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# 2009 Small Grain and Grain Legume Report

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

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University of Idaho
College of Agricultural and Life Sciences

Cover: Soft white winter wheat near Lewiston, Idaho.

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

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## Introduction

This report summarizes the performance of winter wheat, spring wheat, spring barley, spring pea, lentil and chickpea cultivars tested in extension variety trials conducted in northern Idaho during the 2008-2009 crop season. The variety trials were located in cooperators' fields at 11 test sites in Idaho, Lewis, Nez Perce, Latah and Boundary counties.

Increases in field crop yield are the result of a combination of improved agronomic practices and advances in variety development. Trials reported in this publication help producers compare new cultivars with widely grown cultivars using field production practices common for their area.

Plant breeding and extension testing programs strive to increase yield potential through enhanced disease and insect resistance, winter hardiness, straw strength and other agronomic factors. In addition, varieties are developed for improved end-use quality and new markets. A more detailed description of variety development, cooperative extension testing and evaluation, and seed production programs is given in the University of Idaho publication CIS 976 titled, "Small Grain Variety Development and Adaptation in Idaho". Additional information about the varieties can be found in the 2005 Idaho Certified Seed Selection Guide for Some Varieties of Winter Wheat (PR 311), 2006 Spring Wheat (PR 327), 2006 Spring Barley (PR 328), and 2004 Peas, Lentils and Chickpeas (PR 318). Additional variety performance data for northern Idaho and the rest of the state can be viewed at the website http://www.ag.uidaho.edu/cereals/. In Idaho, public varieties are evaluated for general adaptation in regional testing programs. 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. Advanced lines that have shown promise through regional, public and private testing programs were evaluated along with leading commercially released varieties.

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

Five winter cereal trials were established in northern Idaho during the fall of 2008 and seven spring cereal trials were seeded in the spring of 2009. Due to equipment failure during planting, winter wheat and spring barley in Lewis County were ultimately unsuitable for analysis. For each crop, the seeding rate for all entries was a common number of seeds planted per square foot. These rates were determined by weighing 200 seeds of each cereal cultivar. Winter wheat and spring barley were planted at 24 seeds per square foot; spring wheat at 28 seeds. Winter and spring wheat seed was treated with Dividend Extreme at 1 oz/100 lbs; spring barley seed was treated with Raxil-Thiram at 4 oz/100 lbs. Plots were planted 15 feet long on 5 foot centers with 7 rows, 7 inches apart, except for trials with direct seeding. Direct seeded trials had five paired rows with 3 in. spacing and 10 in. from center to center of pairs. Typical cereal seeding depth varied from 1 to 1.5 inches depending on soil texture and moisture conditions. All trials except Lewiston winter wheat were replicated four times in either a lattice or randomized complete block design. The

Lewiston site had three replications. After plants were well established, plots were cut back to approximately 11.5 feet in length by application of glyphosate using a tractor-mounted, shielded sprayer. All trials were established and maintained primarily under "grower management" conditions. Fertilizers and pesticides used in the trials are listed in Table 1 for the sites where the information was reported. Planting and harvesting operations by University of Idaho personnel were timed to approximately coincide with the cooperator's operations.

Each small grain entry at each location was evaluated for grain yield, test weight, plant height, and lodging. Lengths were measured on all plots after trimming to determine individual plot area. Cereal seed yields were reported in bushels per acre, using the standard 60 pounds per bushel conversion for wheat and 48 pounds per bushel for barley. Winter and spring wheat protein and kernel hardness were determined on samples that were composited from the four replications at each site. Wheat whole grain protein at 12% moisture was measured at the University of Idaho Wheat Quality Laboratory at Aberdeen using Near Infrared Spectrometry (NIRS) technology. Kernel hardness was also determined by NIRS. Values under 50 indicate soft wheat and values above 50 indicate hard wheat. Cereal test weight is reported in pounds per standard bushel. Cereal plant height is inches from the soil surface to the tip of the heads, awns excluded.

Lodging was determined for all cereals. Area affected was scored from 1 to 100, with 1 equal to no lodging and 100 being completely lodged. Severity of lodging was scored from 1 to 5, with 1 equal to upright and 5 being bent flat. The product of the two scores was adjusted to a scale of 0 to 100 to reflect percent lodging. Percentage grain plumps and thins were measured for barley only. Plumpness is the percent of the sample that stayed on top of a 6/64 inch slotted screen after shaking. Thin percentage is the portion of the sample that went through a 5.5/64 inch slotted screen.

