



## 2017 Small Grain and Grain Legume Report

Northern Idaho Small Grain and Grain Legume Research and Extension Program

*Kurtis Schroeder and David White*

Cover: University of Idaho winter wheat variety trials near Nezperce, Idaho, at the 2017 Prairie Area Crop & Conservation Tour. Photo by Doug Finkelnburg, University of Idaho Area Extension Educator.

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*Northern Idaho Small Grain and Grain Legume  
Research and Extension Program*

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Idaho Wheat Commission  
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Russ Zenner – Genesee  
Clint Zenner – Genesee  
John Frei – Ferdinand  
Bert Henriksen – Lewiston  
Neil Uptmore – Lewiston  
Greg Zenner – Nezperce  
Doug Bruce – Tensed

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## **Introduction**

This report summarizes the performance of winter wheat, spring wheat, winter barley, spring barley, winter pea, spring pea, lentil and chickpea varieties tested in extension variety trials conducted in northern Idaho during the 2016-2017 crop season. The variety trials were located in cooperators' fields at 9 test sites in Lewis, Nez Perce, Latah, Benewah and Boundary counties and on the University of Idaho Research and Extension Center farm in Moscow (Plant Sciences Farm). Specific trial locations and management practices used at each of the trial locations are listed in Table 1.

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 [www.extension.uidaho.edu/cereals](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.

Increased field crop yield is the result of a combination of improved agronomic practices and advances in variety development. Trials reported in this publication help producers compare new varieties with widely grown varieties using field production practices common for their area. The provided information 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**

Seven winter cereal trials were planted in northern Idaho in the fall of 2016 and eight spring cereal trials were planted in the spring of 2017. For each crop, the seeding rate for all entries was a uniform number of seeds planted per square foot (spsf). These rates were determined by weighing 1,000 seeds of each cereal variety. Winter wheat and spring barley were planted at 23 spsf, spring wheat at 28 spsf, and winter barley at 21 spsf. Winter wheat, winter barley, spring wheat, and spring barley seeds were treated with Vibrance Extreme at 2.8 oz/100 lbs seed plus Sharda 1.0 oz/100 lbs seed. All plots were seeded 20 feet long. Plots in conventional tillage systems were seeded on 5-foot centers using a double-disc opener 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 each opener. The direct-seed drill is equipped with Flexi-Coil Stealth openers that allow fertilizer to be banded below and between the paired rows. Typical cereal seeding depth varied from 0.75 to 1.5 inches depending on soil texture and moisture conditions. At each location, each variety entry was replicated four times in a randomized complete block design. After plants were well established, the beds were cut back to a plot size length of 15 feet with an application of glyphosate using a tractor-mounted, shielded sprayer between plots. For most trials conducted in collaboration with a grower cooperator, pesticides were applied by the grower while treating the remainder of the field surrounding the trial. 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.

Prior to harvest, mature plant height was recorded, each plot was evaluated for lodging and plot length was measured to more accurately determine the harvestable area for each plot. Cereal plant height is the length of the plant from the soil surface to the tip of the head (awns excluded). For lodging, the affected area was

scored from 0% to 100%, with 0% equal to no lodging and 100% being completely lodged. After harvest, each small grain entry at each location was evaluated for grain yield and test weight. Cereal test weight was reported in pounds per standard bushel. Cereal yields were reported in bushels per acre, using a standard 60 pounds per bushel conversion factor for wheat and 48 pounds per bushel for barley. Percentage grain plumps and thins were measured for barley. Plumpness is the percent of the sample that stayed on top of a 5.5/64-inch slotted screen after shaking. Thin percentage is the portion of the sample that went through a 5.5/64-inch slotted screen. 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. For winter and spring wheat samples, all four replications were tested for protein, but the barley samples consisted of a single composite sample for each variety at each location.

### **Legume Test Procedures**

In the fall of 2016, two winter pea trials were established using a seeding rate of 10 spsf. In the spring of 2017, spring pea, lentil and chickpea trials were seeded near Craigmont, Genesee and Moscow. For each legume variety, 1,000 seeds were weighed and seeding rates calculated to give a uniform planting density of pea at 8 spsf, lentil at 8 spsf, and chickpea at 5 spsf. Spring pea and lentil seed were treated with an Apron (0.16 oz/cwt), Maxim (0.08 oz/cwt), Cruiser (0.5 oz/cwt), and molybdenum (0.1 oz/cwt) mix; and chickpea seed was treated Apron (0.2 oz/cwt), Maxim (0.08 oz/cwt), Mertect (2.04 oz/cwt), Cruiser (0.5 oz/cwt), and molybdenum (0.1 oz/cwt). All winter and spring legume plots were established in beds similar to the cereal trials; they were planted on 20-ft long beds that were cut back to 15-ft plots. Planting depths were between 1 and 1.5 inches for lentils and between 1.5 and 2.5 inches for pea and chickpea. Due to wider row spacing between plots, particularly for peas, chemical weed control was supplemented with hand weeding when necessary. Legumes were evaluated for vine length (pea) or plant height (lentil and chickpea), canopy height at harvest, seed yield, 100-seed weight and seed size (chickpea only). Lentil or chickpea plant height or pea vine lengths were measured from the soil surface to the end of the growing point on the main stem. Plant height and vine length measurements were recorded several weeks prior to harvest when plant tissue was green. Pea and lentil canopy height was measured from the soil surface to the average height of the canopy immediately prior to harvest. Seed yields were expressed in pounds per acre. Chickpea seed was sized by shaking 250 g of seed through screens. The screen sizes included 25/64", 22/64" and 20/64".

### **Statistical Interpretation**

Data in the tables is sorted by yield with the highest yielding entries listed first. The overall trial average is shown at the bottom of each 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 aids 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 actual varietal differences. If no significant statistical differences were found among varieties, 'ns' (not significant) is shown for the LSD. The CV listed in the tables is given as a general measurement of the precision of each experiment. Lower CV percentage values indicate lower experimental variation and greater precision. A higher CV value indicates abnormal variation within the trial that could be due to external factors such as animal grazing, hail damage or other variable stress on the plants. CV values were not averaged across trials or years.

Variety choice should take into consideration as much performance data as possible with comparisons across years and locations. In addition to yield, other factors such as 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 variety to plant. Due to seasonal variation, caution should be taken when looking at the results from a single growing season. A summary of released varieties tested during the 2016-2017 growing season is listed in Table 2.



**Table 1. Trial locations and management information for the 2016-2017 Northern Idaho Extension variety trials.**

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S (lb/A)*	-----Chemical-----	
									Product Name	Rate
<b>Winter Cereals - Soft White Winter Wheat</b>										
Lewis	Nezperce	22"	3200'	Direct Seed	10/11/16	8/9/17	Chickpeas	110-50-10-22 (f) 29-13-6-10 (s)	Ally Xtra Carnivore Osprey Priaxor Propiconazole	0.4 oz/A 20 oz/A 4 oz/A 2 oz/A 4 oz/A
Nez Perce	Lewiston (Tammany)	14"	1800'	Conventional Tillage	10/3/16	7/21/17	Fallow	120-30-0-20-10 (Cl) (f) 35-0-0-0 (s)	Osprey Huskie Orion Priaxor Propiconizol	4.75 oz/A 13.5 oz/A 17 oz/A 2 oz/A 4 oz/A
Nez Perce	Genesee	20"	2900'	Direct Seed	10/13/16	8/11/17	Chickpea	30-30-0-6.5 (f) 33-5-5-18 (s)	Osprey Widematch Dagger Tilt Humic Acid	4.75 oz/A 1 pt/A 0.5 pt/A 4 oz/A 0.25 gal/A
Latah	Moscow	20"	2600'	Conventional Tillage	10/12/16	8/10/17	S. Oats	100-20-0-20 (f)	Huskie Affinity BS Axial XL Priaxor	12 oz/A 0.8 oz/A 16.4 oz/A 4 oz/A
Benewah	Tensed	27"	2600'	Conventional Tillage	10/19/16	8/16/17	Lentils	130-30-0-20 (f)	Huskie Affinity BS Priaxor	12 oz/A 0.8 oz/A 4 oz/A
Boundary	Bonnors Ferry	25"	1750'	Direct Seed	9/26/16	8/3/17	Chickpeas	17-38-23-11 (f) 40-0-0-6 (s)	Axial Star Affinity BS Priaxor Tilt Huskie	16.4 oz/A 0.4 oz/A 8 oz/A 4 oz/A 12 oz/A

\* (f) = fall applied, (s) = spring applied.

**Table 1 (continued). Trial locations and management information for the 2016-2017 Northern Idaho Extension variety trials.**

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S (lb/A)	-----Chemical-----	
									Product Name	Rate
<b><u>Winter Cereals - Hard Winter Wheat</u></b>										
Lewis	Nezperce	22"	3200'	Direct Seed	10/11/16	8/9/17	Chickpeas	110-50-10-22 (f) 69-13-6-10 (s)	Ally Xtra Carnivore Osprey Priaxor Propiconazole	0.4 oz/A 20 oz/A 4 oz/A 2 oz/A 4 oz/A
Nez Perce	Lewiston (Tammany)	14"	1800'	Conventional Tillage	10/3/16	7/21/17	Fallow	120-30-0-20-10 (Cl) (f) 40-0-0-0 (s)	Osprey Huskie Orion Priaxor Propiconazol	4.75 oz/A 13.5 oz/A 17 oz/A 2 oz/A 4 oz/A
Nez Perce	Genesee	20"	2900'	Direct Seed	10/19/16	8/11/17	Chickpeas	30-30-0-6.5 (f) 73-5-5-18 (s)	Osprey Widematch Dagger Tilt Humic Acid	4.75 oz/A 1 pt/A 0.5 pt/A 4 oz/A 0.25 gal/A
Latah	Moscow	20"	2600'	Conventional Tillage	10/12/16	8/10/17	S. Oats	100-20-0-20 (f) 40-0-0-0 (s)	Huskie Affinity Axial Priaxor	12 oz/A 0.4 oz/A 16.4 oz/A 8 oz/A
Benewah	Tensed	27"	2600'	Conventional Tillage	10/19/16	8/16/17	Lentils	130-30-0-20 (f) 40-0-0-0 (s)	Huskie Affinity Axial	12 oz/A 0.4 oz/A 16.4 oz/A
Boundary	Bonnors Ferry	25"	1750'	Direct Seed	9/26/16	8/3/17	Chickpeas	17-38-23-11 (f) 80-0-0-6 (s)	Axial Star Affinity BS Priaxor Tilt Huskie	16.4 oz/A 0.4 oz/A 8 oz/A 4 oz/A 12 oz/A
<b><u>Winter Cereals – Winter Barley</u></b>										
Boundary	Bonnors Ferry	25"	1750'	Direct Seed	9/26/16	8/3/17	Chickpeas	17-38-23-11 (f) 40-0-0-6 (s)	Axial Star Affinity BS Priaxor Tilt WildCard	16.4 oz/A 0.4 oz/A 8 oz/A 4 oz/A 32 oz/A

\* (f) = fall applied, (s) = spring applied.

**Table 1 (continued). Trial locations and management information for the 2016-2017 Northern Idaho Extension variety trials.**

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S (lb/A)*	-----Chemical-----	
									Product Name	Rate
<b><u>Spring Cereals - Soft Spring Wheat</u></b>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	5/9/17	8/28/17	W. Wheat	65-10-0-10	Huskie Orion	12 oz/A 17 oz/A
Nez Perce	Genesee	20"	2650'	Direct Seed	5/1/17	8/23/17	W. Wheat	60-0-0-0 (f) 85-30-0-20 (s)	Huskie Orion Propiconazole Priaxor	12 oz/A 17 oz/A 4 oz/A 2 oz/A
Latah	Moscow	24"	2600'	Conventional Tillage	5/11/17	8/31/17	W. Wheat	93-30-0-21	Huskie Orion Starane	12 oz/A 17 oz/A 5 oz/A
Boundary	Bonnors Ferry	25"	1750'	Direct Seed	5/18/17	9/8/17	W. Wheat	77-35-22-10	Powerflex Tilt Wildcard	2 oz/A 2 oz/A 25 oz/A
<b><u>Spring Cereals - Hard Spring Wheat</u></b>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	5/9/17	8/28/17	W. Wheat	110-10-0-10	Huskie Orion	12 oz/A 17 oz/A
Nez Perce	Genesee	20"	2650'	Direct Seed	5/1/17	8/23/17	W. Wheat	60-0-0-0 (f) 135-30-0-20 (s)	Huskie Orion Propiconazole Priaxor	12 oz/A 17 oz/A 4 oz/A 2 oz/A
Latah	Moscow	24"	2600'	Conventional Tillage	5/11/17	8/31/17	W. Wheat	93-30-0-21	Huskie Orion Starane	12 oz/A 17 oz/A 5 oz/A
Boundary	Bonnors Ferry	25"	1750'	Direct Seed	5/18/17	9/8/17	W. Wheat	117-35-22-10	Powerflex Tilt Wildcard	2 oz/A 2 oz/A 25 oz/A

\* (f) = fall applied, (s) = spring applied.

**Table 1 (continued). Trial locations and management information for the 2016-2017 Northern Idaho Extension variety trials.**

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S (lb/A)*	-----Chemical-----	
									Product Name	Rate
<b><u>Spring Cereals - Spring Barley</u></b>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	5/9/17	8/28/17	W. Wheat	65-10-0-10	Huskie Orion	12 oz/A 17 oz/A
Nez Perce	Genesee	20"	2650'	Direct Seed	5/1/17	8/23/17	W. Wheat	60-0-0-0 (f) 85-30-0-20 (s)	Huskie Orion	12 oz/A 17 oz/A
Latah	Moscow	24"	2600'	Direct Seed	5/25/17	8/31/17	W. Wheat	87-28-0-20	Huskie Orion Starane	12 oz/A 17 oz/A 5 oz/A
Boundary	Bonnars Ferry	25"	1750'	Direct Seed	5/18/17	9/8/17	W. Wheat	77-35-22-10	Powerflex Tilt Wildcard	2 oz/A 2 oz/A 25 oz/A
<b><u>Legumes - Winter Peas</u></b>										
Latah	Moscow	24"	2600'	Conventional Tillage	10/19/16	7/28/17	S. Barley	None	Mustang Maxx Warrior II Dimethoate	2.2 oz/A 1.9 oz/A 4.8 oz/A
Idaho	Ferdinand	22"	3850'	Conventional Tillage	10/11/16	--	S. Wheat	None	Poast Select Warrior II Mustang Maxx	7 oz/A 4 oz/A 1.9 oz/A 2.2 oz/A

\* (f) = fall applied, (s) = spring applied.

**Table 1 (continued). Trial locations and management information for the 2016-2017 Northern Idaho Extension variety trials.**

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S (lb/A)*	-----Chemical-----	
									Product Name	Rate**
<b><u>Legumes - Spring Peas</u></b>										
Latah	Moscow	24"	2600'	Conventional Tillage	5/11/17	8/31/17	Sudangrass	None	Sharpen	1 oz/A PrePl
									Tricor	6 oz/A PrePl
									Lorox	24 oz/A PrePl
									Assure II	8 oz/A
									Warrior II	1.9 oz/A
Nez Perce	Genesee	20"	2600'	Direct Seed	5/1/17	8/24/17	S. Barley	None	Sharpen	1 oz/A PrePl
									Sencor	2 oz/A PreEm
									Valor SX	2 oz/A PreEm
									Warrior II	1.9 oz./A
									Mustang Maxx	2.2 oz/A
Lewis	Craigmont	22"	3300'	Conventional Tillage	5/9/17	8/25/17	S. Wheat	None	Metribuzin	1 oz/A PreEm
									Warrior II	1.9 oz/A
									Dimethoate	4.8 oz/A
									Select	4 oz/A
<b><u>Legumes - Spring Lentils</u></b>										
Latah	Moscow	24"	2600'	Conventional Tillage	5/11/17	8/31/17	Sudangrass	None	Lorox	20 oz/A PreEm
									Metribuzin	5.3 oz/A PreEm
									Warrior II	1.9 oz/A
Nez Perce	Genesee	20"	2600'	Direct Seed	5/1/17	8/24/17	S. Barley	None	Metribuzin	5.3 oz/A PreEm
									Warrior II	1.9 oz/A
Lewis	Craigmont	22"	3300'	Conventional Tillage	5/9/17	8/25/17	W. Wheat	None	Metribuzin	5.3 oz/A PreEm
									Warrior II	1.9 oz/A
									Select	4 oz/A

\* (f) = fall applied, (s) = spring applied.

\*\* PreEm = Pre-emergence, PrePl = Pre-plant.

**Table 1 (continued). Trial locations and management information for the 2016-2017 Northern Idaho Extension variety trials.**

County	Nursery Location	Rainfall Zone (inches)	Elevation (feet)	Production System	Planting Date	Harvest Date	Previous Crop	Fertilizer N-P-K-S (lb/A)*	-----Chemical-----	
									Product Name	Rate**
<b><u>Legumes - Spring Chickpeas</u></b>										
Latah	Moscow	24"	2600'	Conventional Tillage	5/11/17	8/31/17	Sudangrass	None	Lorox	20 oz/A PreEm
									Metribuzin	5.3 oz/A PreEm
									Warrior II	1.9 oz/A
Lewis	Craigmont	22"	3300'	Conventional Tillage	5/9/17	8/25/17	S. Barley	None	Metribuzin	5 oz/A PreEm
									Warrior II	1.9 oz/A
									Select	4 oz/A
Nez Perce	Genesee	20"	2600'	Direct Seed	5/1/17	8/24/17	W. Wheat	None	Metribuzin	5.3 oz/A PreEm
									Warrior II	1.9 oz/A

\* (f) = fall applied, (s) = spring applied.

\*\* PreEm = Pre-emergence, PrePl = Pre-plant.

