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2024 Small Grain and Grain Legume Report

Northern Idaho Small Grain and Grain Legume Research and Extension Program

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College of Agricultural and Life Sciences

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www.uidaho.edu/extension/cereals

Cover Image

Plot combine purchased with support from the Idaho Wheat Commission. The photo was taken at the winter wheat variety trial north of Tensed, Idaho.

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Idaho Wheat Commission
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Doug Bruce – Tensed
Tim Dillin – Bonners Ferry
Houck Family Farms – Bonners Ferry
Eric Odberg – Genesee
Brett Poxleitner – Genesee
Clark Tacke – Greencreek
Cliff Tacke – Greencreek
Brent Uhlorn – Cottonwood
Darrell Uhlorn – Cottonwood
Neil Uptmor – Lewiston
Clint Zenner – Genesee
Devon Zenner – Nezperce

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AgriPro/Syngenta
CHS Primeland
Highland Specialty Grains
Limagrain Cereal Seeds
Meridian Seeds
Montana State University
North Dakota State University
Northern Star Seed
Oregon State University
PNW Farmers Cooperative
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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 and advanced breeding lines tested in Extension variety trials conducted in northern Idaho during the 2023–24 crop season. The variety trials were located in cooperators' fields in Idaho, Lewis, Nez Perce, Latah, Benewah, and Boundary Counties and on the University of Idaho Palouse Research, Extension and Education Center farms in Moscow (Parker Farm) and Genesee (Kambitsch Farm). Specific trial locations and management practices used at each of the trial locations are listed in Table 1.

Plant breeding programs strive to increase yield potential through enhanced disease and insect resistance, winter hardiness, drought tolerance, straw strength, and other agronomic factors. In addition, varieties are developed for improved end-use quality and new markets. 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 information provided represents crop performance results from specific locations, production practices, and environmental conditions. Relative performance of varieties can change when tested under other environments and production practices. Evaluation of any variety included in these trials should not be construed as recommending any variety over varieties not included in the trials.

Cereal Test Procedures

Seven winter cereal trials were planted in northern Idaho in the fall of 2023 and five spring cereal trials were planted in the spring of 2024. For each crop, the seeding rate for all entries was a uniform number of seeds planted per square foot (spsf). These rates were determined by weighing 1,000 seeds of each cereal variety. Winter wheat and spring barley were planted at 23 spsf, spring wheat at 28 spsf, and winter barley at 21 spsf. Winter wheat, winter barley, spring wheat, and spring barley seeds were treated with Vibrance Extreme at 5.0 fl oz/100 lbs seed plus Sharda 1.0 fl oz/100 lbs seed. Plots in tilled fields were seeded using a double-disc opener with 7 rows spaced 7 in apart. Direct-seeded trials had five paired rows with 3 in spacing and 10 in from center to center of each opener. The direct-seed drill is equipped with Flexi-Coil Stealth openers that allow fertilizer to be banded below and between the paired rows. Typical cereal seeding depth varied from 0.75 to 1.5 in depending on soil texture and moisture conditions. At each location, each variety entry was replicated four times in a randomized complete block design. All plots were seeded 20 ft long and after plants were well established, the plots were cut back to a length of 15 ft with an application of glyphosate herbicide using a tractor-mounted, shielded sprayer between plots. For most trials conducted in collaboration with a grower cooperator, pesticides were applied by the grower while treating the remainder of the field surrounding the trial. Fertilizers and pesticides used in the trials are listed in Table 1 for the sites where the information was provided. Planting and harvesting operations by University of Idaho personnel were timed to approximately coincide with the cooperator’s operations.

Prior to harvest, mature plant height was recorded, each plot was evaluated for lodging and plot length was measured to more accurately determine the harvestable area for each plot. Cereal plant height is the length of the plant from the soil surface to the tip of the head (awns excluded). For lodging, the affected area was scored from 0% to 100%, with 0% equal to no lodging and 100% being completely lodged. After harvest, each small grain entry at each location was evaluated for grain yield and test weight. Cereal test weight was reported in pounds per standard bushel. Cereal yields were reported in bushels per acre, using a standard 60 lbs/bu conversion factor for wheat and 48 lbs/bu for barley. For barley samples, the percentage of plump

and thins was determined by passing a 250 g sample of cleaned seed through a 6/64 in and 5.5/64 in slotted screen. The sample was shaken for 60 sec on a strand sizer shaker (Seedburo Equip., Chicago, IL). Plump seeds were collected on top of the slotted screens and the thins were the portion of the sample that went through a 5.5/64 in slotted screen. Wheat and barley whole grain protein at 12% moisture was measured at the University of Idaho Wheat Quality Laboratory at Aberdeen using Near Infrared Spectrometry (NIRS) technology. For wheat and barley seed, a single composite sample was analyzed for each variety at each location.

Legume Test Procedures

In the fall of 2023, two winter pea trials were established using a seeding rate of 10 spsf. In the spring of 2024, spring pea, lentil, and chickpea trials were seeded near Ferdinand and Moscow. For each legume variety, 1,000 seeds were weighed and seeding rates calculated to provide 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 Apron XL (0.21 oz/cwt), Maxim XL (0.22 oz/cwt), Cruiser (1 oz/cwt), Vayantis (0.1 oz/cwt), and molybdenum (0.44 oz/cwt) mix; and chickpea seed was treated with Apron XL (0.22 oz/cwt), Vibrance (0.22 oz/cwt), Maxim (0.06 oz/cwt), Rancona (0.1 oz/cwt), Cruiser (1.4 oz/cwt), Seed Start Zinc (3 oz/cwt), and molybdenum (0.66 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 reduced to 15 ft plots using glyphosate. Planting depths were approximately 1 in for lentils and between 1 in to 2 in for pea and chickpea. Winter pea plots were seeded to a depth of 2.5–3 in. Due to wider spacing between plots, 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. During the growing season legumes were evaluated for flowering date, which was defined as the point at which 50% of the plants had flowers that were completely open. Prior to senescence, plots were evaluated to determine vine length (pea) or plant height (lentil and chickpea) by measuring from the soil surface to the end of the growing point on the main stem. Immediately prior to harvest, canopy height was measured and plant height index (PHI) was calculated by dividing the canopy height by the vine length or plant height. This index gives an indication of how well a variety retains its stature at harvest, with higher numbers indicating better height retention. At harvest, seed yield, test weight (when there was sufficient seed quantity), and 100-seed weight were determined. Chickpea seed was evaluated for size by shaking 250 g of seed through screens that included 25/64”, 22/64”, and 20/64”.

Varieties Included in Trials

A summary of released varieties tested during the 2023–24 growing season 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 or owns the variety.

Statistical Interpretation

Data in the tables are sorted by yield with the highest-yielding entries listed first. The overall trial average is shown at the bottom of each table. The Fishers’s least significant difference (LSD) and the coefficient of variation (CV) are listed. The LSD is given at the 5% error level and aids in comparing varieties. If the measured values of any two varieties within a column differ by the LSD value or greater, they may be considered different with a confidence level of 95%. If the measured values are less than the LSD value, the differences may be due to random error rather than actual varietal differences. If no significant statistical differences were found among varieties, “ns” (not significant) is shown for the LSD. The CV listed in the tables is given as a general measurement of the precision of each experiment. Lower CV percentage values indicate lower experimental variation and greater precision. A higher CV value indicates abnormal variation within the trial that could be due to external factors such as animal grazing, hail damage, or other variable stress on the plants. CV values were not averaged across trials or years.

Variety choice should take into consideration as much performance data as possible with comparisons across years and locations. In addition to yield, other factors such as end-use quality, disease and insect resistance, lodging tendency, maturity, plant height, winter hardiness, test weight, and any other observations from grower experience can be used in deciding which variety to plant. Crop performance is impacted by many variables, including seasonal variation in temperature and precipitation, disease incidence and severity, local environment, seeding date, fertility, and many others. Variety performance in a given year is not necessarily indicative of how a particular variety will perform over multiple growing seasons, so caution should be taken when looking at the results from a single growing season. Therefore, it is recommended that when available, multiyear yield performance data be considered when selecting new varieties for production. Variety performance data from previous years for northern Idaho and other regions of the state can be viewed at the website www.uidaho.edu/extension/cereals.

Table 1. Trial locations and management information for the 2023–24 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
Winter Cereals - Soft White Winter Wheat and Herbicide Resistant Soft White Winter Wheat										
Boundary	Bonners Ferry	25”	1750’	Direct Seed	9/18/23	8/1/24	Canola	77-37-22-10 (f) 35-0-0-0 (s)	PowerFlex Affinity Broadspec Nexicor	2 fl oz/A 0.4 fl oz/A 13 fl oz/A
Nez Perce	Genesee	20”	2800’	Direct Seed	10/04/23	7/26/24	Chickpea	98-32-0-20 (f)	Huskie Clean Slate Tilt Micro1000	16 fl oz/A 4.6 fl oz/A 4.6 fl oz/A 1 qt/A
Nez Perce	Lewiston	14”	1715’	Reduced Tillage	10/13/23	7/17/24	Fallow	120-25-0-20 + 10 lb Cl (f)	Osprey Xtra Affinity BroadSpec Huskie FX Slant Veltyma	4.7 fl oz/A 0.4 fl oz/A 15 fl oz/A 2 fl oz/A 4 fl oz/A
Latah	Moscow (Parker Farm)	27”	2600’	Tilled	10/6/23	8/15/24	Pea	100-32-0-20 (f)	Huskie Orion	12 fl oz/A 17fl oz/A
Lewis	Nez Perce	22”	3300’	Direct Seed	9/20/23	8/20/24	Winter pea	100-32-0-20 (f)	Anthem Flex Talinor Osprey Xtra Quelex Serpent 1 EC Slant	3.2 fl oz/A 18.9 fl oz/A 4.7 fl oz/A 0.7 fl oz/A 3.8 fl oz/A 3.9 fl oz/A
Benewah	Tensed	27”	2600’	Reduced Tillage	9/19/23	8/21/24	Lentil	120-32-0-22 (f)	BMP**	BMP**

* (f) = fall applied, (s) = spring applied.
** Best management practice.

Table 1 (continued). Trial locations and management information for the 2023–24 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
Winter Cereals - Hard Winter Wheat										
Boundary	Bonners Ferry	25”	1750’	Direct Seed	9/18/23	8/1/24	Canola	77-37-22-10 (f) 75-0-0-0 (s)	PowerFlex Affinity Broadspec Nexicor	2 fl oz/A 0.4 fl oz/A 13 fl oz/A
Nez Perce	Genesee	20”	2700’	Direct Seed	10/04/23	7/26/24	Chickpea	98-32-0-20 (f) 40-0-0-0 (s)	Huskie Clean Slate Tilt Micro1000	16 fl oz/A 4.6 fl oz/A 4.6 fl oz/A 1 qt/A
Nez Perce	Lewiston	14”	1715’	Reduced Tillage	10/13/23	7/17/24	Fallow	120-25-0-20 + 10 lb Cl (f) 40-0-0-0 (s)	Osprey Xtra Affinity BroadSpec Huskie FX Slant Veltyma	4.7 fl oz/A 0.4 fl oz/A 15 fl oz/A 2 fl oz/A 4 fl oz/A
Latah	Moscow (Parker Farm)	27”	2600’	Tilled	10/6/23	8/15/24	Pea	100-32-0-20 (f) 40-0-0-0 (s)	Husky Orion	12 fl oz/A 17fl oz/A
Lewis	Nezperce	22”	3300’	Direct Seed	9/20/23	8/20/24	Winter pea	100-32-0-20 (f) 40-0-0-0 (s)	Anthem Flex Talinor Osprey Xtra Quelex Serpent 1 EC Slant	3.2 fl oz/A 18.9 fl oz/A 4.7 fl oz/A 0.7 fl oz/A 3.8 fl oz/A 3.9 fl oz/A
Benewah	Tensed	27”	2600’	Direct Seed	9/19/23	8/21/24	Lentil	120-32-0-22 (f) 40-0-0-0 (s)	BMP**	BMP**
Winter Cereals – Winter Barley										
Latah	Genesee (Kambitsch Farm)	22’	2800’	Tilled	9/25/23	7/19/24	Pea	100-30-0-20 (f)	Axial Bold Huskie Orion Nexicor	16 fl oz/A 12 fl oz/A 17 fl oz/A 5 fl oz/A

* (f) = fall applied, (s) = spring applied.
** Best management practice.

Table 1 (continued). Trial locations and management information for the 2023–24 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
Spring Cereals - Soft Spring Wheat										
Latah	Genesee	22”	2800’	Tilled	4/15/24	8/26/24	W. Wheat	100-30-0-20	Huskie	12 fl oz/A
									Orion	17 fl oz/A
									Axial Bold	15 fl oz/A
									Nexicor	5 fl oz/A
Idaho	Greencreek	22”	3100’	Direct Seed	4/12/24	8/27/24	W. Wheat	90-30-0-20	Axial Bold	15 fl oz/A
									WideMatch	18 fl oz/A
									Dagger	8 fl oz/A
Spring Cereals - Hard Spring Wheat										
Latah	Genesee	22”	2800’	Tilled	4/15/24	8/26/24	W. Wheat	125-30-0-20	Huskie	12 fl oz/A
									Orion	17 fl oz/A
									Axial Bold	15 fl oz/A
									Nexicor	5 fl oz/A
Idaho	Greencreek	22”	3100’	Direct Seed	4/12/24	8/27/24	W. Wheat	125-30-0-20	Axial Bold	15 fl oz/A
									WideMatch	18 fl oz/A
									Dagger	8 fl oz/A
Spring Cereals – Spring Barley										
Boundary	Bonners Ferry	25”	1750’	Reduced tillage	4/16/24	9/4/24	W. Wheat	65-30-12-20	Axial Star	16.4 fl oz/A
									WideMatch	16 fl oz/A
									Nexicor	13 fl oz/A
Nez Perce	Genesee	20”	2650’	Direct Seed	4/15/24	7/31/24	W. Wheat	90-30-0-20	Axial Bold	15 fl oz/A
									Talinor	18.2 fl oz/A
									Tilt	4 fl oz/A
Idaho	Greencreek	22”	3650’	Direct Seed	4/12/24	8/27/24	W. Wheat	90-30-0-20	Axial Bold	15 fl oz/A
									WideMatch	18 fl oz/A
									Dagger	8 fl oz/A

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

Table 1 (continued). Trial locations and management information for the 2023–24 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
Legumes - Winter Peas										
Idaho	Greencreek	22”	3650’	Direct Seed	9/28/23	7/29/24	W. Wheat	None	Sharpen (PreEm)	2 fl oz/A
									Sparten Charge (PreEm)	5 fl oz/A
									Tricor (PreEm)	4 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Clethodim	8 fl oz/A
									Carbaryl 4L	1.5 qt/A
									Warrior II	1.92 fl oz/A
									Carbaryl 4L	1.5 qt/A
									Bifenture	6.4 fl oz/A
Latah	Moscow (Parker Farm)	27”	2600’	Direct Seed	10/2/23	8/2/24	S. Barley	None	Sharpen (PreEm)	2 fl oz/A
									Sparten Charge (PreEm)	5 fl oz/A
									Tricor (PreEm)	4 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Clethodim	8 fl oz/A
									Carbaryl 4L	1.5 qt/A
									Warrior II	1.92 fl oz/A
									Carbaryl 4L	1.5 qt/A
									Warrior II	1.92 fl oz/A
									Bifenture	6.4 fl oz/A

* (f) = fall applied, (s) = spring applied.
** PreEm = Post-plant, pre-emergence

Table 1 (continued). Trial locations and management information for the 2023–24 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**
Legumes - Spring Peas										
Idaho	Ferdinand	22”	3600’	Direct Seed	4/23/2024	8/14/24	W. Wheat		Tricor (PreEm)	8 fl oz/A
									Valor (PreEm)	2 fl oz/A
									Sharpen (PreEm)	2 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Clethodim	12 fl oz/A
									Warrior II	1.92 fl oz/A
									Carbaryl 4L	1.5 qt/A
Nez Perce	Genesee	20”	2500’	Direct Seed	4/18/24	8/16/24	S. Barley		Tricor (PreEm)	8 fl oz/A
									Valor (PreEm)	2 fl oz/A
									Sharpen (PreEm)	2 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Assure II	12 fl oz/A
									Warrior II	1.92 fl oz/A
									Carbaryl 4L	1.5 qt/A
Legumes – Spring Lentils										
Idaho	Ferdinand	22”	3600’	Direct Seed	4/23/24	8/14/24	W. Wheat		Tricor (PreEm)	4 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Assure II	12 fl oz/A
Nez Perce	Genesee	20”	2500’	Direct Seed	4/18/24	8/16/24	S. Barley		Tricor (PreEm)	4 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Assure II	12 fl oz/A
Legumes – Chickpeas										
Idaho	Ferdinand	22”	3600’	Direct Seed	4/23/24	9/5/24	W. Wheat		Tricor (PreEm)	8 fl oz/A
									Valor (PreEm)	2 fl oz/A
									Sharpen (PreEm)	2 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Assure II	12 fl oz/A
Nez Perce	Genesee	20”	2500’	Direct Seed	4/18/24	9/5/24	S. Barley		Tricor (PreEm)	8 fl oz/A
									Valor (PreEm)	2 fl oz/A
									Sharpen (PreEm)	2 fl oz/A
									RT3 (PreEm)	32 fl oz/A
									Assure II	12 fl 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 2023–24.

Variety	Experimental No.	Year Released	Developer(s) or Owner of Variety
Soft White Winter Wheat			
AP Exceed	11PN039#20	2020	AgriPro /Syngenta
AP Iliad	11PN044#84	2020	AgriPro /Syngenta
AP Olympia	--	2023	AgriPro /Syngenta
Appleby CL+	ORI2160250CL+	2019	Oregon State AES, USDA
Brundage 96	ID-B-96	2001	Idaho AES, USDA
Bruneau	ID 93-64901A	2009	Idaho AES, USDA
Gale	OR2180377	2024	Oregon State AES, USDA
GS Bounty	--	2022	Geneshifters
LCS Artdeco	NSA-2153A	2011	Limagrain Cereal Seeds
LCS Blackjack	LWW15-71945	2019	Limagrain Cereal Seeds
LCS Jefe	LWW17-8185	2022	Limagrain Cereal Seeds
LCS Hulk	LWW14-73163	2017	Limagrain Cereal Seeds
LCS Hydra AX	--	2022	Limagrain Cereal Seeds
LCS Kamiak	LWW17-5877	2023	Limagrain Cereal Seeds
LCS Kraken AX	--	2022	Limagrain Cereal Seeds
LCS Shine	LWW14-72916	2018	Limagrain Cereal Seeds
LCS Scorpion AX	--	2023	Limagrain Cereal Seeds
Mallory CL+	ORI2190025 CL+	2024	Oregon State AES, USDA
Nimbus	OR2130755	2022	Oregon State AES, USDA
Norwest Duet	LOR-092	2016	Limagrain Cereal Seeds, Oregon AES, USDA
Norwest Tandem	LOR-334	2016	Limagrain Cereal Seeds, Oregon AES, USDA
Nova AX	WA8346 AX	2023	Washington AES, USDA
Piranha CL+	WA8305 CL+	2020	Washington AES, USDA
Sockeye CL+	WA8306 CL+	2020	Washington AES, USDA
Stephens	OR 65-116	1977	Oregon AES, USDA
Stingray CL+	WA8275CL+	2019	Washington AES, USDA
TMC M-Pire	--	2022	The McGregor Company
TMC M-Press	--	--	The McGregor Company
UI Sparrow	IDO1108DH	2016	Idaho AES, USDA
UI Vixen	UIL15-028024A	2024	Idaho AES, USDA
VI Encore CL+	UIL17-7706 CL+	2023	Idaho AES / Limagrain Cereal Seeds
VI Gem	UIL13-046145A	2022	Idaho AES / Limagrain Cereal Seeds
VI Presto CL+	UIL17-6451 CL+	2020	Idaho AES / Limagrain Cereal Seeds
VI Voodoo CL+	UIL17-6268 CL+	2020	Idaho AES / Limagrain Cereal Seeds
WB1545	XE1308	2023	WestBred/Bayer
WB1621	XE1304	2022	WestBred/Bayer
WB1720	--	2022	WestBred/Bayer
WB1922	--	2022	WestBred/Bayer
Winter Club Wheat			
Calyspo	ARSX500-17CBW	Not released	USDA ARS
Cameo	ARSX492-6CBW	2021	Washington AES, USDA
Coda	PI 594372	1998	Washington AES, USDA
Hard White Winter Wheat			
UI Silver	IDO658B	2011	Idaho AES, USDA

Table 2 (cont.). Varieties tested in northern Idaho extension variety trials in 2023–24.

