2	

* Varieties in bold were statistically equal to the top yielding variety in 2013.