**Table 2. Varieties tested in northern Idaho extension variety trials in 2016-2017.**

<b>Variety</b>	<b>Experimental No.</b>	<b>Year Released</b>	<b>Developer(s) of Variety</b>
<b>Soft White Winter Wheat</b>			
Bobtail	OR08047P94	2013	Oregon AES, USDA
Brundage-96	ID-B-96	2001	Idaho AES, USDA
Bruneau	ID 93-64901A	2009	Idaho AES, USDA
Jasper	WA8169	2014	Washington, AES
LCS Artdeco	NSA-2153A	2011	Limagrain Cereal Seeds
LCS Drive	LWW12-7105	2015	Limagrain Cereal Seeds
LCS Hulk	LWW14-73163	2017	Limagrain Cereal Seeds
LCS Shark	LWW14-71195	2017	Limagrain Cereal Seeds
LCS Sonic	LWW14-73161	2017	Limagrain Cereal Seeds
Madsen	WA 7163	1988	Washington AES, USDA
Norwest Duet	LOR-092	2016	Limagrain Cereal Seeds, Oregon AES, USDA
Norwest Tandom	LOR-334	2016	Limagrain Cereal Seeds, Oregon AES, USDA
PNW Hailey		2017	
Puma	WA 8134	2013	Washington AES
Stephens	OR 65-116	1977	Oregon AES, USDA
SY Ovation	03PN108-21	2011	Syngenta Seeds
UI Castle CL+	09-DH10	2015	Idaho AES, USDA
UI Magic CL+	09-DH11	2015	Idaho AES, USDA
UI Palouse CL+	3_5_10	2015	Idaho AES, USDA
UI Sparrow	IDO1108DH	2016	Idaho AES, USDA
UI/WSU Huffman	IDN-03-29902A	2014	Idaho AES, Washington AES
WB1376CLP	EXP-1030CLP	2015	WestBred/Monsanto
WB-Junction	BZ-6W02-616	2012	WestBred/Monsanto
WB1529	BZ6WM07-436	2014	WestBred/Monsanto
WB1604	BZ6WM09-458	2013	WestBred/Monsanto
WB1783	BZ6W09-471	2017	WestBred/Monsanto
<b>Winter Club Wheat</b>			
Cara	ARS97135-9	2007	Washington AES, USDA
<b>Hard Red and White (W) Winter Wheat</b>			
Keldin	AC55017	2011	WestBred/Monsanto
LCS Colonia	NIC- 05-4711-B	2013	Limagrain Cereal Seeds
LCS Jet	NSA10-7208	2015	Limagrain Cereal Seeds
LCS Rocket	NSA10-2196	2017	Limagrain Cereal Seeds
Norwest-553	ORN00B553	2007	Oregon State AES, USDA-ARSARS, Nickerson, UK
UI Silver (W)	IDO658	2011	Idaho AES, USDA
WB4303		2017	WestBred/Monsanto
WB4623CLP		2017	WestBred/Monsanto
WB-Arrowhead	ML9W05-2501	2011	WestBred/Monsanto
Whetstone	W98-344	2009	Syngenta Seeds

**Table 2 (cont). Varieties tested in northern Idaho extension variety trials in 2016-2017.**

<b>Variety</b>	<b>Experimental No.</b>	<b>Year Released</b>	<b>Developer(s) of Variety</b>
<b>Soft White Spring Wheat</b>			
Alturas	IDO 526	2002	Idaho AES, USDA
Babe	WA 8039	2009	Washington AES, USDA
Diva	WA 8090	2009	Washington AES, USDA
Melba (club)	WA 8193	2016	Washington AES, USDA
JD (club)	WA 8047	2009	Washington AES, USDA
Ryan	WA 8214	2016	Washington AES, USDA
Seahawk	WA 8162	2014	Washington AES, USDA
Tekoa	WA 8189	2016	Washington AES, USDA
UI Stone	IDO599	2012	Idaho AES
WB6121	BZ608-121	2014	WestBred/Monsanto
WB6341	BZ608-125	2014	WestBred/Monsanto
WB6430	BZ608-125	2014	WestBred/Monsanto
<b>Hard Red Spring Wheat</b>			
Alum	WA 8166	2014	Washington AES, USDA
Glee	WA 8074	2012	Washington AES, USDA
Jefferson	IDO 462	1998	Idaho AES, USDA
LCS Iron	11SB0096	2016	Limagrain Cereal Seeds
UI Winchester	IDO 578	2009	Idaho AES, USDA
WB9229			WestBred/Monsanto
WB9350		2016	WestBred/Monsanto
WB9411	BZ908-418	2015	WestBred/Monsanto
WB9518	BZ908-485	2013	WestBred/Monsanto
WB9662			WestBred/Monsanto
WB9668	BZ908-552	2015	WestBred/Monsanto
<b>Hard White Spring Wheat</b>			
Dayn	WA 8123	2013	Washington AES, USDA
UI Platinum	IDO 694C	2014	Idaho AES, USDA
WB7417			WestBred/Monsanto
WB-Hartline	BZ903-445WP	2012	WestBred/Monsanto



**Table 2 (cont). Varieties tested in northern Idaho extension variety trials in 2016-2017.**

<b>Variety</b>	<b>Use</b>	<b>Experimental No.</b>	<b>Year Released</b>	<b>Developer(s) of Variety</b>
<b>Two-Row Winter Barley</b>				
Charles	Malt	94Ab1274	2006	USDA-ARS, Aberdeen
Endeavor	Malt	95Ab2299	2008	Idaho AES, USDA
Wintmalt	Malt		2007	KWS Lochow, Germany
<b>Six-Row Winter Barley</b>				
Buck	Food	09OR-86	2015	Oregon AES, USDA
Eight-Twelve	Feed	79Ab812	1988	Idaho AES, USDA
Sunstar Pride	Feed	SDM204-B	1995	Sunderman Breeding
<b>Two-Row Spring Barley</b>				
Altorado	Feed	BZ509-601	2017	Highland Specialty Grains
Camas	Feed	ND 9147	1998	Idaho AES, USDA
CDC-Copeland	Malt	TR150	1999	University of Saskatchewan, Canada
Champion	Feed	YU-501-385D	2008	WestBred/Monsanto
Claymore	Feed	BZ509-210	2016	Highland Specialty Grains
Explorer	Malt	EB1401	-	Secobra, France
Kardia	Food	2Ab09-X06F084-51	2015	Idaho AES, USDA
LCS Genie	Malt		2011	Limagrain Cereal Seeds
LCS Odyssey	Malt		2013	Limagrain Cereal Seeds
LCS Vespa	Feed		2010	Limagrain Cereal Seeds
Lenetah	Feed	01Ab11107	2007	Idaho AES, USDA
Lyon	Feed	05WA-316.K	2013	Washington AES, USDA
Oreana	Feed	BZ509-448	2016	Highland Specialty Grains
Salute	Food		-	WestBred/Monsanto
Tetonia	Feed	98Ab11720	2007	Idaho AES, USDA
Transit	Food	03AH3054-51	2010	Idaho AES, USDA

**Table 2 (cont). Varieties tested in northern Idaho extension variety trials in 2016-2017.**

Variety	Experimental No.	Year Released	Developer(s) of Variety
<b>Chickpea</b>			
BillyBeans		2010	PNW Farmers Cooperative
Bronic		-	Spain
CDC Orion		2010	University of Saskatchewan, Canada
CDC Frontier		2003	University of Saskatchewan, Canada
Nash	CA 04900843C	2013	USDA-ARS, Washington AES
Sawyer	CA 0090B347C	2010	USDA-ARS, Washington AES
Sierra	CA 9783152C	2001	USDA-ARS, Washington AES
<b>Lentil (class)</b>			
Avondale ( <i>Medium green</i> )	LC 10602300R	2012	USDA-ARS, Washington AES
Crimson ( <i>Small red</i> )	LC 800024	1990	USDA-ARS, Washington AES
Eston ( <i>Small green</i> )		1980	University of Saskatchewan, Canada
Merrit ( <i>Large green</i> )	LC 460266B	2001	USDA-ARS, Washington AES
Morena ( <i>Spanish brown</i> )	LC 02601144P	2011	USDA-ARS, Washington AES
Pardina ( <i>Spanish brown</i> )		-	Spain
Richlea ( <i>Medium green</i> )		1994	University of Saskatchewan, Canada
<b>Winter Pea</b>			
Blaze	PRO 124-7130	2017	ProGene
Granger ( <i>Austrian</i> )	D258-1-2	1996	USDA-ARS, Washington AES
Icicle		2011	ProGene
Koyote		2014	ProGene
Melrose ( <i>Austrian</i> )		1979	Idaho AES
Specter	PS9830F009	2006	USDA-ARS, Washington AES
Windham	PS98305358	2006	USDA-ARS, Washington AES
<b>Spring Green Pea</b>			
Aragorn		2007	ProGene
Ariel	NZ 4L25	2001	Crop and Food Research, New Zealand
Banner	Pro 031-7053	2007	ProGene
Columbian		-	Campbell Soup Co.
Ginny	Pro 091-7137	2014	ProGene
Greenwood	Pro 7040	2012	ProGene
Hampton	PS05100736	2014	USDA-ARS, Washington AES
<b>Spring Yellow Pea</b>			
Carousel	SW 995848	2004	ProGene

## 2016-2017 Growing Conditions and Factors Affecting Trial Results

### *Fall/winter conditions:*

Fall cereal trials were planted from late September to mid-October. There were frequent rain events during October that delayed seeding at some locations. However, there was very good soil moisture and winter wheat established well at all locations. Winter pea seeding was delayed until mid-October at both locations due to excessively dry soil conditions in late September and followed by frequent rain events. Despite the later seeding dates, the winter pea emerged due to mild temperatures well into November 2016. December and January temperatures were below normal (Figure 1A), but adequate snow cover protected the small seedlings and there was little to no evidence of winter injury at any location. As a result of extended snow cover (>60 to 70 days), there was concern about snow mold developing in the winter wheat trials. However, snow mold was not observed at any location during the 2016-2017 winter in northern Idaho.

### *Spring/summer conditions:*

Precipitation from February to April was well above normal in northern Idaho (Figure 1B). October 2016 to June 2017 precipitation at the Parker Plant Sciences Farm east of Moscow was 10.7 inches above normal. This resulted in substantially delayed seeding for all spring trials. Spring cereals were seeded from May 1 to May 25 and spring legumes from May 1 to May 11. This was followed by below normal precipitation in June and July along with above normal temperatures for June, July and August. Therefore, the yield for all spring seeded crops was well below normal. Conditions were dry during the harvest season and there was no evidence of sprout in any of the wheat or barley plots.

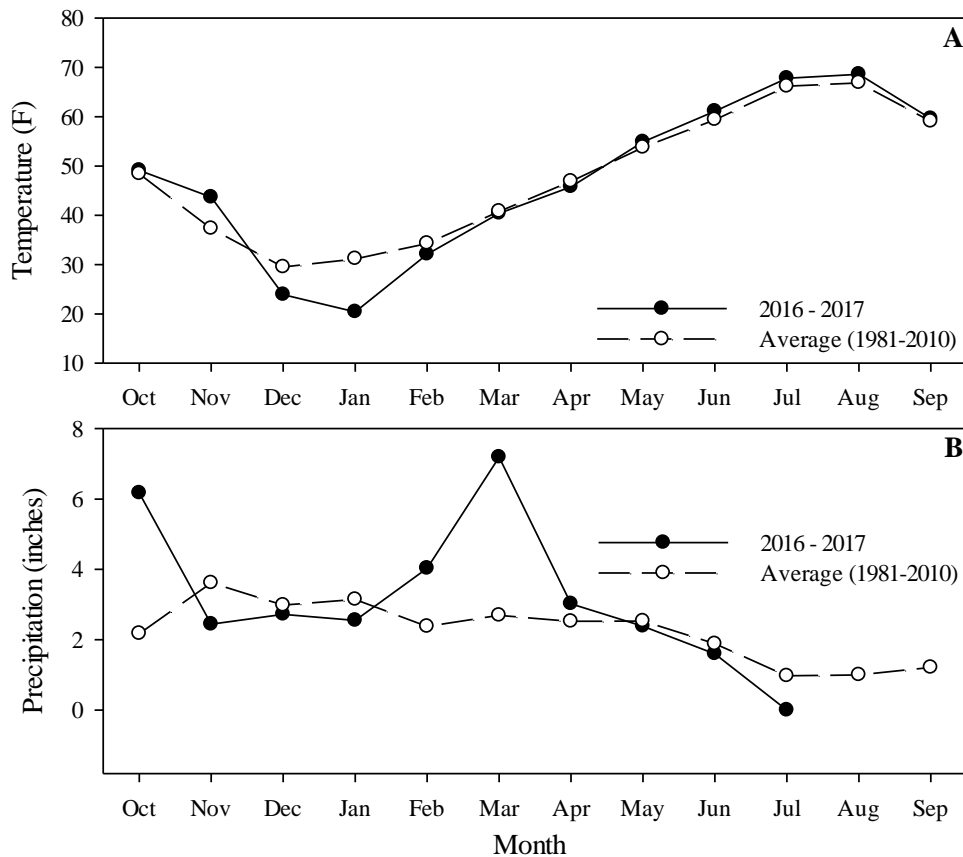


Figure 1. Mean monthly temperature (A) and precipitation (B) for the 2016-2017 growing season at the Parker Plant Sciences Farm east of Moscow compared to 30-year average.

#### *Diseases and pests:*

Stripe rust (*Puccinia striiformis* f.sp. *tritici*) on wheat is commonly observed in northern Idaho. Conditions were conducive for development of stripe rust in the spring of 2017. However, timely fungicide applications and disease resistance in the wheat varieties or lines resulted in very little stripe rust development in the plots. As a result, no notes were collected on this disease. Stem rust (*Puccinia graminis*) was observed to be developing on the spring barley seeded in Bonners Ferry late in the growing season, but was not observed on the winter barley or spring wheat at this location. All varieties appeared to be uniformly impacted and disease incidence was relatively low. The observation of stem rust and economic damage as a result of this pathogen are uncommon in Idaho. Disease severity was too low to result in significant yield reductions within the barley trial.

Pea leaf weevil (*Sitona lineatus* L.) was observed at all winter and spring pea locations, with substantial injury evident on the spring pea. Insecticide applications were performed to limit and prevent further injury to the seedlings. The pea leaf weevil has only one generation per year, with the new adults emerging in early June in the Pacific Northwest. Due to the delayed seeding and emergence of spring pea, the timing of pea leaf weevil adult emergence coincided with spring pea being at the small seeding stage at which point they are particularly vulnerable to damage from this insect. The other problem of note in the legume trials, was the presence of *Aphanomyces* root rot (*Aphanomyces euteiches*) at the Craigmont location. Both pea and lentil are hosts for this pathogen and portions of the plots had substantially reduced stand and poor seedling vigor. As a result, two replications of both the pea and lentil trial at Craigmont were dropped, leaving only two replications for data collection. The most effective management for *Aphanomyces* root rot is avoiding heavily infected fields. In this case, only a portion of the field was impacted in a low valley that was not well drained and retained a greater quantity of water.

### **Summary of 2016-2017 Results**

Data is not reported for the winter wheat trial in Moscow or the either winter pea trials. Excessive snow melt and spring precipitation resulted in flooding and water logged conditions at these trial sites and the location was either not harvested or the yield variability was too high, producing poor quality and misleading data.

A summary of selected agronomic characteristics for winter wheat, spring wheat, spring barley and spring legumes is shown in Tables 3 and 4. Winter wheat yields in 2017 were 14 bu/A above the 10-year average. Winter wheat test weight in 2017 was the second highest of the past 10 years. Due to delayed seeding and higher than normal summer temperatures, the yield for spring wheat was 11 bu/A below the 10-year average while the spring barley yield was 12 bu/A below average. Test weight for both spring cereals were near normal at 58.3 and 50.7 for wheat and barley, respectively.

Like the spring cereal trials, the spring legume yields were significantly impacted by the delayed seeding followed, by drier and warmer than normal late spring and summer weather conditions. The 2017 spring pea yield was at a 10 year low of 749 lb/A, while the 100-seed weight was slightly below the 10-year average at 19.0 g. Vine length and canopy height also were well below normal. Likewise, spring lentil yield was near the 10 year low at 806 lb/A with average 100-seed weight and plant height. Chickpea was less impacted by weather conditions and was only 255 lb/A below the 10-year average at 1806 lb/A. The 100-seed weight was slightly below average while plant height was 2 inches below average.

Specific yield data for all north Idaho trials is listed in Tables 5 to 44. Varieties or breeding lines are listed in order from highest yielding to lowest yielding in each table.

**Table 3. Ten-year average of select agronomic characteristics for winter wheat, spring wheat and spring barley, 2008-2017.**

**Winter Wheat (all market classes)**

YIELD			TEST WEIGHT			PLANT HEIGHT			LODGING		
Year	bu/A	# of Loc.	Year	lb/bu	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2016	122	6	2011	61.4	6	2016	38	6	2014	4	6
2011	111	6	2017	61.2	5	2012	38	6	2011	3	6
2017	107	5	2016	61.1	6	2011	38	5	<b>Ave.</b>	<b>1</b>	--
2013	104	6	2013	59.4	6	2010	38	5	2015	2	6
2015	97	6	<b>Ave.</b>	<b>58.9</b>	--	2017	36	5	2017	0	5
2012	86	6	2012	58.5	6	2015	36	6	2016	0	6
2010	84	5	2009	58.4	4	<b>Ave.</b>	<b>35</b>	--	2010	0	5
2014	78	6	2008	58.3	5	2013	35	6	2009	0	4
<b>Ave.</b>	<b>93</b>	--	2015	57.4	6	2008	33	5	2008	0	5
2008	75	5	2010	56.9	5	2009	31	4	2013	0	4
2009	67	4	2014	56.5	6	2014	28	6	2012	0	6

**Spring Wheat (all market classes)**

YIELD			TEST WEIGHT			PLANT HEIGHT			LODGING		
Year	bu/A	# of Loc.	Year	lb/bu	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2013	76	4	2011	61.9	3	2014	33	4	2014	6	4
2012	75	4	2012	61.1	4	2012	33	4	2016	1	4
2016	72	4	2016	60.5	4	2013	32	4	<b>Ave.</b>	<b>1</b>	--
2010	65	3	2013	60.4	4	2011	32	3	2017	0	4
2014	61	4	2009	59.1	2	2010	32	3	2015	0	4
2011	61	3	<b>Ave.</b>	<b>58.6</b>	--	2016	30	4	2013	0	3
<b>Ave.</b>	<b>58</b>	--	2017	58.3	4	<b>Ave.</b>	<b>30</b>	--	2012	0	4
2017	47	4	2010	57.8	3	2015	29	4	2011	0	3
2015	46	4	2014	55.9	4	2017	27	4	2010	0	3
2009	44	3	2015	55.7	4	2009	27	3	2009	0	3
2008	32	3	2008	55.5	3	2008	22	3	2008	0	3

**Spring Barley (all market classes)**

YIELD			TEST WEIGHT			PLANT HEIGHT			LODGING		
Year	bu/A	# of Loc.	Year	lb/bu	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2016	113	4	2012	54.7	4	2010	34	4	2014	33	4
2012	100	4	2011	53.7	4	2011	33	4	2013	15	4
2011	97	4	2016	53.2	4	2016	32	4	2016	14	4
2010	90	4	2013	51.3	4	2014	32	4	<b>Ave.</b>	<b>11</b>	--
2013	89	4	<b>Ave.</b>	<b>50.9</b>	--	2012	31	4	2010	8	4
2014	88	4	2017	50.7	4	<b>Ave.</b>	<b>30</b>	--	2012	6	4
<b>Ave.</b>	<b>85</b>	--	2010	50.4	4	2017	29	4	2015	3	4
2015	76	4	2009	49.5	3	2015	29	4	2017	0	4
2017	73	4	2015	48.9	4	2009	29	3	2011	--	0
2009	67	3	2008	48.7	4	2013	28	4	2009	--	0
2008	61	4	2014	48.2	4	2008	25	4	2008	--	0