## Legume Test Procedures

In the spring of 2009, spring pea and lentil trials were seeded near Nez Perce, Genesee and Moscow. A chickpea trial was conducted at the University of Idaho's Parker farm in Moscow. For each legume cultivar, 100 seeds were weighed and seeding rates calculated to give a planting density of pea at 8 seeds, lentil at 9 seeds, and chickpea at 6 seeds per square foot. Spring pea and lentil were treated with an Apron, Cruiser, and Maxim mix at 2 oz/100 lbs; and chickpea was treated with Garb mix (Apron, Cruiser, Maxim and LSP) at 2.5 oz/100 lbs. Legume plots were established in dimensions and manner similar to the cereal trials. Planting depths were 1 to 2 inches for lentil; 2 to 2.5 inches for pea and chickpea. Sites were hand weeded to supplement chemical control. Legumes were evaluated for seed yield, plant height, and 100 seed weight. Seed yields were expressed as pounds per acre. Lentil or chickpea plant heights or pea vine lengths were measured from soil surface to end of growing point on the main tiller. Pea canopy heights were measured from the soil surface to the average tall point in the canopy approximately three weeks prior to harvest.

## Statistical Interpretation

Crop class averages are shown within the body of the data tables and overall trial average at the bottom of the table. The least significant difference (LSD) and the coefficient of variation (CV)

are listed. The LSD is given at the 10 percent error level and is an aid in comparing varieties. If the measured values of any two varieties within a column differ by the LSD value or greater, they may be considered different with a confidence level of 90%. If the measured values are less than the LSD value, the differences may be due to random error rather than real differences. If no significant statistical differences were found among cultivars, NS is shown for the LSD. Where data represent cultivar means across locations or years, an approximation of a combined LSD was calculated. Coefficient of variation (CV) is also included in the tables. This is given as a general measurement of the precision of each experiment. Lower CV percentage values indicate less experimental variation and greater precision. CV values were not averaged across trials or years. There is no LSD or CV for wheat protein or hardness data from composited samples.

When making cultivar choices try to evaluate as much performance data as possible. Make comparisons across years and locations. In addition to yield, also consider other characteristics, such as end use quality, disease and insect resistance, lodging tendency, maturity, plant height, winter hardiness, test weight, and any others you deem important. Grain quality of wheat varieties is listed on the Idaho Wheat Commission website: www.idahograin.org under "Preferred Varieties".

## Growing Conditions and Factors Affecting Trials

Fall cereal trials were seeded during October 2008. Winter wheat trials established well at all locations but greater snowfall and cooler spring conditions than usual resulted in thinner stands. Conditions remained wetter and cooler through spring, a trend that held through the summer months. The average winter wheat yield over all locations in 2008-2009 was 8 bu/A lower than the average yield over the previous three crop years.

Spring trials were seeded between April 20 and May 26. Planting was delayed due to lingering snowdrifts and moist soil conditions. The spring wheat and spring barley yields were generally below average. Spring wheat yields in 2009 were 1 bu/A lower than the previous 3-year average, and spring barley was 9 bu/A lower than the previous 3-year average. Late planting of spring legumes due to moist field conditions affected plant development, and rain delayed harvest increased the chance of yield loss through pod "shattering." Specific management practices for individual trials are listed in Table 1.

## Trial Locations, Management and Varieties Tested

Table 1. 2008-2009 Northern Idaho Extension variety trial site management information.

