



2016 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 Cropping Systems Agronomist Kurtis Schroeder, at a 2016 winter wheat variety plot tour in Bonners Ferry. Photo by Kathleen Painter.

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Research and Extension Program*

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Idaho Wheat Commission
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Kurt Blume – Genesee
Brett Poxleitner – Genesee
Russ Zenner – Genesee
Clint Zenner – Genesee
John Frei – Ferdinand
Bert Henriksen – Lewiston
Neil Uptmore – Lewiston
Chad Doggett – 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 2015-2016 crop season. The variety trials were located in cooperators' fields at 11 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 Science Farm).

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. 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

Thirteen winter cereal trials were planted in northern Idaho in the fall of 2015 and twelve spring cereal trials were planted in the spring of 2016. 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 300 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 4 oz/100 lbs seed plus Dynashield at 0.26 oz/100 lbs seed. All plots were seeded 20 feet long. Plots in intensive or reduced tillage systems were seeded on 5-foot centers using a double-disc opener with 7 rows, 7-inches apart. Direct-seeded trials were planted using a drill equipped with Flexi-Coil Stealth openers that allow fertilizer to be banded below and between paired rows. The drill has five paired rows with 3-inch spacing and 10-inch from center to center of each opener. Typical cereal seeding depth varied from 0.75 to 1.25 inches depending on soil texture and moisture conditions. At each location, each entry was replicated four times in a randomized complete block design. After plants were well established, the plots were sized to a length of 15 feet by 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 cooperators' operations.

Heading dates were recorded at some locations. The date was defined by the point at which 50% or more of the heads within a plot were fully emerged from the boot. Prior to harvest, mature plant height was recorded, each plot was evaluated for lodging and plot length was measured to more accurately determine the harvested 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 every 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 the 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 6/64-inch slotted screen after shaking. Thin percentage is the portion of the sample that went through a 5.5/64-inch slotted screen. Protein was determined for each of the four replications from at each site for both winter and spring wheat. In the case of barley, a composite sample was collected from each of the replications within a site. Whole grain protein at 12% moisture was measured at the University of Idaho Wheat Quality Laboratory at Aberdeen using Near Infrared Spectrometry (NIRS) technology.

Legume Test Procedures

In the fall of 2015, two winter pea trials were established using a seeding rate of 10 spsf. In the spring of 2016, spring pea, lentil and chickpea trials were seeded near Craigmont, Genesee and Moscow. For each legume variety, 300 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 that are required to maintain entry separation, particularly for peas, chemical weed control was supplemented with hand weeding when necessary. Trial locations and pesticides used in the trials are listed in Table 1 for the sites where the information was provided. Legumes were evaluated for vine length (pea) or plant height (lentil and chickpea), canopy height, 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".

Varieties Included in Trials

A list of varieties included in the 2015-2016 trials is shown in Table 2. When the information is available, this table also lists the previous experimental name for each variety along with the release year, and company or agency that released the variety.

Statistical Analyses and Interpretation

Means were calculated by averaging the data from each of the four replications. Data for all trials was analyzed using the PROC GLM procedure to perform an analysis of variance and determine the coefficient of variation (CV). Mean comparisons were performed using Fisher's least significant difference (LSD) and an alpha of 0.05. All data were analyzed using SAS 9.3 software.

Data in the tables is sorted by yield with the highest yielding entries listed first and the yield for those varieties not statistically different from the highest yielding variety in bold. The overall trial average is shown at the bottom of each table. The LSD and CV are listed for each variable measured in each trial. 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 varieties are not different for that variable and measured differences are due to random error. 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.

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.

Growing Conditions and Factors Affecting Trial Results

Fall cereal trials were planted from late September to mid-October. Seeding conditions were very dry throughout the early portion of the planting season. Fall temperatures were above normal and above normal temperatures persisted throughout much of the winter and into the spring. Precipitation during the winter and spring months was near normal. The mild winter resulted in very little winter injury within the winter wheat or winter barley trials. Mild late winter temperatures also resulted in earlier spring growth setting up the potential for increased yields. During early July, temperatures were below normal and numerous rain showers persisted from approximately July 5 to July 10. This coincided with grain fill resulting in well above normal yields and test weights at most winter wheat locations. Unfortunately the cool, wet weather also created conditions for late maturity alpha-amylase (LMA), resulting in lower falling numbers for some varieties at some locations. Spring crops also benefited from the mild early summer conditions with above normal yields for chickpea at all locations and higher spring pea and lentil yields at Genesee and Craigmont.

Stripe-rust of wheat was observed at several locations, but the incidence and severity were quite low due to routine application of fungicides. Stripe rust of barley, caused by *Puccinia striiformis* f. sp. *hordei*, was found at the Craigmont location and near Moscow. Stripe rust of barley is distinct from the form that causes disease on wheat and is not as common as wheat stripe rust. Despite observation of barley stripe rust, the incidence was quite low and management by fungicide application was not necessary.

Average winter wheat yields in 2016 were 29 bu/A higher than the previous 3-year average for north Idaho. Likewise, the yield of spring cereals were above average with spring wheat being 11 bu/A greater than the 3-year average and spring barley yields were 29 bu/A higher. Spring legume yields were above the 3-year average for pea (423 lb/A above), lentil (224 lb/A above) and chickpea (817 lb/A above). Despite the higher yields, greater than normal variation was observed, particularly for pea and lentil yields. This variation could have been due to root disease, but a conclusive reason for the increased variability and poor performance of some varieties was not determined.

Table 1. Trial locations and management information for the 2015-2016 northern Idaho 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
<u>Winter Cereals - Soft White Winter Wheat</u>										
Lewis	Nezperce	22"	3200'	Conventional Tillage	10/9/15	8/15/16	Canola	110-28.5-0-15 (f)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Nez Perce	Lewiston (Tammany)	14"	1660'	Conventional Tillage	10/6/15	7/21/16	Fallow	110-30-0-20 (f) 10 Cl (f)	Huskie Ally XP MCPA	15 oz/A 0.1 oz/A 11 oz/A
Nez Perce	Genesee	20"	2500'	Direct Seed	10/5/15	7/29/16	Chickpea	110-28-15-9 (f)	Osprey Curtail M Ally Extra Trivapro A Trivapro B Tilt	3.8 oz/A 1.5 oz/A 0.2 oz/A 2.7 oz/A 7.2 oz/A 4 oz/A
Latah	Moscow	24"	2700'	Conventional Tillage	10/19/15	8/4/16	Oats	--	Huskie Affinity Axial XL Priaxor	15 oz/A 0.8 oz/A 16.4 oz/A 8 oz/A
Benewah	Tensed	27"	2600'	Conventional Tillage	10/1/15	8/17/16	Lentils	119-16-0-22 (f) 30-0-0-6 (s)	Bronate Peak Osprey SharShield	12.8 oz/A 1 oz/A 4.75 oz/A 4 oz/A
Boundary	Bonnars Ferry	25"	1750'	Direct Seed	9/24/15	8/2/16	Canola	93-23-30-9 (f)	Axial Wildcard	16.4 oz/A 25 oz/A

* (f) = fall applied, (s) = spring applied. Cl denotes chloride which is added to minimize physiological leaf spot.

Table 1 (continued). Trial locations and management information for the 2015-2016 northern Idaho 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
Winter Cereals - Hard Winter Wheat										
Lewis	Nezperce	22"	3200'	Conventional Tillage	10/9/15	8/15/16	Canola	108-35-0-26 (f) 40-0-0-0 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Nez Perce	Lewiston (Tammany)	14"	1660'	Conventional Tillage	10/6/15	7/21/16	Fallow	110-30-0-20 (f) 10 Cl (f) 30-0-0-6 (s)	Huskie MCPA Ally XP	15 oz/A 11 oz/A 0.1 oz/A
Nez Perce	Genesee	20"	2500'	Conventional Tillage	10/5/15	7/29/16	Chickpea	110-28-15-9 (f)	Osprey Curtail M Ally Extra Trivapro A Trivapro B Tilt	3.8 oz/A 1.5 oz/A 0.2 oz/A 2.7 oz/A 7.2 oz/A 4 oz/A
Latah	Moscow	24"	2700'	Conventional Tillage	10/19/15	8/4/16	Oats	-- 40-0-0-0 (s)	Huskie Affinity Axial Priaxor	15 oz/A 0.8 oz/A 16.4 oz/A 8 oz/A
Benewah	Tensed	27"	2600'	Conventional Tillage	10/1/15	8/17/16	Lentils	119-16-0-22 (f) 30-0-0-6 (s)	Bronate Peak Osprey SharShield	12.8 oz/A 1 oz/A 4.75 oz/A 4 oz/A
Boundary	Bonnars Ferry	25"	1750'	Direct Seed	9/24/15	8/2/16	Canola	93-23-30-9 (f) 40-0-0-0 (s)	Axial Wildcard	16.4 oz/A 25 oz/A

* (f) = fall applied, (s) = spring applied. Cl denotes chloride which is added to minimize physiological leaf spot.

Table 1 (continued). Trial locations and management information for the 2015-2016 northern Idaho 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
<u>Spring Cereals - Soft Spring Wheat</u>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	4/8/16	8/30/16	W. Wheat	115-15-0-30 (s)	Priaxor Huskie Orion	8 oz/A 15 oz/A 17 oz/A
Nez Perce	Genesee	20"	2650'	Direct Seed	4/8/16	8/22/16	W. Wheat	60-0-0-9 (f) 10 Cl (f) 130-20-0-15 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Latah	Moscow	24"	2600'	Conventional Tillage	5/4/16	8/31/16	Chickpea	100-32-0-20 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Boundary	Bonnars Ferry	25"	1750'	Conventional Tillage	4/19/16	8/24/16	S. Barley	77-35-22-10 (s)	Everest Tilt Wildcard	1 oz/A 2 oz/A 25 oz/A
<u>Spring Cereals - Hard Spring Wheat</u>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	4/8/16	8/30/16	W. Wheat	115-15-0-30 (s)	Priaxor Huskie Orion	8 oz/A 15 oz/A 17 oz/A
Nez Perce	Genesee	20"	2650'	Direct Seed	4/8/16	8/22/16	W. Wheat	60-0-0-9 (f) 10 Cl (f) 150-20-0-15 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Latah	Moscow	24"	2600'	Conventional Tillage	5/4/16	8/31/16	Chickpea	100-32-0-20 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Boundary	Bonnars Ferry	25"	1750'	Conventional Tillage	4/19/16	8/24/16	S. Barley	77-35-22-10 (s)	Everest Tilt Wildcard	1 oz/A 2 oz/A 25 oz/A

* (f) = fall applied, (s) = spring applied. Cl denotes chloride which is added to minimize physiological leaf spot.

Table 1 (continued). Trial locations and management information for the 2015-2016 northern Idaho 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
<u>Spring Cereals - Spring Barley</u>										
Lewis	Craigmont	22"	3650'	Conventional Tillage	4/18/16	8/30/16	W. Wheat	115-15-0-30 (s)	Priaxor Huskie Orion	8 oz/A 15 oz/A 17 oz/A
Nez Perce	Genesee	20"	2650'	Direct Seed	4/8/16	8/22/16	W. Wheat	60-0-0-9 (f) 10 Cl (f) 110-20-0-15 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Latah	Moscow	24"	2600'	Direct Seed	5/4/16	8/31/16	W. Wheat	77-25-0-16 (s)	Huskie Affinity Orion Axial	15 oz/A 0.8 oz/A 17 oz/A 16.4 oz/A
Boundary	Bonnars Ferry	25"	1750'	Direct Seed	4/19/16	8/24/16	S. Barley	77-35-22-10 (s)	Everest Tilt Wildcard	1 oz/A 2 oz/A 25 oz/A
<u>Winter Cereals – Winter Barley</u>										
Boundary	Bonnars Ferry	25"	1750'	Direct Seed	9/24/15	8/2/16	Canola	93-23-30-9 (f)	Axial Wildcard	16.4 oz/A 25 oz/A

* (f) = fall applied, (s) = spring applied. Cl denotes chloride which is added to minimize physiological leaf spot.

Table 1 (continued). Trial locations and management information for the 2015-2016 northern Idaho 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**
<u>Legumes - Winter Pea</u>										
Latah	Moscow	24"	2630'	Direct Seed	9/30/15	7/28/16	W. Barley	None	Sencor Pursuit Assure II Warrior II	6 oz/A PreEm 4 oz/A PreEm 8 oz/A 0.96 oz/A x 2
Idaho	Ferdinand	22"	4230'	Conventional Tillage	10/2/15	Not harvested	W. Wheat	None	None	None
<u>Legumes - Spring Pea</u>										
Latah	Moscow	24"	2600'	Direct Seed	5/3/16	8/12/16	S. Barley	None	Sharpen Tricor Lorox Assure II Warrior II	1 oz/A PrePl 6 oz/A PreEm 24 oz/A PreEm 8 oz/A 1.9 oz/A
Nez Perce	Genesee	20"	2800'	Conventional Tillage	4/21/16	8/10/16	S. Barley	None	Sharpen Sencor Valor SX Warrior II	1 oz/A PrePl 2 oz/A PreEm 2 oz/A PreEm 1.9 oz./A
Lewis	Craigmont	22"	3300'	Conventional Tillage	4/20/16	8/19/16	W. Wheat	None	Sharpen Tricor Warrior II	1 oz/A PreEm 6 oz/A PreEm 1.9 oz/A

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

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

Table 1 (continued). Trial locations and management information for the 2015-2016 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**
<u>Legumes - Spring Lentil</u>										
Latah	Moscow	24"	2600'	Conventional Tillage	5/3/16	9/16/16	W. Wheat	None	Tricor Warrior II	6 oz/A PreEm 1.9 oz/A
Nez Perce	Genesee	20"	2600'	Direct Seed	4/21/16	9/13/16	S. Barley	None	Sharpen Sencor Valor SX Warrior II	1 oz/A PreEm 2 oz/A PreEm 2 oz/A PreEm 1.9 oz/A
Lewis	Craigmont	22"	3300'	Conventional Tillage	4/20/16	8/19/16	W. Wheat	None	Tricor Sharpen Warrior II	6 oz/A PreEm 1 oz/A PreEm 1.9 oz/A
<u>Legumes - Chickpea</u>										
Latah	Moscow	24"	2600'	Conventional Tillage	5/3/16	9/15/16	W. Wheat	None	Sharpen Tricor	1 oz/A PreEm 6 oz/A PreEm
Lewis	Craigmont	22"	3300'	Conventional Tillage	4/20/16	9/2/16	S. Barley	None	Tricor Warrior II	6 oz/A PreEm 1.9 oz/A
Nez Perce	Genesee	20"	2600'	Direct Seed	4/21/16	9/13/16	W. Wheat	None	Sharpen Sencor Valor SX Warrior II	1 oz/A PreEm 2 oz/A PreEm 2 oz/A PreEm 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 2015-2016.