**Table 4. Ten-year average of select agronomic characteristics for pea, lentil and chickpea, 2008-2017.**

**Pea (all market classes)**

YIELD			100 SEED WEIGHT			VINE LENGTH			CANOPY HEIGHT		
Year	lb/A	# of Loc.	Year	grams	# of Loc.	Year	inches	# of Loc.	Year	inches	# of Loc.
2011	2724	2	2011	22.0	2	2014	30	3	2011	27	2
2013	2678	3	2016	21.7	3	2012	30	4	2012	25	4
2012	2678	4	2012	21.0	4	2010	29	3	2010	22	3
2016	2327	3	2013	20.4	3	2013	28	3	2009	22	2
2014	1877	3	2009	19.7	2	2011	28	2	<b>Ave.</b>	<b>20</b>	--
<b>Ave.</b>	<b>1871</b>	--	<b>Ave.</b>	<b>19.7</b>	--	2016	27	3	2016	19	3
2009	1640	2	2017	19.0	3	<b>Ave.</b>	<b>26</b>	--	2015	17	3
2008	1469	2	2014	18.8	3	2009	25	2	2008	17	2
2010	1414	3	2008	18.5	2	2015	22	3	2017	15	3
2015	1156	3	2015	18.3	3	2017	18	3	2014	15	3
2017	749	3	2010	17.9	3	2008	18	2	2013	--	0

**Lentil (all market classes)**

YIELD			100 SEED WEIGHT			PLANT HEIGHT			CANOPY HEIGHT		
Year	lb/A	# of Loc.	Year	grams	# of Loc.	Year	inches	# of Loc.	Year	inches	# of Loc.
2011	2063	3	2008	5.2	2	2014	16	4	2017	12	3
2012	1463	4	2010	5.1	2	2016	15	3	2014	11	4
2009	1383	2	2013	5.0	4	2011	15	3	<b>Ave.</b>	<b>11</b>	--
<b>Ave.</b>	<b>1145</b>	--	2011	5.0	3	2009	15	2	2015	9	1
2008	1124	2	2014	4.8	4	2013	14	4	2016	--	0
2016	1110	3	2012	4.8	4	2012	14	4	2013	--	0
2014	952	4	<b>Ave.</b>	<b>4.7</b>	--	<b>Ave.</b>	<b>14</b>	--	2012	--	0
2013	946	4	2017	4.6	3	2017	13	3	2011	--	0
2010	845	2	2009	4.4	2	2015	13	1	2010	--	0
2017	806	3	2015	4.3	1	2010	13	2	2009	--	0
2015	760	1	2016	3.9	3	2008	11	2	2008	--	0

**Chickpea (all market classes)**

YIELD			100 SEED WEIGHT			PLANT HEIGHT			'A' BEAN (>22/64")		
Year	lb/A	# of Loc.	Year	grams	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc.
2011	3557	1	2008	53.4	1	2013	23	2	2015	73	3
2012	2936	1	2011	51.9	1	2016	22	3	2017	69	3
2016	2609	3	2012	48.9	1	2014	22	3	<b>Ave.</b>	<b>64</b>	--
2008	2597	1	2010	48.3	1	2011	22	1	2016	57	3
2013	2514	2	2013	47.8	2	<b>Ave.</b>	<b>19</b>	--	2014	57	3
<b>Ave.</b>	<b>2061</b>	--	2015	47.6	3	2012	18	1	2013	--	0
2017	1806	3	<b>Ave.</b>	<b>46.6</b>	--	2010	18	1	2012	--	0
2014	1742	3	2017	46.3	3	2017	17	3	2011	--	0
2010	1233	1	2016	42.1	3	2015	17	3	2010	--	0
2015	1119	2	2014	40.6	3	2008	16	1	2009	--	0
2009	495	1	2009	38.6	1	2009	14	1	2008	--	0

**Table 5. Soft white winter wheat variety performance results at Bonners Ferry, 2017.**

Variety or Selection	2016-2017 Crop Year							
	3-Year Average (bu/A)*	2-Year Average (bu/A)*	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
Norwest Duet	127	140	<b>151</b>	61.9	40	0	6/10	11.4
Bruneau	133	143	<b>148</b>	60.8	38	0	6/7	10.8
IDN-01-10704A	133	143	<b>147</b>	61.1	39	0	6/7	10.7
WB1783		139	<b>146</b>	63.7	37	0	6/8	11.6
IDN-02-29001A	131	139	<b>142</b>	60.8	35	0	6/5	11.7
IDN-09-21102A			140	61.3	36	0	6/6	11.2
OR2101043		133	139	61.3	36	0	6/8	11.2
UI/WSU Huffman	129	137	138	61.3	40	0	6/12	10.9
UI Magic CL+	117	123	138	62.2	34	0	6/5	11.6
WB 1529	117	128	138	62.3	35	0	6/5	11.3
UI Castle CL+	122	132	138	63.6	36	0	6/9	11.7
WB-Junction	123	132	137	63.1	36	0	6/3	11.1
WA8232		131	137	62.4	35	14	6/8	11.3
PNW Hailey			136	61.1	36	0	6/7	11.1
OR2121086			135	61.1	37	0	6/8	11.4
IDN-06-03303B			135	60.4	36	0	6/8	11.2
Puma	117	123	134	61.1	38	0	6/9	11.5
WA8234		132	134	62.3	34	0	6/4	11.3
LCS Hulk		133	133	60.6	36	0	6/6	11.4
Madsen	120	129	133	61.5	36	0	6/12	11.9
Bobtail			132	57.4	33	0	6/11	11.1
Stephens	117	123	131	60.0	35	0	6/6	11.4
IDN-09-08357A			130	61.2	37	0	6/5	11.6
Brundage 96			128	61.1	35	0	6/8	11.1
UI Palouse CL+			128	60.7	33	0	6/10	11.4
IDN-07-28017B			128	60.8	35	0	6/7	11.2
SY Ovation		125	127	61.2	36	0	6/5	11.3
Jasper	115	124	127	59.3	35	0	6/10	11.5
UI Sparrow	120	131	125	59.4	40	1	6/11	11.2
Norwest Tandem			124	59.4	36	0	6/8	11.5
LCS Artdeco	106	124	122	60.8	33	0	6/2	10.6
ORI2130033CF+			122	60.6	34	0	6/7	12.1
WB 1604	114	119	122	60.4	35	0	6/3	11.6
ORI2150031CF+			120	60.4	34	0	6/7	12.3
WB1376CLP	108	112	113	63.3	35	0	6/5	12.5
XA1401			95	62.8	33	0	6/4	14.2
XA1101			94	62.6	37	0	6/3	13.2
<b>Average</b>	<b>120</b>	<b>130</b>	<b>131</b>	<b>61.2</b>	<b>36</b>	<b>&lt;1</b>	<b>6/7</b>	<b>11.5</b>
<b>LSD (0.05)</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>0.8</b>	<b>2</b>	<b>3</b>	<b>1.6</b>	<b>0.4</b>
<b>CV (%)</b>	<b>9.4</b>	<b>10.1</b>	<b>5.7</b>	<b>0.9</b>	<b>3.7</b>	<b>562.5</b>	<b>17.1</b>	<b>2.5</b>

\*Two and three year averages are not available for IDN-06-03303B, IDN-07-28017B, Brundage 96, and Bobtail due to wildlife damage to these varieties in 2016.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 6. Soft white winter wheat variety performance results at Genesee (rim area), 2017.**

Variety or Selection	2016-2017 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
WA8234		122	<b>117</b>	62.2	37	0	6/9	11.5
IDN-06-03303B	111	119	<b>116</b>	59.6	35	0	6/11	11.5
UI Sparrow	117	130	<b>116</b>	59.4	40	0	6/16	11.4
IDN-07-28017B		112	<b>115</b>	62.2	36	0	6/10	11.5
LCS Hulk		117	<b>114</b>	61.1	37	0	6/10	11.2
Norwest Duet	113	119	<b>111</b>	60.5	40	0	6/12	11.6
IDN-02-29001A	110	117	<b>111</b>	61.8	37	0	6/11	11.6
OR2101043		121	<b>111</b>	59.9	36	0	6/13	11.4
Jasper	116	126	<b>110</b>	59.1	35	0	6/15	11.4
LWW14-73161			<b>109</b>	61.3	36	0	6/10	11.2
LWW14-71195			<b>109</b>	60.7	34	0	6/10	12.0
Bruneau	113	117	107	61.5	35	0	6/14	11.1
LCS Artdeco	116	119	107	59.9	33	0	6/9	11.2
UI Castle CL+	104	115	107	62.6	37	0	6/13	12.2
UI/WSU Huffman	109	115	106	60.7	37	0	6/15	11.9
PNW Hailey			106	62.5	35	0	6/14	11.6
OR2121086			105	60.6	36	0	6/12	11.8
LCS Drive	109	114	105	59.2	28	0	6/8	11.5
ORI2130033CF+			104	60.9	37	0	6/13	12.6
WA8232		116	104	62.1	37	0	6/14	11.6
UI Palouse CL+	102	109	103	59.9	34	0	6/14	11.8
Puma	107	111	103	61.0	39	0	6/12	11.5
Madsen	102	111	102	60.8	34	0	6/14	12.0
IDN-09-08357A			102	61.0	34	0	6/10	11.4
Cara			102	58.3	32	0	--	11.6
WB 1529	99	101	102	62.4	35	0	6/10	11.8
UI Magic CL+	104	112	101	62.2	34	0	6/10	12.1
IDN-01-10704A	104	109	101	60.8	38	0	6/11	10.9
WB1783		109	99	62.9	35	0	6/11	12.1
Bobtail	109	119	98	58.0	32	0	6/14	10.7
ORI2150031CF+			98	61.0	37	0	6/13	12.5
WB 1604	101	105	97	61.4	35	0	6/9	11.5
WB1376CLP	98	101	97	63.4	36	0	6/10	12.8
IDN-09-21102A			96	62.4	36	0	6/9	11.8
Brundage 96	104	106	96	59.2	33	0	6/12	11.7
Norwest Tandem			96	60.0	34	0	6/11	11.6
Stephens	102	104	94	60.6	36	0	6/10	11.6
XA1101			90	62.3	37	0	6/9	14.1
SY Ovation		99	89	61.2	33	0	6/12	11.6
WB-Junction	105	104	89	62.7	35	0	6/8	11.5
XA1401			83	62.9	34	0	6/10	14.3
<b>Average</b>	<b>107</b>	<b>113</b>	<b>103</b>	<b>61.0</b>	<b>35</b>	<b>0</b>	<b>6/11</b>	<b>11.8</b>
<b>LSD (0.05)</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>1.0</b>	<b>2</b>	<b>--</b>	<b>1.6</b>	<b>0.5</b>
<b>CV (%)</b>	<b>5.9</b>	<b>5.7</b>	<b>6.4</b>	<b>1.2</b>	<b>4.9</b>	<b>--</b>	<b>11.2</b>	<b>3.1</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.



**Table 7. Soft white winter wheat variety performance results at Nezperce, 2017.**

Variety or Selection	2016-2017 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Artdeco	90	100	<b>86</b>	58.3	31	0	6/14	9.6
WA8232		98	<b>85</b>	61.0	34	0	6/18	9.2
IDN-07-28017B		94	<b>85</b>	60.4	32	0	6/16	9.2
Jasper	86	104	<b>84</b>	58.2	32	0	6/18	9.3
Bruneau	88	102	<b>84</b>	60.4	33	0	6/17	9.7
Norwest Duet	91	106	<b>83</b>	60.7	36	0	6/18	9.7
LCS Hulk		103	<b>83</b>	58.6	34	0	6/16	9.1
OR2101043		99	<b>82</b>	58.8	32	0	6/18	9.4
Bobtail	86	101	<b>82</b>	56.1	32	0	6/19	8.9
IDN-09-21102A			<b>80</b>	60.3	31	0	6/15	9.4
IDN-06-03303B	84	97	<b>80</b>	58.9	31	0	6/15	9.2
PNW Hailey			<b>79</b>	61.3	34	0	6/17	9.9
UI Sparrow	85	98	<b>78</b>	59.1	35	0	6/18	9.3
IDN-02-29001A	81	92	<b>78</b>	59.8	32	0	6/16	9.0
UI/WSU Huffman	82	95	<b>77</b>	59.9	34	0	6/19	10.2
IDN-01-10704A	81	93	<b>77</b>	59.8	35	0	6/16	9.2
IDN-09-08357A			<b>77</b>	59.9	31	0	6/17	9.6
WA8234		96	<b>77</b>	60.5	31	0	6/15	9.6
WB1783		93	75	61.9	32	0	6/16	10.2
Cara			75	57.7	30	0	6/20	9.9
OR2121086			75	59.9	34	0	6/17	9.7
UI Palouse CL+	76	89	75	57.7	30	0	6/18	9.7
LCS Sonic			74	59.1	34	0	6/16	9.4
Brundage 96	80	91	74	58.3	31	0	6/16	9.6
XA1101			74	61.4	30	0	6/13	11.6
SY Ovation		89	74	60.0	32	0	6/16	9.8
Puma	81	92	74	60.2	34	0	6/16	9.6
WB 1529	81	88	73	61.4	29	0	6/15	10.1
UI Magic CL+	71	84	72	60.7	32	0	6/14	9.5
Norwest Tandem			72	59.6	29	0	6/17	9.3
ORI2130033CF+			72	59.9	34	0	6/18	10.2
ORI2150031CF+			72	59.9	33	0	6/17	10.5
WB1376CLP	74	83	72	62.4	32	0	6/14	10.6
Madsen	76	88	71	60.0	32	0	6/19	9.5
UI Castle CL+	73	90	71	60.3	33	0	6/18	9.9
WB 1604	77	84	70	59.8	30	0	6/12	10.1
WB-Junction	84	92	70	60.1	31	0	6/12	9.5
Stephens	77	87	66	59.1	32	0	6/15	9.9
XA1401			61	61.7	30	0	6/14	12.2
<b>Average</b>	<b>81</b>	<b>94</b>	<b>76</b>	<b>59.8</b>	<b>32</b>	<b>0</b>	<b>6/16</b>	<b>9.7</b>
<b>LSD (0.05)</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>1.2</b>	<b>2</b>	<b>--</b>	<b>2</b>	<b>0.8</b>
<b>CV (%)</b>	<b>8.8</b>	<b>8.2</b>	<b>9.1</b>	<b>1.4</b>	<b>4.1</b>	<b>--</b>	<b>11.5</b>	<b>5.7</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 8. Soft white winter wheat variety performance results at Tammany (Lewiston), 2017.**

Variety or Selection	2016-2017 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Sonic			<b>133</b>	59.4	42	0	5/29	9.0
IDN-07-28017B		133	<b>130</b>	60.2	40	0	5/27	9.0
LCS Hulk		141	<b>129</b>	59.5	43	0	5/28	8.6
UI Magic CL+	129	136	<b>129</b>	61.1	37	0	5/27	8.4
SY Ovation		137	<b>128</b>	60.6	39	0	5/28	9.2
LCS Artdeco	141	144	<b>128</b>	60.7	35	0	5/23	8.8
IDN-02-29001A	135	139	<b>127</b>	61.5	40	0	5/28	9.1
UI/WSU Huffman	127	131	<b>126</b>	59.5	44	0	5/31	8.9
WA8234		135	<b>125</b>	60.5	38	0	5/27	8.7
IDN-06-03303B	129	136	<b>125</b>	60.0	38	0	5/29	8.6
Norwest Duet	134	137	<b>125</b>	59.3	47	0	5/29	9.1
Jasper	127	132	<b>124</b>	59.2	40	0	5/30	8.6
Bobtail	131	138	<b>124</b>	57.3	38	0	5/29	7.3
WA8232		133	<b>123</b>	59.9	42	0	5/30	8.4
PNW Hailey			<b>122</b>	62.1	41	0	5/29	8.1
IDN-01-10704A	127	129	<b>122</b>	59.8	42	0	5/29	9.3
OR2101043		131	<b>122</b>	59.6	41	0	5/30	7.9
UI Sparrow	126	129	121	57.5	44	0	5/31	9.0
WB 1529	130	133	120	62.2	39	0	5/28	8.7
UI Palouse CL+	119	126	119	59.6	38	0	5/29	8.5
Bruneau	128	132	119	60.1	43	0	5/30	7.6
WB 1604	129	133	118	61.5	37	0	5/24	8.5
IDN-09-08357A			118	60.7	39	0	5/28	9.1
IDN-09-21102A			118	61.4	40	0	5/26	8.5
Puma	129	126	118	59.7	44	0	5/28	10.3
WB1783		130	117	62.0	41	0	5/29	9.6
Norwest Tandem			114	60.3	37	0	5/26	8.1
OR2121086			112	61.2	39	0	5/29	8.2
UI Castle CL+	111	124	112	59.5	40	0	5/30	7.9
Brundage 96	121	126	112	60.0	38	0	5/30	8.0
WB-Junction	128	128	111	61.6	38	0	5/24	8.3
Stephens	121	123	110	60.3	39	0	5/27	7.5
ORI2130033CF+			109	59.9	39	0	5/30	9.3
ORI2150031CF+			109	59.9	39	0	5/29	8.6
Madsen	118	119	108	60.0	38	0	5/30	7.5
Cara			106	57.8	39	0	5/31	8.4
WB1376CLP	113	116	105	63.7	39	0	5/28	9.3
XA1101			104	62.7	41	0	5/27	8.8
XA1401			84	62.4	38	0	5/28	8.6
<b>Average</b>	<b>126</b>	<b>131</b>	<b>118</b>	<b>60.4</b>	<b>40</b>	<b>0</b>	<b>5/28</b>	<b>8.6</b>
<b>LSD (0.05)</b>	<b>7</b>	<b>9</b>	<b>12</b>	<b>0.7</b>	<b>2</b>	<b>--</b>	<b>1.2</b>	<b>0.9</b>
<b>CV (%)</b>	<b>6.7</b>	<b>6.7</b>	<b>7.3</b>	<b>0.8</b>	<b>3.8</b>	<b>--</b>	<b>12.3</b>	<b>7.8</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 9. Soft white winter wheat variety performance results at Tensed, 2017.**