Variety	Experimental No.	Year Released	Developer(s) or Owner of Variety
Hard Red Winter Wheat			
Keldin	AC55017	2011	WestBred/Bayer
LCS Evina	--	2018	Limagrain Cereal Seeds
LCS Missile	LWH19-0192	2023	Limagrain Cereal Seeds
Milestone	--	2020	Nutrien
Norwest 553	ORN00B553	2007	Oregon State AES, USDA
Scorpio	WA8268	2019	Washington AES, USDA
WB4303	--	2018	WestBred/Bayer
WB4510CLP	--	2021	WestBred/Bayer
Soft White Spring Wheat			
Bush	WA8351	2024	Washington AES, USDA
Butch CL+	WA8354 CL+	2023	Washington AES, USDA
Hedge CL+ (Club)	WA8295	2020	Washington AES, USDA
Louise	WA7921	2004	Washington AES, USDA
Melba (Club)	WA8193	2016	Washington AES, USDA
Roger (Club)	WA8325	2022	Washington AES, USDA
Ryan	WA8214	2016	Washington AES, USDA
Seahawk	WA8162	2014	Washington AES, USDA
Tekoa	WA8189	2016	Washington AES, USDA
TMC Lochaven	TMC 2021	2022	The McGregor Company
UI Cookie	IDO1405	2019	Idaho AES, USDA
UI Stone	IDO599	2012	Idaho AES, USDA
WB6211CLP	XD6305	2020	WestBred/Bayer
Hard Red Spring Wheat			
Alum	WA 8166	2014	Washington AES, USDA
CP3055	--	2020	Croplan/Winfield United
CP3119A	--	2021	Croplan/Winfield United
CP3201AX	--	2022	Croplan/Winfield United
CP3322	--	2023	Croplan/Winfield United
Glee	WA 8074	2012	Washington AES, USDA
Hale	WA8315	2022	Washington AES. USDA
Jefferson	IDO 462	1998	Idaho AES, USDA
LCS Hammer AX	LARA18-90008	2022	Limagrain Cereal Seeds
Net CL+	WA8280	2019	Washington AES, USDA
WB9303	XC9302	2021	Westbred/Bayer
WB9623	--	--	Westbred/Bayer
WB9636	--	--	Westbred/Bayer
WB9662	--	--	WestBred/Bayer
WB9668	BZ908-552	2013	WestBred/Bayer
Hard White Spring Wheat			
Dayn	WA8123	2012	Washington AES, USDA
UI Gold	IDO1804S	2022	Idaho AES, USDA

Table 2 (cont.). Varieties tested in northern Idaho extension variety trials in 2023–24.

Variety	Use	Experimental No.	Year Released	Developer(s) or Owner of Variety
Two-Row Spring Barley				
AAC Connect	Malt	TR0482	2016	Agriculture Canada/Canterra Seeds
Altorado	Feed	BZ509-601	2017	Highland Specialty Grains
BC Elinor	Malt	--	--	Limagrain Cereal Seeds
Carleton	Feed	HO517-245	2023	Highland Specialty Grains
CDC-Copeland	Malt	TR150	1999	University of Saskatchewan, Canada
Claymore	Feed	BZ509-210	2016	Highland Specialty Grains
GemCraft	Malt	2Ab08-X05M010-65	2018	Idaho AES, USDA
Goldenhart*	Food	2Ab09-X06F058HL-31	2018	Idaho AES, USDA
Julie*	Food	03AH6561-94	2010	Idaho AES, USDA
Kardia	Food	2Ab09-X06F084-51	2015	Idaho AES, USDA
LCS Odyssey	Malt	NSL08-4556-A	2013	Limagrain Cereal Seeds
Lenetah	Feed	01Ab11107	2007	Idaho AES, USDA
LG Capital	Feed	--	--	Limagrain Cereal Seeds
LG Caravelle	Feed	--	--	Limagrain Cereal Seeds
LG Caruso	Malt	--	--	Limagrain Cereal Seeds
LG Diablo	Malt	--	2022	Limagrain Cereal Seeds
Salute	Food	--	2004	WestBred/Bayer
Successor	Feed	DH190481	2023	Oregon State AES, USDA
Survivor	Feed	07M-203	2017	Washington AES, USDA
Transit*	Food	03AH3054-51	2010	Idaho AES, USDA
Two-Row Winter Barley				
Avalon	Malt	VA16M-81	2020	Virginia Tech
Charles	Malt	94Ab1274	2005	USDA
Endeavor	Malt	95Ab2299	2008	USDA
Flavia	Malt	--	--	Ackermann Saatzucht/Virginia Tech
Marouetta	Malt	--	--	Ackermann Saatzucht/Virginia Tech
Thunder	Malt	10.0777	2016	Oregon State AES, USDA
Upspring*	Food	05ARS748-270	2018	Idaho AES, USDA
Wintmalt	Malt	--	2014	KWS Lochow
Six-Row Winter Barley				
Hirondella**	Malt	--	--	Ackermann Saatzucht/Virginia Tech

*Hulless Varieties

Table 2 (cont.). Varieties tested in northern Idaho extension variety trials in 2023–24.

Variety	Experimental No.	Year Released	Developer(s) or Owner of Variety
Winter Pea (*cotyledon color*)			
Blaze (*yellow*)	Pro 124-7130	2017	ProGene
Dint (*green*)	PS1430NZ002W	2022	USDA-ARS, Washington AES
Goldenwood (*yellow*)	Pro 124-7146	--	ProGene
Keystone (*green*)	Pro 112-7127	2020	ProGene
Klondike (*yellow*)	PS1430NZ010W	2022	USDA-ARS, Washington AES
KurtWood (*green*)	Pro 182-7137	2023	ProGene
MiCa (*green*)	PS1430NZ003W	2022	USDA-ARS, Washington AES
Payback (*yellow*)	Pro 174-7148	2023	ProGene
Vail (*green*)	Pro 122-7160	2022	ProGene
Windham (*yellow*)	PS98305358	2006	USDA-ARS, Washington AES
Spring Pea (*cotyledon color*)			
AAC Chrome (*yellow*)	P0520-116	2017	Agriculture & Agri-Food Canada
AAC Julius (*yellow*)	P0937-4006	2021	Agriculture & Agri-Food Canada
Aragorn (*green*)	--	2007	ProGene
Ariel (*green*)	NZ 4L25	2001	Crop and Food Research, New Zealand
Banner (*green*)	Pro 031-7053	2007	ProGene
Carousel (*yellow*)	SW 995848	2004	ProGene
Columbian (*green*)	--	--	Campbell Soup Co.
Ginny 2 (*green*)	Pro 121-7126	2014	ProGene
Hampton (*green*)	PS05100736	2014	USDA-ARS, Washington AES
Passion (*green*)	Pro 141-6258	2025	ProGene
Shamrock (*green*)	--	2010	Valesco Genetics
Ultra (*green*)	Banner 18	Not released	ProGene
Chickpea			
Billybeans	--	2010	PNW Farmers Cooperative
CDC Frontier	--	2003	University of Saskatchewan
CDC Leader	493-24	2011	University of Saskatchewan
CDC Orion	--	2010	University of Saskatchewan
CDC Palmer	1041-3	2014	University of Saskatchewan
Kasin	--	--	Agrigensol/Valesco Genetics
MT Bridger	NDC160236	2024	Montana State University
Nash	CA04900843C	2013	Washington AES, USDA
ND Crown	BGC090017	2020	North Dakota State University
New Hope	NE21-11-22	2017	University of Nebraska
Sawyer	CA0090B347C	2010	Washington AES, USDA
Sierra	CA9783152C	2001	Washington AES, USDA
Lentil (*Class*)			
Avondale (Medium Green)	LC 10602300R	2012	Washington AES, USDA
Brewer (Large Green)	PI 508090	1984	Washington AES, USDA
Merrit (Large Green)	LC 460266B	2001	Washington AES, USDA
Morena (Spanish Brown)	LC 02601144P	2011	Washington AES, USDA
Pardina (Spanish Brown)	--	--	Spain

2023-24 Growing Conditions and Factors Affecting Trial Results

Fall crop conditions:

Fall cereal trials were planted from late September to mid-October. Seeding conditions were variable with some locations having adequate seed zone moisture and other locations being dry. Despite the variable conditions, there was adequate establishment at all winter locations with the exception of the winter pea trial in Moscow. The average temperatures were near normal for much of the year, but December was notably warm followed by a significant cold snap in mid-January with temperatures reaching -20°F at Moscow, Idaho, with one week of lows near 0°F or below. Temperatures were near normal throughout the spring with above normal temperatures in July (Figure 1A). Adequate snow cover protected crops at most locations and there was little to no evidence of winter injury. The precipitation between September 2023 and June 2024 was 4.7 in below normal at Moscow (Figure 1B). Most of this deficit occurred in 2024 with well-below-normal precipitation from mid-March through July. Winter wheat and winter barley yields were higher than expected, despite the drier than average spring. The mild temperatures in May in June were likely partially responsible for this yield response.

Spring crop conditions:

Due to the dry spring conditions, spring seeding occurred earlier than in recent years with spring cereals planted by April 16 and spring legumes by April 23. While the dry conditions did not negatively influence the winter crops in most cases, the dry weather in May and June substantially reduced the yield of spring cereal and legumes yields at most locations. Conditions were dry during harvest and there was no evidence of sprout in any of the wheat or barley plots.

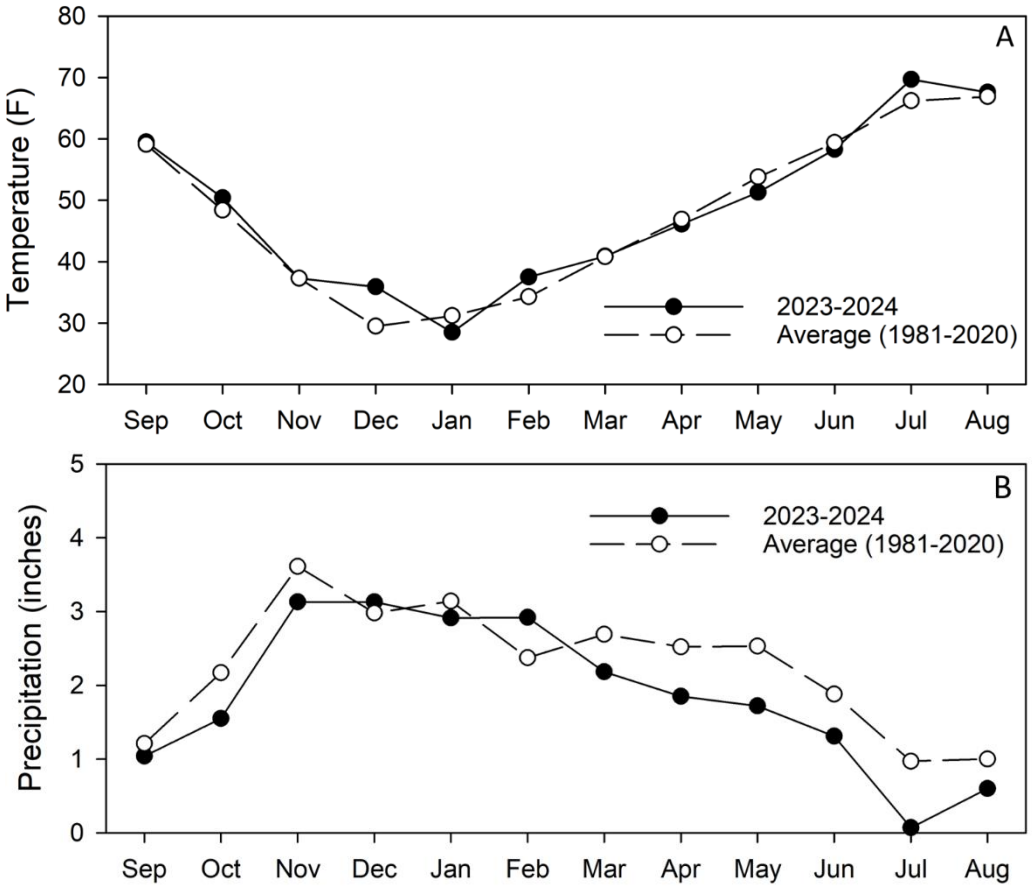

Figure 1. Mean monthly temperature (A) and precipitation (B) for the 2023–24 growing season at the Parker Plant Sciences Farm east of Moscow compared to thirty-year average.

Diseases and pests:
Stripe rust (*Puccinia striiformis* f. sp. *tritici*) on wheat is commonly observed in northern Idaho. Despite a forecast of heavy stripe rust pressure in the spring of 2024, the dry conditions prevented widespread epidemics and diseases incidence was low. Even in Moscow where the winter and spring wheat trials were not sprayed with fungicide, stripe rust incidence was low. Little to no stripe rust was observed at other locations. Cephalosporium stripe (*Cephalosporium graminearum*) also is commonly observed on winter wheat in northern Idaho, but there was not substantial damage caused by this pathogen during the 2023–24 growing season. While not a disease, physiological leaf spot was observed at several winter wheat locations. Not all varieties will display symptoms of physiological leaf spot and there are mixed conclusions as to whether this disorder will result in yield reduction. In general, plant diseases and disorders did not have a substantial role in crop performance in 2024. The exception was the winter pea trial in Greencreek. This site was impacted by Ascochyta complex early in the spring. It is important to note that Ascochyta complex on winter pea is caused by several fungi and are not the same as those that cause Ascochyta blight on chickpea. The fungi impacting winter pea will not cause Ascochyta blight on chickpea if grown in close proximity or in short rotations. Despite fungicide application to manage the disease, there was significant reductions in winter pea stand and highly variable yields (548 to 2,794 lb/A) at the Greencreek location. As a result, data from this trial is not contained in this report.

Pea weevil (*Bruchus pisorum*) was present in all winter and spring pea plots. As a result, an insecticide management plan was implemented at all locations to manage this pest, resulting in minimal weevilled seeds at harvest. This pest can normally be adequately managed by application of insecticide soon after first bloom and repeating as necessary. Since winter peas bloom for a longer duration than spring pea, a second application may be required to adequately manage this pest. Due to the variability in bloom timing in variety trials, multiple applications are often required at weekly intervals.

The second insect pest was Hessian fly (*Mayetiola destructor*). The spring wheat plots at Greencreek were substantially impacted by Hessian fly, with all susceptible varieties yielding below average and making up the lowest yielding varieties in both the soft white spring and hard spring wheat trials. The severity of Hessian fly varies from year to year but is best managed by seeding resistant spring wheat varieties. While uncommon in winter wheat, there have been instances of Hessian fly in winter wheat plots in previous years. There are currently only a few winter wheat varieties with tolerance to Hessian fly.

Summary of 2023–24 Results

Data was reported for all trials and locations that were seeded in the fall of 2023 and spring of 2024 with the exception of the winter peas at Greencreek. While many of the plots were impacted by weather events, diseases, or pests as outlined above, there was acceptable data produced for each of the trials in this report. As noted, in some cases not all varieties or entries are included at all locations.

A summary of selected agronomic characteristics for winter wheat, spring wheat, spring barley, and spring legumes is shown in Tables 3 and 4. Winter wheat yields in 2024 were 9 bu/A above the ten-year average. Winter wheat test weight in 2024 was the fourth highest for the past ten years at an average of 61.1 lb/bu. The yield for spring wheat was equal to the ten-year average (61 bu/A) while the spring barley yield was 2 bu/A below the ten-year average. Test weight for spring wheat were 1.4 lb/bu below the ten-year average while test weight for spring barley was 0.3 lb/bu below the ten-year average.

Spring legume yields were negatively impacted by the dry spring. The 2024 spring pea yield was 213 lb/A below the ten-year average with 1,595 lb/A. Likewise the lentil (668 lb/A) and chickpea (1,402 lb/A) yields were 256 lb/A and 471 lb/A below the 10-year average, respectively. One-hundred seed weights for the peas and lentils were both below the 10-year average while the lentil seeds weights were slightly above the 10-year average. The proportion of chickpea seed larger than 22/64” were 15% below the 10-year average with 50% in 2024.

Specific yield data for all northern Idaho trials along with multilocation summaries are listed in Tables 5–53. Varieties or breeding lines are listed in order from highest yielding to lowest yielding in each table.

Table 3. Ten-year average of select agronomic characteristics for winter wheat, spring wheat, and spring barley, 2015–24.