Variety	Experimental No.	Year Released	Developer(s) of Variety
Soft White Winter Wheat			
Bobtail	OR08047P94	2013	Oregon AES, USDA
Brundage-96	ID-B-96	2001	Idaho AES, USDA
Bruneau	ID 93-64901A	2009	Idaho AES, USDA
Coda		1998	Washington AES, USDA
Jasper	WA8169	2014	Washington, AES
LCS Artdeco	NSA-2153A	2011	Limagrain Cereal Seeds
LCS Biancor		2013	Limagrain Cereal Seeds
LCS Drive	LWW12-7105	2015	Limagrain Cereal Seeds
Madsen	WA 7163	1988	Washington AES, USDA
Norwest Duet	LOR-092	2016	Limagrain Cereal Seeds, Oregon AES, USDA
Puma	WA 8134	2013	Washington AES
Stephens	OR 65-116	1977	Oregon AES, USDA
SY 107	03PN103#7	2013	Syngenta Seeds
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
WB-456	BU6W99-456	2009	WestBred/Monsanto
WB-528	BZ6W98-528	2011	WestBred/Monsanto
WB-1529	BZ6WM07-436	2014	WestBred/Monsanto
WB-1604	BZ6WM09-458	2013	WestBred/Monsanto
Hard Red and White (W) Winter Wheat			
Keldin	AC55017	2011	WestBred/Monsanto
LCS Colonia	NIC- 05-4711-B	2013	Limagrain Cereal Seeds
LCS Jet	NSA10-7208	2015	Limagrain Cereal Seeds
Norwest-553	ORN00B553	2007	Oregon State AES, USDA-ARSARS, Nickerson, UK
UI Silver (W)	IDO658	2011	Idaho AES, USDA
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 2015-2016.

Variety	Experimental No.	Year Released	Developer(s) of Variety
Soft White Spring Wheat			
Alturas	IDO 526	2002	Idaho AES, USDA
Babe	WA 8039	2009	Washington AES, USDA
Diva	WA 8090	2009	Washington AES, USDA
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
SY Saltese	06PN3024-2	2016	Syngenta Seeds
Tekoa	WA 8189	2016	Washington AES, USDA
UI-Stone	IDO599	2012	Idaho AES
WB1376CL+	WB-1030CL	2015	WestBred/Monsanto
WB6121	BZ608-121	2014	WestBred/Monsanto
WB6341	BZ608-125	2014	WestBred/Monsanto
Hard Red Spring Wheat			
Alum	WA 8166	2014	Washington AES, USDA
Glee	WA 8074	2012	Washington AES, USDA
Jefferson	IDO 462	1998	Idaho AES, USDA
HRS 3419	LNR-10-0119	2014	Croplan by WinField
HRS 3504		2015	Croplan by WinField
HRS 3530		2015	Croplan by WinField
HRS 3616		-	Croplan by WinField
LCS Iron	11SB0096	2016	Limagrain Cereal Seeds
LCS Luna	10SB0087-B	2016	Limagrain Cereal Seeds
SY Coho	04W40292R	2015	Syngenta Seeds
SY Selway	04PN3001-2	2015	Syngenta Seeds
SY Steelhead	97S0621-05	2013	Syngenta Seeds
UI Winchester	IDO 578	2009	Idaho AES, USDA
WB9200	BZ9S09-0134R	2016	WestBred/Monsanto
WB9411	BZ908-418	2015	WestBred/Monsanto
WB9518	BZ908-485	2013	WestBred/Monsanto
WB9668	BZ908-552	2015	WestBred/Monsanto
WB9879CL+	MT0608-79	2010	WestBred/Monsanto
Hard White Spring Wheat			
Dayn	WA 8123	2013	Washington AES, USDA
LCS Atomo		2014	Limagrain Cereal Seeds
LCS Star	08SB06568-B	2014	Limagrain Cereal Seeds
SY Teton		2016	Syngenta Seeds
UI Platinum	IDO 694C	2014	Idaho AES, USDA
WB-Hartline	BZ903-445WP	2012	WestBred/Monsanto

Table 2 (cont). Varieties tested in northern Idaho extension variety trials in 2015-2016.

Variety	Use	Experimental No.	Year Released	Developer(s) of Variety
Two-Row Winter Barley				
Charles	Malt	94Ab1274	2006	USDA-ARS, Aberdeen
Endeavor	Malt	95Ab2299	2008	Idaho AES, USDA
Wintmalt	Malt		2015	Idaho AES, USDA
Six-Row Winter Barley				
Alba	Feed/Malt	OR77	2010	Oregon AES, USDA
Buck	Food	09OR-86	2015	Oregon AES, USDA
Eight-Twelve	Feed	79Ab812	1988	Idaho AES, USDA
LCS Saturn	Feed		-	Limagrain Cereal Seeds
Maja*	Feed/Malt	OR81	2009	Oregon AES, USDA
Strider	Feed	ORW6	1998	Oregon AES, USDA
Sunstar Pride	Feed	SDM204-B	1995	Sunderman Breeding
Verdant	Forage	OR712	2014	Oregon AES, USDA
Two-Row Spring Barley				
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
Kardia	Food	2Ab09-X06F084-51	2015	Idaho AES, USDA
LCS Genie	Malt		2011	Limagrain Cereal Seeds
LCS Odyssey	Malt		2013	Limagrain Cereal Seeds
LCS Westminster	Malt		-	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
RWA-1758	Feed			Highland Specialty
Salute	Food		-	WestBred/Monsanto
Tetonia	Feed	98Ab11720	2007	Idaho AES, USDA
Transit	Food	03AH3054-51	2010	Idaho AES, USDA

*Can be planted in spring or winter

Table 2 (cont). Varieties tested in northern Idaho extension variety trials in 2014-2015.

Variety	Experimental No.	Year Released	Developer(s) of Variety
Chickpea			
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
Lentil (class)			
Avondale (<i>Richlea</i>)	LC 10602300R	2012	USDA-ARS, Washington AES
Crimson (<i>Turkish Red</i>)	LC 800024	1990	USDA-ARS, Washington AES
Eston (<i>Eston</i>)		1980	University of Saskatchewan, Canada
Merrit (<i>Laird</i>)	LC 460266B	2001	USDA-ARS, Washington AES
Morena (<i>Pardina</i>)	LC 02601144P	2011	USDA-ARS, Washington AES
Pardina (<i>Pardina</i>)		-	Spain
Richlea (<i>Richlea</i>)		1994	University of Saskatchewan, Canada
Winter Pea			
Fenn (<i>Austrian</i>)		1973	Idaho AES
Glacier (<i>Austrian</i>)		1984	Idaho AES
Granger (<i>Austrian</i>)	D258-1-2	1996	USDA-ARS, Washington AES
Icicle (<i>Forage</i>)		2011	ProGene
Koyote (<i>Food, split pea</i>)		2014	ProGene
Melrose (<i>Austrian</i>)		1979	Idaho AES
Specter (<i>Feed</i>)	PS9830F009	2006	USDA-ARS, Washington AES
Windham (<i>Forage</i>)	PS98305358	2006	USDA-ARS, Washington AES
Spring Green Pea			
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
Spring Yellow Pea			
Carousel	SW 995848	2004	ProGene
DS Admiral	DS49376	2002	Danisco Seed, Agri-Food Canada

Table 3. Soft white winter wheat variety performance results at Bonners Ferry, 2016.

Variety or Selection*	2015-2016 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 (%)
IDN-06-18102A		122	139	60.5	37	0	5/29	10.3
IDN-01-10704A	126	126	139	62.4	41	0	5/28	10.1
Bruneau	123	125	138	61.1	38	0	6/1	10.4
IDN-02-29001A	121	125	137	62.2	39	0	5/30	11.3
UI Sparrow (IDO1108DH)	113	118	136	60.2	40	0	6/2	10.2
UI/WSU Huffman	120	124	136	61.5	38	0	6/1	10.4
LCS Artdeco	105	98	134	59.8	34	0	5/29	10.5
BZ6W09-471			133	62.6	37	0	5/27	11.4
WA8235			132	61.2	39	0	5/29	10.9
LWW14-73163			132	62.6	36	0	5/30	10.5
WA8234			131	61.9	38	0	5/29	10.7
BZ6W09-489			131	62.9	35	0	5/29	12.0
WB528		118	130	61.8	38	0	5/29	11.1
Norwest Duet (LOR-092)		115	129	61.5	41	0	6/2	10.6
OR2101043			128	62.3	37	0	5/31	10.5
UI Castle CL+		114	127	62.2	40	0	6/2	10.8
WB-Junction	116	116	127	62.0	36	0	5/26	10.5
WA8232			126	62.0	37	0	6/1	10.5
Madsen	111	113	125	61.1	37	0	6/2	10.9
Jasper		108	122	61.3	38	0	5/31	10.6
SY Ovation			122	61.9	37	0	5/29	11.0
SY 107			119	61.5	35	0	5/31	10.6
WB1529	102	107	119	62.9	35	0	5/28	11.1
ARS06136-49C			116	60.7	38	0	6/2	11.5
WB1604	106	110	116	61.5	34	0	5/27	11.0
Stephens	108	111	115	61.7	36	0	5/30	10.9
LOR-913		109	113	59.9	34	0	5/29	11.0
WB456		106	113	62.7	35	0	5/26	12.0
Coda			112	61.9	39	0	6/2	11.4
Puma	109	109	112	60.8	41	0	5/31	11.0
WB1376CLP (EXP1030CLP)	104	105	111	64.1	36	0	5/29	12.1
LOR-833		100	109	61.4	32	0	5/28	11.4
LCS Drive (LWW12-7105)	107	103	108	60.5	30	0	5/28	11.0
UI Magic CL+		106	108	62.4	35	0	5/30	11.6
UI Palouse CL+		102	107	61.4	34	0	6/1	10.9
OR2110526			100	62.3	35	0	5/26	11.6
Average	112	112	123	61.7	37	0	5/30	11.0
LSD (0.05)	8	11	19	1.0	2	--	2.4	0.7
CV (%)	9.3	10.1	11.0	1.2	3.3	--	24.3	4.8

*All awnless varieties sustained substantial damage from selective feeding by deer (40-100%). Therefore, data is not reported for Bobtail, Brundage 96, IDN-06-03303B, IDN-07-28017B and LCS Biancor. While UI Palouse CL+ is also awnless, damage was less than 10% in 3 of 4 replications.

**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 4. Soft white winter wheat variety performance results at Genesee, 2016.

Variety or Selection	2015-2016 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 (%)
UI Sparrow (IDO1108DH)	107	117	141	60.6	42	0	6/9	10.4
Bobtail	107	115	141	61.5	39	0	6/8	9.8
Jasper		119	141	62.4	41	0	6/8	10.8
OR2101043			132	62.6	40	0	6/8	10.9
LCS Artdeco	112	121	130	61.9	36	0	6/6	10.4
WA8232			128	63.5	41	0	6/8	11.2
WA8234			128	63.6	41	0	6/7	11.4
Bruneau	105	116	127	63.1	42	0	6/7	11.1
Norwest Duet (LOR-092)		114	126	63.6	45	0	6/8	11.1
LCS Biancor	106	109	124	63.0	34	0	6/6	10.7
UI Castle CLP		103	124	62.9	39	0	6/9	11.3
LCS Drive (LWW12-7105)	108	112	124	61.3	33	0	6/6	10.7
UI/WSU Huffman	100	110	124	63.1	41	0	6/9	11.2
IDN-02-29001A	103	110	123	63.4	41	0	6/8	11.7
SY 107			122	63.1	39	0	6/8	10.7
BZ6W09-489			121	64.4	37	0	6/7	11.7
IDN-06-03303B		108	121	61.4	38	0	6/8	10.7
LWW14-73163			120	64.2	39	0	6/7	11.2
Puma	102	109	120	62.1	43	0	6/7	11.0
Madsen	95	102	120	62.3	39	0	6/8	11.3
WB528		106	120	63.2	40	0	6/7	11.3
WB-Junction	106	113	120	63.1	38	0	6/6	10.8
UI Magic CLP		105	119	63.3	38	0	6/7	11.2
BZ6W09-471			119	64.4	41	0	6/7	12.0
LOR-913		108	119	62.4	38	0	6/7	11.5
OR2110526			117	62.5	38	0	6/6	11.0
WA8235			117	62.9	40	0	6/8	11.8
IDN-01-10704A	103	105	117	62.6	42	0	6/8	10.4
Brundage 96	99	108	116	62.3	38	0	6/7	11.3
LOR-833		107	116	62.2	37	0	6/6	11.8
UI Palouse CLP		101	116	62.1	38	0	6/8	10.9
IDN-06-18102A		107	114	61.4	38	0	6/8	10.8
Stephens	98	106	114	61.6	38	0	6/6	11.6
ARS06136-49C			114	62.4	43	0	6/9	11.0
WB1604	96	103	114	62.4	37	0	6/6	11.0
WB456		105	113	63.6	37	0	6/6	11.7
SY Ovation			109	63.1	38	0	6/7	11.5
IDN-07-28017B			108	63.8	37	0	6/6	11.2
WB1376CLP (EXP1030CLP)	95	98	105	64.1	39	0	6/7	12.4
Coda			105	63.3	40	0	6/9	10.9
WB1529	97	98	100	63.1	37	0	6/6	11.8
Average	102	108	120	62.8	39	0	6/7	11.1
LSD (0.05)	6	6	8	0.7	2	--	0.8	0.6
CV (%)	6.8	5.8	4.6	0.8	3.2	--	26.5	3.7

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 5. Soft white winter wheat variety performance results at Moscow, 2016.*