Variety or Selection	2016-2017 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
Jasper	131	137	<b>133</b>	60.4	41	0	6/13	11.8
WA8232		131	<b>130</b>	62.6	42	0	6/13	12.2
LCS Hulk		139	<b>130</b>	60.7	41	0	6/11	11.9
PNW Hailey			<b>127</b>	63.2	41	0	6/12	12.2
Puma	129	130	<b>125</b>	60.6	43	0	6/13	12.1
Norwest Duet	128	135	<b>124</b>	61.2	45	0	6/13	11.8
IDN-01-10704A	126	132	<b>124</b>	61.5	41	0	6/10	11.8
OR2101043		130	<b>121</b>	60.7	41	0	6/13	12.3
UI/WSU Huffman	126	134	<b>121</b>	61.0	40	0	6/16	12.7
IDN-09-21102A			<b>119</b>	62.3	38	0	6/8	12.4
UI Sparrow	126	131	<b>119</b>	60.1	42	0	6/16	11.9
IDN-06-03303B	123	124	117	59.0	38	0	6/12	12.1
LCS Artdeco	126	133	117	60.4	34	0	6/7	11.8
IDN-07-28017B		115	116	61.5	37	0	6/9	12.1
Madsen	118	124	116	61.5	40	0	6/16	12.8
WA8234		131	116	62.6	39	0	6/8	12.2
UI Magic CL+	108	125	115	61.8	37	0	6/9	12.4
UI Castle CL+	103	123	115	62.1	40	0	6/15	12.4
Bobtail	124	135	112	57.7	37	0	6/14	11.3
OR2121086			111	60.7	38	0	6/12	12.2
LCS Drive	112	121	109	59.0	31	0	6/8	12.3
Norwest Tandem			109	60.1	35	0	6/11	11.8
UI Palouse CL+	115	120	109	59.8	37	0	6/15	12.3
SY Ovation		126	109	60.6	37	0	6/13	12.1
IDN-02-29001A	118	123	109	61.7	38	0	6/10	12.2
Stephens	117	121	109	60.7	39	0	6/9	11.9
LCS Shark			108	60.4	36	0	6/9	12.7
Bruneau	125	125	107	61.3	39	0	6/14	12.1
WB 1529	116	117	105	62.3	36	0	6/10	12.2
ORI2150031CF+			104	61.0	40	0	6/14	13.1
WB1376CLP	105	110	104	63.0	39	0	6/11	13.8
WB 1604	108	116	104	61.3	36	0	6/8	12.4
IDN-09-08357A			104	61.2	38	0	6/9	12.7
Brundage 96	115	115	104	60.2	38	0	6/13	12.3
WB1783		123	103	63.8	38	0	6/12	12.7
ORI2130033CF+			96	61.2	40	0	6/13	13.1
WB-Junction	116	114	94	63.1	36	0	6/9	12.5
Cara			91	60.4	35	0	6/17	12.9
XA1101			88	62.2	38	0	6/9	14.4
XA1401			82	62.3	40	0	6/10	15.4
<b>Average</b>	<b>119</b>	<b>126</b>	<b>111</b>	<b>61.2</b>	<b>38</b>	<b>0</b>	<b>6/11</b>	<b>12.4</b>
<b>LSD (0.05)</b>	<b>16</b>	<b>18</b>	<b>15</b>	<b>1.0</b>	<b>2</b>	<b>--</b>	<b>1.5</b>	<b>0.4</b>
<b>CV (%)</b>	<b>15.8</b>	<b>14.1</b>	<b>9.3</b>	<b>1.1</b>	<b>3.8</b>	<b>--</b>	<b>8.5</b>	<b>2.3</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 10. Soft white winter wheat performance comparison across northern Idaho, 2017.**

Variety or Selection**	2016-2017 Crop Year*											
	3-Year Yield***	2-Year Yield	North Idaho Average	Bonnors Ferry	Genesee	Nezperce	Tammany	Tensed	Test Weight	Plant Height	Lodging	Protein
	bu/A								(lb/bu)	(inches)	(%)	(%)
Norwest Duet	118	127	<b>119</b>	<b>151</b>	<b>111</b>	<b>83</b>	<b>125</b>	<b>124</b>	60.7	41	0	10.7
LCS Hulk		126	<b>118</b>	133	<b>114</b>	<b>83</b>	<b>129</b>	<b>130</b>	60.1	38	0	10.4
Jasper	115	124	<b>116</b>	127	<b>110</b>	<b>84</b>	<b>124</b>	<b>133</b>	59.2	37	0	10.5
WA8232		121	<b>116</b>	137	104	<b>85</b>	<b>123</b>	<b>130</b>	61.6	38	3	10.5
OR2101043		123	<b>115</b>	139	<b>111</b>	<b>82</b>	<b>122</b>	<b>121</b>	60.1	37	0	10.4
IDN-06-03303B			<b>115</b>	135	<b>116</b>	<b>80</b>	<b>125</b>	117	59.6	36	0	10.5
IDN-01-10704A	114	121	<b>114</b>	<b>147</b>	101	<b>77</b>	<b>122</b>	<b>124</b>	60.6	39	0	10.4
IDN-07-28017B			<b>114</b>	128	<b>115</b>	<b>85</b>	<b>130</b>	116	61.0	36	0	10.5
UI/WSU Huffman	114	123	<b>114</b>	138	106	<b>77</b>	<b>126</b>	<b>121</b>	60.5	39	0	10.9
WA8234		123	<b>114</b>	134	<b>117</b>	<b>77</b>	<b>125</b>	116	61.6	36	0	10.6
IDN-02-29001A	115	122	113	<b>142</b>	<b>111</b>	<b>78</b>	<b>127</b>	109	61.1	36	0	10.7
Bruneau	117	124	113	<b>148</b>	107	<b>84</b>	119	107	60.8	38	0	10.2
PNW Hailey			113	136	106	<b>79</b>	<b>122</b>	<b>127</b>	62.1	37	0	10.6
LCS Artdeco	116	124	112	122	107	<b>86</b>	<b>128</b>	117	60.0	33	0	10.4
UI Magic CL+	106	116	112	138	101	72	<b>129</b>	115	61.6	35	0	10.8
UI Sparrow	115	124	112	125	<b>116</b>	<b>78</b>	121	<b>119</b>	59.1	40	<1	10.6
IDN-09-21102A			111	140	96	<b>80</b>	118	<b>119</b>	61.5	36	0	10.6
Puma	112	116	110	134	103	74	118	<b>125</b>	60.5	39	0	11.0
Bobtail			110	132	98	<b>82</b>	<b>124</b>	112	57.3	34	0	9.9
WB1783		119	108	<b>146</b>	99	75	117	103	62.9	37	0	11.3
OR2121086			108	135	105	75	112	111	60.7	37	0	10.6
WB 1529	109	114	107	138	102	73	120	105	62.1	35	0	10.8
UI Castle CL+	102	116	107	138	107	71	112	115	61.5	37	0	10.8
UI Palouse CL+			107	128	103	75	119	109	59.6	34	0	10.7
IDN-09-08357A			106	130	102	<b>77</b>	118	104	60.8	36	0	10.9
Madsen	107	114	106	133	102	71	108	116	60.7	36	0	10.7
SY Ovation		115	106	127	89	74	<b>128</b>	109	60.7	35	0	10.8
Norwest Tandem			103	124	96	72	114	109	59.9	34	0	10.4
Brundage 96			103	128	96	74	112	104	59.7	35	0	10.5
WB 1604	106	111	102	122	97	70	118	104	60.9	34	0	10.8
Stephens	107	112	102	131	94	66	110	109	60.2	36	0	10.4
ORI2130033CF+			101	122	104	72	109	96	60.5	37	0	11.4
ORI2150031CF+			100	120	98	72	109	104	60.4	37	0	11.4
WB-Junction	111	114	100	137	89	70	111	94	62.1	35	0	10.6
WB1376CLP	99	104	98	113	97	72	105	104	63.2	36	0	11.8
XA1101			90	94	90	74	104	88	62.2	36	0	12.4
XA1401			81	95	83	61	84	82	62.4	35	0	12.9
Cara			--	--	102	75	106	91	--	--	--	--
LCS Drive			--	--	105	--	--	109	--	--	--	--
LCS Sonic			--	--	<b>109</b>	74	<b>133</b>	--	--	--	--	--
LCS Shark			--	--	<b>109</b>	--	--	108	--	--	--	--
<b>Average</b>	<b>111</b>	<b>119</b>	<b>108</b>	<b>131</b>	<b>103</b>	<b>76</b>	<b>118</b>	<b>111</b>	<b>60.8</b>	<b>36</b>	<b>&lt;1</b>	<b>10.8</b>
<b>LSD (0.05)</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>15</b>	<b>0.4</b>	<b>1</b>	<b>1</b>	<b>0.3</b>
<b>CV (%)</b>	<b>8.3</b>	<b>8.3</b>	<b>9.3</b>	<b>5.7</b>	<b>6.4</b>	<b>9.1</b>	<b>7.3</b>	<b>9.3</b>	<b>1.1</b>	<b>4.2</b>	<b>1267</b>	<b>4.4</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*Cara, LCS Drive, LCS Sonic and LCS Shark were not included in the multilocation averages since these varieties were not included in Bonnors Ferry. Bobtail, IDN-06-03303B, IDN-07-28017B and UI Palouse CL+ are not included in 2-year and 3-year averages as these varieties were significantly impacted by wildlife herbivory in 2015 and 2016 at Bonnors Ferry.

**Table 11. Hard winter wheat variety performance results at Bonners Ferry, 2017.**

Variety or Selection	Market Class*	2016-2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Rocket	HRW			<b>144</b>	59.8	32	0	6/7	12.3
Keldin	HRW	114	116	<b>142</b>	63.9	36	0	6/7	12.4
XA4104	HRW			<b>140</b>	63.8	35	0	6/3	13.1
LCS Jet	HRW	126	126	<b>135</b>	60.9	31	3	6/6	12.2
OR2111025	HWW			<b>130</b>	62.8	35	0	6/7	12.4
OR2120070R	HRW			127	61.8	34	0	6/6	12.6
Norwest 553	HRW	110	114	124	62.3	31	0	6/7	12.8
WA8248	HRW			122	63.6	34	0	6/3	13.2
UI Silver	HWW	103	109	121	63.1	38	50	6/8	12.1
OR2130118H	HWW			121	63.6	33	0	6/7	12.3
WB-Arrowhead	HRW	105	104	121	63.1	40	0	6/6	12.4
OR2130021R	HRW			119	62.9	32	0	6/8	12.7
WB4303	HRW			116	64.3	33	0	6/2	14.0
OR2120276H	HWW		103	116	62.7	35	0	6/5	12.7
OR2110679	HWW		106	116	61.8	36	0	6/7	12.4
IDO1506	HWW			114	59.3	27	0	6/7	12.3
XA4103	HRW			111	63.5	33	0	6/2	12.7
WB4623 CLP	HRW			106	63.0	34	0	6/4	14.0
<b>Average</b>		<b>112</b>	<b>111</b>	<b>124</b>	<b>62.6</b>	<b>34</b>	<b>3</b>	<b>6/5</b>	<b>12.7</b>
<b>LSD (0.05)</b>		<b>9</b>	<b>11</b>	<b>16</b>	<b>0.6</b>	<b>3</b>	<b>10</b>	<b>1.6</b>	<b>0.3</b>
<b>CV (%)</b>		<b>9.7</b>	<b>9.6</b>	<b>8.9</b>	<b>0.6</b>	<b>5.4</b>	<b>243.4</b>	<b>20.3</b>	<b>1.5</b>

\*HRW = hard red wheat, HWW = hard white wheat

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 12. Hard winter wheat variety performance results at Genesee, 2017.**

Variety or Selection	Market Class*	2016-2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Rocket	HRW			<b>116</b>	60.2	35	0	6/11	11.9
LCS Jet	HRW	116	122	<b>110</b>	61.0	35	0	6/11	12.2
LCS Colonia	HRW	107	114	107	59.1	35	0	6/15	12.4
Keldin	HRW	108	109	103	63.3	37	0	6/11	12.4
OR2130021R	HRW			100	62.0	34	0	6/11	12.7
WA8248	HRW			98	63.4	35	0	6/9	13.5
WB-Arrowhead	HRW	104	105	94	61.9	39	0	6/12	12.7
UI Silver	HWW	100	100	94	62.6	40	0	6/15	12.4
XA4104	HRW			92	63.0	34	0	6/8	12.8
OR2120070R	HRW			90	61.5	34	0	6/10	12.5
Norwest 553	HRW	97	100	87	60.9	31	0	6/11	12.7
OR2130118H	HWW			87	63.1	33	0	6/12	13.0
OR2111025	HWW			85	62.1	36	0	6/14	12.8
XA4103	HRW			84	62.8	33	0	6/5	12.6
OR2110679	HWW		100	84	61.1	35	0	6/13	12.7
WB4623 CLP	HRW			82	61.8	35	0	6/10	13.6
WB4303	HRW			81	63.7	32	0	6/8	14.4
OR2120276H	HWW		93	79	61.3	33	0	6/10	12.8
IDO1506	HWW			77	60.9	26	0	6/11	12.1
<b>Average</b>		<b>105</b>	<b>105</b>	<b>92</b>	<b>61.9</b>	<b>34</b>	<b>0</b>	<b>6/11</b>	<b>12.7</b>
<b>LSD (0.05)</b>		<b>5</b>	<b>7</b>	<b>7</b>	<b>1.0</b>	<b>2</b>	<b>--</b>	<b>1.3</b>	<b>0.3</b>
<b>CV (%)</b>		<b>5.6</b>	<b>6.3</b>	<b>5.5</b>	<b>1.1</b>	<b>3.6</b>	<b>--</b>	<b>9.5</b>	<b>1.8</b>

\*HRW = hard red wheat, HWW = hard white wheat

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 13. Hard winter wheat variety performance results at Nezperce, 2017.**

Variety or Selection	Market Class*	2016-2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Jet	HRW	94	107	<b>96</b>	59.5	32	0	6/14	10.0
LCS Rocket	HRW			<b>95</b>	57.9	31	0	6/14	10.1
LCS Colonia	HRW	87	103	<b>93</b>	59.7	32	0	6/18	10.6
Keldin	HRW	86	96	<b>91</b>	62.1	34	0	6/15	10.9
OR2120070R	HRW			<b>90</b>	60.8	31	0	6/13	10.5
Norwest 553	HRW	84	101	<b>90</b>	60.6	29	0	6/16	10.8
XA4104	HRW			<b>90</b>	62.5	31	0	6/12	11.2
OR2130021R	HRW			89	61.8	32	0	6/16	11.0
UI Silver	HWW	85	96	86	61.9	36	0	6/17	10.2
WB-Arrowhead	HRW	87	97	86	61.4	36	0	6/15	11.4
OR2130118H	HWW			86	63.0	32	0	6/15	11.2
OR2120276H	HWW		90	85	60.8	31	0	6/13	11.1
OR2110679	HWW		96	82	61.2	32	0	6/15	10.8
OR2111025	HWW			82	61.8	33	0	6/17	11.1
WB4623 CLP	HRW			81	62.6	33	0	6/15	11.7
XA4103	HRW			80	62.2	31	0	6/7	10.9
IDO1506	HWW			77	60.0	24	0	6/15	11.0
WB4303	HRW			73	63.7	30	0	6/8	12.4
WA8248	HRW			67	62.3	31	0	6/13	11.3
<b>Average</b>		<b>87</b>	<b>98</b>	<b>85</b>	<b>61.0</b>	<b>32</b>	<b>0</b>	<b>6/14</b>	<b>11.0</b>
<b>LSD (0.05)</b>		<b>5</b>	<b>7</b>	<b>7</b>	<b>0.9</b>	<b>2</b>	<b>--</b>	<b>1</b>	<b>0.5</b>
<b>CV (%)</b>		<b>7.5</b>	<b>6.6</b>	<b>6.1</b>	<b>1.1</b>	<b>3.8</b>	<b>--</b>	<b>13.0</b>	<b>3.2</b>

\*HRW = hard red wheat, HWW = hard white wheat

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 14. Hard winter wheat variety performance results at Tammany (Lewiston), 2017.**

Variety or Selection	Market Class*	2016-2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Rocket	HRW			<b>140</b>	59.5	36	0	5/26	10.3
LCS Jet	HRW	135	140	<b>136</b>	61.3	38	0	5/26	10.5
LCS Colonia	HRW	127	133	<b>128</b>	58.2	36	0	5/30	10.8
OR2120070R	HRW			126	60.7	37	0	5/27	10.0
Keldin	HRW	131	135	121	62.5	43	0	5/27	10.0
OR2130021R	HRW			120	60.9	36	0	5/28	10.5
Norwest 553	HRW	114	125	115	60.8	34	0	5/28	9.5
XA4104	HRW			114	61.8	38	0	5/24	9.8
WB4303	HRW			111	64.8	37	0	5/23	9.9
OR2130118H	HWW			111	63.0	36	0	5/28	9.7
UI Silver	HWW	104	114	110	60.2	45	0	5/30	10.8
IDO1506	HWW			109	60.4	27	0	5/28	9.4
OR2110679	HWW		121	108	60.5	37	0	5/28	9.7
XA4103	HRW			108	63.3	39	0	5/22	9.6
OR2120276H	HWW		124	108	61.9	38	0	5/25	10.2
OR2111025	HWW			106	61.5	38	0	5/28	10.1
WB-Arrowhead	HRW	115	119	106	60.5	43	0	5/28	10.2
WA8248	HRW			105	63.0	39	0	5/24	9.6
WB4623 CLP	HRW			94	62.9	42	0	5/27	9.3
<b>Average</b>		<b>121</b>	<b>126</b>	<b>115</b>	<b>61.5</b>	<b>38</b>	<b>0</b>	<b>5/27</b>	<b>10.0</b>
<b>LSD (0.05)</b>		<b>5</b>	<b>8</b>	<b>14</b>	<b>0.8</b>	<b>2</b>	<b>--</b>	<b>1.2</b>	<b>0.7</b>
<b>CV (%)</b>		<b>5.5</b>	<b>6.2</b>	<b>8.4</b>	<b>1.0</b>	<b>3.1</b>	<b>--</b>	<b>15.3</b>	<b>5.2</b>

\*HRW = hard red wheat, HWW = hard white wheat

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.