| County | Nursery Location | Crops[1] | Planting Date | Harvest Date | Previous Crop | Fertilizer N-P-K-S(lb/A) | ----Chemical---- Name(s) | Rates(s) |
|---|---|---|---|---|---|---|---|---|
| Lewis | Craigmont | SW | 5/15/2009 | 9/9/2009 | W. Wheat | -----BMP[2] rates--- | | |
| Lewis | Craigmont | SL | 5/26/2009 | 9/10/2009 | W. Wheat | None | None | |
| Nez Perce | Tammany | WW | 10/11/2008 | 8/3/2009 | S. Fallow | 90-30-0-20 | Powerflex<br>Affinity Broad Sp.<br>Brox M<br>AMS | 3.5 oz./A<br>0.8 oz./A<br>1 pt./A<br>1.8 lb./A |
| Nez Perce | Genesee | SW + SB | 4/20/2009 | 9/1/2009 | W. Wheat | 139-28-0-29 | Huskie<br>Bumper | 13 oz./A<br>2 oz./A |
| Nez Perce | Genesee | WW | 10/10/2008 | 8/4/2009 | W.Wheat | | | |
| Latah | Moscow | SL | 5/18/2009 | 9/8/2009 | S. Wheat | None | Pursuit<br>Dimethoate<br>Warrior | 2.5 oz/A<br>1 pt/A |
| Latah | Moscow Parker Farm | WW-NT | 10/13/09 | 8/18/2009 | S. Pea | 139-28-0-29 | Roundup RT<br>Huskey<br>Starane | 20 oz/A Pre<br>12 oz/A<br>10 oz/A |
| Latah | Moscow Parker Farm | SL+CP-NT | 5/4/2009 | 9/8/2009 | S. Barley | None | Roundup | 20 oz/A Pre |
| Latah | Moscow Parker Farm | SB-NT | 4/24/2009 | 9/3/2009 | W. Wheat | 139-28-0-29 | Roundup | 20 oz/A Pre |

1- BMP - Recommended best management practice rates of chemical application

Table 1 (continued). 2007-2008 Northern Idaho Extension variety trial site management informatio

| County | Nursery Location | Crops* | Planting Date | Harvest Date | Previous Crop | Fertilizer N-P-K-S(lb/A) | ----Chemical---- Name(s) | Rates(s) |
|---|---|---|---|---|---|---|---|---|
| Latah | Genesee | SL-NT | 5/17/2009 | 9/11/2009 | S. Wheat | None | Roundup<br>Sencor<br>Lorox<br>Dimethoate | 16 oz/A Pre<br>1/4 lb./A<br>1 1/4 lb./A<br>1pt/A |
| Boundary | B. Ferry | WW | 10/16/2008 | 8/28/2009 | Sum. Fallow | 69-0-0-0 | Achieve 40 DG<br>Curail | 0.6 lbs/A<br>2.5 pt/A |
| Boundary | B. Ferry | SW + SB | 4/22/2009 | 8/28/2009 | Sum. Fallow | 69-0-0-0 | Achieve 40 DG<br>Curail | 0.6 lbs/A<br>2.5 pt/A |

2- CP-Chickpea, SL-Spring Legume (pea & lentil), SW-Spring Wheat, SB-Spring Barley, WW-Winter Wheat, NT - No-Till.

Table 2. Released varieties tested in Northern Idaho Extension variety trials in 2008-2009