Variety or Selection	2015-2016 Crop Year					
	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
Bobtail	123	134	60.2	37	0	9.3
Jasper	124	131	62.3	38	0	10.0
UI Sparrow (IDO1108DH)	121	129	59.4	39	0	9.4
Norwest Duet (LOR-092)	121	125	63.1	44	0	10.6
LCS Artdeco	116	123	62.2	35	0	10.2
WA8234		122	62.6	37	0	10.2
IDN-06-03303B	123	121	61.6	36	0	10.4
WA8232		119	62.8	38	0	10.4
LOR-913	109	119	62.3	36	0	10.3
OR2101043		118	62.3	38	0	9.9
UI Palouse CL+	109	117	61.4	34	0	10.5
Bruneau	115	117	62.7	39	0	10.4
UI Castle CL+	108	117	62.6	37	0	10.3
Madsen	110	116	62.1	35	0	10.7
WB-Junction	111	116	63.4	37	0	10.4
OR2110526		115	62.7	37	0	10.5
UI Magic CL+	108	114	62.9	35	0	11.1
Brundage 96	113	114	62.3	35	0	10.6
IDN-02-29001A	114	114	63.4	39	0	10.6
WB1604	109	114	62.8	35	0	10.4
LWW14-73163		114	63.6	36	0	10.4
WA8235		113	62.8	38	0	10.8
Stephens	108	113	62.4	37	0	10.1
IDN-01-10704A	110	113	62.0	39	0	10.2
WB456	105	112	63.5	35	0	11.3
UI/WSU Huffman	113	112	62.3	38	0	10.6
Puma	116	112	61.8	38	0	10.3
LCS Drive (LWW12-7105)	103	111	61.8	32	0	10.5
WB528	107	111	63.2	38	0	10.5
SY Ovation		111	62.1	37	0	10.3
LCS Biancor	103	110	62.3	32	0	10.4
BZ6W09-471		110	63.7	38	0	11.0
IDN-07-28017B		110	63.3	37	0	10.6
BZ6W09-489		110	64.3	35	0	11.0
SY 107		109	61.3	35	0	10.1
IDN-06-18102A	108	108	61.4	35	0	10.3
ARS06136-49C		107	61.8	39	0	10.7
WB1529	106	105	63.5	36	0	10.8
LOR-833	101	103	62.8	33	0	11.5
Coda		100	62.2	37	0	10.4
WB1376CLP (EXP1030CLP)	97	95	64.8	36	0	11.9
Average	111	114	62.5	37	0	10.5
LSD (0.05)	6	9	0.6	2	--	0.4
CV (%)	5.8	5.4	0.7	3.1	--	3.0

*3-year averages are not available for Moscow since this location was not included in the 2013-2014 season.

**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 6. Soft white winter wheat variety performance results at Nezperce, 2016.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2015-2016 Crop Year				
			Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
Norwest Duet (LOR-092)		94	128	60.5	40	0	10.0
Jasper		86	123	58.9	37	0	10.3
LWW14-73163			122	61.0	36	0	10.3
Bobtail	75	88	120	57.6	36	0	10.0
Bruneau	76	90	119	60.3	38	0	10.0
UI Sparrow (IDO1108DH)	75	89	118	58.4	38	0	10.1
WA8234			115	60.3	36	0	10.9
WB528		88	115	60.5	37	0	10.8
OR2101043			115	60.0	36	0	10.4
WB-Junction	81	91	114	60.8	36	0	11.0
IDN-06-03303B		86	114	58.3	35	0	11.2
LCS Artdeco	79	92	113	57.9	34	0	10.1
UI/WSU Huffman	72	84	113	60.1	36	0	10.3
WA8235			112	60.3	34	0	11.1
WA8232			111	61.0	37	0	10.1
BZ6W09-471			111	62.3	37	0	10.8
Puma	74	85	110	60.0	38	0	10.7
IDN-01-10704A	75	83	109	60.1	39	0	10.2
ARS06136-49C			109	59.8	37	0	10.9
UI Castle CL+		74	109	60.6	36	0	10.3
Stephens	72	82	108	59.4	35	0	11.1
Brundage 96	69	83	108	59.8	34	0	10.3
LCS Biancor	73	84	107	58.8	31	0	10.1
IDN-06-18102A		83	107	58.4	34	0	9.9
BZ6W09-489			107	60.9	34	0	11.8
IDN-02-29001A	71	83	107	60.4	36	0	11.1
Coda			106	62.3	39	0	11.8
OR2110526			106	60.2	35	0	11.4
Madsen	70	78	104	60.5	35	0	10.9
WB1529	72	85	104	60.9	35	0	11.3
SY Ovation			104	59.3	36	0	10.1
LOR-913		85	104	58.3	35	0	11.3
UI Palouse CL+		76	103	58.7	34	0	11.0
IDN-07-28017B			103	60.7	34	0	10.1
LOR-833		81	102	60.4	32	0	11.8
SY 107			99	58.3	34	0	10.5
WB1604	72	81	99	60.0	34	0	11.7
UI Magic CL+		70	96	61.3	32	0	11.1
LCS Drive (LWW12-7105)	74	78	96	60.1	30	0	10.9
WB1376CLP (EXP1030CLP)	63	76	94	61.5	36	0	12.8
WB456		76	91	61.0	35	0	12.0
Average	73	83	109	60.0	35	0	10.8
LSD (0.05)	8	7	10	1.0	2	--	0.6
CV (%)	13.1	8.2	6.6	1.2	4.0	--	4.2

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 7. Soft white winter wheat variety performance results at Tammany (Lewiston), 2016.

Variety or Selection	2015-2016 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	114	147	159	56.5	36	0	5/11	9.4
LWW14-73163			153	60.5	41	0	5/17	10.2
Bobtail	106	135	152	56.1	40	0	5/16	9.7
IDN-02-29001A	109	139	151	60.5	44	0	5/17	10.6
Norwest Duet (LOR-092)		139	150	59.4	47	0	5/19	9.9
LCS Biancor	103	129	149	57.3	34	0	5/13	9.4
WB528		134	147	59.8	41	0	5/14	10.7
LCS Drive (LWW12-7105)	107	135	147	55.1	33	0	5/11	10.3
WB1604	105	134	147	59.1	40	0	5/13	10.6
IDN-06-03303B		131	146	57.6	39	0	5/20	10.3
WB1529	106	135	146	60.8	41	0	5/18	10.3
WB-Junction	106	136	146	59.0	42	0	5/14	10.3
SY Ovation			146	59.1	42	0	5/17	10.5
Bruneau	105	133	146	59.8	48	8	5/18	10.5
BZ6W09-489			145	61.1	40	0	5/15	10.8
WA8234			145	59.6	42	0	5/16	10.3
SY 107			145	58.9	41	0	5/19	10.8
BZ6W09-471			144	62.1	43	0	5/18	10.5
UI Magic CL+		128	142	59.5	39	0	5/16	10.5
WA8232			142	60.6	41	5	5/19	10.6
IDN-06-18102A		132	141	57.5	41	0	5/17	10.2
OR2101043			141	58.6	42	0	5/19	10.6
Jasper		128	140	58.8	43	0	5/21	10.5
Brundage 96	97	126	140	57.9	39	0	5/18	10.6
LOR-913		131	139	56.9	40	0	5/16	10.2
IDN-07-28017B			137	58.0	39	0	5/15	10.5
Stephens	96	126	137	57.8	42	0	5/15	10.6
LOR-833		124	137	58.2	37	0	5/12	10.2
UI Sparrow (IDO1108DH)	103	129	136	58.4	49	0	5/23	9.8
WA8235			136	60.2	45	3	5/18	10.6
UI/WSU Huffman	101	127	136	59.6	46	0	5/21	11.1
IDN-01-10704A	103	129	136	58.7	45	0	5/21	10.2
UI Castle CL+		111	136	59.9	44	0	5/20	10.6
WB456		128	136	60.5	40	0	5/14	11.1
Puma	107	134	135	58.8	46	0	5/17	10.1
OR2110526			133	58.7	40	0	5/10	10.3
UI Palouse CL+		120	132	57.2	38	0	5/23	11.4
ARS06136-49C			131	58.6	48	23	5/23	11.2
Madsen	96	139	130	59.8	42	0	5/20	11.4
WB1376CLP (EXP1030CLP)	93	117	127	61.4	40	0	5/17	11.1
Coda			125	59.9	47	33	5/25	10.8
Average	103	131	141	59.0	41	2	5/17	10.4
LSD (0.05)	5	6	8	1.3	3	9	3.4	0.8
CV (%)	5.9	4.4	4.1	1.6	4.4	364.6	26.8	5.6

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 8. Soft white winter wheat variety performance results at Tensed, 2016.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2015-2016 Crop Year				
			Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
Bobtail	121	129	158	59.2	41	0	9.9
LCS Artdeco	129	134	155	59.2	37	0	10.5
LWW14-73163			151	61.9	40	0	10.1
SY Ovation			149	59.9	39	0	10.2
Bruneau	129	137	149	61.2	43	0	9.9
UI/WSU Huffman	123	129	147	60.6	43	0	10.9
Norwest Duet (LOR-092)		129	146	60.8	46	0	10.6
WA8234			146	61.7	40	0	10.3
IDN-01-10704A	119	129	144	60.5	40	0	9.8
IDN-06-18102A		127	144	58.7	38	0	10.5
UI Sparrow (IDO1108DH)	121	129	143	59.3	44	0	10.2
BZ6W09-471			142	62.9	40	0	11.0
Jasper		132	142	59.8	41	0	10.4
WB-Junction	123	130	142	60.5	41	0	10.6
LCS Biancor	106	111	142	59.6	36	0	10.6
BZ6W09-489			142	62.1	38	0	11.3
IDN-02-29001A	121	125	141	61.1	41	0	11.1
LOR-913		124	141	59.9	38	0	11.3
WA8235			140	61.3	40	0	11.1
UI Magic CL+		108	139	60.7	38	0	10.8
OR2101043			139	60.2	40	0	10.7
Puma	125	133	139	59.5	43	0	10.7
IDN-06-03303B		129	138	59.9	36	0	10.8
OR2110526			137	60.6	40	0	11.3
WB528		125	136	61.3	41	0	10.8
LOR-833		123	136	60.2	35	0	11.5
Stephens	117	121	134	60.3	40	0	10.9
WB1529	118	124	134	62.2	40	0	11.2
Madsen	112	121	133	60.5	39	0	11.0
WA8232			133	61.6	42	0	10.2
WB1604	108	114	133	61.2	39	0	11.4
LCS Drive (LWW12-7105)	114	113	133	59.2	35	0	11.3
UI Castle CL+		97	132	60.1	39	0	11.1
WB456		117	131	62.2	40	0	11.7
SY 107			131	60.1	39	0	10.4
UI Palouse CL+		118	130	59.1	39	0	11.2
ARS06136-49C			129	59.2	42	0	10.4
Brundage 96	112	121	127	60.0	38	0	10.8
Coda			123	60.4	42	0	11.3
WB1376CLP (EXP1030CLP)	102	105	116	62.6	40	0	12.5
IDN-07-28017B			114	59.7	37	0	10.6
Average	118	123	138	60.5	40	0	10.8
LSD (0.05)	7	9	13	1.3	2	--	0.7
CV (%)	6.9	7.2	6.0	1.4	3.1	--	4.0

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 9. Soft white winter wheat performance comparison across northern Idaho, 2016.

Variety or Selection**	2015-2016 Crop Year*													
	3-Year Yield***	2-Year Yield	North Idaho	Bonnors Ferry	Genesee	Moscow	Nezperce	Tammany	Tensed	Test Weight	Plant Height	Lodging	Protein	
	bu/A										(lb/bu)	(inches)	(%)	(%)
Bobtail			140	-	141	134	120	152	158	58.9	38	0.0	9.7	
Norwest Duet		119	134	129	126	125	128	150	146	61.5	44	0.0	10.4	
UI Sparrow	104	117	134	136	141	129	118	136	143	59.4	42	0.0	10.0	
LCS Artdeco	107	117	133	134	130	120	113	159	155	59.6	35	0.0	10.2	
Jasper		116	133	122	141	131	123	140	142	60.6	40	0.0	10.4	
Bruneau	107	119	132	138	127	117	119	146	149	61.4	41	1.3	10.4	
WA8234			131	131	128	122	115	145	146	61.6	39	0.0	10.6	
LWW14-73163			131	132	120	114	122	153	151	62.3	38	0.0	10.5	
OR2101043			129	128	132	118	115	141	139	61.0	39	0.0	10.5	
IDN-02-29001A	105	116	128	137	123	114	107	151	141	61.9	40	0.0	11.0	
UI/WSU Huffman	103	114	128	136	124	112	113	136	147	61.2	40	0.0	10.7	
IDN-06-03303B			127	-	121	121	114	146	138	59.7	37	0.0	10.7	
WB-Junction	106	116	127	127	120	116	114	146	142	61.5	38	0.0	10.6	
BZ6W09-471			126	133	119	110	111	144	142	63.0	39	0.0	11.1	
LCS Biancor			126	-	124	110	96	149	142	60.2	33	0.0	10.2	
BZ6W09-489			126	131	121	110	107	145	142	62.6	37	0.0	11.4	
WA8232			126	126	128	119	111	142	133	62.0	39	0.9	10.5	
WB528		112	126	130	120	113	115	147	136	61.7	39	0.0	10.8	
IDN-01-10704A	105	113	125	139	117	113	109	136	144	61.1	41	0.0	10.1	
WA8235			125	132	117	113	112	136	140	61.5	39	0.4	11.0	
IDN-06-18102A		112	125	139	114	108	107	141	144	59.7	37	0.0	10.3	
UI Castle CLP		101	124	127	124	117	109	136	132	61.4	39	0.0	10.7	
LOR-913		111	122	113	119	120	104	139	141	59.9	37	0.0	10.9	
SY Ovation			122	122	109	111	104	146	149	60.9	38	0.0	10.6	
Brundage 96			121	-	116	114	108	140	127	60.4	37	0.0	10.7	
Madsen	96	108	121	125	120	116	104	130	133	61.1	38	0.0	11.0	
SY 107			121	119	122	106	99	145	131	60.5	37	0.0	10.5	
Stephens	98	109	120	115	114	113	108	137	134	60.5	38	0.0	10.9	
LCS Drive	102	107	120	108	124	111	96	147	133	59.7	32	0.0	10.7	
WB1604	97	108	120	116	114	114	99	147	133	61.2	36	0.0	11.0	
Puma	102	113	120	112	120	109	110	135	139	60.5	41	0.0	10.6	
UI Magic CLP		103	119	108	119	114	96	142	139	61.7	36	0.0	11.1	
WB1529	98	109	117	119	100	105	104	146	134	62.2	37	0.0	11.1	
UI Palouse CLP		105	117	107	116	117	103	132	130	60.0	36	0.0	11.0	
ARS06136-49C			117	116	114	107	109	131	129	60.5	41	3.9	11.0	
LOR-833		106	117	109	116	109	102	137	136	60.9	34	0.0	11.3	
OR2110526			117	100	117	115	106	133	137	61.2	37	0.0	11.0	
WB456		106	115	113	113	112	91	136	131	62.3	37	0.0	11.6	
IDN-07-28017B			114	-	108	110	103	137	114	61.1	37	0.0	10.6	
Coda			112	112	105	100	106	125	123	61.6	41	5.4	11.1	
WB1376CLP	91	100	108	111	105	95	94	127	116	63.1	38	0.0	12.1	
Average	101	111	124	123	120	114	108	141	138	61.1	38	0.3	10.8	
LSD (0.05)	3	3	5	19	8	9	10	8	13	0.4	0.8	1.5	0.3	
CV (%)	8.8	7.4	7.1	11.0	4.6	5.6	6.6	4.1	6.0	1.1	3.8	878.9	4.4	

*Variety or selection yields in bold were statistically equal to the top yielding variety.