Winter Wheat (all market classes)

YIELD			TEST WEIGHT			PLANT HEIGHT			LODGING		
Year	bu/A	# of Loc.	Year	lb/bu	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2020	128	6	2020	62.0	6	2022	40	4	2019	4	6
2016	122	6	2023	61.7	6	2024	38	6	2015	2	6
2022	120	4	2017	61.2	5	2016	38	6	2020	1	6
2024	117	6	2024	61.1	6	2020	37	6	2023	1	6
2018	115	6	2016	61.1	6	2015	36	6	2018	1	6
Ave.	**108**	--	2019	60.9	6	2017	36	5	**Ave.**	**1**	--
2019	107	6	2018	60.8	3	2018	36	6	2016	0	6
2023	107	6	2022	60.3	4	**Ave.**	**36**	--	2017	0	5
2017	107	5	**Ave.**	**60.3**	--	2023	34	6	2021	0	4
2015	97	6	2015	57.4	6	2019	32	6	2022	0	4
2021	61	4	2021	56.1	4	2021	30	4	2024	0	6

Spring Wheat (all market classes)

YIELD			TEST WEIGHT			PLANT HEIGHT			LODGING		
Year	bu/A	# of Loc.	Year	lb/bu	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2020	101	1	2020	61.0	1	2020	38	1	2018	2	4
2016	72	4	2019	60.5	4	2022	34	2	2016	1	4
2022	70	2	2016	60.5	4	2018	31	4	2019	1	4
2024	61	2	2022	60.4	2	2019	30	4	2015	0	4
Ave.	**61**	--	**Ave.**	**58.7**	--	2024	30	2	2017	0	4
2019	60	4	2017	58.3	4	2016	30	4	2020	0	1
2023	60	2	2023	58.0	2	**Ave.**	**30**	--	2021	0	2
2018	55	4	2021	57.9	2	2023	29	2	2022	0	2
2017	47	4	2018	57.8	4	2015	29	4	2023	0	2
2015	46	4	2024	57.3	2	2017	27	4	2024	0	2
2021	39	2	2015	55.7	4	2021	24	2	**Ave.**	**0**	--

Spring Barley (all market classes)

YIELD			TEST WEIGHT			PLANT HEIGHT			LODGING		
Year	bu/A	# of Loc.	Year	lb/bu	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2020	123	2	2020	55.7	2	2020	38	2	2016	14	4
2016	113	4	2016	53.2	4	2024	34	3	2020	9	2
2019	92	4	2018	52.5	4	2018	34	4	2024	5	3
2022	91	3	2019	52.4	4	2016	32	4	2023	4	3
Ave.	**86**	--	2022	52.0	3	2019	31	4	**Ave.**	**4**	--
2023	85	3	**Ave.**	**51.2**	--	2022	31	3	2019	3	4
2024	84	3	2024	50.9	3	**Ave.**	**31**	--	2015	3	4
2018	81	4	2017	50.7	4	2015	29	4	2022	2	3
2015	76	4	2023	49.1	3	2017	29	4	2018	2	4
2017	73	4	2015	48.9	4	2023	28	3	2021	0	3
2021	46	3	2021	47.0	3	2021	25	3	2017	0	4

Table 4. Ten-year average of select agronomic characteristics for pea, lentil, and chickpea, 2015–24.

Pea (all market classes)

YIELD			100 SEED WEIGHT			VINE LENGTH			PLANT HEIGHT INDEX		
Year	lb/A	# of Loc.	Year	grams	# of Loc.	Year	inches	# of Loc.	Year	(0-1)	# of Loc
2019	2,996	3	2016	21.7	3	2018	33	3	2017	0.89	3
2022	2,986	2	2019	21.2	3	2019	31	3	2021	0.84	2
2016	2,327	3	2022	20.2	2	2022	31	2	2018	0.82	3
2018	2,115	3	**Ave.**	**19.4**	--	2023	27	2	2023	0.81	2
Ave.	**1,808**	--	2023	19.2	2	2016	27	3	**Ave.**	**0.80**	--
2023	1,782	2	2017	19.0	3	2024	26	2	2024	0.79	2
2024	1,595	2	2018	18.8	3	**Ave.**	**26**	--	2015	0.79	3
2015	1,156	3	2015	18.3	3	2015	22	3	2019	0.77	3
2017	749	3	2021	18.2	2	2021	18	2	2016	0.73	3
2021	568	2	2024	17.7	2	2017	18	3	2022	0.72	2
2020	--	0	2020	--	0	2020	--	0	2020	--	0

Lentil (all market classes)

YIELD			100 SEED WEIGHT			PLANT HEIGHT			PLANT HEIGHT INDEX		
Year	lb/A	# of Loc.	Year	grams	# of Loc.	Year	inches	# of Loc.	Year	(0-1)	# of Loc
2019	1,311	3	2021	4.9	2	2022	16	1	2017	0.97	3
2022	1,210	1	2024	4.9	2	2019	15	3	2015	0.83	1
2016	1,110	3	2017	4.6	3	2023	15	2	2018	0.83	3
2018	1,076	3	2022	4.5	1	2016	15	3	2021	0.82	2
2023	984	2	2023	4.5	2	2018	15	3	2023	0.82	2
Ave.	**924**	--	**Ave.**	**4.5**	--	**Ave.**	**14**	--	**Ave.**	**0.81**	--
2017	806	3	2019	4.4	3	2024	13	2	2024	0.77	2
2015	760	1	2018	4.4	3	2015	13	1	2022	0.76	1
2024	668	2	2015	4.3	1	2017	13	3	2019	0.70	3
2021	387	2	2016	3.9	3	2021	12	2	2020	--	0
2020	--	0	2020	--	0	2020	--	0	2016	--	0

Chickpea (all market classes)

YIELD			100 SEED WEIGHT			PLANT HEIGHT			A BEAN (>22/64")		
Year	lb/A	# of Loc.	Year	grams	# of Loc.	Year	inches	# of Loc.	Year	%	# of Loc
2019	3,396	2	2015	47.6	3	2019	23	2	2019	77	2
2016	2,609	3	2019	47.3	2	2016	22	3	2022	74	1
2022	2,516	1	2017	46.3	3	2023	20	2	2015	73	3
2018	1,898	3	2022	44.5	1	2022	19	1	2017	69	3
Ave.	**1,873**	--	**Ave.**	**43.5**	--	**Ave.**	**19**	--	2023	66	2
2017	1,806	3	2023	42.3	2	2024	18	2	2021	65	1
2023	1,405	2	2016	42.1	3	2018	18	3	**Ave.**	**65**	--
2024	1,402	2	2018	41.7	3	2015	17	3	2016	57	3
2015	1,119	2	2021	41.4	1	2017	17	3	2018	51	3
2021	710	1	2024	38.6	2	2021	14	1	2024	50	2
2020	--	0	2020	--	0	2020	--	0	2020	--	0

Table 5. Soft white winter wheat variety performance results at Bonners Ferry, 2024.

Variety or Selection	3-Year Average (bu/A)**	2-Year Average (bu/A)	2023–24 Crop Year Seed Yield (bu/A)***	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Seed Protein (%)
LCS Hulk	120	121	**138**	63.3	35	0	10.0
LCS Blackjack		119	**136**	60.1	35	0	10.1
VI Gem		124	**136**	62.9	37	0	9.4
LCS Jefe		112	**133**	62.2	35	0	9.2
WA8397		112	**133**	62.5	35	0	9.6
WB1720		102	**132**	63.0	33	0	10.0
WB1922		109	**132**	63.7	37	0	10.6
Norwest Tandem	103	108	**132**	61.7	33	0	9.7
UI Sparrow	105	108	**129**	60.0	39	0	9.6
WA8405		107	**127**	62.0	35	0	9.8
WA8404		106	**125**	61.7	35	0	9.7
GS Bounty			**125**	62.7	38	0	10.0
Norwest Duet	104	107	**125**	63.0	40	0	10.5
ARSRS14X1114-1-3CBW*			**124**	61.3	35	0	9.3
UI Vixen	114	116	**124**	62.7	38	0	9.6
TMC M-Pire		109	**123**	62.6	34	0	10.2
WA8398		103	**123**	62.1	35	0	10.2
LCS Kamiak		109	122	61.8	33	0	10.4
UIL16-478001A		113	122	62.8	36	0	9.4
Calyspo*		102	120	63.3	36	0	10.1
Cameo*		96	118	61.0	36	0	9.8
OR5180071*		103	118	61.9	34	0	9.8
Coda*	102	102	116	63.7	39	0	10.4
UIL17-550099A			116	62.0	37	0	11.0
OR5180072*		104	116	60.8	37	0	9.7
Nimbus	103	103	115	62.1	39	0	9.7
TMC M-Press			115	62.3	35	0	9.7
UIL14-211120A		106	115	61.0	37	0	9.9
Bruneau	112	111	114	61.9	38	0	9.9
UIL17-995133B		107	114	63.3	37	0	10.1
Brundage 96		104	113	61.9	35	0	10.0
UIL16-007057A			113	62.2	37	0	10.5
IDO1708W		101	112	60.7	35	0	10.4
Gale			111	59.2	33	0	9.5
Stephens	100	101	109	61.7	36	0	9.8
WB1545			109	63.2	34	0	10.3
AP Iliad			101	62.1	34	0	10.2
LCS Shine			--	61.7	32	0	11.0
WB1621			--	63.7	36	0	10.0
Average	**107**	**108**	**121**	**62.1**	**36**	**0**	**10.0**
LSD (0.05)	**12**	**8**	**16**	**0.7**	**2**	**--**	**--**
CV (%)	**8.1**	**7.4**	**9.0**	**0.7**	**4.2**	**--**	**--**

*Club wheat

**3-year averages were calculated using data from the current year along with 2020 and 2023. The Bonners Ferry location was not seeded in 2021 or 2022.

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

Note that no yield could be reported for LCS Shine or WB1621 due to severe deer injury to these varieties. Awnless varieties were not uniformly impacted by deer.

Table 6. Soft white winter wheat variety performance results at Genesee, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
AP Exceed	128	132	**149**	64.5	41	0	5/29	10.4
ARSRS14X1114-1-3CBW*			**148**	63.2	39	0	6/6	10.4
LCS Jefe	126	131	**142**	63.3	40	0	6/3	10.4
WA8398		130	**142**	62.4	41	0	6/6	11.2
WA8397		129	**141**	62.3	41	0	6/6	11.2
WA8404		128	**140**	62.0	41	0	6/6	11.1
VI Gem		130	**140**	63.0	40	0	6/3	10.5
WB1720	120	124	138	63.4	37	0	6/5	11.4
GS Bounty			138	62.6	43	0	6/7	11.3
WA8405		125	137	61.9	41	0	6/7	10.6
UIL16-478001A	126	129	137	63.5	41	0	6/5	10.8
Gale			137	59.9	37	0	6/7	10.8
UIL16-007057A			137	62.2	42	0	6/3	11.8
TMC M-Pire		127	137	64.4	37	0	6/2	10.8
UI Vixen	127	129	135	63.6	41	0	6/7	10.8
Calyspo*	120	124	133	64.0	41	0	6/5	11.3
AP Iliad	123	127	132	62.8	40	0	6/2	11.6
AP Olympia			132	64.0	40	0	6/3	10.9
TMC M-Press			131	63.3	41	0	6/4	10.8
Cameo*	120	121	130	62.2	40	0	6/7	10.4
LCS Kamiak	122	127	130	63.9	40	0	5/28	11.1
WB1922	121	124	130	64.1	42	0	6/8	11.2
UI Sparrow	123	124	129	60.7	41	0	6/8	10.6
Bruneau	125	125	129	62.7	42	0	6/6	10.9
UIL14-211120A		125	129	62.1	41	0	6/3	10.9
OR5180071*		119	129	62.5	37	0	6/7	10.0
Norwest Duet	118	122	129	62.7	47	0	6/7	11.1
OR5180072*		122	128	61.5	40	0	6/5	11.4
LCS Blackjack	123	124	128	61.4	39	0	6/5	10.2
Nimbus	116	120	127	62.5	45	0	6/3	10.9
UIL17-995133B		120	125	64.3	38	0	6/2	11.6
Norwest Tandem	115	117	125	63.1	36	0	6/3	11.2
UIL17-550099A			124	62.1	39	0	6/7	11.4
Coda*	111	113	124	64.2	44	0	6/9	10.7
LCS Hulk	121	121	123	63.6	41	0	6/4	10.9
Stephens	111	115	123	62.8	38	0	6/2	11.4
Brundage 96	114	116	123	62.3	38	0	6/5	11.3
WB1621	117	118	123	65.2	40	0	6/3	11.3
WB1545			122	65.0	39	0	5/28	11.4
LCS Shine	124	120	122	63.7	36	0	6/2	11.2
IDO1708W		111	116	62.2	40	0	5/31	10.3
Average	**120**	**123**	**132**	**62.9**	**40**	**0**	**6/4**	**11.0**
LSD (0.05)	**7**	**8**	**11**	**0.5**	**1**	**--**	**1.3**	**--**
CV (%)	**7.5**	**6.7**	**6.0**	**0.6**	**2.6**	**--**	**11.7**	**--**

*Club wheat

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

Table 7. Soft white winter wheat variety performance results at Lewiston, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
UIL17-995133B		136	**145**	63.6	39	0	5/26	11.1
UIL14-211120A		129	**143**	60.4	43	0	5/27	12.5
LCS Kamiak	138	137	**143**	63.8	38	0	5/20	11.9
ARSRS14X1114-1-3CBW*			**143**	63.1	39	0	5/28	10.8
AP Olympia			**142**	62.7	41	0	5/27	12.4
AP Iliad	133	130	**142**	62.1	41	0	5/26	11.8
LCS Blackjack	136	134	**141**	61.0	38	0	5/27	11.6
Norwest Tandem	125	126	**140**	61.9	35	0	5/26	11.6
TMC M-Press			**140**	62.5	39	0	5/28	12.3
LCS Jefe	133	128	**139**	61.5	38	0	5/28	11.6
LCS Hulk	133	130	**139**	62.9	42	0	5/29	11.8
WA8404		129	**139**	61.4	42	0	5/29	11.9
TMC M-Pire		132	**138**	62.9	36	0	5/26	11.2
WA8398		122	**138**	61.2	42	0	5/28	12.0
WB1621	136	131	**136**	65.2	40	0	5/27	11.9
LCS Artdeco		124	**134**	61.7	35	0	5/25	11.2
Nimbus	131	127	**133**	62.5	43	0	5/24	11.5
AP Exceed		121	**133**	63.0	39	0	5/20	11.7
Norwest Duet	128	123	**132**	62.0	46	0	5/31	12.2
WB1545			**130**	64.2	40	0	5/21	11.8
WA8397		121	**130**	60.0	40	0	5/29	12.4
Gale			**130**	60.0	37	0	5/27	11.7
VI Gem		121	**130**	62.4	39	0	5/26	11.5
LCS Shine	130	122	129	61.4	33	0	5/23	11.4
UI Vixen	127	119	128	63.7	41	3	5/30	11.7
UIL16-007057A	121		128	60.4	42	0	5/28	13.0
GS Bounty			128	61.5	44	0	5/29	11.8
WB1720	125	120	127	63.0	37	0	5/27	12.3
Cameo*	120	108	127	61.1	39	0	5/30	11.9
UI Sparrow	121	112	126	60.8	43	0	5/31	11.5
IDO1708W		116	126	59.8	39	0	5/26	12.3
UIL17-550099A			126	60.9	40	0	5/30	12.5
WB1922	123	117	126	63.3	43	0	5/31	12.0
WA8405		121	125	59.1	41	0	5/29	11.9
OR5180072*		117	125	61.1	41	0	5/28	11.8
UIL16-478001A		112	121	61.6	43	0	5/28	11.6
Brundage 96	121	115	121	61.9	40	0	5/28	12.5
OR5180071*		113	120	62.2	38	0	5/30	12.0
Bruneau	125	111	118	62.2	42	1	5/29	11.9
Coda*	116	109	117	63.2	42	10	5/31	12.2
Stephens	118	111	114	60.6	38	0	5/26	12.1
Calyspo*	111	103	113	62.7	39	0	5/27	11.8
Average	**126**	**121**	**131**	**62.0**	**40**	**<1**	**5/27**	**11.9**
LSD (0.05)	**6**	**9**	**16**	**1.2**	**2**	**ns**	**1.4**	**--**
CV (%)	**6.2**	**7.4**	**8.2**	**1.4**	**3.1**	**978.1**	**10.6**	**--**

*Club wheat

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

Table 8. Soft white winter wheat variety performance results at Moscow, 2024.

Variety or Selection	3-Year Average (bu/A)**	2-Year Average (bu/A)	2023–24 Crop Year Seed Yield (bu/A)***	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
LCS Jefe		125	**133**	59.4	39	0	6/7	9.5
LCS Shine	137	124	**130**	58.9	37	0	6/4	10.2
Gale			**128**	57.0	37	0	6/8	10.6
LCS Blackjack	133	119	**122**	57.3	37	0	6/9	9.9
VI Gem		119	**121**	59.3	38	0	6/5	10.0
WA8397		116	**121**	58.8	38	0	6/9	10.3
UI Sparrow	127	116	**121**	58.0	41	0	6/10	10.5
AP Exceed		117	120	60.6	39	0	5/31	9.9
WA8398		113	119	59.2	39	0	6/8	10.3
UIL14-211120A		116	119	59.0	39	0	6/3	10.1
Norwest Tandem	122	113	117	59.3	36	0	6/5	10.5
WA8405		113	117	58.7	38	0	6/9	10.6
ARSRS14X1114-1-3CBW*			115	59.2	36	0	6/8	9.3
WA8404		113	114	59.4	38	0	6/9	10.6
WB1922		104	110	61.6	40	0	6/10	10.7
UI Vixen	120	110	109	60.4	40	0	6/9	10.3
Cameo*	124	108	109	58.6	38	0	6/9	10.2
LCS Hulk	119	104	109	59.8	37	0	6/8	10.8
Stephens	114	101	109	58.6	37	0	6/4	11.7
Bruneau	124	111	108	59.4	39	0	6/9	11.0
UIL16-007057A			108	59.0	38	0	6/5	10.5
TMC M-Pire		109	108	61.1	36	0	6/3	9.7
UIL16-478001A		107	108	59.8	37	0	6/8	9.8
WB1720		106	107	59.9	36	0	6/7	9.8
WB1621		111	107	60.9	36	0	6/6	9.9
TMC M-Press			106	59.8	36	0	6/6	9.8
Norwest Duet	127	113	106	59.5	43	0	6/10	10.1
WB1545			105	62.7	37	0	5/31	10.7
OR5180071*		102	104	59.9	34	0	6/9	10.0
UIL17-550099A			104	58.1	38	0	6/9	11.0
Nimbus	122	106	103	59.2	39	0	6/5	10.4
Brundage 96	117	106	103	59.4	36	0	6/8	10.7
IDO1708W		100	102	58.5	37	0	6/3	10.9
GS Bounty			100	59.2	39	0	6/9	10.9
UIL17-995133B		108	100	60.8	34	0	6/4	10.3
Coda*	111	99	99	60.7	39	0	6/12	11.0
Calyspo*		98	98	61.1	39	0	6/9	10.5
AP Iliad		107	96	59.3	37	0	6/4	9.9
OR5180072*		99	95	57.9	35	0	6/7	9.4
AP Olympia			94	59.9	35	0	6/6	10.3
LCS Kamiak		108	88	59.6	33	0	6/2	10.6
Average	**123**	**110**	**110**	**59.5**	**37**	**0**	**6/7**	**10.3**
LSD (0.05)	**6**	**9**	**13**	**0.7**	**2**	**--**	**1.3**	**--**
CV (%)	**6.4**	**8.3**	**8.3**	**0.8**	**3.9**	**--**	**10.7**	**--**

*Club wheat

**3-year averages were calculated using data from the current year along with 2020 and 2023. The Moscow location was not seeded in 2021 or 2022.