| Variety | Experimental No. | Released | Developer(s) of variety |
|---|---|---|---|
| **Soft white winter wheat** | | | |
| Bitterroot | ID 92-22407A | 2007 | University of Idaho, USDA/ARS |
| Brundage 96 | ID-B-96 | 2001 | University of Idaho, USDA/ARS |
| IDO 587 | IDO 587 | 2002 | University of Idaho, USDA/ARS |
| Lambert | ID 85-153 | 1993 | University of Idaho, USDA/ARS |
| Madsen | WA 7163 | 1988 | Washington State University, USDA/ARS |
| Mohler | BU6W93-477 | 2001 | WestBred, LLC, Bozeman, MT |
| ORCF-101 | OR2010051 | 2002 | Oregon State University, USDA/ARS |
| ORCF-102 | OR2010007 | 2004 | Oregon State University, USDA/ARS |
| ORCF-103 | ORI2042037 | 2008 | Oregon State University, USDA/ARS |
| Simon | ID 91-34302A | 2002 | University of Idaho, USDA/ARS |
| Stephens | OR 65-116 | 1977 | Oregon State University, USDA/ARS |
| Tubbs 06 | OR 939526 - re-select | 2006 | Oregon State University, USDA/ARS |
| Xerpha | WA7973 | 2008 | Washington State University, USDA/ARS |
| Skiles | ORH010085 | 2007 | Oregon State University, USDA/ARS |
| UICF-Lambert | ID 99-435 | 2008 | University of Idaho, USDA/ARS |
| **Winter club wheat** | | | |
| Cara | ARS97135-9 | 2007 | Washington State University, USDA/ARS |
| Chukar | WA 7855 | 2001 | Washington State University, USDA/ARS |
| Coda | WA 7752 | 1998 | Washington State University, USDA/ARS |
| Rohde | OR 855 | 1992 | Oregon State University, USDA/ARS |
| **Hard winter wheat** | | | |
| Boundary (HR) | IDO 467 | 1997 | University of Idaho, USDA/ARS |
| Bauermeister (HR) | WA 7939 | 2005 | Washington State University, USDA/ARS |
| Esparia (HR) | | | |
| Mol (HW) | | | |
| Mieti (HW) | | | |
| MDM (HW) | WA 7936 | 2005 | Washington State University, USDA/ARS |
| Paladin (HR) | W96-355 | | AgriPro |
| Norwest 553 | ORN00B553 | 2007 | OSU, USDA/ARS with Nickerson, UK |
| **Soft white spring wheat** | | | |
| Alturas | IDO 526 | 2002 | University of Idaho, USDA/ARS |
| Babe | WA 8039 | 2009 | Washington State University, USDA/ARS |
| Cataldo | IDO 642 | 2007 | University of Idaho, USDA/ARS |
| Eden | WA 7902 | 2002 | Washington State University, USDA/ARS |
| JD | WA 8047 | 2009 | Washington State University, USDA/ARS |
| Louise | WA 7921 | 2004 | Washington State University, USDA/ARS |
| Nick | BZ 698-31 | 2000 | WestBred, LLC, Bozeman, MT |
| Penawawa | | 1985 | Washington State University, USDA/ARS |
| Whit | WA 8008 | 2008 | Washington State University, USDA/ARS |
| **Hard white spring wheat** | | | |
| Lochsa | IDO 597 | 2004 | University of Idaho, USDA/ARS |
| Lolo | IDO 533 | 1999 | University of Idaho, USDA/ARS |
| Otis | WA 7931 | 2004 | Washington State University, USDA/ARS |

Table 2 (cont.) Released varieties tested in Northern Idaho Extension variety trials in 2008-2009.

| Variety | Experimental No. | Released | Developer(s) of variety |
|---|---|---|---|
| **Hard red spring wheat** | | | |
| Bullseye | B02-0081 | 2008 | AgriPro |
| Cabernet | | | Resource Seeds |
| Hank | BZ 992-322 | 1999 | WestBred, LLC, Bozeman, MT |
| Jedd | | 2002 | WestBred, LLC, Bozeman, MT |
| Jefferson | IDO 462 | 1998 | University of Idaho, USDA/ARS |
| Jerome | IDO 566 | 2004 | University of Idaho, USDA/ARS |
| Kelse | WA 7954 | 2009 | Washington State University, USDA/ARS |
| Tara 2002 | WA 7824 | 2001 | Washington State University, USDA/ARS |
| WestBred 926 | RC 80-8 | 1987 | WestBred, LLC, Bozeman, MT |
| **Two-row spring barley** | | | |
| Baronesse | NS 078054 | 1992 | WestBred, LLC, Bozeman, MT |
| Camas | ND 9147 | 1998 | University of Idaho, USDA/ARS |
| Champion | YU-501-385D | | WestBred, LLC, Bozeman, MT |
| Conrad | B5057 | 2005 | Busch Ag. Resources, Inc. |
| Harrington | TR-441 | 1981 | University of Saskatchewan, Canada |
| Lenetah | 01Ab11107 | 2007 | University of Idaho, USDA/ARS |
| Merit | | 2000 | Busch Ag. Resources, Inc. |
| AC Metcalfe | TR-232 | 1994 | Ag. Canada |
| Radiant | 98NZ223 | | Washington State University, USDA/ARS |
| Spaulding | PB1-95-2R-522 | 2005* | Plant Breeders 1, Moscow, ID |
| * certified | | | |
| **Two-row hulless spring barley** | | | |
| Bear | WA 11045-87 | 1996 | Washington State University, USDA/ARS |
| **Six-row spring barley** | | | |
| Steptoe | | 1973 | Washington State University, USDA/ARS |
| Tradition | 6B95-2482 | 2003 | Busch Ag. Resources, Inc. |
| **Lentil** | | | |
| Brewer | | 1984 | Washington State University, USDA/ARS |
| Crimson | | 1990 | Washington State University, USDA/ARS |
| Eston | | 1980 | University of Saskatchewan, Canada |
| Merrit | LC 460266B | 2001 | Washington State University, USDA/ARS |
| Pardina | | | Spain |
| Richlea | | | Ag. Canada |
| Riveland | | | Washington State University, USDA/ARS |