**Averages for Bobtail, Brundage 96, IDN-06-03303B, IDN-07-28017B and LCS Biancor do not include Bonnors Ferry.

***3-year yield average does not include Moscow as this location was not included in 2014.

Table 10. Hard winter wheat variety performance results at Bonners Ferry, 2016.

Variety or Selection	Market Class	2015-2016 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 Jet (NSA10-7208)	HRW		121	117	62.1	34	0	5/26	12.0
LCS Colonia	HRW	113	112	110	61.5	36	0	6/2	11.4
Norwest 553	HRW	105	102	103	63.4	32	0	5/30	12.9
OR2120012R	HRW			100	62.4	36	0	5/25	12.5
UI Silver	HWW	96	94	98	62.7	40	5	5/30	11.7
OR2110679	HWW			97	62.6	35	0	5/30	12.2
OR2110664	HWW			96	62.9	35	0	5/31	12.0
Keldin	HRW	104	101	91	62.8	36	0	5/26	12.4
OR2120276H	HWW			91	62.5	34	0	5/28	12.9
WB-Arrowhead	HRW	99	97	87	62.0	38	0	5/25	12.7
IDO1101	HWW	96	92	81	61.7	33	3	5/29	12.7
Whetstone	HRW			79	63.0	35	0	5/25	13.5
Average		102	103	96	62.5	35	1	5/28	12.4
LSD (0.05)		9	9	12	0.7	2	3	3.0	0.6
CV (%)		10.5	9.0	8.5	0.8	3.2	343.5	36.2	3.4

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 11. Hard winter wheat variety performance results at Genesee, 2016.

Variety or Selection	Market Class	2015-2016 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 Jet (NSA10-7208)	HRW	118	119	134	62.4	38	0	6/6	12.4
LCS Colonia	HRW	105	108	121	60.6	37	0	6/9	11.9
OR2110664	HWW			117	63.4	38	0	6/8	12.3
WB-Arrowhead	HRW	103	110	117	62.6	42	0	6/6	12.1
OR2110679	HWW			116	62.4	39	0	6/7	12.4
Keldin	HRW	109	111	116	63.3	40	0	6/6	11.7
Norwest 553	HRW	97	102	114	63.5	35	0	6/7	12.5
OR2120276H	HWW			108	62.6	36	0	6/7	12.8
UI Silver	HWW	100	103	106	60.2	42	25	6/8	12.2
OR2120012R	HRW			104	62.3	37	0	6/6	12.4
Whetstone	HRW			101	62.9	39	0	6/6	12.8
IDO1101	HWW	99	100	98	62.1	36	0	6/6	12.9
Average		104	108	113	62.3	38	2	6/7	12.4
LSD (0.05)		6	5	7	1.0	1	4	0.7	0.4
CV (%)		7.0	4.7	4.2	1.1	1.7	138.6	28.1	2.5

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 12. Hard winter wheat variety performance results at Moscow, 2016.*

Variety or Selection	Market Class	2015-2016 Crop Year					
		2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
LCS Jet (NSA10-7208)	HRW	132	136	62.9	37	0	10.8
LCS Colonia	HRW	123	129	59.6	35	0	11.1
UI Silver	HWW	113	120	59.8	41	0	10.9
OR2110679	HWW		117	61.9	37	0	11.6
WB-Arrowhead	HRW	115	116	63.2	42	0	11.5
Keldin	HRW	114	114	63.4	39	0	11.1
OR2110664	HWW		111	63.0	36	0	11.3
Norwest 553	HRW	101	108	62.5	31	0	12.0
OR2120012R	HRW		103	62.2	36	0	12.1
Whetstone	HRW		101	63.3	38	0	12.1
OR2120276H	HWW		98	62.5	36	0	12.0
IDO1101	HWW	103	96	62.1	34	0	11.7
Average		114	112	62.2	37	0	11.5
LSD (0.05)		7	7	0.9	1	--	0.4
CV (%)		5.8	4.3	1.0	2.4	--	2.6

*3-year averages are not available for Moscow since this location was not included in the 2013-2014 season.

**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 13. Hard winter wheat variety performance results at Nezperce, 2016.

Variety or Selection	Market Class	2015-2016 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 Jet (NSA10-7208)	HRW	86	94	118	59.5	36	0	6/4	11.2
LCS Colonia	HRW	82	84	113	58.9	34	0	6/7	11.0
Norwest 553	HRW	78	82	111	62.0	32	0	6/6	11.6
OR2110679	HWW			110	60.4	35	0	6/6	11.2
WB-Arrowhead	HRW	73	97	108	61.3	41	0	6/4	11.6
OR2110664	HWW			106	61.4	35	0	6/6	10.7
UI Silver	HWW	66	85	106	61.3	38	80	6/7	11.1
IDO1101	HWW	83	86	102	61.4	33	0	6/6	11.5
Keldin	HRW	76	84	101	60.0	37	0	6/6	11.3
OR2120012R	HRW			99	60.1	35	0	6/3	11.7
OR2120276H	HWW			96	62.1	36	0	6/3	12.1
Whetstone	HRW			95	61.7	37	0	6/3	12.0
Average		78	87	105	60.8	36	7	6/5	11.4
LSD (0.05)		8	6	7	0.9	2	6	0.8	0.5
CV (%)		12.7	6.9	4.3	1.1	3.1	61.2	14.2	3.1

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 14. Hard winter wheat variety performance results at Tammany (Lewiston), 2016.

Variety or Selection	Market Class	2015-2016 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 (%)
Keldin	HRW	108	136	150	59.8	43	0	5/15	11.4
LCS Jet (NSA10-7208)	HRW	110	135	144	59.1	39	0	5/11	12.2
OR2120276H	HWW			140	59.1	40	0	5/13	12.3
LCS Colonia	HRW	100	127	138	56.7	37	0	5/20	11.4
OR2110664	HWW			137	59.4	41	0	5/19	12.1
OR2120012R	HRW			137	57.3	41	0	5/13	11.8
Norwest 553	HRW	91	114	135	58.8	36	0	5/17	12.3
OR2110679	HWW			133	57.7	41	0	5/16	12.1
WB-Arrowhead	HRW	96	120	132	56.9	48	3	5/12	12.0
Whetstone	HRW			131	58.5	44	0	5/13	12.4
IDO1101	HWW	95	114	123	58.5	41	8	5/14	11.7
UI Silver	HWW	84	102	119	57.3	44	60	5/21	12.3
Average		98	121	135	58.2	41	6	5/15	12.0
LSD (0.05)		6	6	9	1.5	3	14	2.6	0.7
CV (%)		6.9	5.1	4.8	1.8	4.5	161.6	24.1	4.0

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 15. Hard winter wheat variety performance results at Tensed, 2016.

Variety or Selection	Market Class	2015-2016 Crop Year						
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
LCS Jet (NSA10-7208)	HRW	134	137	157	61.4	39	0	11.3
LCS Colonia	HRW	110	120	153	59.1	39	0	11.3
Keldin	HRW	124	128	137	62.5	41	0	11.2
Norwest 553	HRW	97	103	137	62.4	37	0	11.6
OR2110679	HWW			130	61.2	41	0	11.1
UI Silver	HWW	109	120	130	60.8	41	58	11.4
OR2110664	HWW			128	61.8	39	0	10.8
OR2120012R	HRW			126	61.0	40	0	11.9
OR2120276H	HWW			126	62.5	39	0	12.2
WB-Arrowhead	HRW	115	121	125	61.4	44	0	11.5
Whetstone	HRW			125	62.5	40	0	12.0
IDO1101	HWW	109	111	117	61.0	39	0	11.8
Average		114	120	133	61.4	40	5	11.5
LSD (0.05)		8	12	12	0.8	2	10	0.5
CV (%)		8.8	9.6	5.9	0.9	2.8	131.2	2.5

*Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 16. Hard winter wheat performance comparison across northern Idaho, 2016.

Variety or Selection	Market Class	2015-2016 Crop Year*															
		3-Year Yield**	2-Year Yield	North Idaho Average	Bonnors Ferry	Genesee	Moscow	Nezperce	Tammany	Tensed	Test Weight	Plant Height	Lodging	Protein			
		----- bu/A -----												(lb/bu)	(inches)	(%)	(%)
LCS Jet***	HRW	113	123	134	117	134	136	118	144	157	61.2	37	0.0	11.6			
LCS Colonia	HRW	103	111	126	110	121	129	113	138	153	59.4	36	0.0	11.3			
Norwest 553	HRW	94	101	118	103	114	108	111	135	137	62.1	34	0.0	12.1			
Keldin	HRW	104	112	118	91	116	114	101	150	137	62.0	39	0.0	11.5			
OR2110679	HWW			117	97	116	117	110	133	130	61.0	38	0.0	11.8			
OR2110664	HWW			116	96	117	111	106	137	128	62.0	37	0.0	11.6			
WB-Arrowhead	HRW	97	108	114	87	117	116	108	132	125	61.2	42	0.4	11.9			
UI Silver	HWW	91	103	113	98	106	120	106	119	130	60.3	41	37.9	11.6			
OR2120012R	HRW			112	100	104	103	99	137	126	60.9	37	0.0	12.1			
OR2120276H	HWW			110	91	108	98	96	140	126	61.9	37	0.0	12.4			
Whetstone	HRW			104	79	101	101	95	131	125	62.0	38	0.0	12.5			
IDO1101	HWW	97	101	102	81	98	96	102	123	117	61.1	36	1.7	12.0			
Average		100	108	115	96	113	112	105	135	133	61.3	38	3.3	11.9			
LSD (0.05)		3	4	5	12	7	7	7	9	12	0.4	1	3.0	0.2			
CV (%)		9.2	8.0	7.3	8.5	4.2	4.3	4.3	4.8	5.9	1.2	3.6	157.2	3.3			

*Variety or selection yields in bold were statistically equal to the top yielding variety.

**3-year yield average does not include Moscow as this location was not included in 2014.

***3-year average for LCS Jet includes only 17 site/years as this variety was not included at Bonnors Ferry in 2014.

Table 17. Soft white spring wheat variety performance results at Bonners Ferry, 2016.

Variety or Selection*	2016 Crop Year						
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
Seahawk	86	82	106	63.3	33	4	11.2
Diva	78	75	93	61.8	31	60	11.2
Ryan (WA8214)		67	90	61.2	28	4	11.6
WB-6341	76	72	90	60.3	28	0	10.7
JD ^c	72	73	89	63.0	30	18	12.1
Tekoa (WA8189)	79	69	86	63.3	32	0	11.5
Melba ^c (WA8193)			85	61.2	27	4	10.8
WB-6121	74	65	84	62.5	27	3	12.8
12-SW-068			80	57.0	27	1	11.6
WB-1035CL+			73	59.5	28	0	13.3
WA8236 ^c			73	62.4	27	18	12.3
UI Stone	60	56	64	60.5	30	0	10.5
Alturas	58	57	59	60.7	30	5	11.2
Babe	59	56	59	56.9	30	1	11.8
Average	71	67	81	61.0	29	8	11.6
LSD (0.05)	5	7	10	0.7	2	17	0.4
CV (%)	9.5	9.7	8.5	0.8	5.2	146.9	2.1

* c = spring club. SY3024-2 not included at Bonners Ferry.

**Variety or selection yields in bold were statistically equal to the top yielding variety.

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

Variety or Selection*	2016 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Lodging (%)	Protein (%)
Seahawk	62	66	101	62.6	34	6/25	0	12.6
Tekoa (WA8189)	63	65	97	62.1	35	6/24	0	12.3
Melba ^c (WA8193)			94	61.1	34	6/24	0	12.0
12-SW-068			93	60.3	34	6/22	0	12.4
Ryan (WA8214)		63	92	61.0	34	6/20	0	12.1
SY Saltese (06PN3024-2)			89	60.0	36	6/18	0	12.5
Babe	63	62	88	61.4	35	6/24	0	12.4
WB-6121	61	61	88	61.3	33	6/18	0	13.7
WA8236 ^c			88	62.8	36	6/24	5	12.8
UI Stone	59	61	86	60.1	34	6/21	0	12.3
JD ^c	56	59	84	61.7	39	6/24	18	13.4
Diva	55	57	83	59.9	38	6/23	28	12.8
WB-1035CL+			78	59.4	34	6/19	0	14.2
WB-6341	59	57	78	59.8	33	6/21	0	11.9
Alturas	48	50	71	59.7	35	6/23	0	12.6
Average	58	60	87	60.9	35	6/22	3	12.7
LSD (0.05)	5	5	8	1.3	1	2.0	17	0.6
CV (%)	9.9	8.4	6.4	1.5	2.6	14.7	357.7	3.4

* c = spring club.