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

Table 9. Soft white winter wheat variety performance results at Nezperce, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
AP Exceed	120	113	**120**	60.3	38	0	6/9	10.3
AP Olympia			**117**	60.2	38	0	6/13	10.4
WB1621	111	110	**116**	61.8	38	0	6/13	10.4
LCS Jefe	112	106	**114**	58.7	36	0	6/16	10.4
WA8398		103	**112**	59.0	38	0	6/14	10.6
VI Gem		107	**111**	60.1	38	0	6/12	10.7
WA8404		104	**110**	58.7	38	0	6/14	10.8
UIL17-550099A		105	**110**	59.7	39	0	6/16	11.0
WA8397		102	109	58.1	39	0	6/15	10.7
GS Bounty			109	59.6	41	0	6/16	10.6
WA8405		101	109	56.8	40	0	6/16	11.4
UIL16-478001A	106	103	109	59.2	38	1	6/14	10.7
UIL17-995133B			108	61.9	36	0	6/11	11.0
UIL16-007057A			108	59.3	41	0	6/12	10.8
LCS Hulk	107	103	106	59.8	38	0	6/14	10.1
LCS Blackjack	106	102	106	57.4	35	0	6/15	10.0
ARSRS14X1114-1-3CBW*			105	59.1	36	0	6/14	9.6
WB1922	101	97	104	61.0	40	0	6/19	11.0
UI Vixen	103	102	103	61.2	39	0	6/15	10.3
UI Sparrow	106	99	103	58.8	39	0	6/16	9.9
WB1720	103	100	103	60.1	36	0	6/13	10.7
LCS Shine	110	104	103	57.7	32	0	6/12	9.9
Cameo*	102	98	102	58.3	37	0	6/14	10.7
OR5180071*		95	101	60.2	36	0	6/15	10.2
OR5180072*		97	101	59.1	37	0	6/13	10.3
Gale			101	56.4	34	0	6/15	10.7
Norwest Duet	100	98	100	60.0	42	0	6/17	10.6
Nimbus	103	98	100	60.0	40	0	6/12	10.7
TMC M-Press			99	60.0	35	0	6/16	10.7
Norwest Tandem	101	96	98	59.8	33	0	6/11	10.6
Coda*	97	92	98	62.1	41	3	6/19	11.1
Stephens	101	96	98	59.4	35	0	6/11	10.9
Bruneau	106	101	98	58.7	38	0	6/17	10.8
UIL14-211120A		100	97	60.2	39	0	6/10	10.4
TMC M-Pire		98	95	61.0	33	0	6/10	10.9
Calyspo*	94	95	94	61.6	38	0	6/13	10.8
AP Iliad	106	95	88	58.2	34	0	6/13	10.8
Brundage 96	98	92	87	59.8	37	0	6/15	10.8
LCS Kamiak	107	98	87	59.5	34	0	6/9	10.9
IDO1708W		91	87	57.4	34	0	6/10	10.0
WB1545			76	62.5	32	0	6/9	10.9
Average	**105**	**100**	**102**	**59.6**	**37**	**<1**	**6/13**	**10.6**
LSD (0.05)	**7**	**7**	**11**	**0.8**	**2**	**ns**	**2.1**	**--**
CV (%)	**8.2**	**6.5**	**7.5**	**0.9**	**4.0**	**957.7**	**20.0**	**--**

*Club wheat

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

Table 10. Soft white winter wheat variety performance results at Tensed, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
LCS Shine	133	129	**132**	60.8	31	0	6/10	11.6
WA8405		120	**123**	59.9	39	0	6/12	12.2
WA8398		118	**123**	60.4	38	0	6/12	12.9
UI Sparrow	123	121	**122**	59.0	39	0	6/17	12.1
LCS Jefe	124	120	**121**	60.8	33	0	6/11	11.6
WA8404		119	117	60.0	38	0	6/11	12.2
Cameo*	122	114	116	61.2	38	0	6/14	13.7
Coda*	117	114	116	62.7	40	0	6/16	13.2
WA8397		116	116	60.3	37	0	6/12	11.9
Norwest Tandem	111	103	113	59.7	33	0	6/10	12.6
UIL16-007057A			113	59.9	39	0	6/12	13.1
UI Vixen	114	112	111	61.1	36	0	6/14	12.7
GS Bounty			110	59.9	41	0	6/12	12.7
Norwest Duet	117	115	110	60.5	39	0	6/15	12.3
ARSRS14X1114-1-3CBW*			107	60.7	35	0	6/13	12.0
WB1922	115	108	106	61.3	36	0	6/19	12.7
Nimbus	117	109	105	60.3	39	0	6/10	12.8
OR5180072*		104	103	59.8	35	0	6/15	12.4
UIL17-995133B		105	102	61.9	33	0	6/10	12.4
OR5180071*		104	101	61.4	35	0	6/14	12.3
UIL17-550099A			98	57.8	37	0	6/13	13.1
Calyspo*	116	109	98	62.4	37	0	6/12	13.9
VI Gem		104	98	59.5	35	0	6/12	12.6
UIL16-478001A	108	101	96	58.8	35	0	6/12	12.9
Bruneau	109	103	95	59.7	35	0	6/14	13.3
AP Exceed	110	100	95	61.1	33	0	6/10	12.7
WB1720	104	100	94	58.4	33	0	6/12	13.6
LCS Hulk	108	98	94	59.2	34	0	6/12	13.2
AP Olympia			94	59.0	33	0	6/12	13.3
TMC M-Press			93	59.9	35	0	6/12	13.0
AP Iliad	109	101	92	58.9	32	0	6/11	12.8
LCS Kamiak	112	106	92	58.7	32	0	6/10	13.9
WB1621	110	99	89	62.0	32	0	6/11	13.5
TMC M-Pire		103	89	59.9	32	0	6/11	13.4
LCS Blackjack	110	102	88	56.9	34	0	6/12	12.8
UIL14-211120A		99	85	57.0	36	0	6/11	13.0
Brundage 96	103	98	84	58.1	34	0	6/12	13.4
WB1545			74	60.8	30	0	6/10	13.7
IDO1708W		87	69	56.6	32	0	6/10	13.3
Gale			69	54.4	30	0	6/14	13.0
Stephens	88	82	62	54.6	31	0	6/12	14.3
Average	**113**	**107**	**100**	**59.6**	**35**	**0**	**6/12**	**12.9**
LSD (0.05)	**9**	**12**	**12**	**0.9**	**2**	**--**	**0.9**	**--**
CV (%)	**9.4**	**11.1**	**8.7**	**1.1**	**5.0**	**--**	**10.9**	**--**

*Club wheat

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

Table 11. Soft white winter wheat performance comparison across northern Idaho, 2024.

Variety or Selection	3-Year Yield**	2-Year Yield	2023–24 Crop Year*** North Idaho Average	Bonners Ferry	Genesee	Lewiston	Moscow	Nezperce	Tensed	Test Weight	Plant Height	Lodging	Seed Protein
	bu/A									(lb/bu)	(inches)	(%)	(%)
LCS Jefe	**124**	**121**	132	**133**	**142**	**139**	**133**	**114**	**121**	61.0	37	0	10.5
WA8398		115	127	**123**	**142**	**138**	119	**112**	**123**	60.7	39	0	11.2
WA8397		116	126	**133**	**141**	**130**	**121**	109	116	60.3	38	0	11.0
WA8404		116	125	**125**	**140**	**139**	114	**110**	117	60.5	39	0	11.1
ARSRS14X1114-1-3CBW*			124	**124**	**148**	**143**	115	105	107	61.1	36	0	10.2
WA8405		114	123	**127**	137	125	117	109	**123**	59.7	39	0	11.1
VI Gem		**118**	123	**136**	**140**	**130**	**121**	**111**	98	61.2	38	0	10.8
UI Sparrow	118	113	122	**129**	129	126	**121**	103	**122**	59.6	40	0	10.7
Norwest Tandem	113	111	121	**132**	125	**140**	117	98	113	60.9	34	0	11.0
LCS Blackjack	119	117	120	**136**	128	**141**	**122**	106	88	58.9	36	0	10.8
UI Vixen	118	115	119	**124**	135	128	109	103	111	62.1	39	<1	10.9
LCS Hulk	117	113	119	**138**	123	**139**	109	106	94	61.4	38	0	11.1
WB1922	115	110	118	**132**	130	126	110	104	106	62.5	39	0	11.4
UIL16-007057A			118	113	137	128	108	108	113	60.5	40	0	11.6
GS Bounty			118	**125**	138	128	100	109	110	60.9	41	0	11.2
Norwest Duet	116	113	118	**125**	129	**132**	106	100	110	61.2	43	0	11.1
Cameo*	116	107	117	118	130	127	109	102	116	60.4	38	0	11.1
WB1720	113	109	117	**132**	138	127	107	103	94	61.3	35	0	11.3
UIL17-995133B		114	116	114	125	**145**	100	108	102	62.6	36	0	11.1
UIL16-478001A	115	111	116	122	137	121	108	109	96	60.9	38	<1	10.9
TMC M-Pire		113	115	**123**	137	**138**	108	95	89	62.0	34	0	11.0
UIL14-211120A		113	115	115	129	**143**	119	97	85	59.9	39	0	11.1
Nimbus	117	111	115	115	127	**133**	103	100	105	61.1	41	0	11.0
TMC M-Press			114	115	131	**140**	106	99	93	61.3	37	0	11.1
UIL17-550099A			114	116	124	126	104	**110**	98	60.1	38	0	11.7
Gale			113	111	137	**130**	**128**	101	69	57.8	34	0	11.1
OR5180071*		106	112	118	129	120	104	101	101	61.3	36	0	10.7
Coda*	110	105	112	116	124	117	99	98	116	62.8	40	2	11.4
OR5180072*		107	112	116	128	125	95	101	103	60.0	37	0	10.8
LCS Kamiak	120	114	111	122	130	**143**	88	87	92	61.2	35	0	11.5
Bruneau	116	110	111	114	129	118	108	98	95	60.8	39	<1	11.3
Calyspo*	110	105	110	120	133	113	98	94	98	62.5	38	0	11.4
AP Iliad	117		107	101	132	**142**	96	88	92	60.6	36	0	11.2
Brundage 96	109	105	106	113	123	121	103	87	84	60.6	37	0	11.5
WB1545			103	109	122	**130**	105	76	74	63.1	35	0	11.5
Stephens	104	101	103	109	123	114	109	98	62	59.6	36	0	11.7
IDO1708W		101	102	112	116	126	102	87	69	59.2	36	0	11.2
LCS Shine	**124**		--	--	122	129	**130**	103	**132**	60.5	33	0	10.9
WB1621	118		--	--	123	**136**	107	**116**	89	63.1	37	0	11.2
AP Exceed			--	--	**149**	**133**	120	**120**	95	--	--	--	--
AP Olympia			--	--	132	**142**	94	**117**	94	--	--	--	--
LCS Artdeco			--	--	--	**134**	--	--	--	--	--	--	--
Average	**116**	**111**	**116**	**121**	**132**	**131**	**110**	**102**	**100**	**60.9**	**37**	**<1**	**11.1**
LSD (0.05)	**4**	**4**	**6**	**16**	**11**	**16**	**13**	**11**	**12**	**0.3**	**1**	**ns**	**--**
CV (%)	**8.1**	**8.4**	**9.1**	**9.0**	**6.0**	**8.2**	**8.3**	**7.5**	**8.7**	**1.0**	**4.6**	**880.9**	**--**

*Club wheat

**3-year average does not include Bonners Ferry or Moscow as these locations were not seeded in 2022.

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

Table 12. Soft white winter wheat (herbicide-resistant) variety performance results at Bonners Ferry, 2024.

Variety or Selection*	3-Year Average (bu/A)**	2-Year Average (bu/A)	2023–24 Crop Year Seed Yield (bu/A)***	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Seed Protein (%)
Piranha CL+	120	121	**133**	61.9	40	0	9.7
Sockeye CL+	109	117	**132**	61.6	39	0	9.5
Nova AX			**125**	62.7	36	0	9.8
VI Presto CL+	112	110	**124**	63.4	40	0	9.9
VI Encore CL+	114	113	**123**	63.0	37	0	10.3
Stingray CL+	108	106	120	62.8	35	0	10.0
Brundage 96		111	119	62.4	36	0	10.2
LCS Hydra AX			119	62.5	37	0	9.6
Stephens	106	110	116	62.4	35	0	10.3
LCS Kraken AX			114	63.4	41	0	10.4
LCS Scorpion AX			111	61.9	35	0	10.0
Mallory CL+			109	61.6	31	0	9.9
Appleby CL+	94	91	108	62.9	35	0	11.0
VI Voodoo CL+	103	99	107	62.6	32	0	9.9
Average	**108**	**108**	**119**	**62.5**	**36**	**0**	**10.0**
LSD (0.05)	**7**	**8**	**13**	**0.4**	**2**	**--**	**--**
CV (%)	**8.3**	**7.6**	**7.3**	**0.5**	**3.2**	**--**	**--**

*Stephens and Brundage 96 were used as common controls between the two soft white wheat trials.

**3-year averages were calculated using data from the current year along with 2020 and 2023. The Bonners Ferry location was not seeded in 2021 or 2022.

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

Table 13. Soft white winter wheat (herbicide-resistant) variety performance results at Genesee, 2024.

Variety or Selection*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Sockeye CL+	130	137	**149**	61.2	42	0	6/7	11.0
Mallory CL+			**146**	62.8	39	0	5/31	11.7
Piranha CL+	128	135	**146**	61.9	42	0	6/7	10.9
Nova AX			**143**	62.4	44	0	6/5	11.2
VI Voodoo CL+	123	126	139	62.9	36	0	6/3	10.5
LCS Hydra AX			138	64.3	41	0	6/3	10.8
VI Encore CL+	123	127	135	63.2	39	0	6/5	11.5
LCS Scorpion AX			131	62.5	41	0	6/3	11.4
Stingray CL+	115	118	129	62.4	39	0	6/6	11.7
Appleby CL+		114	128	63.4	42	0	6/3	11.4
Brundage 96	112	115	124	62.2	39	0	6/6	11.7
Stephens	114	117	122	63.1	38	0	6/3	11.1
LCS Kraken AX			121	62.8	42	0	6/5	11.0
VI Presto CL+	113	113	119	64.5	43	0	6/7	12.0
Average	**120**	**122**	**133**	**62.8**	**40**	**0**	**6/4**	**11.3**
LSD (0.05)	**6**	**6**	**8**	**0.4**	**2**	**--**	**1.2**	**--**
CV (%)	**6.2**	**5.2**	**4.4**	**0.5**	**2.9**	**--**	**10.5**	**--**

*Stephens and Brundage 96 were used as common controls between the two soft white wheat trials.
**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 14. Soft white winter wheat (herbicide-resistant) variety performance results at Lewiston, 2024.

Variety or Selection*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Mallory CL+			**144**	62.2	40	0	5/20	12.2
LCS Scorpion AX			**137**	61.9	40	0	5/26	12.0
VI Encore CL+	133	131	**137**	63.5	40	0	5/27	12.0
VI Voodoo CL+	133	128	**136**	60.8	35	0	5/27	11.8
Stingray CL+	130		**133**	62.1	40	0	5/29	12.7
Piranha CL+	134	125	**133**	61.8	43	0	5/27	12.0
Sockeye CL+	133	123	131	61.8	43	0	5/28	11.4
Nova AX			128	61.1	42	0	5/27	12.1
VI Presto CL+	128	122	126	64.1	43	0	5/26	11.8
Appleby CL+	125	119	124	63.2	41	0	5/25	11.8
LCS Hydra AX			123	63.2	39	0	5/26	11.3
Brundage 96	123	116	122	62.1	38	0	5/27	12.5
LCS Kraken AX			121	62.1	44	0	5/27	12.2
Stephens	118	106	113	60.0	36	0	5/26	12.4
Average	**129**	**122**	**129**	**62.1**	**40**	**0**	**5/26**	**12.0**
LSD (0.05)	**6**	**8**	**13**	**0.9**	**2**	**--**	**1.2**	**--**
CV (%)	**5.4**	**6.5**	**6.9**	**1.0**	**2.8**	**--**	**10.3**	**--**

*Stephens and Brundage 96 were used as common controls between the two soft white wheat trials.
**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 15. Soft white winter wheat (herbicide-resistant) variety performance results at Moscow, 2024.

Variety or Selection*	3-Year Average (bu/A)**	2-Year Average (bu/A)	2023–24 Crop Year					
			Seed Yield (bu/A)***	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
VI Voodoo CL+	133	125	**125**	58.9	35	0	6/4	10.4
Sockeye CL+	139	128	**125**	59.2	41	0	6/7	10.9
Stingray CL+	126	118	**117**	59.3	36	0	6/7	11.6
VI Presto CL+	127	120	**116**	61.1	40	0	6/7	11.6
VI Encore CL+	130	123	115	59.6	38	0	6/7	11.0
LCS Scorpion AX			114	59.4	36	0	6/3	11.5
LCS Hydra AX			113	61.8	37	0	6/6	10.8
Piranha CL+	135	123	113	59.3	39	0	6/9	10.8
Stephens	119	112	110	59.4	37	0	6/3	11.1
Brundage 96		113	110	59.9	36	0	6/8	11.6
Nova AX			107	59.1	40	0	6/7	11.0
Mallory CL+			102	58.1	35	0	6/2	11.1
Appleby CL+		109	101	59.7	40	0	6/4	11.0
LCS Kraken AX			99	58.9	40	0	6/7	10.6
Average	**130**	**119**	**112**	**59.5**	**38**	**0**	**6/6**	**11.1**
LSD (0.05)	**6**	**9**	**10**	**0.7**	**2**	**--**	**1.2**	**--**
CV (%)	**6.1**	**7.2**	**6.3**	**0.8**	**3.2**	**--**	**10.8**	**--**

*Stephens and Brundage 96 were used as common controls between the two soft white wheat trials.

**3-year averages were calculated using data from the current year along with 2020 and 2023. The Moscow location was not seeded in 2021 or 2022.

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

Table 16. Soft white winter wheat (herbicide-resistant) variety performance results at Nezperce, 2024.

Variety or Selection*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Sockeye CL+	100	105	**118**	57.8	43	0	6/15	11.3
VI Encore CL+	103	102	**112**	58.7	37	0	6/14	11.0
Appleby CL+		97	**107**	59.6	41	0	6/14	11.3
Nova AX			**107**	57.7	43	0	6/14	10.9
Stingray CL+	93	95	104	57.3	37	0	6/15	11.4
Mallory CL+			104	57.8	36	0	6/12	11.3
LCS Kraken AX			104	59.2	43	0	6/17	11.0
Piranha CL+	97	99	103	58.0	41	0	6/17	11.3
VI Presto CL+	98	99	102	61.4	41	0	6/14	11.1
LCS Scorpion AX			100	59.1	37	0	6/10	10.4
LCS Hydra AX			100	60.2	38	0	6/15	10.6
VI Voodoo CL+	98	95	100	57.4	32	0	6/13	11.2
Stephens	96	96	98	58.8	37	0	6/11	11.1
Brundage 96	91	93	95	59.3	38	0	6/15	11.2
Average	**97**	**98**	**104**	**58.7**	**39**	**0**	**6/14**	**11.1**
LSD (0.05)	**6**	**6**	**12**	**0.8**	**2**	**--**	**2.0**	**--**
CV (%)	**7.1**	**6.2**	**8.1**	**0.9**	**3.0**	**--**	**18.0**	**--**

*Stephens and Brundage 96 were used as common controls between the two soft white wheat trials.
**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 17. Soft white winter wheat (herbicide-resistant) variety performance results at Tensed, 2024.