**Table 15. Hard winter wheat variety performance results at Tensed, 2017.**

Variety or Selection	Market Class*	2016-2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
LCS Rocket	HRW			<b>138</b>	59.8	35	0	6/8	12.8
LCS Jet	HRW	136	146	<b>134</b>	61.3	38	0	6/8	13.3
LCS Colonia	HRW	120	138	127	57.5	38	0	6/11	12.9
Keldin	HRW	126	129	121	62.2	39	0	6/9	13.4
UI Silver	HWW	120	125	121	62.6	43	0	6/11	13.1
Norwest 553	HRW	109	128	119	62.3	35	0	6/10	13.7
OR2130021R	HRW			118	62.2	37	0	6/11	13.6
OR2120070R	HRW			117	61.5	37	0	6/9	13.4
OR2130118H	HWW			109	64.0	35	0	6/10	13.8
XA4104	HRW			107	62.8	35	0	6/6	14.2
OR2111025	HWW			105	63.2	37	0	6/10	13.9
OR2110679	HWW		116	102	62.0	36	0	6/11	13.7
WB-Arrowhead	HRW	115	114	102	63.5	41	0	6/8	14.1
WB4623 CLP	HRW			101	62.3	38	0	6/9	15.0
WA8248	HRW			98	63.3	36	0	6/8	--
IDO1506	HWW			93	60.3	27	0	6/10	13.2
XA4103	HRW			92	63.2	34	0	5/31	13.8
OR2120276H	HWW		108	89	61.7	35	0	6/8	13.9
WB4303	HRW			86	63.9	34	0	6/3	14.8
<b>Average</b>		<b>121</b>	<b>125</b>	<b>109</b>	<b>62.1</b>	<b>36</b>	<b>0</b>	<b>6/8</b>	<b>13.7</b>
<b>LSD (0.05)</b>		<b>17</b>	<b>17</b>	<b>10</b>	<b>1.1</b>	<b>2</b>	<b>--</b>	<b>2.0</b>	<b>0.4</b>
<b>CV (%)</b>		<b>17.4</b>	<b>13.0</b>	<b>6.5</b>	<b>1.2</b>	<b>3.4</b>	<b>--</b>	<b>15.0</b>	<b>2.0</b>

\*HRW = hard red wheat, HWW = hard white wheat

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 16. Hard winter wheat performance comparison across northern Idaho, 2017.**

Variety or Selection	Market Class	2016-2017 Crop Year*											
		3-Year Yield	2-Year Yield	North Idaho Average*	Bonnors Ferry	Genesee	Nezperce	Tammany	Tensed	Test Weight	Plant Height	Lodging	Protein
		----- bu/A ----- (lb/bu) (inches) (%) (%)											
LCS Rocket	HRW			<b>127</b>	<b>144</b>	<b>116</b>	<b>95</b>	<b>140</b>	<b>138</b>	59.4	34	0	11.5
LCS Jet	HRW	121	128	<b>122</b>	<b>135</b>	<b>110</b>	<b>96</b>	<b>136</b>	<b>134</b>	60.8	35	<1	11.6
Keldin	HRW	113	117	116	<b>142</b>	103	<b>91</b>	121	121	62.8	38	0	11.8
OR2120070R	HRW			110	127	90	<b>90</b>	126	117	61.2	34	0	11.8
OR2130021R	HRW			109	119	100	89	120	118	62.0	34	0	12.1
XA4104	HRW			108	<b>140</b>	92	<b>90</b>	114	107	62.8	35	0	12.2
Norwest 553	HRW	103	114	107	124	87	<b>90</b>	115	119	61.4	32	0	11.9
UI Silver	HWW	102	109	106	121	94	86	110	121	62.1	40	10	11.7
OR2130118H	HWW			103	121	87	86	111	109	63.3	34	0	12.0
WB-Arrowhead	HRW	105	108	102	121	94	86	106	102	62.1	39	0	12.2
OR2111025	HWW			102	<b>130</b>	85	82	106	105	62.3	36	0	12.1
OR2110679	HWW		108	98	116	84	82	108	102	61.3	35	0	11.9
WA8248	HRW			98	122	98	67	105	98	63.1	35	0	11.9
OR2120276H	HWW		104	95	116	79	85	108	89	61.7	34	0	12.1
XA4103	HRW			95	111	84	80	108	92	63.0	34	0	11.9
IDO1506	HWW			94	114	77	77	109	93	60.2	26	0	11.6
WB4303	HRW			94	116	81	73	111	86	64.1	33	0	13.1
WB4623 CLP	HRW			93	106	82	81	94	101	62.5	36	0	12.7
LCS Colonia**	HRW			--	--	107	<b>93</b>	<b>128</b>	127	--	--	--	--
<b>Average</b>		<b>109</b>	<b>112</b>	<b>104</b>	<b>124</b>	<b>92</b>	<b>85</b>	<b>115</b>	<b>109</b>	<b>62.0</b>	<b>35</b>	<b>&lt;1</b>	<b>12.0</b>
<b>LSD (0.05)</b>		<b>3</b>	<b>4</b>	<b>6</b>	<b>16</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>10</b>	<b>0.4</b>	<b>1</b>	<b>2.0</b>	<b>0.2</b>
<b>CV (%)</b>		<b>7.6</b>	<b>8.1</b>	<b>9.1</b>	<b>8.9</b>	<b>5.5</b>	<b>6.1</b>	<b>8.4</b>	<b>6.5</b>	<b>1.0</b>	<b>4.1</b>	<b>540.5</b>	<b>3.0</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*LCS Colonia was not included at Bonnors Ferry so multilocation data as well as 2-year and 3-year averages are not available.

**Table 17. Soft white spring wheat variety performance results at Bonners Ferry, 2017.**

Variety or Selection*	3-Year Average (bu/A)	2-Year Average (bu/A)	2017 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
14-SSW-1059			<b>48</b>	58.4	22	0	7/12	11.4
WA8278			<b>46</b>	60.2	25	0	7/7	9.5
WB-6341	65	70	<b>44</b>	61.1	21	0	7/4	9.9
Seahawk	74	85	<b>44</b>	61.7	21	0	7/10	10.1
Tekoa	62	67	<b>42</b>	63.0	22	0	7/5	10.5
Ryan	59	68	38	61.2	23	0	7/2	11.8
JD <sup>c</sup>	63	66	37	62.2	21	0	7/5	11.1
Babe	52	52	37	62.3	22	0	7/9	11.1
Diva	67	74	36	60.7	24	0	7/4	10.6
IDO1405S			35	61.5	22	0	7/6	12.3
WA8277			34	62.5	21	0	6/30	11.6
WB-6121	58	67	33	62.1	20	0	7/1	12.2
Melba <sup>c</sup>		62	32	61.9	19	0	7/7	11.3
Alturas	52	50	31	60.8	19	0	7/13	11.1
WB-6430			29	62.7	18	0	7/3	11.5
IDO1403S			29	61.2	19	0	7/5	12.5
UI Stone	50	53	29	61.7	21	0	7/3	10.9
<b>Average</b>	<b>60</b>	<b>65</b>	<b>37</b>	<b>61.5</b>	<b>21</b>	<b>0</b>	<b>7/5</b>	<b>11.2</b>
<b>LSD (0.05)</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>0.9</b>	<b>2</b>	<b>--</b>	<b>2.6</b>	<b>0.6</b>
<b>CV (%)</b>	<b>10.3</b>	<b>10.0</b>	<b>10.0</b>	<b>0.7</b>	<b>4.6</b>	<b>--</b>	<b>18.5</b>	<b>2.6</b>

\*c = spring club.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 18. Soft white spring wheat variety performance results at Craigmont, 2016.**

Variety or Selection*	2017 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
WA8277			<b>56</b>	56.7	35	0	7/5	14.1
14-SSW-1059			<b>56</b>	53.7	31	0	7/14	15.5
Ryan	60	74	<b>55</b>	53.7	32	0	7/5	13.2
Tekoa	61	75	<b>53</b>	56.1	30	0	7/8	14.2
IDO1405S			<b>53</b>	53.6	31	0	7/5	14.3
WA8278			<b>52</b>	55.1	32	0	7/8	12.9
UI Stone	58	69	51	55.4	30	0	7/5	13.6
WB-6121	58	72	51	54.5	29	0	7/5	14.2
Babe	58	70	51	56.1	31	0	7/9	13.3
Seahawk	60	75	50	55.7	29	0	7/11	14.8
Melba <sup>c</sup>		72	50	55.6	26	0	7/8	13.9
Diva	55	67	50	53.8	31	0	7/7	13.6
WB-6430			50	55.2	24	0	7/5	14.1
JD <sup>c</sup>	55	66	47	56.2	33	0	7/8	14.9
WB-6341	54	62	47	53.7	29	0	7/5	13.6
IDO1403S			46	55.6	27	0	7/5	13.8
Alturas	47	56	42	54.4	27	0	7/8	13.9
<b>Average</b>	<b>57</b>	<b>69</b>	<b>51</b>	<b>55.0</b>	<b>30</b>	<b>0</b>	<b>7/7</b>	<b>14.0</b>
<b>LSD (0.05)</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>1.7</b>	<b>3</b>	<b>--</b>	<b>1.2</b>	<b>1.1</b>
<b>CV (%)</b>	<b>8.4</b>	<b>6.8</b>	<b>7.1</b>	<b>2.2</b>	<b>6.5</b>	<b>--</b>	<b>21.6</b>	<b>5.5</b>

\*c = spring club.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 19. Soft white spring wheat variety performance results at Genesee (rim area), 2016.**

Variety or Selection*	3-Year Average (bu/A)	2-Year Average (bu/A)	2017 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
Tekoa	66	76	<b>72</b>	60.0	33	0	7/1	11.8
Ryan	64	73	<b>70</b>	58.9	34	0	6/27	11.8
WA8277			<b>69</b>	61.4	35	0	6/26	12.1
WB-6341	57	63	<b>69</b>	59.1	33	0	6/27	11.5
Diva	60	70	63	59.9	36	1	6/30	11.8
WA8278			63	59.3	35	0	6/30	11.5
Babe	58	58	62	59.4	34	0	6/30	12.2
UI Stone	54	60	62	59.7	33	0	6/27	11.9
WB-6121	64	70	62	59.1	32	0	6/28	12.8
JD <sup>c</sup>	62	70	61	60.0	35	0	6/30	12.0
WB-6430			60	59.6	30	0	6/26	12.0
Melba <sup>c</sup>		73	60	58.7	30	0	7/2	11.3
IDO1405S			60	58.0	33	0	6/27	12.8
14-SSW-1059			60	57.4	33	0	7/3	13.7
Seahawk	67	75	59	59.9	33	0	7/2	12.6
Alturas	49	55	56	59.2	32	0	7/1	11.8
IDO1403S			53	58.6	30	0	6/27	12.7
<b>Average</b>	<b>60</b>	<b>67</b>	<b>62</b>	<b>59.3</b>	<b>33</b>	<b>&lt;0.1</b>	<b>6/29</b>	<b>12.1</b>
<b>LSD (0.05)</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>1.1</b>	<b>2</b>	<b>ns</b>	<b>2.2</b>	<b>0.7</b>
<b>CV (%)</b>	<b>12.0</b>	<b>8.0</b>	<b>7.9</b>	<b>1.3</b>	<b>4.2</b>	<b>824.6</b>	<b>31.3</b>	<b>3.9</b>

\*c = spring club.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 20. Soft white spring wheat variety performance results at Moscow, 2016.**

Variety or Selection*	2017 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
JD <sup>c</sup>	55	58	<b>47</b>	60.5	28	0	7/3	10.7
WA8278			<b>47</b>	60.1	30	0	7/2	10.8
WA8277			<b>46</b>	62.4	27	0	6/27	11.1
Ryan	56	55	<b>46</b>	59.8	27	0	6/29	10.9
WB-6121	54	56	<b>45</b>	61.1	25	0	7/1	12.3
Diva	56	56	<b>45</b>	60.3	30	0	7/1	10.5
WB-6341	49	45	<b>43</b>	60.3	27	0	7/2	10.9
IDO1405S			<b>42</b>	60.7	29	0	6/30	12.2
WB-6430			<b>41</b>	60.5	25	0	7/1	11.0
Seahawk	59	60	<b>41</b>	59.6	27	0	7/4	11.6
UI Stone	44	42	<b>40</b>	61.0	26	0	6/30	11.3
Tekoa	54	57	37	61.6	28	0	7/2	11.2
Babe	44	38	36	59.6	27	0	7/4	11.2
Melba <sup>c</sup>		52	35	59.8	24	0	7/3	10.5
14-SSW-1059			34	57.2	23	0	7/8	11.6
Alturas	43	37	29	58.5	24	0	7/4	11.6
IDO1403S			28	60.2	23	0	7/1	11.2
<b>Average</b>	<b>51</b>	<b>50</b>	<b>40</b>	<b>60.2</b>	<b>26</b>	<b>0</b>	<b>7/2</b>	<b>11.2</b>
<b>LSD (0.05)</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>1.2</b>	<b>2</b>	<b>--</b>	<b>1.3</b>	<b>ns</b>
<b>CV (%)</b>	<b>10.9</b>	<b>12.9</b>	<b>14.4</b>	<b>1.4</b>	<b>5.7</b>	<b>--</b>	<b>13.3</b>	<b>8.1</b>

<sup>c</sup>c = spring club.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 21. Soft white spring wheat variety performance comparison across northern Idaho, 2016.**

Variety or Selection*	2017 Crop Year									
	3-Year Yield	2-Year Yield	North Idaho Average**	Bonnors Ferry	Craigmont	Genesee	Moscow	Test Weight	Plant Height	Protein
	bu/A							(lb/bu)	(inches)	(%)
Tekoa	61	69	<b>54</b>	<b>42</b>	<b>53</b>	<b>72</b>	37	59.9	28	12.0
Ryan	60	68	<b>54</b>	38	<b>55</b>	<b>70</b>	<b>46</b>	58.2	29	11.9
14-SSW-1059			<b>53</b>	<b>48</b>	<b>56</b>	60	34	56.6	28	13.2
WA8278			<b>53</b>	<b>46</b>	<b>52</b>	63	<b>47</b>	58.4	31	11.4
WA8277			<b>53</b>	34	<b>56</b>	<b>69</b>	<b>46</b>	60.6	30	12.3
Diva	59	67	<b>51</b>	36	50	63	<b>45</b>	58.4	31	11.8
WB-6341	56	60	<b>51</b>	<b>44</b>	47	<b>69</b>	<b>43</b>	58.4	28	11.6
WB-6121	59	66	50	33	51	62	<b>45</b>	58.8	27	13.0
Seahawk	65	73	50	<b>44</b>	50	59	<b>41</b>	58.9	28	12.6
JD <sup>c</sup>	59	65	49	37	47	61	<b>47</b>	59.5	30	12.3
UI Stone	52	56	49	29	51	62	<b>40</b>	59.1	28	12.0
IDO1405S			48	35	<b>53</b>	60	<b>42</b>	58.2	29	12.9
Babe	53	54	48	37	51	62	36	58.9	29	12.0
WB-6430			47	29	50	60	<b>41</b>	59.0	25	12.3
Melba <sup>c</sup>		65	46	32	50	60	35	58.8	25	11.8
Alturas	48	50	41	31	42	56	29	57.8	26	12.2
IDO1403S			40	29	46	53	28	58.5	25	12.5
<b>Average</b>	<b>57</b>	<b>63</b>	<b>49</b>	<b>37</b>	<b>51</b>	<b>62</b>	<b>40</b>	<b>58.7</b>	<b>28</b>	<b>12.2</b>
<b>LSD (0.05)</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>0.7</b>	<b>1</b>	<b>0.6</b>
<b>CV (%)</b>	<b>12.9</b>	<b>10.6</b>	<b>11.9</b>	<b>10.0</b>	<b>7.1</b>	<b>7.9</b>	<b>14.4</b>	<b>1.7</b>	<b>6.1</b>	<b>6.5</b>

\*c = spring club.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 22. Hard spring wheat variety performance results at Bonners Ferry, 2017.**

Variety or Selection	Market Class*	2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
12SB0197	HRS			<b>42</b>	61.1	20	0	7/10	12.9
IDO1202S	HWS	58	62	<b>40</b>	62.2	23	0	7/5	13.0
WB-Hartline	HWS	58	67	<b>39</b>	61.5	21	0	7/7	12.2
Alum	HRS	51	56	37	63.3	22	0	7/4	13.1
Dayn	HWS	64	77	37	62.8	21	0	7/3	12.3
IDO1203S-A	HWS	55	63	36	63.4	20	0	6/30	13.0
IDO1602S	HWS			36	63.3	22	0	7/3	12.5
Glee	HRS	62	73	35	62.9	22	0	7/3	13.3
LCS Iron	HRS	60	72	35	61.1	20	0	7/11	13.1
WB7417	HWS			35	62.7	24	0	7/1	13.8
WB9518	HRS	52	62	35	60.9	20	0	7/8	15.8
WB9411	HRS	56	65	34	62.3	19	0	7/2	12.9
IDO1603S	HRS			33	62.2	21	0	7/4	14.0
Jefferson	HRS	54	62	32	62.5	22	0	7/4	13.6
UI Winchester	HRS	50	57	32	62.0	19	0	7/4	13.9
WB9662	HRS			31	61.4	20	0	7/13	14.0
WB9229	HRS			31	62.5	18	0	7/12	14.0
XA7320	HWS			30	62.8	18	0	6/30	12.8
UI Platinum	HWS	53	69	29	62.9	20	0	7/1	12.4
500-709	HRS			29	61.3	18	0	7/6	13.1
WB9668	HRS	44	53	26	62.3	19	0	7/1	15.1
501-089	HRS			26	59.0	17	0	7/6	14.9
WB9350	HRS			24	61.2	16	0	7/3	14.4
<b>Average</b>		<b>55</b>	<b>64</b>	<b>33</b>	<b>62.1</b>	<b>20</b>	<b>0</b>	<b>7/4</b>	<b>13.6</b>
<b>LSD (0.05)</b>		<b>5</b>	<b>5</b>	<b>5</b>	<b>0.5</b>	<b>2</b>	<b>--</b>	<b>2.4</b>	<b>0.9</b>
<b>CV (%)</b>		<b>10.3</b>	<b>7.0</b>	<b>7.5</b>	<b>0.4</b>	<b>4.7</b>	<b>--</b>	<b>19.9</b>	<b>3.6</b>

\*HRS = hard red spring, HWS = hard white spring

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.