Table 2 (cont.) Released varieties tested in Northern Idaho Extension variety trials in 2008-2009.

| Variety | Experimental No. | Released | Developer(s) of variety |
|---|---|---|---|
| **Yellow pea** | | | |
| Carousel | SW 995848 | 2004 | ProGene |
| Delta | | | Cebeco, Netherlands |
| Rex | | 1993 | Crop and Food Research, New Zealand |
| Shawnee | PS 010603 | 1997 | Washington State University, USDA/ARS |
| Universal | | 2000 | Svalof Weibull |
| **Green pea** | | | |
| Aragorn | | | ProGene |
| Ariel | NZ 4L25 | 2001 | Crop and Food Research, New Zealand |
| Banner | Pro 031-7053 | 2007 | ProGene |
| Columbian | | | Campbell Soup Co. |
| Cruiser | NZ 4L28 | 2001 | Crop and Food Research, New Zealand |
| Joel | PS 110028 | 1997 | Washington State University, USDA/ARS |
| Karita | | 1995 | Svalof Weibull |
| Medora | PS 99102238 | 2006 | Washington State University, USDA/ARS |
| Monarch | Pro 98106 | 2003 | ProGene |
| Pacifica | Pro 011-7107 | 2003 | ProGene |
| Stirling | PS 610152 | 2002 | Washington State University, USDA/ARS |
| **Kabuli chickpea** | | | |
| Dwelley | | 1994 | Washington State University, USDA/ARS |
| Dylan | CA 9990I604C | 2005 | Washington State University, USDA/ARS |
| Sierra | CA 9783152C | 2001 | Washington State University, USDA/ARS |
| Spanish White | | | Spain |
| Troy | CA 99901875W | 2007 | Washington State University, USDA/ARS |
| **Desi chickpea** | | | |
| Myles | | 1994 | Washington State University, USDA/ARS |

## Winter Wheat

Table 3. Winter wheat variety performance preliminary results at Lewiston, 2008-2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Bitterroot | 71 | 12.7 | 20 | 58.3 | 35 | |
| Brundage 96 | 94 | 11.8 | 20 | 59.5 | 34 | |
| IDO 587 | 62 | 14.5 | 20 | 54.4 | 32 | |
| Lambert | 90 | 11.8 | 27 | 58.6 | 40 | |
| Madsen | 69 | 14.8 | 26 | 56.2 | 31 | |
| ORCF-101 | 87 | 13.8 | 25 | 56.7 | 35 | |
| ORCF-102 | 49 | 15.4 | 25 | 55.3 | 33 | |
| ORCF-103 | 65 | 13.8 | 21 | 56.3 | 32 | |
| Simon | 74 | 13.2 | 25 | 57.6 | 36 | |
| Stephens | 74 | 14.2 | 26 | 55.5 | 34 | |
| Tubbs 06 | 54 | 15.6 | 29 | 53.1 | 34 | |
| Xerpha | 76 | 11.1 | 24 | 58.1 | 34 | |
| Skiles | 69 | 12.3 | 19 | 57.0 | 30 | |
| IDO 655 | 55 | 14.9 | 21 | 52.3 | 35 | |
| UICF-Lambert | 69 | 12.0 | 25 | 56.9 | 39 | |
| ID 93-64901A | 72 | 11.5 | 17 | 57.5 | 34 | |
| ID 02-859 | 72 | 13.3 | 20 | 57.2 | 31 | |
| ID00-475-2DH | 62 | 13.9 | 22 | 58.0 | 32 | |
| **Average** | 70 | 13.4 | 23 | 56.6 | 34 | |
| **Hard Wheat** | | | | | | |
| MDM | 53 | 12.6 | 53 | 58.5 | 31 | |
| Boundary | 59 | 12.8 | 62 | 57.1 | 33 | |
| Bauermeister | 56 | 12.1 | 57 | 57.8 | 32 | |
| IDO 621 | 78 | 12.5 | 57 | 57.9 | 34 | |
| Norwest 553 | 77 | 11.2 | 59 | 60.4 | 32 | |
| Mol | 64 | 14.9 | 64 | 60.3 | 29 | |
| Mieti | 69 | 12.8 | 58 | 58.8 | 28 | |
| Esparia | 54 | 14.1 | 55 | 56.1 | 29 | |
| **Average** | 64 | 12.9 | 58 | 58.4 | 31 | |
| **Club** | | | | | | |
| Cara | 77 | 12.1 | 26 | 52.7 | 32 | |
| Chukar | 90 | 11.3 | 25 | 54.8 | 34 | |
| Coda | 74 | 12.9 | 26 | 57.7 | 35 | |
| Rhode | 73 | 12.9 | 29 | 58.5 | 33 | |
| **Average** | 78 | 12.3 | 27 | 55.9 | 34 | |
| Overall Average | 70 | 13.1 | 33 | 57.0 | 33 | No Lodging |
| LSD (0.10) | 19 | -- | -- | 3.2 | 3 | Recorded |
| CV (%) | 20 | -- | -- | 4.2 | 7 | |