Variety or Selection*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Nova AX			**115**	61.1	39	0	6/12	12.5
Sockeye CL+	121	116	**114**	59.3	38	0	6/13	12.5
Piranha CL+	120	112	**109**	59.4	38	0	6/13	12.9
Stingray CL+	116	108	**105**	59.6	37	0	6/12	13.1
LCS Scorpion AX			104	59.7	36	0	6/11	12.9
VI Encore CL+	114	106	103	60.9	36	0	6/12	13.2
LCS Hydra AX			98	61.9	35	0	6/11	12.8
LCS Kraken AX			97	60.6	38	0	6/12	12.9
Mallory CL+			94	58.7	34	0	6/10	13.0
Appleby CL+		98	92	60.7	35	0	6/10	13.4
Brundage 96	105	102	91	58.9	35	0	6/12	13.6
VI Presto CL+	103	97	90	60.4	36	0	6/12	13.7
VI Voodoo CL+	106	101	81	57.9	30	0	6/12	13.2
Stephens	91	87	68	57.2	33	0	6/11	13.9
Average	**110**	**103**	**97**	**59.7**	**35**	**0**	**6/12**	**13.1**
LSD (0.05)	**7**	**8**	**11**	**0.8**	**3**	**--**	**0.9**	**--**
CV (%)	**7.5**	**7.7**	**7.8**	**0.9**	**5.1**	**--**	**11.7**	**--**

*Stephens and Brundage 96 were used as common controls between the two soft white wheat trials.
**Variety or selection yields in bold were statistically equal to the top yielding variety.

Table 18. Soft white winter wheat (herbicide-resistant) performance comparison across northern Idaho, 2024.

Variety or Selection	3-Year Yield*	2-Year Yield	2023–24 Crop Year**										
			North Idaho Average	Bonners Ferry	Genesee	Lewiston	Moscow	Nezperce	Tensed	Test Weight	Plant Height	Lodging	Seed Protein
	---------- bu/A ----------									(lb/bu)	(inches)	(%)	(%)
Sockeye CL+	121	121	**128**	**132**	**149**	131	**125**	**118**	**114**	60.2	41	0	11.1
Piranha CL+	120	119	123	**133**	**146**	**133**	113	103	**109**	60.4	40	0	11.2
Nova AX			121	**125**	**143**	128	107	**107**	**115**	60.7	41	0	11.3
VI Encore CL+	118	117	121	**123**	135	**137**	115	**112**	103	61.4	38	0	11.5
Stingray CL+	113	111	118	120	129	**133**	**117**	104	**105**	60.6	37	0	11.8
Mallory CL+			117	109	**146**	**144**	102	104	94	60.2	36	0	11.5
LCS Scorpion AX			116	111	131	**137**	114	100	104	60.7	37	0	11.4
LCS Hydra AX			116	119	138	123	113	100	98	62.3	38	0	11.0
VI Voodoo CL+	115	112	115	107	139	**136**	**125**	100	81	60.1	33	0	11.2
VI Presto CL+	110	110	113	**124**	119	126	**116**	102	90	62.4	41	0	11.7
Brundage 96	108	108	110	119	124	122	110	95	91	60.8	37	0	11.8
Appleby CL+		105	110	108	128	124	101	**107**	92	61.6	39	0	11.6
LCS Kraken AX			110	114	121	121	99	104	97	61.2	41	0	11.3
Stephens	105	105	105	116	122	113	110	98	68	60.1	36	0	11.6
Average	**114**	**112**	**116**	**119**	**133**	**129**	**112**	**104**	**97**	**60.9**	**38**	**0**	**11.4**
LSD (0.05)	**3**	**3**	**5**	**13**	**8**	**13**	**10**	**12**	**11**	**0.3**	**1**	--	--
CV (%)	**6.9**	**7.4**	**8.1**	**7.3**	**4.4**	**6.9**	**6.3**	**8.1**	**7.8**	**0.8**	**3.8**	--	--

*3-year average does not include Bonners Ferry or Moscow as these locations were not seeded in 2022.

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

Table 19. Hard winter wheat variety performance results at Bonners Ferry, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)**	2-Year Average (bu/A)	2023–24 Crop Year				
				Seed Yield (bu/A)***	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Seed Protein (%)
WA8401	HRW			**138**	63.0	37	0	9.3
WA8399	HRW			**136**	63.1	37	0	9.6
Scorpio	HRW	116	113	**133**	62.1	37	0	10.0
LCS Missile	HRW			**131**	63.2	36	0	10.2
UI Silver	HWW	107	108	**129**	64.3	40	28	10.6
WB4510CLP	HRW		110	127	66.3	39	0	10.8
Keldin	HRW	113	111	124	64.7	38	0	10.7
OR2190064R	HRW		104	122	63.8	34	0	10.8
Norwest 553	HRW	102	99	121	64.2	34	0	11.7
LCS Evina	HRW			120	63.7	37	0	11.0
WB4303	HRW	96	101	119	63.9	32	0	11.4
OR2190160R	HRW			117	64.1	35	0	11.9
Milestone	HRW		101	107	63.4	37	0	10.7
Average		**107**	**106**	**125**	**63.8**	**36**	**2**	**10.7**
LSD (0.05)		**7**	**9**	**11**	**0.5**	**1**	**8**	**--**
CV (%)		**7.4**	**8.3**	**6.4**	**0.5**	**2.8**	**248.2**	**--**

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

**3-year averages were calculated using data from the current year along with 2020 and 2023. The Bonners Ferry location was not seeded in 2021 or 2022.

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

Table 20. Hard winter wheat variety performance results at Genesee, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
				Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Scorpio	HRW	115	114	**133**	62.8	39	0	6/4	11.9
WA8399	HRW			**133**	62.6	38	0	6/6	11.0
LCS Missile	HRW			**132**	62.9	40	0	6/4	11.2
WB4303	HRW	122	119	**131**	64.1	41	0	5/28	12.3
WA8401	HRW			**129**	63.0	38	0	6/7	11.0
Milestone	HRW		121	**127**	63.8	41	0	6/2	11.7
OR2190160R	HRW			**127**	64.9	38	0	6/1	12.1
Keldin	HRW	126	122	**127**	65.1	43	0	6/3	12.2
OR2190064R	HRW		109	**125**	64.5	37	0	6/4	12.5
WB4510CLP	HRW	122	122	**124**	66.3	44	0	6/3	11.5
UI Silver	HWW		117	121	64.3	45	0	6/8	12.3
Norwest 553	HRW	105	104	120	64.1	35	0	6/3	12.7
LCS Evina	HRW			117	62.8	43	0	6/8	12.9
Average		**118**	**117**	**126**	**63.9**	**40**	**0**	**6/4**	**11.9**
LSD (0.05)		**10**	**9**	**12**	**0.5**	**2**	**--**	**1.3**	**--**
CV (%)		**10.0**	**7.4**	**6.7**	**0.5**	**2.9**	**--**	**12.3**	**--**

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

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

Table 21. Hard winter wheat variety performance results at Lewiston, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
				Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
OR2190064R	HRW		123	142	63.6	36	0	5/27	12.8
Keldin	HRW	138	127	135	63.6	41	0	5/26	13.2
LCS Missile	HRW			129	62.0	39	0	5/27	13.3
WB4303	HRW	127	121	129	62.4	38	0	5/21	13.5
WA8401	HRW			127	60.6	38	0	5/28	12.8
WB4510CLP	HRW	129	116	126	65.4	39	0	5/26	12.7
OR2190160R	HRW			125	63.7	35	0	5/27	14.2
WA8399	HRW			125	60.7	38	0	5/27	12.5
Scorpio	HRW	126	116	124	60.3	37	0	5/27	13.7
Norwest 553	HRW	119	113	123	62.8	34	0	5/27	13.3
LCS Evina	HRW			118	61.9	42	0	5/31	14.7
UI Silver	HWW		103	111	63.0	41	40	5/30	13.7
Average		**128**	**117**	**126**	**62.5**	**38**	**3**	**5/27**	**13.4**
LSD (0.05)		**6**	**7**	**ns**	**1.6**	**1**	**3**	**0.7**	**--**
CV (%)		**5.2**	**6.0**	**8.9**	**1.8**	**2.3**	**70.7**	**5.2**	**--**

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

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

Table 22. Hard winter wheat variety performance results at Moscow, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)**	2-Year Average (bu/A)	2023–24 Crop Year					
				Seed Yield (bu/A)***	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
WA8401	HRW			**133**	57.8	39	0	6/7	11.6
WA8399	HRW			**132**	58.8	39	0	6/7	10.9
Scorpio	HRW	137	129	**129**	59.8	38	0	6/5	11.4
LCS Missile	HRW			**129**	60.7	40	0	6/5	12.0
Keldin	HRW	138	134	**129**	62.6	42	0	6/4	11.5
Norwest 553	HRW	130	123	**127**	61.8	36	0	6/5	12.1
LCS Evina	HRW			**124**	60.2	43	0	6/9	13.6
UI Silver	HWW	126	122	**122**	61.9	43	0	6/9	11.8
OR2190064R	HRW		123	**121**	61.1	35	0	6/6	11.5
WB4303	HRW	114	126	**121**	60.2	38	0	5/30	11.6
OR2190160R	HRW			107	61.9	35	0	6/5	12.5
Milestone	HRW		118	101	59.4	37	0	6/4	11.4
WB4510CLP	HRW		110	93	63.8	40	0	6/4	11.6
Average		**129**	**123**	**121**	**60.7**	**39**	**0**	**6/5**	**11.8**
LSD (0.05)		**8**	**11**	**16**	**0.9**	**2**	**--**	**1.1**	**--**
CV (%)		**7.3**	**8.7**	**9.5**	**1.0**	**3.3**	**--**	**10.4**	**--**

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

**3-year averages were calculated using data from the current year along with 2020 and 2023. The Moscow location was not seeded in 2021 or 2022.

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

Table 23. Hard winter wheat variety performance results at Nezperce, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
				Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Scorpio	HRW	104	104	**121**	59.7	37	0	6/12	11.7
Keldin	HRW	109	109	**121**	61.9	41	1	6/11	11.9
Norwest 553	HRW	96	98	**115**	61.2	33	0	6/12	12.3
WA8401	HRW			**114**	57.8	38	0	6/16	11.6
LCS Missile	HRW			**113**	59.8	38	0	6/12	12.1
WB4510CLP	HRW	99	100	109	64.2	41	0	6/12	11.9
OR2190064R	HRW		98	108	60.9	35	0	6/12	12.4
OR2190160R	HRW			107	61.2	34	0	6/11	12.8
WA8399	HRW			106	58.3	37	0	6/15	10.8
LCS Evina	HRW			103	57.4	39	0	6/19	14.4
Milestone	HRW		97	102	60.0	37	0	6/10	11.7
UI Silver	HWW		92	98	61.5	43	69	6/15	11.9
WB4303	HRW	94	99	98	57.9	37	0	6/10	12.0
Average		**100**	**100**	**109**	**60.2**	**37**	**5**	**6/13**	**12.1**
LSD (0.05)		**9**	**8**	**11**	**0.7**	**2**	**18**	**2.1**	**--**
CV (%)		**10.5**	**8.1**	**7.1**	**0.8**	**2.9**	**236.4**	**21.6**	**--**

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

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

Table 24. Hard winter wheat variety performance results at Tensed, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)	2-Year Average (bu/A)	2023–24 Crop Year					
				Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
WA8401	HRW			**134**	61.3	36	0	6/12	13.2
WA8399	HRW			**132**	61.1	36	0	6/12	12.3
UI Silver	HWW		115	121	62.1	41	8	6/13	14.1
Keldin	HRW	122	118	115	62.2	37	0	6/10	13.8
Scorpio	HRW	116	113	114	60.6	35	0	6/12	13.5
WB4303	HRW	104	103	108	60.8	34	0	6/8	14.9
LCS Evina	HRW			105	60.0	36	0	6/16	14.9
LCS Missile	HRW			104	61.1	33	0	6/11	13.9
OR2190064R	HRW		105	103	61.3	34	0	6/11	14.0
OR2190160R	HRW			101	61.1	32	0	6/10	14.2
WB4510CLP	HRW	105	98	98	62.7	38	0	6/10	14.5
Norwest 553	HRW	98	94	89	61.5	30	0	6/11	14.9
Milestone	HRW		97	85	60.5	33	0	6/10	14.4
Average		**109**	**105**	**108**	**61.2**	**35**	**1**	**6/11**	**14.0**
LSD (0.05)		**6**	**9**	**11**	**ns**	**2**	**ns**	**1.0**	**--**
CV (%)		**7.0**	**8.1**	**7.2**	**2.0**	**3.7**	**721.1**	**13.0**	**--**

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

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

Table 25. Hard winter wheat performance comparison across northern Idaho, 2024.

Variety or Selection	3-Year Yield**	2-Year Yield	2023–24 Crop Year***										
			North Idaho Average	Bonners Ferry	Genesee	Lewiston	Moscow	Nezperce	Tensed	Test Weight	Plant Height	Lodging	Seed Protein
	---------- bu/A ----------									(lb/bu)	(inches)	(%)	(%)
WA8401			**129**	**138**	**129**	127	**133**	**114**	**134**	60.6	38	0	11.6
WA8399			**128**	**136**	**133**	125	**132**	106	**132**	60.7	38	0	11.2
Scorpio	115	115	**126**	**133**	**133**	124	**129**	**121**	114	60.9	37	0	12.0
Keldin	124	120	**125**	124	**127**	135	**129**	**121**	115	63.3	40	<1	12.2
LCS Missile			123	**131**	**132**	129	**129**	**113**	104	61.6	37	0	12.1
OR2190064R		112	118	122	**125**	142	**121**	108	103	62.5	35	0	12.3
WB4303	112	111	118	119	**131**	129	**121**	98	108	61.5	37	0	12.6
UI Silver*		110	117	**129**	121	111	**122**	98	121	62.8	42	24	12.4
Norwest 553	104	105	116	121	120	123	**127**	**115**	89	62.6	34	0	12.8
LCS Evina			115	120	117	118	**124**	103	105	61.1	40	0	13.6
OR2190160R			113	117	**127**	125	107	107	101	62.8	35	0	12.9
WB4510CLP	113	109	112	127	**124**	126	93	109	98	64.8	40	0	12.2
Milestone			--	107	**127**	--	101	102	85	--	--	--	--
Average	**113**	**112**	**120**	**125**	**126**	**126**	**121**	**109**	**108**	**62.1**	**38**	**2**	**12.3**
LSD (0.05)	**4**	**4**	**6**	**11**	**12**	**ns**	**16**	**11**	**11**	**0.4**	**1**	**4**	**--**
CV (%)	**8.3**	**8.2**	**8.8**	**6.4**	**6.7**	**8.9**	**9.5**	**7.1**	**7.2**	**1.2**	**3.5**	**307.2**	**--**

*Hard white

**3-year average does not include Bonners Ferry or Moscow as these locations were not seeded in 2022.

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

Table 26. Soft white spring wheat variety performance results at Genesee, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
WA8408			**76**	58.4	33	0	6/25	13.5
Butch CL+	81	73	**72**	57.8	30	0	6/23	13.6
Roger*	81	75	**71**	59.0	31	0	6/21	12.4
WA8384			70	55.9	34	0	6/23	14.0
WA8327	81	75	68	55.9	31	0	6/25	13.6
Seahawk	81	72	68	56.1	30	0	6/28	14.6
Bush	79	71	66	56.0	30	0	6/24	13.2
Ryan	77	71	66	53.9	31	0	6/22	13.1
TMC Lochaven			65	54.9	31	0	6/26	15.0
UI Cookie	75	69	65	53.8	31	0	6/22	14.5
Louise			64	54.7	35	0	6/26	14.0
Tekoa	74	66	64	55.9	32	0	6/27	13.9
Hedge CL+*	76	72	64	58.2	32	0	6/26	14.4
Melba*	80	70	62	55.7	29	0	6/26	14.0
IDO1902S	72	66	61	57.2	31	0	6/24	14.1
UI Stone	71	66	60	54.5	31	0	6/22	14.7
WB6211CLP	70	63	55	50.7	30	0	6/23	15.2
Average	**77**	**70**	**66**	**55.8**	**31**	**0**	**6/24**	**14.0**
LSD (0.05)	**6**	**6**	**6**	**1.3**	**1**	**--**	**1.0**	**--**
CV (%)	**9.3**	**8.7**	**6.3**	**1.6**	**3.0**	**--**	**10.8**	**--**

*Spring club.

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

Table 27. Soft white spring wheat variety performance results at Greencreek, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year					
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
Bush	65	68	**79**	62.1	33	0	6/30	11.2
Ryan	66	70	**78**	59.1	34	0	6/25	10.9
WA8408			**76**	62.0	34	0	6/28	10.6
Seahawk	59	62	**74**	60.5	33	0	7/2	11.9
WA8327	65	67	**73**	60.3	33	0	6/29	10.8
TMC Lochaven			72	61.2	33	0	6/30	12.1
Tekoa	58	60	69	61.7	33	0	7/3	11.5
Roger*	58	62	68	62.1	32	0	6/28	10.9
Butch CL+	62	63	68	60.4	31	0	6/27	11.8
WB6211CLP	55	59	67	59.4	31	0	6/28	12.1
Louise			65	59.8	35	0	7/1	11.2
UI Stone	50	52	54	59.9	31	0	6/28	12.6
UI Cookie	49	47	47	58.5	30	0	6/30	12.8
IDO1902S	50	48	45	61.4	29	0	7/4	12.1
WA8384			41	60.1	31	0	7/3	12.7
Hedge CL+*	47	44	41	60.8	30	0	7/4	13.2
Melba*	40	37	32	60.7	24	0	7/6	13.5
Average	**56**	**57**	**62**	**60.6**	**31**	**0**	**6/30**	**11.9**
LSD (0.05)	**4**	**5**	**7**	**0.4**	**2**	**--**	**1.4**	**--**
CV (%)	**8.8**	**8.4**	**7.9**	**0.4**	**4.4**	**--**	**7.0**	**--**

*Spring club.

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

Table 28. Soft white spring wheat performance comparison across northern Idaho, 2024.