**Table 23. Hard spring wheat variety performance results at Craigmont, 2017.**

Variety or Selection	Market Class*	2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
WB7417	HWS			<b>51</b>	56.4	31	0	7/5	16.2
XA7320	HWS			<b>50</b>	52.6	29	0	7/4	15.1
LCS Iron	HRS	61	71	<b>50</b>	52.4	27	0	7/5	15.9
IDO1602S	HWS			<b>49</b>	53.5	31	0	7/4	16.0
500-709	HRS			<b>48</b>	51.0	25	0	7/6	15.5
Dayn	HWS	61	73	<b>48</b>	54.4	29	0	7/6	15.8
12SB0197	HRS			<b>47</b>	52.5	27	0	7/6	16.4
UI Platinum	HWS	59	68	<b>47</b>	53.2	27	0	7/5	15.3
WB9350	HRS			<b>46</b>	51.1	23	0	7/5	15.7
WB9668	HRS	55	64	<b>46</b>	53.7	26	0	7/4	16.5
501-089	HRS			<b>46</b>	53.5	22	0	7/5	15.2
WB-Hartline	HWS	55	66	<b>46</b>	52.9	28	0	7/6	16.0
IDO1203S-A	HWS	56	65	45	54.3	28	0	7/4	15.9
WB9411	HRS	57	66	45	55.3	28	0	7/5	16.1
IDO1603S	HRS			44	53.2	27	0	7/5	16.1
Glee	HRS	55	65	43	54.4	28	0	7/5	16.5
UI Winchester	HRS	54	64	43	53.2	27	0	7/5	16.3
Alum	HRS	53	64	43	55.4	27	0	7/7	16.7
WB9518	HRS	54	62	42	53.3	25	0	7/5	16.6
IDO1202S	HWS	56	64	41	55.1	29	0	7/8	16.2
Jefferson	HRS	51	58	41	55.5	28	0	7/6	16.5
WB9229	HRS			40	54.4	25	0	7/9	16.4
WB9662	HRS			37	54.8	23	0	7/11	16.9
<b>Average</b>		<b>56</b>	<b>65</b>	<b>45</b>	<b>53.7</b>	<b>27</b>	<b>0</b>	<b>7/6</b>	<b>16.1</b>
<b>LSD (0.05)</b>		<b>4</b>	<b>5</b>	<b>6</b>	<b>1.3</b>	<b>3</b>	<b>--</b>	<b>1.4</b>	<b>0.8</b>
<b>CV (%)</b>		<b>8.8</b>	<b>8.0</b>	<b>9.8</b>	<b>1.8</b>	<b>7.8</b>	<b>--</b>	<b>38.9</b>	<b>3.5</b>

\*HRS = hard red spring, HWS = hard white spring

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 24. Hard spring wheat variety performance results at Genesee, 2017.**

Variety or Selection	Market Class*	2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
WB7417	HWS			<b>68</b>	59.9	33	0	6/26	14.6
XA7320	HWS			<b>68</b>	58.4	28	0	6/26	14.1
Glee	HRS	64	69	<b>67</b>	58.9	32	0	6/27	14.6
WB9518	HRS	67	72	<b>65</b>	59.5	30	0	6/28	15.3
12SB0197	HRS			<b>63</b>	56.9	30	0	7/1	14.3
Jefferson	HRS	57	61	<b>62</b>	59.3	32	0	6/29	14.8
LCS Iron	HRS	65	74	<b>62</b>	57.0	29	0	7/1	14.4
IDO1203S-A	HWS	58	59	<b>62</b>	59.3	29	0	6/27	13.9
IDO1202S	HWS	58	61	<b>61</b>	58.9	33	0	6/29	14.6
Dayn	HWS	65	72	60	56.9	33	0	6/26	14.9
WB-Hartline	HWS	60	66	60	55.9	33	0	6/30	14.9
UI Platinum	HWS	63	68	60	58.6	28	0	6/26	14.1
IDO1602S	HWS			59	58.5	31	0	6/27	14.3
WB9668	HRS	63	67	59	59.0	27	0	6/26	15.9
500-709	HRS			58	57.0	28	0	6/29	14.4
IDO1603S	HRS			58	58.0	29	0	6/29	14.7
UI Winchester	HRS	56	61	57	57.4	30	0	6/27	14.5
WB9411	HRS	61	67	57	58.6	28	0	6/26	15.1
Alum	HRS	59	63	56	58.6	31	0	6/29	15.0
WB9662	HRS			56	59.3	28	0	7/1	15.4
WB9229	HRS			56	59.1	27	0	6/30	14.6
501-089	HRS			53	57.1	24	0	6/27	14.4
WB9350	HRS			51	56.5	23	0	6/27	14.5
<b>Average</b>		<b>61</b>	<b>66</b>	<b>60</b>	<b>58.2</b>	<b>29</b>	<b>0</b>	<b>6/28</b>	<b>14.7</b>
<b>LSD (0.05)</b>		<b>5</b>	<b>5</b>	<b>8</b>	<b>1.4</b>	<b>2</b>	<b>--</b>	<b>1.7</b>	<b>0.6</b>
<b>CV (%)</b>		<b>9.9</b>	<b>7.5</b>	<b>9.5</b>	<b>1.7</b>	<b>4.0</b>	<b>--</b>	<b>31.2</b>	<b>3.1</b>

\*HRS = hard red spring, HWS = hard white spring

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 25. Hard spring wheat variety performance results at Moscow, 2017.**

Variety or Selection	Market Class*	2017 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Protein (%)
Dayn	HWS	57	55	<b>47</b>	59.5	29	0	6/29	13.5
Glee	HRS	51	50	<b>46</b>	60.3	30	0	6/30	14.1
12SB0197	HRS			<b>45</b>	57.6	25	0	7/2	13.6
WB9411	HRS	56	54	<b>45</b>	59.5	26	0	6/27	14.0
WB7417	HWS			<b>45</b>	61.3	30	0	6/29	13.0
UI Platinum	HWS	52	49	<b>45</b>	59.9	26	0	6/27	13.3
WB-Hartline	HWS	55	52	<b>43</b>	58.7	27	0	7/2	13.8
IDO1602S	HWS			<b>41</b>	60.6	28	0	6/27	13.8
IDO1603S	HRS			<b>41</b>	59.9	25	0	7/1	14.1
LCS Iron	HRS	52	51	<b>41</b>	58.1	25	0	7/2	13.5
IDO1202S	HWS	47	44	<b>41</b>	60.9	28	0	7/2	13.3
IDO1203S-A	HWS	47	41	40	61.2	26	0	6/27	12.7
XA7320	HWS			39	61.0	24	0	6/27	13.1
Alum	HRS	51	48	39	60.1	26	0	7/2	14.2
WB9518	HRS	52	49	39	58.7	25	0	7/2	15.2
Jefferson	HRS	47	44	38	60.2	27	0	7/1	14.0
UI Winchester	HRS	48	44	38	59.4	26	0	7/1	13.8
WB9350	HRS			37	58.7	21	0	6/29	14.5
WB9668	HRS	50	45	36	60.8	24	0	6/29	15.2
500-709	HRS			35	59.8	23	0	7/2	13.7
501-089	HRS			33	57.8	21	0	7/2	13.8
WB9229	HRS			32	59.5	23	0	7/4	14.4
WB9662	HRS			30	59.5	23	0	7/4	14.7
<b>Average</b>		<b>51</b>	<b>48</b>	<b>40</b>	<b>59.7</b>	<b>26</b>	<b>0</b>	<b>6/30</b>	<b>13.9</b>
<b>LSD (0.05)</b>		<b>4</b>	<b>4</b>	<b>7</b>	<b>1.3</b>	<b>2</b>	<b>--</b>	<b>1.1</b>	<b>0.9</b>
<b>CV (%)</b>		<b>10.2</b>	<b>8.9</b>	<b>11.7</b>	<b>1.5</b>	<b>4.6</b>	<b>--</b>	<b>15.0</b>	<b>4.8</b>

\*HRS = hard red spring, HWS = hard white spring

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 26. Hard spring wheat variety performance comparison across northern Idaho, 2016.**

Variety or Selection	Market Class*	2017 Crop Year									
		3-Year Yield	2-Year Yield	North Idaho Average**	Bonnors Ferry	Craigmont	Genesee	Moscow	Test Weight	Plant Height	Protein
		bu/A						(lb/bu)	(inches)	(%)	
WB7417	HWS			<b>51</b>	35	<b>51</b>	<b>68</b>	<b>45</b>	59.9	30	14.4
12SB0197	HRS			<b>50</b>	<b>42</b>	<b>47</b>	<b>63</b>	<b>45</b>	56.4	26	14.5
Glee	HRS	58	64	<b>50</b>	35	43	<b>67</b>	<b>46</b>	58.6	29	14.8
Dayn	HWS	62	69	<b>50</b>	37	<b>48</b>	60	<b>47</b>	57.8	29	14.4
LCS Iron	HRS	59	67	<b>49</b>	35	<b>50</b>	<b>62</b>	<b>41</b>	56.6	26	14.4
WB-Hartline	HWS	57	62	<b>48</b>	<b>39</b>	<b>46</b>	60	<b>43</b>	56.6	28	14.5
XA7320	HWS			<b>48</b>	30	<b>50</b>	<b>68</b>	39	58.4	25	13.8
UI Platinum	HWS	57	63	47	29	<b>47</b>	60	<b>45</b>	58.0	26	13.9
WB9411	HRS	58	63	47	34	45	57	<b>45</b>	58.4	26	14.8
IDO1602S	HWS			47	36	<b>49</b>	59	<b>41</b>	58.4	29	14.4
IDO1203S-A	HWS	54	57	47	36	45	<b>62</b>	40	59.3	26	13.9
IDO1202S	HWS	55	58	46	<b>40</b>	41	<b>61</b>	<b>41</b>	59.1	28	14.3
Jefferson	HRS	52	56	45	32	41	<b>62</b>	38	58.9	28	14.9
IDO1603S	HRS			45	33	44	58	<b>41</b>	58.1	26	14.7
500-709	HRS			44	29	<b>48</b>	58	35	56.7	24	14.3
WB9518	HRS	56	61	44	35	42	<b>65</b>	39	57.9	25	15.7
Alum	HRS	54	57	44	37	43	56	39	59.1	27	14.8
UI Winchester	HRS	52	57	43	32	43	57	38	57.7	26	14.7
WB9668	HRS	53	57	43	26	<b>46</b>	59	36	58.7	24	15.7
WB9229	HRS			41	31	40	56	32	58.3	24	15.0
WB9350	HRS			41	24	<b>46</b>	51	37	56.6	21	14.8
501-089	HRS			40	26	<b>46</b>	53	33	56.7	21	14.5
WB9662	HRS			40	31	37	56	30	58.4	24	15.4
<b>Average</b>		<b>56</b>	<b>61</b>	<b>46</b>	<b>33</b>	<b>45</b>	<b>60</b>	<b>40</b>	<b>58.0</b>	<b>26</b>	<b>14.6</b>
<b>LSD (0.05)</b>		<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>0.8</b>	<b>1.1</b>	<b>0.6</b>
<b>CV (%)</b>		<b>11.5</b>	<b>9.0</b>	<b>13.0</b>	<b>7.5</b>	<b>9.8</b>	<b>9.5</b>	<b>11.7</b>	<b>1.9</b>	<b>5.9</b>	<b>5.6</b>

\*HRS = hard red spring, HWS = hard white spring

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 27. Winter barley variety performance results at Bonners Ferry, 2017.**

Variety or Selection*	Market Class*	2016-2017 Crop Year									
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Heading Date
							(>6/64")	(>5.5/64")			
<b>2-row</b>											
10.0777	Malt		139	<b>157</b>	52.8	31	96	3	1	19	6/7
Wintmalt	Malt		132	154	52.9	34	96	2	1	0	6/6
06ARS633-3	Malt			137	52.7	32	83	11	7	18	6/6
05ARS561-208	Malt	131	129	137	52.7	31	92	6	2	31	6/8
10.0860	Malt		119	132	52.6	30	95	4	1	10	6/7
Charles	Malt	111	116	116	51.8	29	93	5	2	35	6/7
Endeavor	Malt	99	100	113	54.1	34	95	4	1	10	6/5
06ARS617-25	Malt			112	54.1	31	95	2	3	5	6/5
05ARS748-270	Malt	66	77	110	58.4	33	83	12	5	3	6/6
<b>6-row</b>											
Sunstar Pride	Feed	156	162	<b>172</b>	52.2	33	80	13	7	0	6/9
Eight-Twelve	Feed	134	136	<b>161</b>	52.9	31	88	9	3	11	6/4
Buck	Malt		72	89	61.0	32	77	18	5	3	6/6
<b>Average</b>		<b>116</b>	<b>118</b>	<b>133</b>	<b>54.0</b>	<b>32</b>	<b>90</b>	<b>7</b>	<b>3</b>	<b>12</b>	<b>6/6</b>
<b>LSD (0.05)</b>		<b>12</b>	<b>14</b>	<b>17</b>	<b>1.1</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>23</b>	<b>1.1</b>
<b>CV (%)</b>		<b>12.9</b>	<b>12.0</b>	<b>8.8</b>	<b>1.4</b>	<b>6.0</b>	<b>1.9</b>	<b>20.8</b>	<b>25.1</b>	<b>133.8</b>	<b>18.9</b>

\*05ARS748-270 and Buck are hullless.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 28. Spring barley variety performance results at Bonners Ferry, 2017.**

Variety or Selection	2017 Crop Year									
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
<b>Feed</b>										
Tetonia	103	121	<b>81</b>	51.4	22	97	2	1	0	9.1
Camas	100	115	<b>78</b>	52.1	23	94	5	2	0	9.8
Claymore	109	126	<b>77</b>	51.8	24	97	3	1	0	11.3
11WA-105-13			<b>76</b>	51.3	23	98	1	<1	0	10.3
Lyon	97	111	<b>75</b>	50.5	22	99	1	<1	0	10.3
09WA-232.16	102	116	<b>75</b>	51.9	21	98	2	<1	0	10.8
09WA-203.24	97	115	<b>75</b>	52.2	21	98	1	1	0	10.8
Oreana	103	122	<b>75</b>	52.1	21	97	2	1	0	11.8
LCS Vespa	102	119	<b>74</b>	51.9	22	99	1	<1	0	12.4
11WA-102-23			72	51.4	23	99	1	<1	0	11.1
Champion	98	117	71	51.6	22	97	3	1	0	10.4
Lenetah	104	117	70	51.8	22	96	3	1	0	10.4
Altorado	98	116	69	51.2	21	96	3	1	0	11.2
<b>Malt</b>										
Explorer			71	50.8	21	97	2	1	0	11.6
2Ab08-X05M010-65			69	50.4	20	97	3	1	0	10.5
2Ab07-X031098-31	90	104	68	52.0	22	96	4	1	0	10.7
CDC-Copeland	96	111	68	51.4	24	96	4	<1	0	11.0
LCS Odyssey	103	123	68	50.6	22	98	1	<1	0	11.2
2Ab08-X05M010-82	97	114	66	51.5	22	97	2	1	0	10.8
LCS Genie	95	116	64	52.6	22	99	1	1	0	11.9
<b>Food</b>										
Kardia	98	114	59	50.9	23	97	3	1	0	13.8
Salute	84	100	59	50.8	24	99	1	<1	0	14.0
2Ab09-X06F058HL-31**	68	79	49	57.8	21	94	5	1	0	14.0
Transit**	53	63	29	55.1	23	79	19	2	0	16.1
<b>Average</b>	<b>95</b>	<b>111</b>	<b>68</b>	<b>51.9</b>	<b>22</b>	<b>96</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>11.5</b>
<b>LSD (0.05)</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>1.1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>1</b>	--	--
<b>CV (%)</b>	<b>9.0</b>	<b>6.1</b>	<b>7.0</b>	<b>1.1</b>	<b>5.0</b>	<b>1.6</b>	<b>43.3</b>	<b>42.9</b>	--	--

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*Entries are hulless or naked.

**Table 29. Spring barley variety performance results at Craigmont, 2017.**

Variety or Selection	2017 Crop Year									
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
<b>Feed</b>										
09WA-232.16	91	112	<b>97</b>	50.9	34	73	22	5	0	10.0
09WA-203.24	90	111	<b>96</b>	50.8	35	73	21	6	0	10.9
Lenetah	88	108	<b>96</b>	50.8	31	77	18	5	0	10.6
Champion	90	110	<b>95</b>	51.2	35	67	27	7	0	10.7
Altorado	90	109	<b>93</b>	49.3	33	31	46	23	0	9.9
11WA-102-23			<b>91</b>	48.4	36	57	28	15	0	11.6
Lyon	86	106	<b>89</b>	48.7	35	53	33	14	0	9.7
11WA-105-13			88	47.4	35	49	30	20	0	10.7
Tetonia	83	104	88	46.8	35	43	35	22	0	11.8
LCS Vespa	83	106	87	50.2	31	67	24	9	0	11.6
Oreana	92	115	85	41.0	30	42	32	27	0	10.8
Camas	82	100	84	51.9	35	64	27	10	0	10.9
Claymore	87	106	84	44.6	35	50	31	19	0	10.2
<b>Malt</b>										
Explorer			<b>93</b>	48.0	30	55	33	12	0	9.7
LCS Genie	83	108	<b>93</b>	48.0	30	66	23	11	0	10.9
LCS Odyssey	88	111	<b>91</b>	45.4	31	74	18	8	0	10.1
2Ab08-X05M010-65			88	45.2	36	35	34	32	0	11.5
2Ab07-X031098-31	81	102	85	49.6	34	49	33	18	0	11.0
2Ab08-X05M010-82	77	97	80	47.6	34	40	32	29	0	10.9
CDC-Copeland	73	93	77	48.2	35	58	29	12	0	11.0
<b>Food</b>										
Salute	74	92	87	47.2	36	69	21	10	0	12.6
2Ab09-X06F058HL-31**	64	81	70	53.9	33	33	35	32	0	13.6
Kardia	68	89	61	49.9	34	74	19	6	0	13.4
Transit**	44	58	41	55.2	33	19	48	33	0	15.9
<b>Average</b>	<b>81</b>	<b>101</b>	<b>85</b>	<b>48.7</b>	<b>34</b>	<b>54</b>	<b>29</b>	<b>17</b>	<b>0</b>	<b>11.3</b>
<b>LSD (0.05)</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>2.6</b>	<b>3</b>	<b>13</b>	<b>7</b>	<b>10</b>	--	--
<b>CV (%)</b>	<b>9.5</b>	<b>7.4</b>	<b>7.3</b>	<b>3.8</b>	<b>5.4</b>	<b>16.6</b>	<b>15.0</b>	<b>40.5</b>	--	--

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*Entries are hulless or naked.

**Table 30. Spring barley variety performance results at Genesee, 2017.**

Variety or Selection	2017 Crop Year									
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
<b>Feed</b>										
Tetonia	78	75	<b>58</b>	50.3	23	70	23	7	0	7.6
Lyon	73	71	<b>54</b>	51.1	21	88	10	2	0	7.3
11WA-102-23			<b>51</b>	49.8	23	84	13	3	0	7.7
Claymore	71	64	50	48.3	21	78	17	5	0	8.1
Camas	70	66	47	51.3	24	68	24	8	0	7.8
09WA-232.16	72	67	45	49.4	21	82	14	4	0	8.1
11WA-105-13			44	49.2	21	78	18	4	0	7.8
Lenetah	69	63	44	49.4	22	82	13	5	0	8.4
Champion	71	64	44	49.6	23	84	12	4	0	8.4
Oreana	72	65	44	49.8	22	81	14	5	0	8.2
LCS Vespa	75	70	44	49.7	22	93	6	1	0	8.4
Altorado	73	67	43	49.5	22	80	15	4	0	7.9
09WA-203.24	68	61	42	50.2	20	86	11	3	0	8.0
<b>Malt</b>										
2Ab08-X05M010-65			<b>54</b>	48.0	23	74	21	5	0	7.6
LCS Odyssey	73	68	<b>51</b>	49.4	22	94	4	1	0	7.9
2Ab08-X05M010-82	72	68	47	48.2	21	70	22	8	0	7.5
CDC-Copeland	77	78	46	48.0	23	77	17	7	0	7.7
Explorer			46	48.0	22	92	6	2	0	8.0
LCS Genie	65	63	42	49.5	23	92	6	2	0	9.0
2Ab07-X031098-31	69	64	41	48.3	21	69	22	8	0	8.2
<b>Food</b>										
Salute	62	59	43	49.0	22	93	6	2	0	9.5
2Ab09-X06F058HL-31**	44	43	34	57.2	21	44	39	17	0	11.3
Kardia	57	51	29	48.6	24	89	9	2	0	11.5
Transit**	39	37	24	52.0	23	26	48	26	0	13.1
<b>Average</b>	<b>67</b>	<b>63</b>	<b>44</b>	<b>49.7</b>	<b>22</b>	<b>78</b>	<b>16</b>	<b>6</b>	<b>0</b>	<b>8.5</b>
<b>LSD (0.05)</b>	<b>7</b>	<b>10</b>	<b>8</b>	<b>1.1</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>--</b>	<b>--</b>
<b>CV (%)</b>	<b>12.5</b>	<b>15.4</b>	<b>12.9</b>	<b>1.5</b>	<b>6.9</b>	<b>5.3</b>	<b>18.4</b>	<b>31.6</b>	<b>--</b>	<b>--</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*Entries are hullless or naked.