Table 4. Winter wheat variety performance preliminary results at Genesee, 2008-2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Bitterroot | 55 | 11.7 | 26 | 60.5 | 31 | |
| Brundage 96 | 63 | 11.1 | 27 | 60.3 | 27 | |
| IDO 587 | 61 | 11.4 | 27 | 59.2 | 29 | |
| Lambert | 66 | 10.5 | 32 | 60.6 | 31 | |
| Madsen | 64 | 11.2 | 31 | 60.7 | 30 | |
| ORCF-101 | 71 | 11.9 | 30 | 60.5 | 30 | |
| ORCF-102 | 74 | 11.9 | 31 | 60.5 | 32 | |
| ORCF-103 | 64 | 11.1 | 29 | 60.7 | 31 | |
| Simon | 63 | 11.1 | 29 | 60.1 | 30 | |
| Stephens | 63 | 10.6 | 28 | 60.3 | 30 | |
| Tubbs 06 | 66 | 11.0 | 33 | 60.6 | 32 | |
| Xerpha | 73 | 10.9 | 36 | 61.2 | 30 | |
| Skiles | 70 | 11.9 | 36 | 61.5 | 30 | |
| IDO 655 | 67 | 11.9 | 32 | 61.7 | 34 | |
| UICF-Lambert | 64 | 11.0 | 31 | 59.7 | 32 | |
| ID 93-64901A | 65 | 10.7 | 27 | 61.0 | 29 | |
| ID 02-859 | 69 | 11.4 | 23 | 59.7 | 29 | |
| ID00-475-2DH | 72 | 11.4 | 27 | 62.2 | 30 | |
| **Average** | 66 | 11.3 | 30 | 60.6 | 30 | |
| **Hard Wheat** | | | | | | |
| MDM | 52 | 10.7 | 59 | 61.6 | 31 | |
| Boundary | 56 | 11.2 | 64 | 60.7 | 28 | |
| Bauermeister | 59 | 11.5 | 64 | 61.4 | 31 | |
| IDO 621 | 59 | 10.7 | 60 | 62.0 | 26 | |
| Norwest 553 | 58 | 11.8 | 66 | 62.6 | 26 | |
| Mol | 44 | 12.5 | 61 | 62.6 | 25 | |
| Mieti | 48 | 11.7 | 60 | 61.4 | 22 | |
| Esparia | 59 | 11.5 | 52 | 61.6 | 27 | |
| **Average** | 54 | 11.5 | 61 | 61.7 | 27 | |
| **Club** | | | | | | |
| Cara | 50 | 12.2 | 35 | 58.0 | 26 | |
| Chukar | 57 | 11.1 | 34 | 58.7 | 27 | |
| Coda | 61 | 11.4 | 34 | 61.2 | 29 | |
| Rhode | 44 | 11.8 | 30 | 61.0 | 26 | |
| **Average** | 53 | 11.6 | 33 | 59.7 | 27 | |
| Overall Average | 61 | 11.4 | 38 | 60.8 | 29 | No Lodging |
| LSD (0.10) | 6 | -- | -- | 1.0 | 2 | Recorded |
| CV (%) | 8 | -- | -- | 1.3 | 5 | |