**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 19. Soft white spring wheat variety performance results at Genesee, 2016.

Variety or Selection*	2016 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Lodging (%)	Protein (%)
Seahawk	64	70	90	62.1	36	6/17	0	10.4
Melba ^c (WA8193)			85	59.6	34	6/15	0	9.9
Tekoa (WA8189)	61	65	81	62.0	35	6/16	0	9.4
WB-6121	62	66	80	61.5	33	6/7	0	11.2
JD ^c	59	62	78	62.1	38	6/16	0	10.1
Diva	55	59	77	60.0	38	6/14	0	9.7
Ryan (WA8214)		60	75	58.7	35	6/13	0	10.1
WA8236 ^c			75	61.9	36	6/16	0	10.6
SY Saltese			69	59.8	36	6/8	0	10.0
12-SW-068			67	57.7	35	6/15	0	10.6
UI Stone	52	51	58	55.8	34	6/12	0	9.7
WB-6341	53	51	58	56.0	33	6/10	0	9.4
Alturas	47	45	55	58.8	34	6/12	0	9.9
Babe	58	56	54	56.2	34	6/16	0	9.6
WB-1035CL+			48	54.5	33	6/9	0	11.6
Average	57	59	70	59.1	35	6/13	0	10.1
LSD (0.05)	6	7	7	1.8	2	2.8	--	0.6
CV (%)	12.7	11.4	6.2	2.0	4.3	22.8	--	3.7

* c = spring club. SY Saltese was 06PN3024-2.

**Variety or selection yields in bold were statistically equal to the top yielding variety.

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

Variety or Selection*	2016 Crop Year							
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Lodging (%)	Protein (%)
Seahawk	71	66	74	62.6	31	7/5	0	12.8
SY Saltese			69	62.8	31	6/26	0	11.5
Tekoa (WA8189)	64	58	68	62.4	29	6/30	0	11.8
Melba ^c (WA8193)			64	61.1	27	6/29	0	12.4
WB-6121	64	58	64	62.0	26	6/27	0	13.3
JD ^c	62	57	63	63.1	30	6/29	0	13.3
Diva	65	59	61	61.7	30	6/29	0	12.1
Ryan (WA8214)		60	61	60.4	27	6/29	0	12.2
WA8236 ^c			59	62.8	26	6/28	0	13.5
12-SW-068			48	59.1	26	6/29	0	12.6
WB-6341	61	52	46	59.7	26	6/27	0	11.5
UI Stone	56	46	44	60.7	28	6/27	0	11.4
Alturas	55	48	43	61.4	28	7/4	0	11.8
Babe	57	48	39	58.4	27	7/2	0	12.0
WB-1035CL+			37	56.0	28	6/27	0	13.3
Average	62	55	56	60.9	28	6/29	0	12.4
LSD (0.05)	4	6	9	1.7	2	1.3	--	0.4
CV (%)	8.9	10.5	11.8	1.9	4.5	11.4	--	2.2

* c = spring club. SY Saltese was 06PN3024-2.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

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

Variety or Selection*	2016 Crop Year										
	3-Year Average	2-Year Average	N. Idaho Average**	Bonnors Ferry	Craigmont	Genesee	Moscow	Test Weight	Plant Height	Lodging	Protein
	bu/A							(lb/bu)	(inches)	-----%-----	
Seahawk	70	71	93	106	101	90	74	62.6	33	1	11.7
Tekoa (WA8189)	67	64	83	86	97	81	68	62.5	32	0	11.4
Melba ^c (WA8193)			82	85	94	85	64	60.7	30	1	11.3
Ryan (WA8214)		62	80	90	92	75	61	60.3	31	1	11.5
Diva	63	62	79	93	83	77	61	60.8	34	22	11.4
WB-6121	65	62	79	84	88	80	64	61.8	30	1	12.8
JD ^c	62	63	78	89	84	78	63	62.5	34	9	12.2
WA8236 ^c			74	73	88	75	59	62.5	31	6	12.4
12-SW-068			72	80	93	67	48	58.6	30	<1	11.9
WB-6341	62	58	68	90	78	58	46	58.9	30	0	10.9
UI Stone	57	53	63	64	86	58	44	59.5	31	0	11.0
Babe	59	56	60	59	88	54	39	58.2	31	<1	11.4
WB-1035CL+			59	73	78	48	37	57.4	31	0	13.1
Alturas	52	50	57	59	71	55	43	60.2	32	1	11.4
Average	62	60	73	81	87	70	55	60.4	31	3	11.7
LSD (0.05)	3	4	11	10	8	7	9	1.1	3	8	0.8
CV (%)	11.8	13.1	20.7	8.5	6.4	6.2	11.8	2.6	11.8	364.5	9.4

* c = spring club. SY Saltese is not included in north Idaho average as it was not seeded at Bonnors Ferry.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 22. Hard spring wheat variety performance results at Bonners Ferry, 2016.

Variety or Selection*	Class	2016 Crop Year						
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Protein (%)
LCS Star	HWS	80	72	100	62.2	28	0	12.0
Dayn	HWS	80	71	96	62.6	32	0	12.6
WA8240	HWS			95	62.0	30	0	12.8
Glee	HRS	75	69	93	62.7	31	0	12.5
LCS Iron	HRS	73	67	91	62.0	30	0	12.3
UI Platinum	HWS	67	59	89	62.5	26	0	12.0
LCS Luna	HRS		62	87	62.6	26	0	12.5
WA8241	HRS			84	63.2	31	0	12.3
LCS Atomo	HWS	71	61	84	61.0	24	0	11.8
WB9518	HRS	68	58	83	61.9	28	0	13.5
IDO1203S-A	HWS		62	83	62.2	28	0	12.4
HRS 3419	HRS	78	69	81	61.2	31	0	11.9
WB9411	HRS		62	81	61.4	26	0	13.0
WB-Hartline	HWS	72	63	80	60.0	32	0	12.4
IDO1202S	HWS	72	64	79	61.9	32	0	12.0
HRS 3504	HRS		65	78	59.5	30	0	13.1
Jefferson	HRS	68	59	77	60.5	30	0	12.0
WB9200	HRS			77	63.3	27	0	14.5
UI Winchester	HRS	63	57	76	61.9	31	0	13.0
WB9668	HRS		51	73	62.3	26	0	14.5
HRS 3616	HRS			71	60.6	32	0	14.6
Alum	HRS	62	56	70	61.6	31	0	13.3
WB9879CLP	HRS			65	59.7	30	0	13.4
HRS 3530	HRS		42	43	56.6	33	0	12.5
Average		71	62	81	61.5	29	0	12.8
LSD (0.05)		5	7	7	0.7	2	--	0.4
CV (%)		8.6	10.7	6.1	0.8	4.4	--	2.3

*SY Teton, SY Steelhead, SY Selway, and SY Coho were not included at Bonners Ferry. LCS Luna was previously tested as 10SB0087-B.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 23. Hard spring wheat variety performance results at Craigmont, 2016.

Variety or Selection*	Class	2016 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Lodging (%)	Protein (%)
LCS Atomo	HWS	68	68	95	60.0	28	6/16	0	12.5
SY Teton	HWS			93	59.2	31	6/19	0	12.2
LCS Iron	HRS	63	66	93	60.8	33	6/23	0	13.1
WA8240	HWS			93	61.9	34	6/22	0	13.4
Dayn	HWS	61	66	92	61.1	34	6/15	0	13.2
UI Platinum	HWS	65	65	89	60.5	32	6/15	0	12.4
WB9411	HRS		62	88	61.5	33	6/17	0	13.5
SY Coho	HRS			88	57.6	32	6/24	0	13.5
Glee	HRS	60	61	87	59.2	33	6/15	0	13.3
LCS Luna	HRS		61	86	59.7	31	6/24	0	13.9
IDO1202S	HWS	60	63	86	60.6	35	6/23	0	12.6
WB-Hartline	HWS	58	60	85	59.8	33	6/22	0	13.4
IDO1203S-A	HWS		61	85	60.9	31	6/15	0	12.4
SY Selway	HRS			85	58.6	36	6/20	0	14.3
LCS Star	HWS	60	62	85	59.4	31	6/23	0	13.4
UI Winchester	HRS	58	60	85	60.8	30	6/19	0	12.7
HRS 3616	HRS			84	61.0	35	6/20	0	14.4
WB9668	HRS		60	82	61.3	29	6/19	0	14.1
WB9518	HRS	61	60	82	60.5	32	6/22	0	14.1
WA8241	HRS			81	61.0	34	6/15	0	13.2
Alum	HRS	52	56	80	59.2	35	6/23	0	14.1
SY Steelhead	HRS			80	63.2	37	6/23	0	14.2
HRS 3419	HRS	51	53	79	58.7	34	6/26	0	13.7
HRS 3504	HRS		50	79	59.5	31	6/23	0	14.2
WB9200	HRS			77	62.3	31	6/19	0	13.4
WB9879CLP	HRS			76	60.0	33	6/23	0	14.2
Jefferson	HRS	56	56	76	60.6	33	6/23	0	13.3
HRS 3530	HRS		54	76	59.9	38	6/25	0	13.3
Average		59	60	85	60.3	33	6/21	0	13.4
LSD (0.05)		4	5	7	1.2	1	2.1	--	0.7
CV (%)		8.6	8.3	5.6	1.4	3.1	17.7	--	3.6

*LCS Luna was previously tested as 10SB0087-B.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 24. Hard spring wheat variety performance results at Genesee, 2016.

Variety or Selection*	Class	2016 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Lodging (%)	Protein (%)
LCS Iron	HRS	62	70	90	61.2	33	6/17	0	11.5
Dayn	HWS	59	67	84	61.1	35	6/9	0	11.0
LCS Star	HWS	60	68	81	59.6	32	6/13	0	10.9
SY Coho	HRS			81	59.4	34	6/17	0	11.4
LCS Luna	HRS		69	80	61.1	33	6/16	0	11.5
SY Teton	HWS			80	59.0	33	6/12	0	10.7
WB9518	HRS	60	67	77	61.4	32	6/15	0	11.8
SY Selway	HRS			77	59.4	37	6/13	0	11.5
WB9411	HRS		63	77	60.3	32	6/8	0	11.7
WA8240	HWS			76	60.4	34	6/14	0	11.0
UI Platinum	HWS	59	64	76	60.8	30	6/7	0	10.6
WB9200	HRS			75	63.1	32	6/10	0	12.4
WB9668	HRS		64	75	62.2	29	6/8	0	12.8
WB-Hartline	HWS	53	60	72	58.1	34	6/12	0	10.8
Glee	HRS	61	63	71	60.1	34	6/8	0	11.5
LCS Atomo	HWS	64	69	70	58.0	26	6/6	0	10.6
Alum	HRS	52	61	70	60.9	36	6/14	0	11.7
HRS 3419	HRS	53	56	69	60.0	34	6/18	0	11.1
SY Steelhead	HRS			68	63.1	36	6/13	0	12.4
UI Winchester	HRS	52	55	64	58.9	33	6/11	0	11.3
HRS 3616	HRS			62	58.4	36	6/13	0	12.1
IDO1202S	HWS	52	57	62	58.7	37	6/17	0	10.7
WA8241	HRS			61	61.5	35	6/7	0	11.2
Jefferson	HRS	53	54	59	58.7	36	6/13	0	11.3
IDO1203S-A	HWS		55	55	57.0	31	6/7	0	11.1
WB9879CLP	HRS			55	56.0	37	6/15	0	12.3
HRS 3504	HRS		49	51	55.6	33	6/16	0	11.7
HRS 3530	HRS		44	45	58.0	37	6/16	0	11.3
Average		57	61	70	59.7	33	6/12	0	11.4
LSD (0.05)		5	6	4	1.1	2	2.9	--	0.5
CV (%)		10.9	9.2	3.8	1.3	3.7	28.5	--	3.3

*LCS Luna was previously tested as 10SB0087-B.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 25. Hard spring wheat variety performance results at Moscow, 2016.

Variety or Selection*	Class	2016 Crop Year							
		3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Lodging (%)	Protein (%)
LCS Luna	HRS		60	64	61.4	25	6/30	0	12.8
Dayn	HWS	64	62	64	62.5	26	6/27	0	13.7
SY Teton	HWS			63	58.7	25	6/30	0	12.3
WB9411	HRS		61	63	62.3	24	6/27	0	14.3
LCS Star	HWS	62	58	63	60.8	24	6/29	0	13.2
SY Selway	HRS			62	60.3	29	6/28	0	13.9
WB-Hartline	HWS	65	60	61	59.2	26	6/29	0	13.1
LCS Iron	HRS	61	57	61	60.2	26	7/3	0	13.0
WB9518	HRS	59	58	60	59.9	25	7/3	0	14.8
HRS 3419	HRS	53	54	59	59.3	27	7/6	0	12.8
WA8240	HWS			57	61.6	27	6/27	0	13.8
SY Steelhead	HRS			56	63.1	27	6/28	0	13.7
Alum	HRS	60	57	56	61.6	27	7/1	0	13.6
WB9668	HRS		57	55	61.9	23	6/27	0	15.7
Glee	HRS	59	53	54	62.2	28	6/27	0	13.4
UI Platinum	HWS	58	56	54	62.2	25	6/26	0	12.4
WB9200	HRS			53	62.0	26	6/28	0	15.8
SY Coho	HRS			52	56.6	26	7/6	0	13.1
UI Winchester	HRS	55	53	50	60.2	26	6/27	0	12.5
Jefferson	HRS	56	51	50	60.8	26	6/28	0	12.6
WA8241	HRS			49	62.3	28	6/27	0	12.7
IDO1202S	HWS	56	50	47	60.9	27	6/29	0	11.8
LCS Atomo	HWS	56	51	43	59.5	21	6/26	0	12.9
HRS 3616	HRS			43	60.9	26	6/29	0	14.0
IDO1203S-A	HWS		51	43	60.8	24	6/27	0	12.1
WB9879CLP	HRS			40	58.3	26	6/29	0	13.7
HRS 3504	HRS		43	35	56.8	24	6/30	0	12.8
HRS 3530	HRS		41	33	57.2	29	7/3	0	12.6
Average		59	54	53	60.5	26	6/29	0	13.3
LSD (0.05)		4	5	6	1.3	2	1.4	--	0.4
CV (%)		8.2	9.5	8.0	1.5	4.2	12.5	--	2.3