**Table 31. Spring barley variety performance results at Moscow, 2017.**

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2017 Crop Year							
			Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%) (>6/64") (>5.5/64")		Thins (%)	Lodging (%)	Protein (%)
<b>Feed</b>										
Tetonia	78	75	<b>58</b>	50.3	23	70	23	7	0	7.6
Lyon	73	71	<b>54</b>	51.1	21	88	10	2	0	7.3
11WA-102-23			<b>51</b>	49.8	23	84	13	3	0	7.7
Claymore	71	64	50	48.3	21	78	17	5	0	8.1
Camas	70	66	47	51.3	24	68	24	8	0	7.8
09WA-232.16	72	67	45	49.4	21	82	14	4	0	8.1
11WA-105-13			44	49.2	21	78	18	4	0	7.8
Lenetah	69	63	44	49.4	22	82	13	5	0	8.4
Champion	71	64	44	49.6	23	84	12	4	0	8.4
Oreana	72	65	44	49.8	22	81	14	5	0	8.2
LCS Vespa	75	70	44	49.7	22	93	6	1	0	8.4
Altorado	73	67	43	49.5	22	80	15	4	0	7.9
09WA-203.24	68	61	42	50.2	20	86	11	3	0	8.0
<b>Malt</b>										
2Ab08-X05M010-65			<b>54</b>	48.0	23	74	21	5	0	7.6
LCS Odyssey	73	68	<b>51</b>	49.4	22	94	4	1	0	7.9
2Ab08-X05M010-82	72	68	47	48.2	21	70	22	8	0	7.5
CDC-Copeland	77	78	46	48.0	23	77	17	7	0	7.7
Explorer			46	48.0	22	92	6	2	0	8.0
LCS Genie	65	63	42	49.5	23	92	6	2	0	9.0
2Ab07-X031098-31	69	64	41	48.3	21	69	22	8	0	8.2
<b>Food</b>										
Salute	62	59	43	49.0	22	93	6	2	0	9.5
2Ab09-X06F058HL-31**	44	43	34	57.2	21	44	39	17	0	11.3
Kardia	57	51	29	48.6	24	89	9	2	0	11.5
Transit**	39	37	24	52.0	23	26	48	26	0	13.1
<b>Average</b>	<b>67</b>	<b>63</b>	<b>44</b>	<b>49.7</b>	<b>22</b>	<b>78</b>	<b>16</b>	<b>6</b>	<b>0</b>	<b>8.5</b>
<b>LSD (0.05)</b>	<b>7</b>	<b>10</b>	<b>8</b>	<b>1.1</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>--</b>	<b>--</b>
<b>CV (%)</b>	<b>12.5</b>	<b>15.4</b>	<b>12.9</b>	<b>1.5</b>	<b>6.9</b>	<b>5.3</b>	<b>18.4</b>	<b>31.6</b>	<b>--</b>	<b>--</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*Entries are hulless or naked.

**Table 32. Spring barley performance comparison across northern Idaho, 2017.**

Variety or Selection	2017 Crop Year													
	3-Year Average	2-Year Average	North Idaho Ave.*	Bonnors Ferry	Craigmont	Genesee	Moscow	Test Weight	Plant Height	Plumps (>6/64)	Plumps (>5.5/64)	Thins	Lodging	Protein
	-----bu/A-----							(lb/bu)	(inches)	-----%				
<b>Feed</b>														
09WA-203.24	91	96	<b>89</b>	<b>75</b>	<b>96</b>	<b>88</b>	42	52.0	31	80	15	5	0	10.0
Champion	92	96	<b>88</b>	71	<b>95</b>	<b>89</b>	44	52.6	31	77	19	5	0	10.2
09WA-232.16	93	97	<b>87</b>	<b>75</b>	<b>97</b>	<b>86</b>	45	51.9	30	82	15	4	0	9.9
Lenetah	93	97	<b>85</b>	70	<b>96</b>	<b>87</b>	44	52.1	29	85	12	3	0	9.9
Oreana	95	102	<b>84</b>	<b>75</b>	85	<b>88</b>	44	47.9	29	66	21	14	0	10.3
Tetonia	92	98	<b>84</b>	<b>81</b>	88	<b>82</b>	<b>58</b>	50.1	30	70	20	10	0	9.8
LCS Vespa	93	101	<b>84</b>	<b>74</b>	87	<b>87</b>	44	51.7	28	82	14	5	0	10.6
Lyon	90	94	83	<b>75</b>	<b>89</b>	80	<b>54</b>	50.7	31	75	19	7	6	9.4
Altorado	90	95	82	69	<b>93</b>	76	43	51.1	29	53	34	13	0	9.9
Camas	88	93	82	<b>78</b>	84	<b>82</b>	47	53.1	31	78	16	6	1	9.8
Claymore	93	97	79	<b>77</b>	84	75	50	48.9	32	70	20	10	0	10.0
11WA-105-13			74	<b>76</b>	88	79	44	49.5	29	69	21	10	0	9.7
11WA-102-23			74	72	<b>91</b>	81	<b>51</b>	50.1	29	77	16	7	0	10.2
<b>Malt</b>														
2Ab08-X05M010-65			73	69	88	<b>82</b>	<b>54</b>	48.5	28	67	21	13	0	10.0
LCS Odyssey	94	102	73	68	<b>91</b>	80	<b>51</b>	48.4	27	87	10	4	0	9.9
Explorer			72	71	<b>93</b>	79	46	49.4	26	79	15	6	0	9.9
CDC-Copeland	85	92	72	68	77	78	46	49.5	30	76	17	7	1	10.1
LCS Genie	87	97	69	64	<b>93</b>	75	42	50.3	26	83	12	6	0	10.5
2Ab07-X031098-31	84	90	68	68	85	79	41	50.3	28	72	19	9	0	10.1
2Ab08-X05M010-82	88	95	68	66	80	79	47	49.5	28	65	21	14	0	9.9
<b>Food</b>														
Salute	78	82	65	59	87	68	43	49.5	28	84	11	4	0	12.0
2Ab09-X06F058HL-31**	64	70	54	49	70	61	34	56.3	27	58	27	16	1	12.9
Kardia	80	86	54	59	61	68	29	49.9	29	82	14	5	0	12.7
Transit**	52	56	38	29	41	56	24	55.0	29	41	41	18	0	14.9
<b>Average</b>	<b>86</b>	<b>92</b>	<b>73</b>	<b>68</b>	<b>85</b>	<b>79</b>	<b>44</b>	<b>50.7</b>	<b>29</b>	<b>73</b>	<b>18</b>	<b>8</b>	<b>&lt;1</b>	<b>10.5</b>
<b>LSD (0.05)</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>1.1</b>	<b>1</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>--</b>
<b>CV (%)</b>	<b>9.8</b>	<b>8.4</b>	<b>8.9</b>	<b>7.0</b>	<b>7.3</b>	<b>6.9</b>	<b>12.9</b>	<b>2.8</b>	<b>6.0</b>	<b>11.1</b>	<b>25.8</b>	<b>54.0</b>	<b>786.1</b>	<b>--</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

\*\*Entries are hulless or naked.

**Table 33. Dry pea variety performance results at Craigmont, 2017.\***

Variety or Selection	2017 Crop Year						
	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)**	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
<b>Green</b>							
Pro 141-6258			<b>1581</b>	20.4	18	15	0.80
Greenwood	1598	2063	<b>1356</b>	19.0	16	14	0.90
PS1410B0064			<b>1308</b>	21.4	17	14	0.82
Pro 121-7126			<b>1290</b>	21.0	14	14	1.00
Pro 131-7123	1525	1846	<b>1230</b>	17.9	16	16	0.97
Hampton	1679	1867	1165	20.4	15	15	0.97
PS14100018			1091	18.0	19	17	0.91
Aragorn	1327	1517	1064	20.0	17	13	0.79
Ginny	1626	2002	1057	19.4	17	17	1.00
PS1514B0002			989	22.0	17	13	0.77
Ariel	1306	1573	969	17.9	17	16	0.95
PS1514B0049			922	20.5	17	17	0.97
PS1410B0073			909	18.7	16	14	0.90
PS05100840	1604	1647	898	21.4	17	15	0.91
PS12100058			864	19.8	18	16	0.89
PS14100072			842	20.4	16	12	0.76
PS1514B0095			705	22.4	13	11	0.85
Columbian	1082	1439	690	19.6	18	13	0.74
PS05100735			556	19.0	13	13	0.97
Banner	1256	1662	521	19.5	16	14	0.93
<b>Yellow</b>							
Pro 133-7409			<b>1444</b>	24.2	19	16	0.84
Pro 133-6243			<b>1333</b>	26.3	18	14	0.80
Pro 143-6230			<b>1264</b>	20.1	18	14	0.78
Carousel	1439	1505	1084	24.0	17	17	1.00
PS1514B0400			963	21.5	16	16	1.00
Pro 093-7410			738	20.8	16	14	0.87
PS10100207			722	23.0	15	15	1.00
PS08101022	1139	1186	681	24.8	14	10	0.68
PS08101004	1365	1523	641	22.5	14	12	0.88
PS07100925	1391	1198	584	23.0	13	11	0.85
<b>Average</b>	<b>1410</b>	<b>1617</b>	<b>981</b>	<b>20.9</b>	<b>16</b>	<b>14</b>	<b>0.89</b>
<b>LSD (0.05)</b>	<b>ns</b>	<b>311</b>	<b>405</b>	<b>1.7</b>	<b>4</b>	<b>4</b>	<b>ns</b>
<b>CV (%)</b>	<b>33.3</b>	<b>16.6</b>	<b>20.2</b>	<b>4.0</b>	<b>12.2</b>	<b>12.4</b>	<b>14.4</b>

\*Data in this table is comprised of only two replications due to severe Aphanomyces root rot in a portion of the trial.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 34. Dry pea variety performance results southeast of Genesee, 2017.**

Variety or Selection	2017 Crop Year						
	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
<b>Green</b>							
PS1410B0073			<b>968</b>	17.6	20	16	0.84
PS1514B0002			<b>958</b>	19.5	20	16	0.80
Hampton	2258	2613	<b>950</b>	20.0	19	17	0.89
PS05100840	2275	2361	<b>897</b>	19.9	19	16	0.85
Pro 121-7126			<b>864</b>	18.6	18	16	0.86
PS14100018			<b>849</b>	16.2	22	19	0.86
PS05100735			<b>849</b>	17.4	21	17	0.83
Ginny	2102	2137	<b>824</b>	17.1	19	16	0.83
Pro 131-7123	2134	2286	<b>824</b>	16.2	19	17	0.86
Greenwood	2047	2129	<b>772</b>	16.3	18	16	0.89
PS1410B0064			<b>759</b>	18.5	20	18	0.92
PS12100058			<b>748</b>	17.8	21	17	0.81
Columbian	1871	1981	<b>733</b>	15.8	20	15	0.72
Pro 141-6258			<b>726</b>	17.1	17	15	0.87
Banner	1682	1749	649	15.0	18	15	0.88
Ariel	1938	1977	636	16.2	19	18	0.93
Aragorn	1853	1874	630	17.7	20	18	0.91
PS1514B0049			590	19.2	23	19	0.83
PS14100072			528	16.0	20	17	0.86
PS1514B0095			379	20.5	16	13	0.85
<b>Yellow</b>							
Pro 133-6243			<b>857</b>	21.8	22	18	0.84
PS08101004	2253	2404	<b>855</b>	19.0	20	16	0.83
PS08101022	2190	2275	<b>853</b>	18.9	18	16	0.87
Pro 093-7410			<b>834</b>	17.3	17	15	0.88
Pro 133-7409			<b>819</b>	19.2	22	18	0.85
PS07100925	2315	2449	<b>810</b>	18.6	16	13	0.86
Pro 143-6230			<b>790</b>	17.3	20	18	0.89
PS1514B0400			644	17.2	19	17	0.90
Carousel	2040	2223	625	20.3	20	17	0.86
PS10100207			372	19.9	24	20	0.82
<b>Average</b>	<b>2074</b>	<b>2189</b>	<b>753</b>	<b>18.1</b>	<b>19</b>	<b>17</b>	<b>0.86</b>
<b>LSD (0.05)</b>	<b>242</b>	<b>340</b>	<b>298</b>	<b>1.2</b>	<b>2</b>	<b>2</b>	<b>ns</b>
<b>CV (%)</b>	<b>14.5</b>	<b>15.6</b>	<b>28.1</b>	<b>4.9</b>	<b>7.4</b>	<b>8.7</b>	<b>10.1</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 35. Dry pea variety performance results at Moscow, 2017.**

Variety or Selection	2017 Crop Year						
	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
<b>Green</b>							
PS14100018			<b>887</b>	17.7	18	17	0.96
PS1410B0064			<b>780</b>	19.2	17	16	0.97
PS1514B0049			<b>779</b>	19.5	22	19	0.87
PS1410B0073			<b>725</b>	19.1	18	15	0.87
PS1514B0095			<b>714</b>	21.2	13	12	0.91
PS1514B0002			<b>695</b>	20.0	15	15	0.97
PS14100072			<b>686</b>	18.8	16	16	0.97
Hampton	1181	1626	676	21.1	16	15	0.93
Pro 141-6258			638	19.0	15	14	0.97
Ariel	629	761	619	17.7	16	15	0.90
Pro 121-7126			619	19.4	17	15	0.92
PS05100840	1180	1238	612	20.4	16	15	0.93
Greenwood	809	962	570	17.6	16	15	0.91
Pro 131-7123	790	936	566	18.0	16	15	0.99
Aragorn	750	914	562	19.2	17	15	0.86
PS12100058			559	17.8	16	16	0.96
Ginny	823	961	553	18.3	15	15	1.00
PS05100735			468	19.0	16	15	0.96
Banner	448	538	459	17.3	17	16	0.96
Columbian	476	488	329	17.1	17	13	0.76
<b>Yellow</b>							
Pro 133-6243			<b>884</b>	20.6	19	17	0.89
Pro 133-7409			<b>790</b>	17.0	18	16	0.88
Carousel	844	1012	673	18.8	18	17	0.96
Pro 143-6230			663	16.9	17	16	0.95
PS07100925	805	952	601	20.4	14	12	0.89
PS1514B0400			593	19.7	15	14	0.95
Pro 093-7410			584	18.7	17	14	0.84
PS08101022	981	1061	571	19.1	14	13	0.95
PS08101004	1103	1207	532	18.6	17	15	0.93
PS10100207			440	20.5	17	16	0.93
<b>Average</b>	<b>833</b>	<b>974</b>	<b>627</b>	<b>18.9</b>	<b>16</b>	<b>15</b>	<b>0.92</b>
<b>LSD (0.05)</b>	<b>170</b>	<b>194</b>	<b>205</b>	<b>2.0</b>	<b>3</b>	<b>2</b>	<b>ns</b>
<b>CV (%)</b>	<b>25.1</b>	<b>19.9</b>	<b>23.3</b>	<b>7.4</b>	<b>11.6</b>	<b>10.8</b>	<b>9.4</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 36. Dry pea performance comparison across northern Idaho, 2017.**

Variety or Selection	2017 Crop Year									
	3-Year Average (lb/A)	2-Year Average (lb/A)	N. Idaho Average (lb/A)**	Craigmont	Genesee	Moscow	100 Seed Weight (gram)	Vine Length (inches)	Canopy Height	Erect Index (0-1)
<b>Green</b>										
PS14100018			<b>913</b>	1091	<b>849</b>	<b>887</b>	17.2	20	18	0.91
Hampton	1708	2050	<b>883</b>	1165	<b>950</b>	676	20.5	17	16	0.92
PS1410B0064			<b>877</b>	<b>1308</b>	<b>759</b>	<b>780</b>	19.4	18	17	0.92
Pro 141-6258			<b>861</b>	<b>1581</b>	<b>726</b>	638	18.5	16	15	0.90
PS1410B0073			<b>859</b>	909	<b>968</b>	<b>725</b>	18.4	18	15	0.86
PS1514B0002			<b>859</b>	989	<b>958</b>	<b>695</b>	20.2	17	15	0.86
Pro 121-7126			<b>851</b>	<b>1290</b>	<b>864</b>	619	19.4	17	15	0.94
Greenwood	1478	1686	<b>808</b>	<b>1356</b>	<b>772</b>	570	17.3	17	15	0.90
Pro 131-7123	1501	1711	<b>802</b>	<b>1230</b>	<b>824</b>	566	17.3	17	16	0.93
PS05100840	1691	1758	783	898	<b>897</b>	612	20.4	17	15	0.89
Ginny	1511	1673	762	1057	<b>824</b>	553	18.1	16	15	0.97
PS1514B0049			732	922	590	<b>779</b>	19.6	21	19	0.87
PS12100058			696	864	<b>748</b>	559	18.2	19	16	0.89
Ariel	1290	1424	695	969	636	619	17.1	17	16	0.92
Aragorn	1309	1427	689	1064	630	562	18.7	18	16	0.87
PS14100072			654	842	528	<b>686</b>	18.0	17	15	0.88
PS05100735			638	556	<b>849</b>	468	18.3	17	16	0.91
PS1514B0095			578	705	379	<b>714</b>	21.1	14	12	0.87
Columbian	1147	1290	563	690	<b>733</b>	329	17.0	18	14	0.74
Banner	1121	1285	547	521	649	459	16.8	17	15	0.92
<b>Yellow</b>										
Pro 133-6243			<b>963</b>	<b>1333</b>	<b>857</b>	<b>884</b>	22.2	20	17	0.85
Pro 133-7409			<b>932</b>	<b>1444</b>	<b>819</b>	<b>790</b>	19.3	20	17	0.86
Pro 143-6230			<b>834</b>	<b>1264</b>	<b>790</b>	663	17.7	19	16	0.89
Carousel	1441	1587	736	1084	625	673	20.4	19	17	0.93
Pro 093-7410			715	738	<b>834</b>	584	18.5	17	14	0.86
PS08101022	1454	1536	706	681	<b>853</b>	571	20.1	15	13	0.86
PS1514B0400			687	963	644	593	19.1	17	15	0.94
PS08101004	1586	1728	683	641	<b>855</b>	532	19.5	17	15	0.88
PS07100925	1510	1563	681	584	<b>810</b>	601	20.2	14	12	0.87
PS10100207			469	722	372	440	20.8	19	17	0.91
<b>Average</b>	<b>1442</b>	<b>1593</b>	<b>749</b>	<b>981</b>	<b>753</b>	<b>627</b>	<b>19.0</b>	<b>18</b>	<b>15</b>	<b>0.89</b>
<b>LSD (0.05)</b>	<b>175</b>	<b>236</b>	<b>180</b>	<b>405</b>	<b>298</b>	<b>205</b>	<b>1.0</b>	<b>2</b>	<b>2</b>	<b>0.09</b>
<b>CV (%)</b>	<b>25.4</b>	<b>24.8</b>	<b>27.2</b>	<b>20.2</b>	<b>28.1</b>	<b>23.3</b>	<b>6.0</b>	<b>10.7</b>	<b>11.1</b>	<b>11.0</b>