Table 5. Winter wheat variety performance preliminary results at Moscow, 2008-2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Bitterroot | 70 | 11.2 | 21 | 59.4 | 34 | |
| Brundage 96 | 80 | 10.0 | 24 | 58.3 | 32 | |
| IDO 587 | 85 | 10.3 | 23 | 59.1 | 34 | |
| Lambert | 74 | 10.3 | 28 | 59.2 | 34 | |
| Madsen | 82 | 10.2 | 28 | 59.4 | 34 | |
| ORCF-101 | 87 | 10.4 | 23 | 58.8 | 34 | |
| ORCF-102 | 83 | 9.9 | 25 | 59.5 | 34 | |
| ORCF-103 | 81 | 9.9 | 19 | 58.7 | 34 | |
| Simon | 73 | 11.0 | 28 | 59.1 | 33 | |
| Stephens | 91 | 10.1 | 23 | 59.0 | 33 | |
| Tubbs 06 | 70 | 10.2 | 29 | 59.1 | 34 | |
| Xerpha | 86 | 10.3 | 32 | 59.9 | 33 | |
| Skiles | 77 | 10.5 | 23 | 59.3 | 32 | |
| IDO 655 | 76 | 10.4 | 30 | 60.9 | 37 | |
| UICF-Lambert | 68 | 10.3 | 30 | 59.4 | 35 | |
| ID 93-64901A | 85 | 10.2 | 18 | 59.4 | 33 | |
| ID 02-859 | 94 | 9.6 | 16 | 57.9 | 33 | |
| ID00-475-2DH | 90 | 10.2 | 19 | 61.0 | 33 | |
| **Average** | 81 | 10.3 | 24 | 59.3 | 33 | |
| **Hard Wheat** | | | | | | |
| MDM | 79 | 9.9 | 54 | 60.9 | 35 | |
| Boundary | 76 | 10.4 | 60 | 59.3 | 29 | |
| Bauermeister | 73 | 9.6 | 59 | 60.8 | 36 | |
| IDO 621 | 85 | 10.2 | 56 | 60.7 | 31 | |
| Norwest 553 | 69 | 11.5 | 64 | 61.7 | 28 | |
| Mol | 49 | 13.3 | 62 | 59.7 | 26 | |
| Mieti | 45 | 11.7 | 56 | 59.2 | 25 | |
| Esparia | 56 | 11.3 | 55 | 59.8 | 27 | |
| **Average** | 67 | 11.0 | 58 | 60.2 | 30 | |
| **Club** | | | | | | |
| Cara | 70 | 10.3 | 24 | 57.3 | 29 | |
| Chukar | 77 | 10.6 | 25 | 57.7 | 32 | |
| Coda | 73 | 11.0 | 30 | 61.1 | 32 | |
| Rhode | 77 | 10.9 | 27 | 61.5 | 30 | |
| **Average** | 74 | 10.7 | 27 | 59.4 | 31 | |
| Overall Average | 76 | 10.5 | 34 | 59.6 | 32 | No Lodging |
| LSD (0.10) | 13 | -- | -- | 0.4 | 2 | Recorded |
| CV (%) | 15 | -- | -- | 0.5 | 5 | |