*LCS Luna was previously tested as 10SB0087-B.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

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

Variety or Selection*	Class	2016 Crop Year										
		3-Year Average	2-Year Average	N. Idaho Average**	Bonnors Ferry	Craigmont	Genesee	Moscow	Test Weight	Plant Height	Lodging	Protein
		-----bu/A-----							(lb/bu)	(inches)	-----%-----	
Dayn	HWS	66	67	84	96	92	84	64	61.8	32	0	12.6
LCS Iron	HRS	64	64	83	91	93	90	61	61.0	31	0	12.5
LCS Star	HWS	65	65	82	100	85	81	63	60.5	29	0	12.4
WA8240	HWS			80	95	93	76	57	61.4	31	0	12.7
LCS Luna	HRS		63	79	87	86	80	64	61.2	29	0	12.7
WB9411	HRS		62	77	81	88	77	63	61.4	28	0	13.1
UI Platinum	HWS	62	61	77	89	89	76	54	61.5	28	0	11.8
Glee	HRS	64	61	76	93	87	71	54	61.0	31	0	12.7
WB9518	HRS	62	61	75	83	82	77	60	60.9	29	0	13.5
WB-Hartline	HWS	62	61	75	80	85	72	61	59.3	31	0	12.4
LCS Atomo	HWS	65	62	73	84	95	70	43	59.6	25	0	11.9
HRS 3419	HRS	59	58	72	81	79	69	59	59.8	31	0	12.4
WB9668	HRS		58	71	73	82	75	55	61.9	27	0	14.3
WB9200	HRS			71	77	77	75	53	62.6	29	0	14.0
Alum	HRS	57	58	69	70	80	70	56	60.8	32	0	13.2
WA8241	HRS			69	84	81	61	49	62.0	32	0	12.4
UI Winchester	HRS	57	56	69	76	85	64	50	60.4	30	0	12.4
IDO1202S	HWS	60	59	68	79	86	62	47	60.5	33	0	11.8
IDO1203S-A	HWS		57	67	83	85	55	43	60.2	29	0	12.0
Jefferson	HRS	58	55	66	77	76	59	50	60.1	31	0	12.3
HRS 3616	HRS			65	71	84	62	43	60.2	32	0	13.8
HRS 3504	HRS		52	59	78	79	51	35	57.8	29	0	12.9
WB9879CLP	HRS			59	65	76	55	40	58.5	31	0	13.4
HRS 3530	HRS		45	47	43	76	45	33	57.9	34	0	12.4
Average		62	59	71	81	84	69	52	60.5	30	0	12.7
LSD (0.05)		3	3	10	7	7	4	6	1.1	2	--	0.7
CV (%)		10.9	11.2	20.1	6.1	5.6	3.8	8.0	2.5	11.3	--	7.8

*SY Teton, SY Steelhead, SY Selway, and SY Coho are not included in north Idaho average as they were not seeded at Bonnors Ferry. LCS Luna was previously tested as 10SB0087-B.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 27. Spring barley variety performance results at Bonners Ferry, 2016.

Variety or Selection	2016 Crop Year										
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
							(>6/64)	(>5.5/64)			
Feed											
LCS Vespa	119	113	153	51.5	31	6/22	97	2	1	36	10.4
Lenetah	121	116	152	51.7	31	6/21	94	5	1	20	10.8
Tetonia	117	111	151	51.8	33	6/22	94	5	1	18	10.1
Claymore (BZ509-216)	126	117	150	52.0	36	6/22	93	6	2	20	10.1
09WA-232.16		112	147	51.5	33	6/20	96	3	1	29	10.7
Oreana (BZ509-448)	116	109	145	53.0	32	6/22	98	2	1	58	9.2
Camas	116	109	143	52.3	33	6/21	97	3	<1	18	10.6
RWA-1758	110	105	142	51.1	32	6/22	95	4	1	14	10.8
BZ509-601	114	106	140	51.9	33	6/20	95	5	1	10	10.8
Champion	112	105	140	51.9	34	6/20	96	4	1	58	9.9
09WA-203.36		105	136	51.8	32	6/21	93	5	1	35	10.4
09WA-203.24	113	103	135	51.7	32	6/21	97	2	<1	18	11.1
10WA-106.18		103	132	51.8	34	6/20	94	4	1	23	10.4
Lyon	109	102	129	50.8	31	6/21	93	5	2	25	10.2
Malt											
LCS Odyssey		112	150	51.2	31	6/22	98	2	1	23	9.8
LCS Westminster			146	52.1	34	6/23	97	2	<1	26	10.0
LCS Genie	111	103	142	51.4	31	6/22	97	3	1	15	9.6
2Ab08-X05M010-82	111	105	138	52.0	36	6/21	95	4	1	16	10.3
2Ab04-X01084-27	108	104	137	50.9	32	6/21	92	6	2	26	10.5
CDC-Copeland	111	102	132	51.7	36	6/22	95	3	1	40	10.2
2Ab07-X031098-31	107	99	131	51.4	35	6/21	94	5	1	9	11.6
10WA-117.17			128	51.3	32	6/22	92	7	1	31	10.4
Food											
Kardia		113	154	51.4	37	6/24	93	6	1	14	11.9
Salute	97	91	121	51.1	35	6/21	98	2	<1	35	12.1
2Ab09-X06F058HL-31	81	76	103	52.5	34	6/21	96	3	1	14	13.0
Transit	69	62	89	55.5	37	6/22	89	10	1	4	14.2
Average	109	103	137	51.8	33	6/20	95	4	1	24	10.7
LSD (0.05)	7	9	10	0.9	2	0.9	1	1	<1	27	--
CV (%)	7.9	8.8	5.0	1.3	3.8	18.7	1.1	20.7	30.5	79.0	--

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 28. Spring barley variety performance results at Craigmont, 2016.

Variety or Selection	2016 Crop Year										
	3-Year Average (bu/A)	2-Year Average (bu/A)	Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Heading Date	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
							(>6/64)	(>5.5/64)			
Feed											
Oreana (BZ509-448)	91	95	144	54.6	31	6/26	91	7	2	3	11.0
09WA-203.36		88	131	54.9	35	6/23	95	4	1	25	10.5
Claymore (BZ509-216)	89	88	128	53.8	36	6/25	91	8	2	8	10.8
09WA-232.16		88	128	54.6	35	6/22	95	4	1	20	10.6
09WA-203.24	88	87	127	54.9	34	6/23	96	3	1	28	11.1
Champion	89	88	126	54.7	35	6/19	95	4	1	35	10.7
BZ509-601	88	88	124	55.0	34	6/22	94	5	1	0	10.9
LCS Vespa	83	81	124	54.1	28	6/28	96	3	1	0	10.2
Lyon	82	84	124	53.0	34	6/21	92	6	2	50	11.5
Tetonia	80	81	120	53.5	35	6/24	89	8	3	40	11.1
Lenetah	87	85	120	54.0	33	6/18	96	4	1	30	11.0
10WA-106.18		83	116	54.3	35	6/18	95	4	1	68	11.2
Camas	81	81	116	54.7	34	6/23	93	6	1	3	11.4
RWA-1758	79	80	115	53.6	33	6/25	95	4	1	5	11.6
Malt											
LCS Odyssey		86	131	52.7	31	6/27	92	6	2	18	9.9
LCS Genie	77	78	123	54.0	31	6/27	93	6	2	0	10.2
LCS Westminster			123	54.7	33	6/26	96	4	1	0	10.8
2Ab04-X01084-27	77	79	120	52.5	34	6/23	91	7	2	13	12.1
2Ab07-X031098-31	78	79	118	54.6	36	6/24	93	6	1	0	11.0
2Ab08-X05M010-82	76	75	113	54.0	35	6/26	92	6	1	0	10.3
CDC-Copeland	70	70	109	52.9	37	6/26	90	8	2	60	11.5
10WA-117.17			107	53.3	34	6/26	84	13	3	88	10.7
Food											
Kardia		71	117	53.0	36	6/30	90	8	1	0	12.0
Salute	73	68	97	53.7	36	6/23	92	6	2	40	12.9
2Ab09-X06F058HL-31	63	60	92	56.8	33	6/22	91	7	2	23	13.1
Transit	50	45	76	58.4	39	6/26	76	21	3	5	14.1
Average	79	80	118	54.2	34	6/24	92	7	1	21	11.2
LSD (0.05)	8	8	11	1.1	2	2.6	6	4	1	34	--
CV (%)	12.2	10.1	6.6	1.5	4.2	15.5	4.3	47.6	67.6	113.5	--

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 29. Spring barley variety performance results at Genesee, 2016.

Variety or Selection	2016 Crop Year									
	3-Year Average	2-Year Average	Seed Yield	Test Weight	Plant Height	Plumps (%)		Thins	Lodging	Protein
	(bu/A)	(bu/A)	(bu/A)*	(lb/bu)	(inches)	(>6/64)	(>5.5/64)	(%)	(%)	(%)
Feed										
09WA-203.36			136	52.1	37	78	17	5	5.0	12.2
09WA-232.16			135	51.6	35	76	18	6	5.0	11.5
09WA-203.24		105	134	51.0	36	75	18	7	7.5	12.2
10WA-106.18			133	51.6	36	69	22	8	23.8	10.1
Champion	104	106	129	52.7	36	81	16	3	1.3	11.8
Lyon		106	129	50.8	33	78	16	6	16.3	12.5
BZ509-448		101	128	49.5	31	59	26	15	8.8	11.4
BZ509-216		102	127	48.6	37	63	25	12	5.0	12.1
Lenetah	99	100	124	51.7	35	82	15	3	1.3	10.7
LCS Vespa	102	97	123	48.7	31	63	26	11	0.0	11.7
BZ509-601		103	122	51.8	34	66	26	8	0.0	11.8
Camas	95	96	120	52.8	36	76	17	7	2.5	11.7
Tetonia	96	94	117	48.9	36	53	32	15	1.3	12.6
RWA-1758		99	115	50.7	32	69	21	10	7.5	12.4
Muir		95	112	49.1	35	70	22	8	20.0	14.3
Malt										
LCS Odyssey			124	45.9	34	84	13	4	6.3	10.6
Merem		88	118	50.0	40	72	18	10	6.3	11.7
LCS Overture			113	45.1	33	78	15	8	2.5	11.1
2Ab08-X05M010-82	94	93	113	48.3	35	55	29	17	1.3	12.5
2Ab07-X031098-31		87	110	47.7	38	61	25	14	37.5	15.3
CDC-Copeland	90	89	110	48.3	39	71	20	9	35.0	13.7
2Ab04-X01084-27		87	110	46.0	35	71	21	8	5.0	13.3
LCS Genie	94	90	109	47.1	32	67	21	12	55.0	13.1
Food										
Salute		89	110	49.9	35	82	13	5	6.3	13.7
Kardia**			108	47.1	38	58	28	14	2.5	14.2
2Ab09-X06F058HL-31		69	86	53.9	35	58	28	14	45.0	14.6
Transit		67	83	56.4	37	36	47	17	0.0	16.0
Average	97	93	121	49.5	35	70	21	9	11.0	12.5
LSD (0.05)	6	8	12	2.1	2	13	8	6	19.7	--
CV (%)	7	9	7	3.0	4	13	25	42	123.0	--

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 30. Spring barley variety performance results at Moscow, 2016.

Variety or Selection	2016 Crop Year									
	3-Year Average	2-Year Average	Seed Yield	Test Weight	Plant Height	Plumps (%)		Thins	Lodging	Protein
	(bu/A)	(bu/A)	(bu/A)*	(lb/bu)	(in)	(>6/64)	(>5.5/64)	(%)	(%)	(%)
Feed										
BZ509-601	89	88	92	53.6	31	93	6	1	0	7.5
RWA-1758	88	87	91	53.1	30	95	4	1	0	7.8
Tetonia	87	88	91	52.6	30	93	7	1	0	7.2
LCS Vespa	87	86	90	51.7	32	96	4	1	0	7.7
09WA-232.16		85	90	53.7	30	95	5	1	0	8.0
Lyon	84	82	88	52.0	29	95	4	1	0	7.7
Oreana (BZ509-448)	86	85	87	52.7	31	92	7	2	0	7.1
Camas		81	85	54.2	29	97	2	<1	0	8.8
09WA-203.36	84	83	85	53.0	29	93	6	2	0	7.3
Champion	86	84	84	53.7	32	91	7	2	0	8.2
Lenetah	82	82	82	53.2	30	94	5	1	0	7.0
10WA-106.18		91	82	54.2	30	94	5	1	0	7.3
09WA-203.24		81	81	52.7	30	96	3	1	0	7.8
Claymore (BZ509-216)	82	81	78	51.8	31	92	7	1	0	7.3
Malt										
CDC-Copeland	84	84	92	53.9	28	97	2	1	0	8.0
2Ab08-X05M010-82	83	84	90	53.0	29	93	6	1	0	7.4
2Ab07-X031098-31	82	81	86	53.7	28	93	6	1	0	7.6
LCS Odyssey		84	85	52.0	29	97	2	1	0	7.0
LCS Westminster			85	52.8	31	98	2	<1	0	7.4
LCS Genie	80	76	84	53.6	29	98	1	<1	0	8.0
10WA-117.17			82	52.2	30	95	4	1	0	7.4
2Ab04-X01084-27	81	80	79	50.1	29	95	4	1	0	6.9
Food										
Salute	76	72	75	52.3	28	98	2	<1	0	9.2
Kardia		71	73	48.2	28	94	5	1	0	9.1
2Ab09-X06F058HL-31	56	50	53	56.9	31	90	8	2	0	10.4
Transit	52	46	49	58.8	29	59	34	7	0	11.4
Average	84	84	86	52.9	30	95	5	1	0	7.9
LSD (0.05)	7	10	17	1.1	3	3	2	1	--	--
CV (%)	10.3	12.4	14.5	1.5	7.4	2.4	29.9	55.4	--	--

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 31. Spring barley performance comparison across northern Idaho, 2016.