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 37. Spring lentil variety performance results at Craigmont, 2017.**

Variety or Selection	Market Class	2017 Crop Year					
		2-Year Average (lb/A)	Seed Yield (lb/A)**	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
LC14600031P	Spanish brown		<b>2321</b>	4.1	15	14	0.97
LC14600017P	Spanish brown	2290	<b>2282</b>	4.3	15	15	1.00
LC11600342R	Medium green	1907	<b>2203</b>	5.6	17	16	0.97
Crimson	Small red	2047	<b>2039</b>	3.1	14	14	1.00
LC09600507P	Spanish brown		<b>2037</b>	4.2	16	11	0.71
Avondale	Medium green	2192	<b>1993</b>	4.8	15	15	1.00
LC09600476L	Large green		<b>1873</b>	6.6	15	14	0.90
LC14600024P	Spanish brown		<b>1872</b>	3.9	14	14	1.00
Richlea	Medium green	2000	<b>1826</b>	4.7	16	16	1.00
LC10600494P	Spanish brown	2045	<b>1788</b>	3.8	16	15	0.97
LC1460NZ06FG	French green	1791	<b>1743</b>	2.8	15	14	0.97
Pardina	Spanish brown	1818	<b>1684</b>	3.2	13	13	0.96
LC09600410L	Large green	1591	<b>1660</b>	7.1	15	15	1.00
Morena	Spanish brown	2146	<b>1655</b>	3.6	15	15	1.00
LC14600023P	Spanish brown		1601	4.0	13	13	0.96
Merrit	Large green	1796	1600	6.1	14	13	0.93
Eston	Small green	1892	1565	2.8	17	15	0.91
LC08600005E	Small green	1824	1452	4.2	15	15	1.00
LC01602273E	Small green	1931	1450	3.3	16	13	0.83
LC14600030P	Spanish brown		1401	3.7	13	11	0.86
LC14600010P	Spanish brown	1445	1202	4.0	15	13	0.84
Black Beluga			702	2.3	17	17	1.00
<b>Average</b>		<b>1914</b>	<b>1724</b>	<b>4.2</b>	<b>15</b>	<b>14</b>	<b>0.94</b>
<b>LSD (0.05)</b>		<b>353</b>	<b>713</b>	<b>0.4</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>
<b>CV (%)</b>		<b>16.0</b>	<b>19.9</b>	<b>4.0</b>	<b>9.1</b>	<b>11.8</b>	<b>9.2</b>

\*Data in this table is comprised of only two replications due to severe Aphanomyces root rot in a portion of the trial.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 38. Spring lentil variety performance results southeast of Genesee (rim area), 2017.**

Variety or Selection	Market Class	3-Year Average (lb/A)	2-Year Average (lb/A)	2017 Crop Year				
				Seed Yield (lb/A)*	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
LC11600342R	Medium green		1157	<b>1109</b>	4.9	14	14	0.97
Richlea	Medium green	959	905	<b>1034</b>	4.9	15	14	0.92
LC09600507P	Spanish brown			<b>1021</b>	4.2	12	12	1.00
Merrit	Large green	1098	1138	<b>1007</b>	6.2	13	12	0.98
LC09600476L	Large green			<b>992</b>	6.7	14	13	0.95
Avondale	Medium green	1199	1170	<b>988</b>	5.2	14	13	0.95
LC09600410L	Large green	1056	1064	<b>984</b>	7.0	13	13	1.00
Morena	Spanish brown	1156	1156	<b>942</b>	3.8	13	13	1.00
LC01602273E	Small green	1277	1287	<b>909</b>	3.7	14	14	1.00
LC14600017P	Spanish brown		1099	<b>899</b>	4.3	13	13	1.00
LC14600010P	Spanish brown		895	<b>890</b>	4.5	12	12	1.00
LC14600023P	Spanish brown			<b>888</b>	4.2	12	12	1.00
LC14600024P	Spanish brown			864	4.4	12	11	0.98
LC08600005E	Small green		750	861	4.8	13	12	0.98
LC14600031P	Spanish brown			814	4.3	11	11	1.00
LC14600030P	Spanish brown			734	4.2	11	10	0.98
LC10600494P	Spanish brown	975	956	709	4.3	13	13	0.98
Eston	Small green	752	713	644	3.7	14	13	0.92
Crimson	Small red	874	987	621	3.7	12	12	1.00
Pardina	Spanish brown	1044	908	512	3.9	12	12	1.00
LC1460NZ06FG	French green		574	436	3.1	12	12	1.00
<b>Average</b>		<b>1039</b>	<b>985</b>	<b>850</b>	<b>4.6</b>	<b>13</b>	<b>12</b>	<b>0.98</b>
<b>LSD (0.05)</b>		<b>182</b>	<b>228</b>	<b>242</b>	<b>0.4</b>	<b>2</b>	<b>2</b>	<b>ns</b>
<b>CV (%)</b>		<b>21.5</b>	<b>23.2</b>	<b>20.0</b>	<b>6.3</b>	<b>8.8</b>	<b>9.6</b>	<b>4.2</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.



**Table 39. Spring lentil variety performance results at Moscow, 2017.**

Variety or Selection	Market Class	2017 Crop Year					
		2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
LC14600024P	Spanish brown		<b>627</b>	4.8	12	12	1.00
LC14600023P	Spanish brown		491	4.8	11	11	0.98
LC14600017P	Spanish brown	344	396	4.8	13	12	0.95
LC01602273E	Small green	327	358	4.1	13	13	0.98
Morena	Spanish brown	504	348	4.2	13	12	0.98
LC14600030P	Spanish brown		336	4.5	11	10	0.94
LC14600031P	Spanish brown		333	5.0	12	11	0.92
Avondale	Medium green	361	331	5.1	13	12	0.98
Richlea	Medium green	241	315	5.3	13	13	0.96
LC14600010P	Spanish brown	252	296	4.9	11	11	1.00
LC11600342R	Medium green	261	280	5.5	13	13	0.97
LC09600507P	Spanish brown		261	4.9	13	12	0.92
LC09600410L	Large green	282	260	7.6	12	12	1.00
LC08600005E	Small green	206	226	4.6	13	12	0.94
LC09600476L	Large green		198	7.0	13	12	0.96
Merrit	Large green	268	189	6.3	13	13	0.98
LC10600494P	Spanish brown	213	159	4.3	12	12	0.98
Pardina	Spanish brown	229	154	4.2	11	11	0.96
Eston	Small green	172	120	3.7	12	12	0.98
LC1460NZ06FG	French green	97	106	3.3	12	11	0.98
Crimson	Small red	125	99	3.9	11	11	0.96
Black Beluga			44	2.4	13	13	0.98
<b>Average</b>		<b>259</b>	<b>269</b>	<b>4.8</b>	<b>12</b>	<b>12</b>	<b>0.97</b>
<b>LSD (0.05)</b>		<b>82</b>	<b>120</b>	<b>0.3</b>	<b>2</b>	<b>2</b>	<b>ns</b>
<b>CV (%)</b>		<b>31.7</b>	<b>31.6</b>	<b>4.7</b>	<b>9.7</b>	<b>8.9</b>	<b>5.7</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 40. Lentil performance comparison across northern Idaho, 2017**

Variety or Selection	Market Class	2-Year Average (lb/A)	2017 Crop Year							
			N. Idaho Average**	Craigmont	Genesee	Moscow	100 Seed Weight	Vine Length	Canopy Height	Erect Index
			(lb/A)**			(gram)	(inches)		(0-1)	
LC11600342R	Medium green	1036	<b>996</b>	<b>2203</b>	<b>1109</b>	280	5.3	14	14	0.97
LC14600017P	Spanish brown	1149	<b>975</b>	<b>2282</b>	<b>899</b>	396	4.5	14	13	0.98
LC14600024P	Spanish brown		<b>971</b>	<b>1872</b>	864	627	4.5	12	12	0.99
Avondale	Medium green	1154	<b>926</b>	<b>1993</b>	<b>988</b>	331	5.1	13	13	0.97
LC14600031P	Spanish brown		<b>923</b>	<b>2321</b>	814	333	4.5	12	11	0.96
LC09600507P	Spanish brown		<b>920</b>	<b>2037</b>	<b>1021</b>	261	4.5	13	12	0.91
Richlea	Medium green	962	<b>905</b>	<b>1826</b>	<b>1034</b>	315	5.0	14	14	0.95
LC14600023P	Spanish brown		<b>872</b>	1601	<b>888</b>	491	4.4	12	12	0.98
LC09600476L	Large green		<b>851</b>	<b>1873</b>	<b>992</b>	198	6.8	14	13	0.94
Morena	Spanish brown	1189	<b>847</b>	<b>1655</b>	<b>942</b>	348	3.9	13	13	0.99
LC09600410L	Large green	923	829	<b>1660</b>	<b>984</b>	260	7.3	13	13	1.00
Merrit	Large green	1001	798	1600	<b>1007</b>	189	6.2	13	13	0.97
LC01602273E	Small green	1114	797	1450	<b>909</b>	358	3.8	14	13	0.96
LC08600005E	Small green	845	725	1452	861	226	4.6	13	13	0.97
LC14600030P	Spanish brown		708	1401	734	336	4.2	11	10	0.94
LC10600494P	Spanish brown	983	705	<b>1788</b>	709	159	4.2	13	13	0.98
Crimson	Small red	963	696	<b>2039</b>	621	99	3.7	12	12	0.98
LC14600010P	Spanish brown	807	695	1202	<b>890</b>	296	4.6	12	12	0.97
Eston	Small green	838	618	1565	644	120	3.5	13	13	0.94
Pardina	Spanish brown	909	603	<b>1684</b>	512	154	3.9	12	12	0.98
LC1460NZ06FG	French green	733	565	<b>1743</b>	436	106	3.1	12	12	0.99
Black Beluga			--	702	--	44	2.4	14	14	0.99
<b>Average</b>		<b>974</b>	<b>806</b>	<b>1724</b>	<b>850</b>	<b>269</b>	<b>4.6</b>	<b>13</b>	<b>12</b>	<b>0.97</b>
<b>LSD (0.05)</b>			<b>167</b>	<b>713</b>	<b>242</b>	<b>120</b>	<b>0.2</b>	<b>1</b>	<b>1</b>	<b>0.05</b>
<b>CV (%)</b>		<b>22.2</b>	<b>23.4</b>	<b>19.9</b>	<b>20.0</b>	<b>31.6</b>	<b>5.5</b>	<b>9.5</b>	<b>9.9</b>	<b>5.8</b>

\*No 3-year average due to loss of Craigmont and Moscow locations in 2015.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 41. Chickpea variety performance results at Craigmont, 2017**

Variety or Selection	2017 Crop year							
	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Plant Height (in)	Chickpea Size (%)			
					(>25/64")	(>22/64")	(>20/64")	(<20/64")
BillyBeans	2182	<b>2276</b>	27.4	20	<1	3	50	47
Nash	1868	<b>2185</b>	48.4	18	24	65	9	1
CA0790B0547C	1998	<b>2172</b>	46.7	19	7	69	21	3
Bronic	1959	<b>2141</b>	35.2	21	1	29	56	15
CDC Orion	2042	<b>2089</b>	48.3	17	3	72	23	2
CA0790B0043C	1781	<b>1997</b>	46.5	22	18	71	10	1
CA0790B0034C	1866	1941	48.8	20	19	67	12	2
CA0890B0531C	1976	1909	46.8	17	12	67	15	6
CA0890B0429C	1673	1886	48.0	18	24	65	9	1
CDC Frontier	1846	1793	40.1	17	<1	39	51	9
Sierra	1540	1741	46.4	17	10	54	28	8
Sawyer	1869	1662	42.7	17	6	56	34	4
<b>Average</b>	<b>1885</b>	<b>1983</b>	<b>43.8</b>	<b>18</b>	<b>11</b>	<b>55</b>	<b>27</b>	<b>8</b>
<b>LSD (0.05)</b>	<b>332</b>	<b>288</b>	<b>4.3</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>9</b>	<b>3</b>
<b>CV (%)</b>	<b>17.4</b>	<b>10.1</b>	<b>6.9</b>	<b>10.2</b>	<b>46.6</b>	<b>14.0</b>	<b>22.2</b>	<b>24.9</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 42. Chickpea variety performance results southeast of Genesee, 2017.**

Variety or Selection	2017 Crop year								
	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Plant Height (in)	Chickpea Size (%)			
						(>25/64")	(>22/64")	(>20/64")	(<20/64")
CDC Frontier	2563	3268	<b>2909</b>	39.5	16	<1	63	35	2
CA0790B0034C			<b>2681</b>	55.8	19	39	57	3	1
CA0890B0429C	2016	2848	<b>2560</b>	54.5	16	61	38	1	<1
Bronic	2375	3022	<b>2558</b>	38.9	18	1	32	56	12
CDC Orion	2509	3002	<b>2477</b>	44.2	14	7	80	12	1
BillyBeans	2416	3097	<b>2388</b>	35.1	14	4	12	57	27
CA0790B0043C	2204	2911	2358	55.4	18	59	39	2	1
Nash	2097	2741	2227	62.3	16	51	47	1	1
CA0790B0547C			2061	53.0	15	26	66	6	2
CA0890B0531C	2085	2482	1980	54.0	15	40	52	7	1
Sawyer	2030	2536	1672	47.2	15	4	66	28	2
Sierra	1728	2348	1611	47.3	15	18	74	8	1
<b>Average</b>	<b>2206</b>	<b>2829</b>	<b>2290</b>	<b>48.9</b>	<b>16</b>	<b>26</b>	<b>52</b>	<b>18</b>	<b>4</b>
<b>LSD (0.05)</b>	<b>290</b>	<b>375</b>	<b>537</b>	<b>4.0</b>	<b>2</b>	<b>11</b>	<b>12</b>	<b>5</b>	<b>4</b>
<b>CV (%)</b>	<b>16.0</b>	<b>12.9</b>	<b>16.3</b>	<b>5.7</b>	<b>8.5</b>	<b>30.8</b>	<b>15.3</b>	<b>17.5</b>	<b>63</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 43. Chickpea variety performance results at Moscow, 2016.**

Variety or Selection	2017 Crop Year								
	3-Year Average	2-Year Average	Seed Yield	100 Seed Weight	Plant Height	Chickpea Size (%)			
	(lb/A)	(lb/A)	(lb/A)*	(g)	(in)	(>25/64")	(>22/64")	(>20/64")	(<20/64")
CA0790B0547C	1898	2178	1437	51.2	16	9	73	11	7
BillyBeans	1737	2009	1258	31.6	16	1	5	50	45
CA0790B0034C		2001	1246	51.5	17	20	68	10	3
Bronic	1753	1928	1195	36.5	18	1	24	51	23
CDC Frontier	1713	1904	1194	36.5	14	0	28	59	13
Nash	1743	2051	1164	52.4	16	42	48	8	2
CA0790B0043C	1582	1747	1117	52.6	18	23	65	10	2
CA0890B0531C	1630	1768	1067	51.7	15	30	57	9	4
Sierra	1528	1818	1061	51.0	15	8	73	16	3
CDC Orion	1697	1867	1038	47.0	14	3	57	34	6
Sawyer	1613	1843	1032	42.9	15	3	44	46	6
CA0890B0429C	1592	1803	939	50.6	15	24	63	9	4
<b>Average</b>	<b>1681</b>	<b>1910</b>	<b>1146</b>	<b>46.3</b>	<b>16</b>	<b>14</b>	<b>51</b>	<b>26</b>	<b>10</b>
<b>LSD (0.05)</b>	<b>208</b>	<b>ns</b>	<b>ns</b>	<b>4.9</b>	<b>2</b>	<b>11</b>	<b>11</b>	<b>7</b>	<b>5</b>
<b>CV (%)</b>	<b>15.3</b>	<b>15.0</b>	<b>18.3</b>	<b>7.4</b>	<b>9.9</b>	<b>57.3</b>	<b>15.1</b>	<b>19.8</b>	<b>36.7</b>

\*Variety or selection yields in bold were not statistically different from the top yielding variety.

**Table 44. Chickpea performance comparison across northern Idaho, 2017**

Variety or Selection	2017 Crop Year											
	3-Year Average (lb/A)*	2-Year Average (lb/A)	N. Idaho Average (lb/A)**	Craigmont	Genesee	Moscow	100 Seed Weight (gram)	Plant Height (inches)	Chickpea Size (%)			
									(>25/64")	(>22/64")	(>20/64")	(<20/64")
BillyBeans	2077	2429	<b>1974</b>	<b>2276</b>	<b>2388</b>	1258	31.3	18	1	7	52	40
CDC Frontier	2138	2339	<b>1965</b>	1793	<b>2909</b>	1194	38.7	16	0	44	48	8
Bronic	2064	2303	<b>1965</b>	<b>2141</b>	<b>2558</b>	1195	36.8	19	1	28	54	17
CA0790B0034C			<b>1956</b>	1941	<b>2681</b>	1246	52.0	18	26	64	8	2
CA0790B0547C			<b>1890</b>	<b>2172</b>	2061	1437	50.3	17	14	69	13	4
CDC Orion	2103	2304	<b>1868</b>	<b>2089</b>	<b>2477</b>	1038	46.5	15	4	70	23	3
Nash	1920	2235	<b>1858</b>	<b>2185</b>	2227	1164	54.4	17	39	54	6	1
CA0790B0043C	1893	2162	<b>1824</b>	<b>1997</b>	2358	1117	51.5	20	33	58	7	1
CA0890B0429C	1785	2041	<b>1795</b>	1886	<b>2560</b>	939	51.0	17	36	55	6	2
CA0890B0531C	1848	2058	1652	1909	1980	1067	50.8	16	27	58	10	4
Sierra	1628	1902	1471	1741	1611	1061	48.2	16	12	67	17	4
Sawyer	1822	2083	1455	1662	1672	1032	44.2	16	4	56	36	4
<b>Average</b>	<b>1929</b>	<b>2187</b>	<b>1806</b>	<b>1983</b>	<b>2290</b>	<b>1146</b>	<b>46.3</b>	<b>17</b>	<b>17</b>	<b>52</b>	<b>24</b>	<b>7</b>
<b>LSD (0.05)</b>	<b>181</b>	<b>203</b>	<b>277</b>	<b>288</b>	<b>537</b>	<b>ns</b>	<b>2.5</b>	<b>2</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>2</b>
<b>CV (%)</b>	<b>16.4</b>	<b>16.1</b>	<b>18.9</b>	<b>10.1</b>	<b>16.3</b>	<b>18.3</b>	<b>6.7</b>	<b>10.5</b>	<b>43.3</b>	<b>14.9</b>	<b>21.3</b>	<b>40.3</b>

\*3-year average yield does not include data from Craigmont since this location was lost in 2015.

\*\*Variety or selection yields in bold were not statistically different from the top yielding variety.