Variety or Selection	3-Year Yield	2-Year Yield	2024 Crop Year** North Idaho Average	Genesee	Greencreek	Test Weight	Plant Height	Lodging	Seed Protein
	----------	----------	bu/A	----------	----------	(lb/bu)	(inches)	(%)	(%)
WA8408			**76**	**76**	**76**	60.2	34	0	12.0
Bush	**72**	**70**	**73**	66	**79**	59.1	32	0	12.2
Ryan	**72**	**71**	**72**	66	**78**	56.5	32	0	12.0
Seahawk	**70**	67	71	68	**74**	58.3	31	0	13.3
WA8327	**73**	**71**	71	68	**73**	58.1	32	0	12.2
Butch CL+	**72**	**68**	70	**72**	68	59.1	30	0	12.7
Roger*	**70**	**68**	70	**71**	68	60.6	31	0	11.7
TMC Lochaven			68	65	72	58.1	32	0	13.6
Tekoa	66	63	67	64	69	58.8	33	0	12.7
Louise			64	64	65	57.2	35	0	12.6
WB6211CLP	62	61	61	55	67	55.1	31	0	13.7
UI Stone	60	59	57	60	54	57.2	31	0	13.7
WA8384			56	70	41	58.0	32	0	13.3
UI Cookie	62	58	56	65	47	56.2	31	0	13.6
IDO1902S	61	57	53	61	45	59.3	30	0	13.1
Hedge CL+*	62	58	52	64	41	59.5	31	0	13.8
Melba*	60	54	47	62	32	58.2	27	0	13.8
Average	**66**	**63**	**64**	**66**	**62**	**58.2**	**31**	**0**	**12.9**
LSD (0.05)	**4**	**4**	**5**	**6**	**7**	**0.7**	**1**	**--**	**--**
CV (%)	**9.3**	**9.0**	**7.2**	**6.3**	**7.9**	**1.2**	**3.7**	**--**	**--**

*Club wheat

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

Table 29. Hard spring wheat variety performance results at Genesee, 2024.

				2024 Crop Year					
Variety or Selection	**Market Class***	**3-Year Average (bu/A)**	**2-Year Average (bu/A)**	**Seed Yield (bu/A)****	**Test Weight (lb/bu)**	**Plant Height (in)**	**Lodging (%)**	**Heading Date**	**Seed Protein (%)**
WB9662	HRS	71	65	**70**	57.0	29	0	6/27	15.9
WB9303	HRS	71	66	**68**	58.5	32	0	6/20	16.5
Hale	HRS	81	73	**68**	55.9	33	0	6/23	16.5
WB9668	HRS	72	66	**66**	57.4	29	0	6/21	17.1
WB9636	HRS		68	**66**	54.9	28	0	6/26	16.1
LCS Hammer AX	HRS			64	56.2	30	0	6/23	14.8
IDO2202CL+	HRS	73	68	63	54.8	31	0	6/20	16.0
Net CL+	HRS	75	67	62	58.0	31	0	6/29	17.2
CP3119A	HRS			61	51.7	33	0	7/3	16.3
Dayn	HWS	75	69	60	55.3	32	0	6/22	16.4
Jefferson	HRS	70	65	59	54.1	30	0	6/22	16.8
CP3201AX	HRS			59	55.0	30	0	6/27	15.9
CP3055	HRS			58	51.1	33	0	7/2	16.8
WB9623	HRS	72	64	58	52.2	30	0	6/26	17.2
Glee	HRS	73	65	57	53.4	31	0	6/22	16.0
IDO2104HF	HWS	70	66	57	53.7	30	0	6/25	15.8
Alum	HRS	71	63	55	54.4	31	0	6/26	16.6
UI Gold	HWS	67	64	55	53.6	31	0	6/26	17.1
CP3322	HRS			51	52.9	29	0	7/1	17.2
Average		**72**	**66**	**61**	**54.7**	**31**	**0**	**6/25**	**16.4**
LSD (0.05)		**5**	**ns**	**5**	**1.2**	**1**	**--**	**1.3**	**--**
CV (%)		**8.1**	**9.0**	**6.3**	**1.6**	**3.1**	**--**	**12.7**	**--**

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

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

Table 30. Hard spring wheat variety performance results at Greencreek, 2024.

Variety or Selection	Market Class*	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year					
				Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Lodging (%)	Heading Date	Seed Protein (%)
WB9303	HRS	60	59	**69**	60.8	32	0	6/23	16.1
Hale	HRS	60	61	**69**	61.1	34	0	6/28	14.7
Alum	HRS	58	59	**67**	59.6	32	0	6/30	14.7
CP3119A	HRS			**66**	54.3	33	0	7/8	15.0
WB9623	HRS	56	58	**66**	58.1	31	0	7/1	15.2
IDO2202CL+	HRS	53	55	**65**	58.3	31	0	6/26	15.2
Net CL+	HRS	56	57	**65**	60.9	31	0	7/3	16.2
IDO2104HF	HWS	55	55	**64**	56.7	31	0	6/29	14.9
Glee	HRS	56	58	**64**	58.9	32	0	6/26	15.3
WB9668	HRS	51	51	60	58.6	27	0	6/28	16.4
CP3322	HRS			59	57.2	29	0	7/7	15.4
CP3201AX	HRS			54	58.3	30	0	7/3	15.3
Dayn	HWS	52	50	51	58.9	29	0	7/2	14.7
Jefferson	HRS	52	50	50	59.2	28	0	7/2	14.5
CP3055	HRS			47	54.9	30	0	7/8	15.2
WB9636	HRS		36	41	57.0	24	0	7/3	16.1
WB9662	HRS	35	27	40	58.4	24	0	7/3	16.8
UI Gold	HWS	42	39	34	58.2	27	0	7/4	16.7
Average		**53**	**51**	**57**	**58.3**	**30**	**0**	**7/1**	**15.5**
LSD (0.05)		**3**	**4**	**8**	**0.7**	**2**	**--**	**1.2**	**--**
CV (%)		**7.2**	**8.6**	**9.9**	**0.9**	**4.5**	**--**	**5.7**	**--**

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

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

Table 31. Hard spring wheat performance comparison across northern Idaho, 2024.

Variety or Selection	Market Class	3-Year Yield	2-Year Yield	2024 Crop Year* North Idaho Average	Genesee	Greencreek	Test Weight	Plant Height	Lodging	Seed Protein
		----------	----------	bu/A	----------	----------	(lb/bu)	(inches)	(%)	(%)
WB9303	**HRS**	66	62	**68**	**68**	**69**	59.7	32	0	16.3
Hale	**HRS**	**70**	**67**	**68**	**68**	**69**	58.5	33	0	15.6
WB9668	**HRS**	62	59	**64**	**66**	60	58.0	28	0	16.8
IDO2202CL+	**HRS**	64	62	**64**	63	**65**	56.5	31	0	15.6
CP3119A	**HRS**			**64**	61	**66**	53.0	33	0	15.6
Net CL+	**HRS**	66	62	63	62	**65**	59.4	31	0	16.7
WB9623	**HRS**	64	61	62	58	**66**	55.1	30	0	16.2
Alum	**HRS**	64	61	61	55	**67**	57.0	32	0	15.7
IDO2104HF	**HWS**	63	60	61	57	**64**	55.2	30	0	15.3
Glee	**HRS**	64	61	60	57	**64**	56.1	32	0	15.6
CP3201AX	**HRS**			56	59	54	56.6	30	0	15.6
Dayn	**HWS**	63	59	55	60	51	57.1	31	0	15.6
WB9662	**HRS**	53	46	55	**70**	40	57.7	26	0	16.4
CP3322	**HRS**			55	51	59	55.1	29	0	16.3
Jefferson	**HRS**	61	57	55	59	50	56.6	29	0	15.6
WB9636	**HRS**		52	54	**66**	41	55.9	26	0	16.1
CP3055	**HRS**			53	58	47	53.0	32	0	16.0
UI Gold	**HWS**	54	52	44	55	34	55.9	29	0	16.9
LCS Hammer AX	**HRS**			--	64	--	--	--	--	--
Average		**63**	**59**	**59**	**61**	**57**	**56.5**	**30**	**0**	**16.0**
LSD (0.05)		**3**	**4**	**5**	**5**	**8**	**0.7**	**1**	**--**	**--**
CV (%)		**8.1**	**9.5**	**8.2**	**6.3**	**9.9**	**1.3**	**4.0**	**--**	**--**

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

Table 32. Winter barley variety performance results at Genesee, 2024.

Variety or Selection	Class	2023–24 Crop Year								
		Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Heading Date	Protein (%)
					(>6/64")	(>5.5/64")				
11ARS652-7	Malt	**198**	55.3	41	87	11	2	0	5/25	9.1
Flavia	Malt	**197**	54.6	38	97	2	0	1	5/20	9.2
DH171854	Malt	**196**	54.7	42	90	9	1	0	5/23	9.7
Hirondella	Malt	**196**	51.0	42	91	8	2	5	5/25	9.7
13ARS526-8	Malt	**193**	54.4	37	89	9	2	1	5/24	9.0
16ARS627-037	Malt	**188**	55.4	36	80	17	3	5	5/20	9.7
DH190077	Malt	**188**	55.0	39	98	2	0	0	5/20	9.6
Wintmalt	Malt	**187**	53.5	41	92	7	1	0	5/26	9.3
Marouetta	Malt	**186**	53.7	44	97	3	0	0	5/19	9.2
Thunder	Malt	185	55.1	38	96	3	1	1	5/21	9.0
DH141947	Malt	182	53.6	37	97	2	1	0	5/21	9.5
Charles	Malt	180	52.1	35	91	7	2	3	5/19	9.4
DH162310	Malt	176	55.8	41	97	2	0	3	5/17	10.4
13ARS537-19	Malt	176	56.6	36	95	4	1	0	5/16	9.2
DH170472	Malt	175	53.5	47	95	4	1	0	5/26	9.8
Endeavor	Malt	167	53.7	39	71	23	6	23	5/24	9.0
Avalon	Malt	151	55.8	44	97	3	0	<1	5/22	10.5
12ARS777-2	Food, hulless	139	62.7	41	82	15	3	0	5/27	10.8
12ARS777-1	Food, hulless	136	62.6	43	75	21	3	0	5/29	10.6
Upspring	Food, hulless	122	64.3	40	75	22	3	0	5/31	10.5
Average		**176**	**55.7**	**40**	**90**	**9**	**2**	**2**	**5/23**	**9.7**
LSD (0.05)		**13**	**0.7**	**2**	**6**	**5**	**2**	**ns**	**1.9**	**--**
CV (%)		**5.3**	**0.9**	**3.4**	**5.1**	**39.8**	**82.4**	**488.9**	**17.8**	**--**

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

Table 33. Spring barley (feed and food) variety performance results at Bonners Ferry, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year							
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
Feed										
Lenetah	114	108	**107**	50.5	28	93	5	1	0	10.6
Claymore	123	116	**101**	50.6	29	96	3	1	0	10.3
Altorado	115	106	**97**	50.9	27	92	7	1	0	10.9
Carleton		117	95	50.6	26	93	6	1	0	10.4
Survivor	109	100	90	51.7	28	97	2	0	0	10.8
YU518-415			88	51.2	27	95	5	1	0	11.1
HO516-429			79	51.7	30	97	2	0	1	10.9
Successor		97	76	52.1	25	97	2	1	0	10.8
Food										
Kardia	101	92	**97**	49.8	29	95	4	1	0	11.7
Salute	109	102	90	51.4	28	97	3	1	0	10.4
18ARS205-2*			76	58.6	30	87	10	3	8	11.5
16ARS295-1*		77	71	57.0	24	73	21	6	1	11.8
Julie*	54	57	64	59.6	29	73	23	4	0	11.4
Goldenhart*	96	69	62	59.1	28	90	8	2	0	13.2
Transit*	62	55	48	55.6	31	59	34	7	1	13.2
Average	**96**	**92**	**83**	**53.3**	**28**	**89**	**9**	**2**	**1**	**11.3**
LSD (0.05)	**8**	**9**	**11**	**1.1**	**2**	**5**	**4**	**2**	**2**	**--**
CV (%)	**9.7**	**9.8**	**9.0**	**1.4**	**4.1**	**4.2**	**28.7**	**66.9**	**180.1**	**--**

*Entries are hulless.

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

Table 34. Spring barley (feed and food) variety performance results at Genesee, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year							
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
Feed										
Carleton		83	**74**	47.6	28	24	49	27	0	11.4
Successor		75	**71**	51.4	27	56	35	9	0	11.3
Lenetah	84	79	**69**	49.7	28	46	40	14	0	10.9
Claymore	81	73	**68**	47.7	31	37	44	19	0	11.6
YU518-415			67	49.5	30	15	53	32	0	11.3
Altorado	82	76	63	48.7	28	8	47	44	0	11.3
Survivor	73	71	62	50.2	30	49	40	12	0	12.0
HO516-429			60	49.9	31	36	40	24	0	11.9
Food										
Salute	76	72	62	49.2	29	45	39	16	0	12.6
Kardia	66	63	54	47.0	29	28	40	32	0	13.1
16ARS295-1*		63	53	56.6	28	25	44	30	0	12.4
18ARS205-2*			49	55.0	30	6	24	70	0	13.2
Goldenhart*	53	53	47	56.1	29	19	32	49	0	12.8
Julie*	47	51	40	56.0	26	4	24	72	0	13.0
Transit*	49	45	33	52.6	30	12	26	62	0	12.8
Average	**68**	**67**	**58**	**51.1**	**29**	**28**	**39**	**34**	**0**	**12.1**
LSD (0.05)	**6**	**8**	**9**	**1.1**	**2**	**8**	**7**	**9**	--	--
CV (%)	**10.1**	**11.6**	**10.0**	**1.4**	**5.1**	**19.9**	**12.7**	**17.6**	--	--

*Entries are hulless.

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

Table 35. Spring barley (feed and food) variety performance results at Greencreek, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year								
			Seed Yield (bu/A)**	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Heading Date	Protein (%)
						(>6/64")	(>5.5/64")				
Feed											
Carleton		83	**133**	50.7	36	72	22	5	25	6/27	9.3
Claymore	81	73	**128**	50.1	39	75	20	5	0	6/28	9.9
Lenetah	84	79	**127**	52.4	39	88	10	2	55	6/27	9.3
Successor		75	123	53.3	34	94	5	1	43	6/17	9.5
YU518-415			120	52.3	38	75	22	3	14	6/26	10.1
HO516-429			120	53.6	41	91	7	2	3	6/25	10.3
Altorado	82	76	118	52.0	36	62	33	5	6	6/26	10.0
Survivor	73	71	116	52.4	37	87	10	2	16	6/27	10.0
Food											
Kardia	66	63	111	48.0	38	67	26	7	3	7/3	10.6
Salute	76	72	106	51.2	38	87	12	1	15	6/28	10.7
18ARS205-2*			95	56.5	38	30	47	24	58	7/1	10.6
16ARS295-1*		63	91	58.8	36	62	31	7	5	6/29	11.3
Julie*	47	51	87	59.2	35	25	51	24	8	7/3	11.0
Goldenhart*	53	53	81	58.6	38	43	47	9	68	7/1	11.6
Transit*	49	45	69	55.0	39	37	41	22	0	7/4	11.8
Average	**68**	**67**	**109**	**53.6**	**37**	**66**	**26**	**8**	**21**	**6/28**	**10.4**
LSD (0.05)	**6**	**8**	**10**	**0.8**	**2**	**7**	**5**	**3**	**32**	**2.4**	**--**
CV (%)	**10.1**	**11.6**	**6.0**	**1.0**	**4.0**	**7.0**	**12.8**	**24.2**	**105.9**	**13.9**	**--**

*Entries are hulless.

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

Table 36. Spring barley (feed and food) performance comparison across northern Idaho, 2024.

Variety or Selection	3-Year Average	2-Year Average	2024 Crop Year**										
			North Idaho Average	Bonners Ferry	Genesee	Greencreek	Test Weight	Plant Height	Plumps (>6/64)	Plumps (>5.5/64)	Thins	Lodging	Protein
	---------- bu/A ----------						(lb/bu)	(inches)	---------- % ----------				
Feed													
Carleton		**101**	**103**	95	**74**	**133**	49.8	30	67	23	10	8	10.4
Lenetah	**95**	95	**101**	**107**	**69**	**127**	50.9	31	76	18	6	18	10.3
Claymore	**99**	**97**	**99**	**101**	**68**	**128**	49.5	33	69	22	8	0	10.6
Altorado	**95**	91	93	**97**	63	118	50.6	30	54	29	17	2	10.7
YU518-415			92	88	67	120	51.0	32	62	27	12	5	10.8
Successor		90	90	76	**71**	123	52.2	29	82	14	3	14	10.6
Survivor	89	88	89	90	62	116	51.4	32	78	17	5	5	10.9
HO516-429			86	79	60	120	51.7	34	75	17	9	1	11.0
Food													
Kardia	81	80	87	**97**	54	111	48.3	32	63	23	13	1	11.8
Salute	88	86	84	90	62	106	50.5	32	75	18	6	5	11.2
18ARS205-2*			73	76	49	95	56.7	32	41	27	32	22	11.8
16ARS295-1*		70	69	71	53	91	57.3	29	53	32	15	2	11.8
Julie*	50	57	66	64	40	87	58.5	30	37	34	30	3	11.8
Goldenhart*	61	61	63	62	47	81	57.9	32	51	29	20	23	12.5
Transit*	55	52	50	48	33	69	54.4	33	36	34	30	<1	12.6
Average	**79**	**81**	**83**	**83**	**58**	**109**	**52.7**	**31**	**61**	**24**	**14**	**7**	**11.3**
LSD (0.05)	**5**	**6**	**8**	**11**	**9**	**10**	**0.6**	**1**	**4**	**3**	**3**	**11**	**--**
CV (%)	**12.4**	**13.2**	**11.1**	**9.0**	**10.0**	**6.0**	**1.4**	**5.4**	**8.0**	**15.7**	**28.0**	**179.1**	**--**

*Entries are hulless.

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

Table 37. Spring barley (malt) variety performance results at Bonners Ferry, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year							
			Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
BC Elinor			**98**	48.7	26	98	1	<1	0	10.0
17ARS072-5		108	**96**	50.1	26	97	3	1	0	10.2
16ARS067-13		113	**95**	50.3	27	98	2	<1	0	10.2
AAC Connect	108	107	**94**	50.8	31	96	3	<1	1	10.2
LGBU17-1320A			**93**	48.0	25	98	1	<1	0	9.8
GemCraft	119	111	**93**	51.1	27	95	5	1	0	10.5
LCS Odyssey			**92**	50.5	26	98	2	<1	0	10.0
CDC-Copeland	103	104	**92**	51.0	27	97	2	1	0	10.7
LG Diablo			**90**	48.9	25	99	1	<1	0	10.7
20WAM-721.1		109	**88**	50.6	27	97	3	1	0	11.2
LG Caruso			86	48.9	25	98	1	<1	0	9.7
20WAM-248.1		101	85	52.3	27	94	5	1	0	10.9
20WAM-487.1		105	83	52.0	27	94	5	1	0	10.9
DH131756			83	50.6	26	98	2	1	0	11.1
17ARS069-1		99	79	51.0	26	92	7	1	0	11.2
20WAM-783.1		101	76	51.0	29	98	2	<1	3	11.0
Average	**110**	**106**	**89**	**50.4**	**27**	**97**	**3**	**<1**	**<1**	**10.5**
LSD (0.05)	**9**	**11**	**11**	**0.8**	**2**	**1**	**1**	**<1**	**1**	**--**
CV (%)	**9.9**	**10.1**	**8.7**	**1.1**	**4.6**	**0.7**	**17.2**	**35.0**	**361.1**	**--**

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

Table 38. Spring barley (malt) variety performance results at Genesee, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year							
			Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Protein (%)
						(>6/64")	(>5.5/64")			
17ARS069-1		76	**66**	49.1	30	20	46	35	0	12.2
GemCraft	76	71	**63**	44.9	28	15	46	38	0	11.6
BC Elinor			**63**	45.0	27	41	38	20	0	11.1
20WAM-248.1		70	**62**	48.7	30	43	39	18	0	12.0
LGBU17-1320A			**61**	43.7	26	41	38	20	0	10.9
CDC-Copeland	74	71	**61**	46.3	28	36	43	21	0	12.9
20WAM-783.1		70	**61**	46.9	31	35	41	23	0	11.8
17ARS072-5		70	**61**	45.4	27	20	45	34	0	11.7
LCS Odyssey			60	45.4	26	45	37	18	0	11.0
LG Diablo			59	45.2	26	54	32	14	0	11.6
16ARS067-13		73	58	45.0	26	16	34	50	0	12.2
AAC Connect	70	64	58	47.3	30	31	41	28	0	12.2
20WAM-487.1		67	54	48.9	29	38	42	20	0	11.9
20WAM-721.1		65	52	45.2	28	29	44	27	0	13.5
Average	**73**	**70**	**60**	**46.2**	**28**	**33**	**40**	**26**	**0**	**11.9**
LSD (0.05)	**ns**	**6**	**6**	**1.4**	**2**	**12**	**5**	**11**	**--**	**--**
CV (%)	**9.0**	**8.8**	**6.7**	**2.1**	**5.0**	**25.4**	**9.1**	**30.7**	**--**	**--**

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

Table 39. Spring barley (malt) variety performance results at Greencreek, 2024.