Variety or Selection	2016 Crop Year														
	3-Year Average	2-Year Average	North Idaho Ave.	Bonnerr Ferry	Craigmont	Genesee	Moscow	Test Weight	Plant Height	Plumps (>6/64)	Plumps (>5.5/64)	Thins	Lodging	Protein	
	-----bu/A-----							(lb/bu)	(inches)	-----%-----					
Feed															
Oreana (BZ509-448)	101	105	127	145	144	131	87	53.0	30	94	5	1	15	9.2	
LCS Vespa	99	101	124	153	124	127	90	52.8	30	96	3	1	9	9.6	
Claymore (BZ509-216)	102	103	120	150	128	123	78	52.7	35	93	6	1	7	9.4	
Lenetah	99	101	119	152	120	121	82	53.0	32	95	4	1	20	9.7	
Tetonia	96	98	118	151	120	111	91	53.0	33	93	6	1	17	9.6	
09WA-232.16		101	117	147	128	103	90	53.4	33	96	4	1	12	9.9	
RWA-1758	95	97	116	142	115	117	91	53.0	32	95	4	1	5	10.1	
BZ509-601	99	99	116	140	124	108	92	53.6	32	94	5	1	3	9.8	
09WA-203.24	98	98	115	135	127	117	81	53.0	32	97	3	1	12	10.0	
09WA-203.36		100	115	136	131	107	85	53.4	32	95	4	1	16	9.6	
Champion	98	99	115	140	126	109	84	53.3	34	95	4	1	26	9.7	
Camas	95	96	112	143	116	104	85	53.9	32	96	3	1	5	10.4	
Lyon	95	96	112	129	124	106	88	52.4	31	94	5	1	21	9.9	
10WA-106.18		98	109	132	116	98	82	53.4	33	95	4	1	25	9.8	
Malt															
LCS Odyssey		104	127	150	131	141	85	52.2	30	96	3	1	10	9.0	
LCS Genie	93	95	121	142	123	135	84	53.1	30	96	3	1	4	9.2	
LCS Westminster			118	146	123	120	85	53.5	32	97	2	1	7	9.4	
2Ab08-X05M010-82	94	96	118	138	113	129	90	53.0	34	94	5	1	7	9.5	
2Ab07-X031098-31	90	92	111	131	118	108	86	53.2	33	94	5	1	3	9.9	
2Ab04-X01084-27	90	93	111	137	120	107	79	51.4	31	93	5	1	13	9.9	
CDC-Copeland	89	90	107	132	109	93	92	52.9	34	95	4	1	43	10.0	
10WA-117.17			106	128	107	105	82	52.3	32	92	7	1	51	9.7	
Food															
Kardia		92	116	154	117	120	73	52.3	34	93	6	1	3	10.8	
Salute	84	83	98	121	97	98	75	52.7	33	96	3	1	22	11.4	
2Ab09-X06F058HL-31	69	69	86	103	92	89	53	55.7	33	92	6	2	13	12.3	
Transit	61	59	73	89	76	78	49	57.8	35	76	20	3	2	13.4	
Average	92	94	113	137	118	112	86	53.2	32	94	5	1	14	10.0	
LSD (0.05)	4	5	6	10	11	7	17	0.5	1	2	1	<1	12	--	
CV (%)	10.4	9.7	7.4	5.0	6.6	4.4	14.5	1.4	5.5	2.8	41.2	57.7	123.1	--	

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 32. Winter barley variety performance results at Bonners Ferry, 2016.

		2015-2016 Crop Year									
Variety or Selection	Class	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)			
2-row											
05ARS561-208	Malt		128	122	51.3	31	98	1	1	0	10.6
10.0777	Malt			121	50.7	30	99	1	<1	23	11.7
Charles	Malt		108	116	50.6	29	98	1	1	20	10.9
93Ab669	Malt		118	115	52.1	36	98	2	<1	0	10.5
Wintmalt	Malt			111	50.5	33	99	1	<1	0	12.1
02Ab431	Malt		109	107	51.1	35	99	1	<1	20	10.9
10.0860	Malt			105	50.7	30	98	1	<1	0	12.0
02Ab671	Malt		115	101	51.9	35	99	0	<1	5	11.1
Endeavor	Malt		91	87	51.4	33	98	1	1	0	11.7
05ARS748-270	Malt, hulless		43	43	56.7	29	94	5	1	0	13.7
6-row											
Sunstar Pride	Feed	138	148	151	49.8	31	90	8	2	0	9.0
Alba	Feed		114	126	50.3	34	96	3	1	18	10.6
LCS Saturn	Feed			126	48.6	30	96	2	1	0	10.8
Strider	Feed	113	118	122	49.5	33	95	4	1	5	11.5
Verdant	Hooded, forage		109	121	44.5	41	95	4	1	0	11.8
Eight-Twelve	Feed	117	121	111	50.1	32	91	8	2	0	10.6
Maja	Feed/malt		103	98	51.8	32	96	3	1	18	10.8
Buck	Malt, hulless			55	58.6	28	80	17	3	3	12.1
Average		123	110	108	51.1	32	95	4	1	6	11.2
LSD (0.05)		14	16	23	1.1	3	2	1	<1	21	--
CV (%)		13.1	14.6	15.0	1.5	6.7	1.3	30.9	32.8	264.1	--

*Three-year averages are not available for 02Ab431, 02Ab671, 93Ab669, Alba, Charles or Endeavor due to significant wildlife damage in 2014.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 33. Dry pea variety performance results at Craigmont, 2016.

Variety or Selection	3-Year Average (lb/A)	2-Year Average (lb/A)	2016 Crop Year				
			Seed Yield (lb/A)*	100 Seed Weight (g)	Vine Length (in)	Canopy Height (in)	Erect Index (0-1)
Green							
PS10100158		1715	2486	17.6	27	17	0.62
Ginny	1832	1768	2474	21.1	29	20	0.71
Greenwood	1750	1659	2416	20.6	24	19	0.78
Banner	1615	1439	2233	21.9	28	18	0.67
Hampton	1826	1808	2218	22.0	26	13	0.54
Pro 131-7123		1599	2155	20.6	26	20	0.79
PS12100040			2045	22.4	28	13	0.45
PS12100038			2028	24.8	22	18	0.83
PS05100840	1902	1780	2022	22.6	24	15	0.66
PS08100133	1570	1446	1965	23.2	28	18	0.69
PS03101445	1475	1476	1880	22.9	24	15	0.66
Ariel	1370	1390	1876	19.7	23	15	0.69
Columbian	1191	1180	1813	19.2	32	9	0.29
Aragorn	1441	1393	1744	23.0	26	21	0.81
PS10100131			1587	23.9	24	21	0.90
PS10100558			1557	23.7	26	21	0.83
Yellow							
PS12100111			2029	21.6	28	14	0.53
PS08101004	1743	1546	1964	24.5	25	17	0.66
Carousel	1599	1528	1715	25.1	24	20	0.83
DS Admiral			1711	23.4	28	22	0.79
Pro 822	1381	1285	1564	28.1	27	20	0.72
PS07100925	1554	1592	1505	25.6	21	16	0.74
PS08101022		1254	1438	25.5	23	16	0.71
Average	1589	1521	1931	22.7	26	17	0.69
LSD (0.05)	378	500	482	1.1	5	4	0.19
CV (%)	29.4	33.1	17.7	3.3	14.5	17.5	19.6

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 34. Dry pea variety performance results southeast of Genesee, 2016.

Variety or Selection	2016 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)
Green							
Hampton	2719	2913	4275	23.8	33	20	0.61
PS12100040			4032	25.8	30	22	0.76
PS05100840	2727	2965	3825	24.8	31	23	0.77
Pro 131-7123		2789	3749	21.5	32	28	0.87
PS03101445	2302	2610	3604	23.9	30	23	0.78
PS10100158		2600	3552	20.1	30	22	0.75
PS12100038			3549	25.1	32	27	0.84
Greenwood	2563	2684	3485	23.4	32	28	0.86
Ginny	2557	2742	3450	24.0	33	29	0.88
PS10100131			3409	25.8	32	26	0.81
PS10100558			3398	25.0	34	27	0.80
Ariel	2330	2589	3318	22.1	31	27	0.87
Columbian	2137	2441	3230	19.6	37	9	0.25
Aragorn	2320	2465	3118	24.2	32	28	0.88
PS08100133	2270	2363	3058	24.6	31	26	0.86
Banner	2175	2198	2849	22.3	31	25	0.82
Yellow							
PS07100925	2699	3068	4089	25.3	32	24	0.77
PS08101004	2819	2952	3952	24.9	29	19	0.66
Carousel	2473	2748	3820	25.4	39	34	0.87
PS08101022		2858	3696	25.1	29	20	0.69
Pro 822	2714	2891	3481	26.8	33	31	0.94
DS Admiral			3413	24.9	34	31	0.91
PS12100111			3407	24.2	28	16	0.58
Average	2486	2699	3555	24.0	32	24	0.77
LSD (0.05)	215	284	457	1.2	4	4	0.16
CV (%)	10.7	10.6	9.1	3.5	9.3	12.8	14.7

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 35. Dry pea variety performance results at Moscow, 2016.

Variety or Selection	2016 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)
Green							
Hampton	1694	1434	2576	20.4	27	16	0.60
PS12100040	1690		2473	20.5	30	14	0.47
PS12100038			2309	21.9	28	18	0.67
PS10100131			1895	22.5	28	21	0.73
PS05100840	1667	1465	1865	20.7	25	15	0.63
PS10100558			1632	21.1	28	16	0.55
Pro 131-7123		919	1429	14.8	23	18	0.79
PS08100133	1130	881	1416	17.7	21	18	0.86
Ginny	1305	958	1370	17.1	21	18	0.82
Greenwood	1225	929	1354	16.2	22	19	0.86
Aragorn	1113	844	1266	17.5	22	19	0.86
PS03101445	943	872	1209	17.1	21	14	0.67
Ariel	864	634	903	14.3	21	16	0.76
PS10100158		604	771	14.6	20	12	0.59
Columbian	850	550	648	15.3	29	10	0.35
Banner	770	443	617	16.7	22	17	0.79
Yellow							
PS08101004		1389	1881	22.0	29	15	0.53
Pro 822	1249	1068	1654	20.0	25	22	0.88
PS08101022		1185	1550	18.1	20	15	0.77
Carousel	1204	929	1350	18.0	23	16	0.72
PS07100925	1191	908	1303	18.8	18	16	0.94
PS12100111			1211	17.1	20	15	0.74
DS Admiral			1065	18.5	23	19	0.81
Average	1207	942	1467	18.3	24	16	0.71
LSD (0.05)	199	225	291	1.0	4	5	0.21
CV (%)	20.3	23.8	13.8	3.6	10.8	19.8	20.4

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 36. Dry pea performance comparison across northern Idaho, 2016.

Variety or Selection	2016 Crop Year									
	3-Year Average	2-Year Average	N. Idaho Average*	Craigmont	Genesee	Moscow	100 Seed Weight	Vine Length	Canopy Height	Erect Index
	------(lb/A)-----						(gram)	------(inches)-----		(0-1)
Green										
Hampton	2079	2051	3023	2218	4275	2576	22.1	29	16	0.58
PS12100040			2850	2045	4032	2473	22.9	29	16	0.56
PS12100038			2629	2028	3549	2309	23.9	27	21	0.78
PS05100840	2099	2070	2571	2022	3825	1865	22.7	26	18	0.69
Pro 131-7123		1806	2537	2155	3749	1429	19.3	27	22	0.82
Ginny	1898	1823	2431	2474	3450	1370	20.7	28	22	0.80
Greenwood	1846	1758	2418	2416	3485	1354	20.1	26	22	0.83
PS10100131			2297	1587	3409	1895	24.1	28	23	0.81
PS10100158		1640	2270	2486	3552	771	17.4	26	17	0.65
PS10100558			2247	1557	3398	1632	23.5	29	22	0.74
PS03101445	1573	1653	2231	1880	3604	1209	21.3	25	17	0.70
PS08100133	1672	1593	2213	1965	3058	1416	22.2	27	21	0.80
Aragorn	1624	1567	2043	1744	3118	1266	21.6	27	23	0.85
Ariel	1521	1538	2032	1876	3318	903	18.7	25	19	0.78
Banner	1520	1360	1900	2233	2849	617	20.3	27	20	0.76
Columbian	1392	1390	1897	1813	3230	648	18.0	33	9	0.29
Yellow										
PS08101004	2084	1962	2599	1964	3952	1881	23.8	28	17	0.62
PS07100925	1814	1856	2299	1505	4089	1303	23.3	23	18	0.82
Carousel	1759	1735	2295	1715	3820	1350	22.8	28	23	0.81
Pro 822	1781	1748	2233	1564	3481	1654	25.0	28	24	0.84
PS08101022		1766	2228	1438	3696	1550	22.9	24	17	0.72
PS12100111			2216	2029	3407	1211	21.0	25	15	0.61
DS Admiral			2063	1711	3413	1065	22.2	28	24	0.83
Average	1762	1724	2327	1931	3555	1467	21.7	27	19	0.73
LSD (0.05)	183	241	403	482	457	291	0.7	3	3	0.11
CV (%)	22.3	24.6	21.4	17.7	9.1	13.8	3.8	13.0	16.1	19.2

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 37. Spring lentil variety performance results at Craigmont, 2016.*

Variety or Selection	Market Class	2016 Crop Year		
		Seed Yield (lb/A)**	100 Seed Weight (g)	Plant Height (in)
Morena	Pardina	2392	3.8	17
LC11600361R	Richlea	2354	4.4	14
LC14600017P	Pardina	2293	4.3	16
Avondale	Richlea	2292	4.2	15
LC01602062T	Turkish red	2281	4.2	14
LC09600066E	Eston	2187	3.3	16
LC10600494P	Pardina	2174	3.8	14
LC01602273E	Eston	2172	3.2	15
Richlea	Richlea	2086	4.5	16
Eston	Eston	2056	2.9	15
Crimson	Turkish red	2051	3.1	12
LC09600054E	Eston	2025	3.6	15
LC08600005E	Eston	2010	4.2	16
LC08600113P	Pardina	1983	4.5	10
LC1460NZ05FG	French green	1977	2.7	15
Merrit	Laird	1894	5.6	11
Pardina	Pardina	1884	3.5	10
LC1460NZ06FG	French green	1815	2.6	15
LC11600342R	Richlea	1759	5.1	15
LC1660NZ003E	Eston	1714	3.1	16
LC14600010P	Pardina	1566	4.0	12
LC09600410L	Laird	1557	6.7	14
LC14600006P	Pardina	1397	3.9	13
Average		1996	4.0	14
LSD (0.05)		350	0.2	3
CV (%)		12.4	4.2	13.0

*2-year and 3-year averages are not available due to loss of the location in 2015.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 38. Spring lentil variety performance results southeast of Genesee (rim area), 2016.