Variety or Selection	3-Year Average (bu/A)	2-Year Average (bu/A)	2024 Crop Year								
			Seed Yield (bu/A)*	Test Weight (lb/bu)	Plant Height (in)	Plumps (%)		Thins (%)	Lodging (%)	Heading Date	Protein (%)
						(>6/64")	(>5.5/64")				
GemCraft	76	71	118	48.7	36	68	26	6	0	7/1	10.0
BC Elinor			116	48.2	31	86	12	2	0	7/4	9.1
CDC-Copeland	74	71	116	49.9	37	88	10	2	23	6/27	10.2
17ARS072-5		70	115	49.9	33	73	22	5	0	7/5	9.0
16ARS067-13		73	114	49.6	29	80	15	5	0	7/11	10.0
20WAM-783.1		70	110	51.7	39	91	7	1	15	6/30	9.6
20WAM-248.1		70	109	51.7	36	89	10	1	35	6/26	10.3
AAC Connect	70	64	109	50.6	36	89	9	2	4	6/28	9.4
20WAM-721.1		65	109	49.8	34	90	9	2	0	6/30	10.1
LG Diablo			108	46.8	30	89	9	2	0	7/8	9.8
17ARS069-1		76	107	51.7	37	73	24	3	0	6/25	10.1
20WAM-487.1		67	103	52.4	37	93	6	1	3	6/26	10.4
Average	**73**	**70**	**111**	**50.1**	**34**	**84**	**13**	**3**	**7**	**6/30**	**9.8**
LSD (0.05)	**ns**	**6**	**ns**	**0.7**	**2**	**5**	**4**	**1**	**22**	**2.9**	**--**
CV (%)	**9.0**	**8.8**	**5.9**	**1.0**	**4.6**	**4.1**	**19.5**	**38.1**	**236.1**	**14.5**	**--**

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

Table 40. Spring barley (malt) performance comparison across northern Idaho, 2024.

Variety or Selection	3-Year Average	2-Year Average	2024 Crop Year** North Idaho Average	Bonners Ferry	Genesee	Greencreek	Test Weight	Plant Height	Plumps (>6/64)	Plumps (>5.5/64)	Thins	Lodging	Protein
	---------- bu/A ----------						(lb/bu)	(inches)	---------- % ----------				
BC Elinor			**92**	**98**	**63**	116	47.3	28	75	17	8	0	10.1
GemCraft	**94**	92	**91**	**93**	**63**	118	48.2	31	59	26	15	0	10.7
17ARS072-5		90	**91**	**96**	**61**	115	48.5	29	63	23	13	0	10.3
CDC-Copeland	86	89	**90**	**92**	**61**	116	49.1	31	74	18	8	8	11.3
16ARS067-13		93	**89**	**95**	58	114	48.3	27	65	17	18	0	10.8
AAC Connect		87	**87**	**94**	58	109	49.5	32	72	18	10	2	10.6
20WAM-248.1		86	86	85	**62**	109	50.9	31	75	18	7	12	11.1
LG Diablo			85	**90**	59	108	46.8	27	79	15	6	0	10.7
17ARS069-1		87	84	79	**66**	107	50.6	32	59	27	14	0	11.2
20WAM-721.1		88	83	**88**	52	109	48.5	30	72	18	10	0	11.6
20WAM-783.1		85	83	76	**61**	110	49.8	33	73	18	9	6	10.8
20WAM-487.1		86	80	83	54	103	51.1	31	75	18	7	1	11.0
LGBU17-1320A			--	**93**	**61**	--	--	--	--	--	--	--	--
LCS Odyssey			--	**92**	60	--	--	--	--	--	--	--	--
LG Caruso			--	86	--	--	--	--	--	--	--	--	--
DH131756			--	83	--	--	--	--	--	--	--	--	--
Average	**90**	**88**	**87**	**89**	**60**	**111**	**49.0**	**30**	**70**	**20**	**10**	**2**	**10.8**
LSD (0.05)	**5**	**ns**	**6**	**11**	**6**	**ns**	**0.6**	**1**	**4**	**2**	**4**	**8**	**--**
CV (%)	**10.7**	**11.1**	**8.4**	**8.7**	**6.7**	**5.9**	**1.5**	**5.1**	**7.7**	**13.5**	**47.1**	**405.0**	**--**

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

Table 41. Winter pea variety performance results at Moscow, 2024.

				2023–24 Crop Year								
Variety or Selection	Cotyledon Color	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Seed Protein (%)	Test Weight (lb/bu)	Vine Length (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date	Shatter (%)
Pro 184-7148	**Yellow**	3,029	2,486	**1,754**	16.6	19.2	63.5	27	21	0.80	6/6	1
Goldenwood	**Yellow**	3,049	2,120	**1,610**	14.9	19.4	64.3	25	19	0.77	6/8	5
Vail	**Green**	3,072	2,400	**1,603**	14.1	19.5	65.0	28	22	0.78	6/9	1
Pro 172-7132	**Green**	3,416	2,748	**1,600**	15.9	19.8	64.2	24	20	0.83	6/4	3
Pro 172-7107	**Green**	2,771	2,137	**1,551**	15.7	20.4	64.4	26	21	0.81	6/4	6
Payback	**Yellow**	2,965	2,051	**1,494**	15.5	18.8	62.6	24	19	0.77	6/12	4
Pro 182-7136	**Green**	2,829	2,113	**1,428**	15.6	21.2	65.1	31	25	0.79	6/7	6
PS11300240W	**Green**	3,005	2,470	**1,388**	13.4	20.1	63.4	28	21	0.78	6/5	1
Blaze	**Yellow**	2,773	2,003	**1,376**	15.7	18.8	64.2	24	20	0.87	6/9	6
Windham	**Yellow**	2,878	2,326	**1,370**	13.0	18.1	64.9	24	20	0.82	6/7	4
PS1634C0011W	**Yellow**		2,742	**1,328**	14.1	18.1	64.8	26	20	0.80	6/6	1
KurtWood	**Green**	2,890	2,245	1,215	16.6	22.5	61.8	31	24	0.77	6/9	0
Dint	**Green**	2,383	2,100	1,021	12.1	22.1	59.1	27	22	0.84	6/23	0
Keystone	**Green**	2,600	1,889	1,014	15.1	17.4	64.5	27	21	0.76	6/7	8
PS17340612W	**Green**	2,416	1,977	977	14.8	18.7	60.7	26	20	0.78	6/6	9
Klondike	**Yellow**	2,681	1,926	955	14.5	23.6	64.3	28	20	0.72	6/11	11
MiCa	**Green**	2,651	1,824	901	15.6	19.7	64.5	25	18	0.75	6/11	0
Average		**2,838**	**2,209**	**1,328**	**14.9**	**19.8**	**63.4**	**26**	**21**	**0.79**	**6/8**	**4**
LSD (0.05)		**325**	**421**	**466**	**0.8**	**1.5**	**2.1**	**4**	**3**	**0.14**	**1.7**	**5**
CV (%)		**14.2**	**19.2**	**24.7**	**3.7**	**5.4**	**1.9**	**10.3**	**9.5**	**12.6**	**22.8**	**89.5**

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

Table 42. Spring pea (green cotyledon) variety performance results at Ferdinand (Camas Prairie), 2024.

Variety or Selection	2-Year Average (lb/A)	2024 Crop Year								
		Seed Yield (lb/A)*	Test Weight (lb/bu)	100 Seed Weight (g)	Seed Protein (%)	Vine Length (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date	Pod Shatter (%)
Passion	1,409	**1,743**	63.0	17.4	22.3	22	18	0.79	6/25	3
Pro 171-7665	1,300	**1,669**	63.5	18.6	22.7	23	20	0.87	6/26	6
Shamrock	1,229	**1,485**	63.1	16.6	25.3	27	22	0.80	7/1	5
PG 9641		1,445	62.0	18.2	24.5	27	23	0.87	6/28	5
PG 9645		1,424	62.7	16.3	25.1	26	22	0.85	6/28	5
PG 9634		1,392	63.7	17.5	25.1	26	22	0.86	6/28	6
Hampton	1,186	1,365	62.8	16.9	25.3	20	17	0.84	7/1	8
PG 9635		1,329	63.0	17.5	24.7	25	21	0.84	6/28	3
Vail**	1,067	1,311	62.8	12.1	28.6	23	19	0.83	7/2	1
PG 4046	1,261	1,304	62.5	17.0	25.9	24	20	0.83	6/27	10
PS17100182	1,240	1,288	63.3	16.1	27.9	29	23	0.79	6/30	5
Ariel	1,252	1,269	62.0	15.2	24.8	24	19	0.79	6/26	9
Ginny 2	1,057	1,219	62.3	17.6	24.2	23	19	0.84	6/26	11
Aragorn	1,183	1,206	62.4	17.2	23.9	25	20	0.80	6/26	8
Ultra	1,070	1,142	63.9	15.9	21.4	26	21	0.84	6/24	9
Columbian	780	1,042	62.6	15.7	25.5	35	10	0.29	6/23	1
Banner	934	925	62.7	15.9	21.8	26	20	0.79	6/24	15
PS16100017		899	62.1	16.4	23.4	23	19	0.82	6/26	18
Average	**1,151**	**1,303**	**62.8**	**16.6**	**24.6**	**25**	**20**	**0.79**	**6/27**	**7**
LSD (0.05)	**243**	**267**	**0.6**	**0.5**	**1.6**	**2**	**2**	**0.06**	**1.6**	**5**
CV (%)	**21.2**	**14.4**	**0.7**	**2.0**	**4.6**	**6.3**	**6.3**	**5.1**	**15.7**	**52.2**

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

**Varieties are winter pea.

Note: 3-year yield averages are not available as this location was lost to hail damage in 2022.

Table 43. Spring pea (green cotyledon) variety performance results at Genesee, 2024.

Variety or Selection	3-Year Average (lb/A)	2-Year Average (lb/A)	2024 Crop Year								
			Seed Yield (lb/A)*	Test Weight (lb/bu)	100 Seed Weight (g)	Seed Protein (%)	Vine Length (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date	Pod Shatter (%)
Pro 171-7665		2,415	**2,233**	63.8	19.4	20.8	24	19	0.80	6/24	0
Ultra	2,658	2,437	**2,218**	65.7	17.5	18.9	27	20	0.77	6/21	3
Passion	2,445	2,312	**2,185**	63.7	18.3	21.0	22	18	0.82	6/24	0
PG 9634			**2,144**	64.9	18.5	23.3	27	21	0.79	6/27	3
Banner	2,286	2,246	**2,054**	65.2	16.9	19.5	25	20	0.79	6/21	3
PG 9641			2,015	63.4	18.8	24.0	28	22	0.79	6/25	0
PG 9635			2,011	64.6	17.3	23.5	28	22	0.79	6/25	0
Ginny 2	2,482	2,128	2,006	63.4	17.4	23.4	23	19	0.81	6/24	1
PG 9645			1,968	64.0	17.0	23.1	27	21	0.78	6/24	1
Aragorn	2,014	1,891	1,937	62.5	17.8	23.3	24	19	0.80	6/23	1
PS17100182		2,315	1,904	64.0	17.7	26.9	30	24	0.80	6/26	3
Ariel		1,990	1,886	62.5	15.2	24.5	23	18	0.79	6/24	3
Hampton	2,426	2,204	1,820	63.0	19.0	24.1	24	17	0.73	6/26	4
PG 4046		2,010	1,778	63.2	17.0	24.8	27	21	0.77	6/24	5
PS16100017			1,689	62.2	18.1	22.9	25	19	0.75	6/24	14
Columbian	1,772	1,715	1,523	62.1	16.4	24.3	30	11	0.35	6/12	0
Vail**	2,008	1,815	1,505	64.3	12.8	27.6	24	19	0.80	6/27	0
Shamrock	2,132	1,905	1,379	64.3	17.7	23.6	28	23	0.81	6/26	38
Average	**2,247**	**2,106**	**1,903**	**63.7**	**17.4**	**23.3**	**26**	**20**	**0.76**	**6/24**	**4**
LSD (0.05)	**244**	**146**	**193**	**0.6**	**0.6**	**0.5**	**2**	**2**	**0.07**	**0.9**	**4**
CV (%)	**13.4**	**7.0**	**7.2**	**0.6**	**2.5**	**1.6**	**6.7**	**6.3**	**6.3**	**5.0**	**72.5**

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

**Varieties are winter pea.

Table 44. Spring pea (green cotyledon) variety performance comparison across northern Idaho, 2024.

Variety or Selection	2-Year Yield	2024 Crop Year*							
		North Idaho Average	Genesee	Ferdinand	100 Seed Weight	Vine Length	Canopy Height	Plant Height Index	Seed Protein
	---------- lb/A ----------				(grams)	-- (inches) --		(0-1)	(%)
Passion	1,861	**1,964**	**2,185**	**1,743**	17.8	22	18	0.80	21.6
Pro 171-7665	1,857	**1,951**	**2,233**	**1,669**	19.0	24	20	0.84	21.8
PG 9634		1,768	**2,144**	1,392	18.0	26	22	0.83	24.2
PG 9641		1,730	2,015	1,445	18.5	27	23	0.83	24.3
PG 9645		1,696	1,968	1,424	16.6	26	21	0.81	24.1
Ultra	1,754	1,680	**2,218**	1,142	16.7	26	21	0.80	20.2
PG 9635		1,670	2,011	1,329	17.4	26	22	0.82	24.1
Ginny 2	1,592	1,613	2,006	1,219	17.5	23	19	0.82	23.8
PS17100182	1,777	1,596	1,904	1,288	16.9	30	23	0.79	27.4
Hampton	1,695	1,592	1,820	1,365	17.9	22	17	0.78	24.7
Ariel	1,621	1,577	1,886	1,269	15.2	24	19	0.79	24.6
Aragorn	1,537	1,571	1,937	1,206	17.5	24	19	0.80	23.6
PG 4046	1,635	1,541	1,778	1,304	17.0	26	20	0.80	25.4
Banner	1,590	1,490	**2,054**	925	16.4	25	20	0.79	20.7
Shamrock	1,567	1,432	1,379	**1,485**	17.1	28	22	0.80	24.5
Vail**	1,441	1,408	1,505	1,311	12.4	24	19	0.81	28.1
PS16100017		1,294	1,689	899	17.2	24	19	0.78	23.1
Columbian	1,248	1,282	1,523	1,042	16.1	32	10	0.32	24.9
Average	**1,629**	**1,603**	**1,903**	**1,303**	**17.0**	**25**	**20**	**0.78**	**23.9**
LSD (0.05)	**143**	**164**	**193**	**267**	**0.4**	**2**	**1**	**0.04**	**0.9**
CV (%)	**12.6**	**10.3**	**7.2**	**14.4**	**2.6**	**6.8**	**6.3**	**5.8**	**3.7**

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

**Varieties are winter pea.

Note: 3-year average yield is not available since the 2022 Ferdinand trial was lost to hail damage.

Table 45. Spring pea (yellow cotyledon) variety performance results at Ferdinand (Camas Prairie), 2024.

		2024 Crop Year								
Variety or Selection	2-Year Average (lb/A)	Seed Yield (lb/A)*	Test Weight (lb/bu)	100 Seed Weight (g)	Seed Protein (%)	Vine Length (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date	Pod Shatter (%)
AAC Julius	1,540	**1,616**	61.0	16.5	27.2	25	22	0.87	6/28	3
5206	1,537	**1,612**	61.3	18.0	28.4	32	28	0.88	6/30	6
PS17100022	1,523	**1,610**	62.5	19.7	26.9	32	26	0.83	6/28	4
PS22100111		**1,535**	61.8	19.3	24.0	29	25	0.87	6/29	5
PS17100120		**1,445**	61.3	20.8	23.7	24	20	0.81	6/29	5
Pro 173-7406	1,185	**1,432**	59.7	20.0	23.0	28	22	0.80	6/26	11
PS22100020		1,342	59.7	19.3	26.7	25	21	0.84	6/27	8
PS17100008	1,212	1,337	61.4	19.6	21.4	20	16	0.80	6/26	11
Carousel	1,354	1,334	62.4	19.8	25.1	25	21	0.84	6/28	8
AAC Chrome	1,214	1,278	60.9	17.2	24.9	23	19	0.81	6/28	9
Pro 143-6230		1,201	61.6	17.7	24.6	25	20	0.79	6/28	9
Payback**	928	1,070	61.3	11.3	25.7	16	13	0.85	7/5	0
Average	**1,310**	**1,401**	**61.3**	**18.3**	**25.1**	**25**	**21**	**0.83**	**6/28**	**6**
LSD (0.05)	**231**	**252**	**0.7**	**0.6**	**1.6**	**2**	**2**	**ns**	**1.3**	**5**
CV (%)	**17.2**	**12.5**	**0.8**	**2.3**	**4.5**	**5.3**	**5.8**	**5.4**	**10.5**	**54.0**

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

**Varieties are winter pea.

Table 46. Spring pea (yellow cotyledon) variety performance results at Genesee, 2024.

			2024 Crop Year								
Variety or Selection	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)*	Test Weight (lb/bu)	100 Seed Weight (g)	Seed Protein (%)	Vine Length (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date	Pod Shatter (%)
PS17100008	2,667	2,319	**2,199**	63.3	20.7	21.8	19	16	0.86	6/24	4
PS17100022	2,647	2,481	**2,052**	64.6	19.9	25.4	30	24	0.79	6/24	0
AAC Julius	2,732	2,424	**2,040**	63.2	17.1	25.7	27	22	0.79	6/25	1
5206		2,360	1,895	63.6	18.9	25.8	32	24	0.75	6/25	5
PS17100120			1,853	62.5	22.2	22.6	24	19	0.79	6/25	10
Pro 173-7406	2,462	2,202	1,840	62.0	20.1	22.3	27	22	0.80	6/24	8
PS22100111			1,790	63.7	21.0	23.1	29	24	0.81	6/24	5
Pro 143-6230			1,679	63.1	18.2	24.5	24	19	0.77	6/24	4
Carousel	2,294	1,857	1,653	64.6	20.3	24.9	27	22	0.82	6/24	23
PS22100020			1,492	62.8	20.3	25.8	27	22	0.83	6/24	28
AAC Chrome	2,512	2,046	1,484	62.2	17.6	23.9	25	19	0.77	6/26	9
Payback**		1,386	1,190	63.7	12.9	25.5	16	13	0.81	6/30	0
Average	**2,552**	**2,146**	**1,764**	**63.3**	**19.1**	**24.3**	**26**	**20**	**0.80**	**6/25**	**8**
LSD (0.05)	**ns**	**230**	**296**	**0.5**	**0.7**	**0.9**	**2**	**2**	**ns**	**1.3**	**8**
CV (%)	**17.7**	**10.5**	**11.7**	**0.6**	**2.6**	**2.6**	**6.3**	**5.9**	**6.1**	**6.7**	**66.0**

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

**Varieties are winter pea.

Table 47. Spring pea (yellow cotyledon) variety performance comparison across northern Idaho, 2024.

Variety or Selection	2-Year Yield	2024 Crop Year*							
		North Idaho Average	Genesee	Ferdinand	100 Seed Weight	Vine Length	Canopy Height	Plant Height Index	Seed Protein
	---------- lb/A ----------				(grams)	-- (inches) --		(0-1)	(%)
PS17100022	2,002	**1,831**	**2,052**	**1,610**	19.8	31	25	0.81	26.1
AAC Julius	1,982	**1,828**	**2,040**	**1,616**	16.8	26	22	0.83	26.4
PS17100008	1,765	**1,768**	**2,199**	1,337	20.1	19	16	0.83	21.6
5206	1,976	**1,754**	1,895	**1,612**	18.4	32	26	0.81	27.1
PS22100111		**1,662**	1,790	**1,535**	20.2	29	24	0.84	23.6
PS17100120		**1,649**	1,853	**1,445**	21.5	24	19	0.80	23.1
Pro 173-7406	1,694	**1,636**	1,840	**1,432**	20.0	27	22	0.80	22.6
Carousel		1,493	1,653	1,334	20.0	26	22	0.83	25.0
Pro 143-6230		1,440	1,679	1,201	18.0	25	19	0.78	24.6
PS22100020		1,417	1,492	1,342	19.8	26	22	0.83	26.3
AAC Chrome	1,606	1,381	1,484	1,278	17.4	24	19	0.79	24.4
Payback**	1,142	1,130	1,190	1,070	12.1	16	13	0.83	25.6
Average	**1,731**	**1,582**	**1,764**	**1,401**	**18.7**	**25**	**21**	**0.81**	**24.7**
LSD (0.05)	**164**	**225**	**296**	**252**	**0.5**	**2**	**1**	**ns**	**1.1**
CV (%)	**13.3**	**14.3**	**11.7**	**12.5**	**2.9**	**6.5**	**5.9**	**6.0**	**4.6**

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

**Varieties are winter pea.

Note: 3-year average yield is not available since the 2022 Ferdinand trial was lost to hail damage.

Table 48. Spring lentil variety performance results at Ferdinand (Camas Prairie), 2024.

			2024 Crop Year						
Variety or Selection	Market Class	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Seed Protein (%)	Plant Height (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date
LC06601616R	**Medium green**		**656**	5.2	25.4	13	10	0.80	6/26
LC08600113P	**Spanish brown**		**580**	4.7	24.6	12	9	0.74	6/29
LC14600088R	**Medium green**	430	**578**	5.2	25.1	13	10	0.76	6/27
LC14600027P	**Spanish brown**		**573**	4.8	26.8	13	11	0.85	6/26
LC14600017P	**Spanish brown**	454	**555**	4.7	26.3	13	11	0.83	6/27
LC19640586R	**Medium green**	490	**547**	4.8	25.8	14	11	0.78	6/27
LC19640192R	**Medium green**	513	**544**	4.7	26.1	13	11	0.83	6/25
LC19640200P	**Spanish brown**		**511**	4.6	26.6	12	10	0.86	6/24
LC09600507P	**Spanish brown**		**496**	4.6	25.5	12	10	0.84	6/25
Avondale	**Medium green**	496	**488**	5.1	26.0	14	12	0.84	6/27
Morena	**Spanish brown**	369	**485**	4.4	28.3	13	10	0.81	6/28
Pardina	**Spanish brown**	463	**430**	4.4	25.4	11	9	0.78	6/25
Merrit	**Large green**	568	**417**	5.6	26.9	14	11	0.82	6/24
Brewer	**Large green**	278	310	5.0	26.4	15	11	0.72	6/24
Average		**450**	**512**	**4.8**	**26.1**	**13**	**10**	**0.80**	**6/26**
LSD (0.05)		**ns**	**140**	**0.3**	**--**	**1**	**1**	**ns**	**2.2**
CV (%)		**46.6**	**19.1**	**4.4**	**--**	**0.6**	**7.2**	**10.1**	**26.8**

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

Table 49. Spring lentil variety performance results at Genesee, 2024.

				2024 Crop Year						
Variety or Selection	Market Class	3-Year Average (lb/A)	2-Year Average (lb/A)	Seed Yield (lb/A)*	100 Seed Weight (g)	Seed Protein (%)	Plant Height (in)	Canopy Height (in)	Plant Height Index (0-1)	Flowering Date
Avondale	**Medium green**	1,390	1,356	**959**	4.9	26.8	13	10	0.78	6/25
LC14600088R	**Medium green**	1,285	1,292	**940**	5.1	27.0	14	10	0.68	6/25
Morena	**Spanish brown**	1,354	1,384	**934**	4.5	28.6	11	10	0.85	6/26
LC14600017P	**Spanish brown**	1,423	1,357	**933**	4.6	26.8	13	8	0.66	6/26
LC19640200P	**Spanish brown**			**920**	4.7	28.9	12	8	0.66	6/21
LC14600027P	**Spanish brown**			**904**	4.8	26.6	12	10	0.85	6/26
LC19640192R	**Medium green**		1,343	**861**	4.5	25.9	13	10	0.75	6/24
LC06601616R	**Medium green**			**858**	5.2	25.8	13	10	0.80	6/25
LC19640586R	**Medium green**		1,131	**839**	4.9	26.0	13	10	0.75	6/25
LC08600113P	**Spanish brown**	1,163	1,222	**817**	4.9	25.9	12	9	0.73	6/25
Pardina	**Spanish brown**	1,218	1,213	**713**	4.6	26.0	12	8	0.70	6/24
LC09600507P	**Spanish brown**			**705**	4.6	28.5	12	8	0.67	6/23
Merrit	**Large green**	1,005	1,099	**690**	5.7	27.7	13	9	0.73	6/22
Brewer	**Large green**	880	893	425	5.2	26.5	12	8	0.69	6/23
Average		**1,214**	**1,228**	**823**	**4.9**	**26.9**	**12**	**9**	**0.73**	**6/24**
LSD (0.05)		**149**	**159**	**253**	**0.3**	**--**	**1**	**0.9**	**0.10**	**2.0**
CV (%)		**14.3**	**12.2**	**18.7**	**4.1**	**--**	**6.5**	**7.1**	**9.4**	**14.7**

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

Table 50. Spring lentil variety performance comparison across northern Idaho, 2024.

Variety or Selection	Market Class	2-Year Yield	2024 Crop Year*							
			North Idaho Average	Genesee	Ferdinand	100 Seed Weight	Plant Height	Canopy Height	Plant Height Index	Seed Protein
		---------- lb/A ----------				(grams)	-- (inches) --		(0-1)	(%)
LC14600088R	**Medium green**	865	**759**	**940**	**578**	5.1	14	10	0.72	26.0
LC06601616R	**Medium green**		**757**	**858**	**656**	5.2	13	10	0.80	25.6
LC14600027P	**Spanish brown**		**738**	**904**	**573**	4.8	12	10	0.85	26.7
LC14600017P	**Spanish brown**	875	**717**	**933**	**555**	4.6	13	10	0.75	26.5
LC19640192R	**Medium green**	928	**702**	**861**	**544**	4.6	13	10	0.79	26.0
LC19640586R	**Medium green**	810	**693**	**839**	**547**	4.8	13	10	0.77	25.9
Avondale	**Medium green**	897	**690**	**959**	**488**	5.0	14	11	0.81	26.4
LC19640200P	**Spanish brown**		**686**	**920**	**511**	4.7	12	9	0.76	27.7
LC08600113P	**Spanish brown**	769	**659**	**817**	**580**	4.8	12	9	0.73	25.2
Morena	**Spanish brown**	804	**635**	**934**	**485**	4.5	12	10	0.83	28.4
LC09600507P	**Spanish brown**		586	**705**	**496**	4.6	12	9	0.75	27.0
Pardina	**Spanish brown**	838	571	**713**	**430**	4.5	11	8	0.74	25.7
Merrit	**Large green**	816	534	**690**	**417**	5.6	13	10	0.77	27.3
Brewer	**Large green**	565	359	425	310	5.1	14	9	0.71	26.5
Average		**818**	**652**	**823**	**512**	**4.8**	**13**	**10**	**0.77**	**26.5**
LSD (0.05)		**143**	**161**	**253**	**140**	**0.2**	**1**	**1**	**0.08**	**--**
CV (%)		**24.2**	**23.5**	**18.7**	**19.1**	**4.2**	**7.1**	**7.4**	**10.2**	**--**

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

Note: 3-year average yield is not available since the 2022 Ferdinand trial was lost to hail damage.

Table 51. Chickpea variety performance results at Ferdinand (Camas Prairie), 2024.

		2024 Crop Year											
									Chickpea Size (%)				
Variety or Selection	2-Year Average (lb/A)	Seed Yield (lb/A)*	Test Weight (lb/bu)	100 Seed Weight (g)	Seed Protein (%)	Plant Height (in)	Canopy Height (in)	Plant Height Index (0-1)	(>25/64")	(>22/64")	(>20/64")	(<20/64")	Flowering Date
CDC Frontier	1,272	**1,565**	62.8	31.9	21.7	18	16	0.93	0	19	59	22	6/29
Billybeans	1,339	**1,555**	62.6	28.0	22.3	19	17	0.88	0	2	42	56	6/25
CDC Orion	1,231	**1,511**	61.5	40.0	20.2	16	15	0.97	5	64	26	5	6/24
MT Bridger		**1,485**	62.4	32.4	22.2	18	18	0.96	<1	21	52	27	7/1
CDC Palmer	1,245	**1,451**	62.2	33.8	20.6	15	15	1.00	1	29	46	25	6/26
NSSCX04	979	**1,373**	61.9	40.2	23.1	17	16	0.95	5	47	32	15	7/1
CDC Leader	1,113	1,366	62.3	34.6	20.4	15	15	0.97	<1	34	50	15	6/28
NSSCX01	1,040	1,353	62.1	40.3	22.9	17	17	0.96	5	43	39	12	7/1
Sawyer	1,153	1,345	62.0	38.6	22.0	17	16	0.93	2	41	47	10	6/26
Kasin	1,166	1,291	64.1	26.6	22.8	21	19	0.92	0	1	24	75	6/29
ND Crown		1,274	62.5	32.7	22.4	20	19	0.92	1	38	42	19	7/1
New Hope	946	1,243	62.1	33.7	22.7	20	19	0.95	1	28	49	22	7/1
Nash	875	1,201	60.5	44.9	22.6	18	16	0.90	23	51	15	12	6/30
CA15940057C	845	1,186	60.5	46.0	23.1	17	16	0.96	21	56	16	8	7/2
CA17900020C	796	1,173	59.7	42.6	22.6	19	17	0.91	8	49	30	13	6/30
CA13900162C	890	1,148	59.7	41.4	21.5	18	16	0.89	12	53	23	11	6/26
Sierra	831	1,022	60.2	42.1	21.5	17	16	0.94	8	59	25	8	6/30
Average	**1,046**	**1,321**	**61.9**	**37.2**	**22.0**	**18**	**17**	**0.94**	**5**	**38**	**36**	**20**	**6/29**
LSD (0.05)	**179**	**194**	**1.1**	**2.6**	**0.8**	**1**	**1**	**ns**	**4**	**10**	**8**	**9**	**2.1**
CV (%)	**17.0**	**10.1**	**1.1**	**4.9**	**2.4**	**5.5**	**5.4**	**6.1**	**45.2**	**17.6**	**15.5**	**30.8**	**17.0**

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

Table 52. Chickpea variety performance results at Genesee, 2024.

Variety or Selection	3-Year Average (lb/A)	2-Year Average (lb/A)	2024 Crop Year											
			Seed Yield (lb/A)*	Test Weight (lb/bu)	100 Seed Weight (g)	Seed Protein (%)	Plant Height (in)	Canopy Height (in)	Plant Height Index (0-1)	Chickpea Size (%) (>25/64")	(>22/64")	(>20/64")	(<20/64")	Flowering Date
MT Bridger			**1,835**	61.1	39.8	20.3	19	16	0.86	<1	39	52	8	6/26
NSSCX04		1,837	1,635	61.3	44.7	20.4	16	14	0.86	6	67	24	3	6/27
NSSCX01		1,793	1,590	60.8	45.0	20.7	15	14	0.91	6	62	28	3	6/26
CDC Frontier	2,362	2,008	1,583	62.4	35.6	20.6	16	14	0.87	1	25	63	12	6/25
CDC Orion	2,061	1,770	1,578	60.5	41.8	18.2	16	14	0.89	5	55	36	5	6/24
Billybeans	2,235	1,910	1,558	62.2	27.5	20.4	18	14	0.82	<1	3	32	65	6/24
Nash	1,925	1,737	1,517	59.5	43.3	22.1	17	14	0.84	27	63	8	2	6/26
CA17900020C	1,968	1,695	1,493	59.9	44.9	20.8	17	15	0.84	11	75	12	1	6/25
CDC Palmer	2,086	1,752	1,461	61.6	37.9	19.4	15	14	0.90	<1	40	51	9	6/24
ND Crown			1,445	61.7	43.2	21.6	20	17	0.82	1	66	29	3	6/26
Kasin	2,059	1,782	1,428	62.6	29.7	20.9	20	17	0.87	1	3	24	72	6/26
CA15940057C	2,013	1,665	1,427	59.1	42.7	21.9	16	13	0.82	21	70	7	1	6/26
CDC Leader	2,103	1,734	1,377	61.9	38.2	20.1	15	13	0.88	0	43	49	7	6/25
CA13900162C	2,052	1,736	1,376	59.1	42.2	20.7	17	14	0.84	16	73	9	1	6/26
Sawyer	1,793	1,620	1,363	61.9	40.0	21.0	15	13	0.88	4	43	46	7	6/26
New Hope	1,689	1,501	1,310	61.9	39.9	21.4	20	17	0.85	1	48	45	6	6/26
Sierra	1,690	1,495	1,229	60.8	43.7	20.9	16	13	0.84	8	71	18	3	6/26
Average	**2,001**	**1,734**	**1,482**	**61.1**	**40.0**	**20.7**	**17**	**14**	**0.86**	**6**	**50**	**31**	**12**	**6/25**
LSD (0.05)	**214**	**133**	**124**	**0.7**	**2.8**	**0.5**	**1**	**1**	**0.07**	**4**	**8**	**7**	**5**	**1.1**
CV (%)	**13.1**	**7.7**	**5.9**	**0.8**	**4.9**	**1.8**	**5.4**	**4.5**	**6.1**	**45.6**	**10.6**	**16.1**	**30.6**	**5.3**

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

Table 53. Chickpea variety performance comparison across northern Idaho, 2024.

Variety or Selection	2-Year Yield	2024 Crop Year*											
		North Idaho Average	Genesee	Ferdinand	100 Seed Weight	Plant Height	Canopy Height	Plant Height Index	Chickpea Size (%)				Seed Protein
									(>25/64")	(>22/64")	(>20/64")	(<20/64")	
	---------- lb/A ----------				(grams)	-- (inches) --		(0-1)					(%)
MT Bridger		**1,660**	**1,835**	**1,485**	36.1	18	17	0.91	<1	30	52	17	21.2
CDC Frontier	1,640	**1,574**	1,583	**1,565**	33.8	17	15	0.90	<1	22	61	17	21.2
Billybeans	1,625	**1,557**	1,558	**1,555**	27.7	18	15	0.85	<1	3	36	61	21.2
CDC Orion	1,501	**1,544**	1,578	**1,511**	40.9	16	14	0.93	5	59	31	5	19.2
NSSCX04	1,437	**1,523**	1,635	**1,373**	42.5	17	15	0.90	6	57	28	9	21.8
NSSCX01	1,417	1,471	1,590	1,353	42.7	16	15	0.93	5	53	34	8	21.8
CDC Palmer	1,498	1,456	1,461	**1,451**	35.8	15	14	0.95	<1	34	48	17	20.0
CDC Leader	1,424	1,371	1,377	1,366	36.4	15	14	0.93	<1	39	49	11	20.3
ND Crown		1,360	1,445	1,274	37.9	20	18	0.87	1	52	36	11	22.0
Kasin	1,474	1,359	1,428	1,291	28.2	20	18	0.89	<1	2	24	74	21.8
Nash	1,306	1,359	1,517	1,201	44.1	17	15	0.87	25	57	11	7	22.4
Sawyer	1,387	1,354	1,363	1,345	39.3	16	15	0.91	3	42	46	9	21.5
CA17900020C	1,245	1,333	1,493	1,173	43.7	18	16	0.87	10	62	21	7	21.7
CA15940057C	1,255	1,306	1,427	1,186	44.4	17	15	0.89	21	63	12	4	22.5
New Hope	1,224	1,277	1,310	1,243	36.8	20	18	0.90	1	38	47	14	22.0
CA13900162C	1,313	1,262	1,376	1,148	42.8	17	15	0.86	14	63	16	6	21.1
Sierra	1,163	1,125	1,229	1,022	42.9	16	15	0.89	8	65	22	5	21.2
Average	**1,392**	**1,403**	**1,482**	**1,321**	**38.7**	**17**	**15**	**0.90**	**6**	**44**	**34**	**16**	**21.4**
LSD (0.05)	**114**	**158**	**124**	**194**	**2.3**	**1**	**1**	**0.06**	**3**	**7**	**5**	**6**	**0.5**
CV (%)	**11.7**	**11.3**	**5.9**	**10.1**	**6.0**	**5.4**	**5.0**	**6.2**	**45.2**	**16.3**	**15.8**	**38.2**	**2.6**

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

Note: 3-year average yield is not available since the 2022 Ferdinand trial was lost to hail damage.