Variety or Selection	Market Class	3-Year Average (lb/A)	2-Year Average (lb/A)	2016 Crop Year		
				Seed Yield (lb/A)*	100 Seed Weight (g)	Plant Height (in)
LC01602273E	Eston	1410	1461	1665	3.6	15
LC11600361R	Richlea			1385	4.8	15
Morena	Pardina	1247	1263	1370	3.6	19
Crimson	Turkish red	989	1000	1354	3.3	13
Avondale	Richlea	1294	1305	1352	4.4	18
Pardina	Pardina	1249	1310	1304	3.8	13
LC14600017P	Pardina			1298	4.3	17
Merrit	Laird	1143	1144	1270	6.6	15
LC11600342R	Richlea			1206	5.4	17
LC10600494P	Pardina			1203	4.0	17
LC09600054E	Eston			1193	3.8	17
LC09600410L	Laird		1092	1144	7.1	16
LC09600066E	Eston			1104	3.7	15
LC08600113P	Pardina	972	984	977	4.3	16
LC14600010P	Pardina			900	3.9	15
LC1460NZ05FG	French green			844	2.9	15
LC14600006P	Pardina			825	3.7	15
Eston	Eston	840	807	783	3.3	15
Richlea	Richlea	1049	922	776	4.3	17
LC01602062T	Turkish red	936	892	754	4.3	15
LC1460NZ06FG	French green			713	2.6	15
LC08600005E	Eston			640	4.0	16
LC1660NZ003E	Eston			571	3.3	16
Average		1113	1107	1071	4.1	16
LSD (0.05)		139	178	315	0.5	2
CV (%)		15.4	16.1	20.8	8.5	8.0

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 39. Spring lentil variety performance results at Moscow, 2016.*

Variety or Selection	Market Class	2016 Crop Year		
		Seed Yield (lb/A)**	100 Seed Weight (g)	Plant Height (in)
Morena	Pardina	659	3.3	16
LC09600066E	Eston	406	3.4	15
Avondale	Richlea	390	3.8	18
Merrit	Laird	348	5.8	15
LC11600361R	Richlea	315	4.2	17
Pardina	Pardina	304	3.4	13
LC09600410L	Laird	304	5.9	14
LC01602273E	Eston	296	3.2	13
LC14600017P	Pardina	292	3.5	16
LC08600113P	Pardina	287	3.6	14
LC09600054E	Eston	271	3.8	14
LC10600494P	Pardina	266	3.2	15
LC11600342R	Richlea	243	4.8	16
Eston	Eston	225	3.1	12
LC14600010P	Pardina	207	3.6	13
LC14600006P	Pardina	193	3.4	12
LC08600005E	Eston	186	3.9	16
LC01602062T	Turkish red	179	3.5	13
Richlea	Richlea	167	3.6	13
Crimson	Turkish red	151	3.2	13
LC1660NZ003E	Eston	137	2.7	13
LC1460NZ05FG	French green	135	2.6	13
LC1460NZ06FG	French green	89	2.7	14
Average		263	3.7	14
LSD (0.05)		107	0.4	2
CV (%)		28.8	8.7	8.2

*2-year and 3-year averages are not available due to loss of the location in 2015.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 40. Lentil performance comparison across northern Idaho, 2016*

Variety or Selection	Market Class	2016 Crop Year					
		N. Idaho Average**	Craigmont	Genesee	Moscow	100 Seed Weight (grams)	Plant Height (inches)
		----- (lb/A) -----					
Morena	Pardina	1474	2392	1370	659	3.6	17
LC01602273E	Eston	1378	2172	1665	296	3.3	14
LC11600361R	Richlea	1351	2354	1385	315	4.5	15
Avondale	Richlea	1345	2292	1352	390	4.1	17
LC14600017P	Pardina	1294	2293	1298	292	4.0	16
LC09600066E	Eston	1232	2187	1104	406	3.5	15
LC10600494P	Pardina	1214	2174	1203	266	3.7	15
Crimson	Turkish red	1185	2051	1354	151	3.2	13
Merrit	Laird	1170	1894	1270	348	6.0	14
Pardina	Pardina	1164	1884	1304	304	3.6	12
LC09600054E	Eston	1163	2025	1193	271	3.7	15
LC08600113P	Pardina	1082	1983	977	287	4.1	13
LC01602062T	Turkish red	1071	2281	754	179	4.0	14
LC11600342R	Richlea	1069	1759	1206	243	5.1	16
Eston	Eston	1021	2056	783	225	3.1	14
Richlea	Richlea	1010	2086	776	167	4.1	15
LC09600410L	Laird	1002	1557	1144	304	6.6	15
LC1460NZ05FG	French green	985	1977	844	135	2.7	14
LC08600005E	Eston	945	2010	640	186	4.0	16
LC14600010P	Pardina	891	1566	900	207	3.8	13
LC1460NZ06FG	French green	872	1815	713	89	2.6	15
LC1660NZ003E	Eston	807	1714	571	137	3.0	15
LC14600006P	Pardina	805	1397	825	193	3.6	13
Average		1110	1996	1071	263	3.9	15
LSD (0.05)		176	350	315	107	0.2	1
CV (%)		19.7	12.4	20.8	28.8	7.4	10.0

*2-year and 3-year averages were not calculated since the Craigmont and Moscow locations were lost in 2015.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 41. Chickpea variety performance results at Craigmont, 2016.*

Variety or Selection	2016 Crop year						
	Seed Yield (lb/A)**	100 Seed Weight (g)	Plant Height (in)	Chickpea Size (%)			
				(>25/64")	(>22/64")	(>20/64")	(<20/64")
BillyBeans	2087	25.5	26	2	4	21	72
Sawyer	2075	38.5	23	4	38	43	16
CA0890B0531C	2044	43.1	21	13	51	25	12
CDC Orion	1995	34.6	22	3	33	42	23
CDC Frontier	1899	33.3	24	2	26	42	30
CA0790B0547C	1824	38.0	23	5	36	34	24
CA0790B0034C	1791	39.3	23	6	42	31	21
Bronic	1777	33.6	27	5	21	36	38
CA0790B0043C	1493	33.5	25	6	32	33	30
CA0890B0429C	1460	40.1	21	11	45	27	17
Nash	1446	46.7	22	16	49	23	12
Sierra	1339	39.3	22	5	40	36	19
Average	1769	37.1	23	6	35	33	26
LSD (0.05)	530	4.1	3	4	13	9	12
CV (%)	20.1	7.5	7.5	46.1	24.7	17.7	30.8

*2-year and 3-year averages are not available due to loss of the location in 2015.

**Varieties or selection yields in bold were statistically equal to the top yielding variety

Table 42. Chickpea variety performance results southeast of Genesee, 2016.

Variety or Selection*	2016 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")
BillyBeans	2238	2430	3806	29.3	26	0	2	33	65
CDC Frontier	2226	2389	3626	34.5	22	8	33	45	14
CDC Orion		2525	3526	43.3	21	11	63	23	3
Bronic	2073	2283	3487	34.5	25	3	17	54	27
CA0790B0043C	1929	2127	3465	48.8	23	25	56	17	1
CA0890B0429C		1654	3425	55.7	21	52	45	2	1
Sawyer	2036	2209	3401	42.6	20	6	58	32	5
Nash	1986	2032	3255	60.0	22	42	52	4	1
CA0890B0531C		2144	3151	54.0	21	39	54	5	2
Sierra	1777	1786	3085	48.9	21	18	66	13	2
Average	2036	2171	3423	45.2	22	20	45	23	12
LSD (0.05)	176	243	339	3.7	2	15	10	12	6
CV (%)	10.5	10.9	6.4	5.4	5.5	54.3	14.6	32.8	32.3

*CA0790B0034C and CA0790B0547C were not included at this location because of a shortage of seed at planting.

**Varieties or selection yields in bold were statistically equal to the top yielding variety.

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

Variety or Selection	3-Year Average (lb/A)	2-Year Average (lb/A)	2016 Crop Year						
			Seed Yield (lb/A)*	100 Seed Weight (g)	Plant Height (in)	Chickpea Size (%)			
						(>25/64")	(>22/64")	(>20/64")	(<20/64")
Nash	1969	2033	2939	61.3	20	52	46	2	0
CA0790B0547C		2128	2918	46.9	18	8	71	18	2
BillyBeans	1956	1977	2760	28.5	26	0	3	28	69
CA0790B0034C			2756	52.8	23	26	68	6	1
CDC Orion	1898	2027	2697	42.8	17	5	65	26	3
CA0890B0429C		1919	2667	55.1	20	46	50	3	1
Bronic	2042	2032	2662	35.6	23	1	16	34	50
Sawyer	1847	1904	2655	41.5	20	3	51	42	4
CDC Frontier	1969	1973	2613	36.4	19	1	24	29	46
Sierra	1711	1762	2575	50.3	20	20	69	10	2
CA0890B0531C		1912	2469	50.3	18	26	61	10	3
CA0790B0043C	1862	1814	2377	50.5	22	24	66	9	2
Average	1907	1953	2674	46.0	20	18	49	18	15
LSD (0.05)	203	211	335	1.7	2	6	6	5	4
CV (%)	13.1	10.8	8.7	2.5	5.7	23.5	8.5	19.4	19.2

*Varieties or selection yields in bold were statistically equal to the top yielding.

Table 44. Chickpea performance comparison across northern Idaho, 2016

Variety or Selection	2016 Crop Year*											
	3-Year Average**	2-Year Average**	N. Idaho Average***	Craigmont	Genesee	Moscow	100 Seed Weight	Plant Height	Chickpea size (%)			
	----- (lb/A) -----						(grams)	(inches)	(>25/64")	(>22/64")	(>20/64")	(<20/64")
BillyBeans	2097	2204	2884	2087	3806	2760	27.8	26	1	3	31	65
CDC Orion	1898	2276	2739	1995	3526	2697	40.2	20	7	53	30	10
CDC Frontier	2092	2181	2713	1899	3626	2613	34.7	22	3	35	45	17
Sawyer	1941	2057	2710	2075	3401	2655	40.9	21	6	51	35	8
Nash	1977	2032	2647	1446	3255	2939	56.8	21	38	49	9	4
Bronic	2058	2158	2642	1777	3487	2662	34.6	25	3	24	47	26
CA0790B0043C	1896	1970	2532	1493	3465	2377	45.3	23	24	49	18	9
CA0890B0531C		2020	2500	2044	3151	2469	48.7	20	29	52	13	6
CA0890B0429C		1805	2336	1460	3425	2667	49.2	20	33	47	12	7
Sierra	1744	1774	2333	1339	3085	2575	46.2	21	19	54	19	8
Average	1966	2051	2609	1762	3423	2641	42.1	22	16	41	26	17
LSD (0.05)	141	159	237	530	339	335	2.1	1	5	6	5	5
CV (%)	11.8	10.9	10.9	20.1	6.4	8.7	5.9	6.7	39.3	16.7	21.4	38.3

*CA0790B0034C and CA0790B0547C are not included in multilocation averages because these varieties were not seeded at Genesee.

**2-year and 3-year averages do not include Craigmont.

***Varieties or selection yields in bold were statistically equal to the top yielding variety.

Table 45. Winter pea variety performance results at Moscow, 2016.

Variety or Selection	Market Class	Testa (Seed Coat Color)	2-Year Average (lb/A)	2016 Crop Year			
				Seed Yield (lb/A)*	Plant Height (inches)	Canopy height (inches)	Erect Index (0-1)
PS11300290W	Yellow	--		2554	52	20	0.38
PS12300046W	Green	--		2551	30	19	0.64
PS12300045W	Green	--		2546	35	18	0.53
PS10300121W	Austrian	--		2286	59	15	0.26
PS12300048W	Green	--		2266	34	18	0.54
Pro 124-7130	Yellow	Ghost	2059	2240	28	20	0.72
PS10300120W	Austrian	--		2117	53	17	0.33
Pro 122-7150	Green	Clear	1403	2115	36	27	0.76
PS11300289W	Yellow	Clear	2645	2090	24	10	0.43
PS1230032W	Green	--		2064	27	18	0.67
Pro 122-7121	Green	--		2008	34	17	0.50
Pro 122-7116	Green	Ghost	1538	1982	34	21	0.64
Pro 112-7127	Green	Clear	1122	1947	37	22	0.59
PS11300287W	Green	--	1625	1940	25	17	0.66
Glacier/Fenn	Austrian	--		1928	46	13	0.29
PS11300240W	Green	--	1858	1908	35	23	0.66
Icicle**	Green	Green	1780	1901	38	15	0.39
Melrose	Austrian	--		1830	45	14	0.33
PS03101269W	Green	Green	1710	1719	50	20	0.39
Specter	Yellow	Ghost	1964	1678	47	19	0.42
PS11300087W	Green	Green	1278	1657	29	20	0.71
Fenn	Austrian	--		1638	44	13	0.29
PS09300095W	Austrian	--		1613	43	17	0.39
PS05300180W	Green	--	1528	1603	37	19	0.51
Granger	Austrian	--		1559	45	17	0.36
Pro 144-7211	Yellow	--		1557	32	21	0.67
Pro 124-7146	Yellow	Ghost	1428	1492	23	18	0.81
PS11300069W	Green	--		1399	26	19	0.74
Glacier	Austrian	--		1395	24	9	0.37
Windham	Yellow	Ghost	1290	1310	25	15	0.60
Koyote	Yellow	Ghost	1382	1288	27	20	0.73
Average			1641	1877	36	18	0.53
LSD (0.05)			393	527	7	4	0.12
CV (%)			24.1	19.9	14.5	15.0	15.8

*Varieties or selection yields in bold were statistically equal to the top yielding variety.

**Forage pea.