Table 6. Winter wheat variety performance preliminary results at Bonner's Ferry, 2008-2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Bitterroot | 51 | 12.8 | 38 | 56.8 | 30 | |
| Brundage 96 | 79 | 11.4 | 14 | 55.1 | 29 | |
| IDO 587 | 82 | 11.9 | 22 | 55.9 | 31 | |
| Lambert | 68 | 11.6 | 22 | 56.1 | 35 | |
| Madsen | 79 | 12.4 | 22 | 56.0 | 31 | |
| ORCF-101 | 72 | 12.6 | 20 | 55.6 | 29 | |
| ORCF-102 | 66 | 13.0 | 20 | 56.2 | 30 | |
| ORCF-103 | 69 | 12.5 | 24 | 56.2 | 31 | |
| Simon | 63 | 12.2 | 20 | 56.4 | 31 | |
| Stephens | 83 | 11.8 | 20 | 55.9 | 33 | |
| Tubbs 06 | 72 | 12.2 | 21 | 55.1 | 33 | |
| Xerpha | 69 | 12.1 | 21 | 55.6 | 32 | |
| Skiles | 61 | 13.2 | 16 | 55.5 | 29 | |
| IDO 655 | 70 | 11.7 | 19 | 57.5 | 34 | |
| UICF-Lambert | 62 | 12.3 | 23 | 56.1 | 36 | |
| ID 93-64901A | 55 | 11.5 | 11 | 55.3 | 29 | |
| ID 02-859 | 59 | 11.5 | 9 | 54.8 | 28 | |
| ID00-475-2DH | 64 | 12.4 | 24 | 57.0 | 28 | |
| **Average** | 68 | 12.2 | 20 | 55.9 | 31 | |
| **Hard Wheat** | | | | | | |
| MDM | 45 | 12.1 | 53 | 56.8 | 31 | |
| Boundary | 44 | 12.3 | 46 | 57.2 | 27 | |
| Bauermeister | 42 | 11.7 | 42 | 56.6 | 29 | |
| IDO 621 | 51 | 12.2 | 44 | 57.7 | 27 | |
| Norwest 553 | 72 | 12.3 | 52 | 57.9 | 27 | |
| Mol | 33 | 15.1 | 53 | 57.7 | 22 | |
| Mieti | 42 | 14.4 | 54 | 56.3 | 20 | |
| Esparia | 49 | 13.0 | 49 | 57.0 | 25 | |
| **Average** | 47 | 12.9 | 49 | 57.1 | 26 | |
| **Club** | | | | | | |
| Cara | 50 | 13.3 | 23 | 54.2 | 24 | |
| Chukar | 58 | 12.4 | 19 | 54.6 | 28 | |
| Coda | 63 | 12.4 | 17 | 56.6 | 30 | |
| Rhode | 58 | 12.4 | 18 | 56.1 | 26 | |
| **Average** | 57 | 12.6 | 19 | 55.4 | 27 | |
| Overall Average | 61 | 12.4 | 27.9 | 56.2 | 29 | No Lodging |
| LSD (0.10) | 14 | -- | -- | 1.0 | 3 | Recorded |
| CV (%) | 19 | -- | -- | 1.5 | 7 | |

Table 7. Combined winter wheat performance data for Lewiston, Genesee, Moscow, and Bonners Ferry. 2008-2009.

| Variety or Selection | Seed Yield | | | | |
|---|---|---|---|---|---|
| | Lewiston | Genesee | Moscow | B. Ferry | Average |
| | | | bu/acre | | |
| **Soft White** | | | | | |
| Bitterroot | 71 | 55 | 70 | 51 | 62 |
| Brundage 96 | 94 | 63 | 80 | 79 | 79 |
| IDO 587 | 62 | 61 | 85 | 82 | 72 |
| Lambert | 90 | 66 | 74 | 68 | 74 |
| Madsen | 69 | 64 | 82 | 79 | 73 |
| ORCF-101 | 87 | 71 | 87 | 72 | 79 |
| ORCF-102 | 49 | 74 | 83 | 66 | 68 |
| ORCF-103 | 65 | 64 | 81 | 69 | 70 |
| Simon | 74 | 63 | 73 | 63 | 68 |
| Stephens | 74 | 63 | 91 | 83 | 78 |
| Tubbs 06 | 54 | 66 | 70 | 72 | 65 |
| Xerpha | 76 | 73 | 86 | 69 | 76 |
| Skiles | 69 | 70 | 77 | 61 | 69 |
| IDO 655 | 55 | 67 | 76 | 70 | 67 |
| UICF-Lambert | 69 | 64 | 68 | 62 | 66 |
| ID 93-64901A | 72 | 65 | 85 | 55 | 69 |
| ID 02-859 | 72 | 69 | 94 | 59 | 74 |
| ID00-475-2DH | 62 | 72 | 90 | 64 | 72 |
| **Average** | 70 | 66 | 81 | 68 | 71 |
| **Hard Wheat** | | | | | |
| MDM | 53 | 52 | 79 | 45 | 57 |
| Boundary | 59 | 56 | 76 | 44 | 59 |
| Bauermeister | 56 | 59 | 73 | 42 | 58 |
| IDO 621 | 78 | 59 | 85 | 51 | 68 |
| Norwest 553 | 77 | 58 | 69 | 72 | 69 |
| Mol | 64 | 44 | 49 | 33 | 47 |
| Mieti | 69 | 48 | 45 | 42 | 51 |
| Esparia | 54 | 59 | 56 | 49 | 55 |
| **Average** | 64 | 54 | 67 | 47 | 58 |
| **Club** | | | | | |
| Cara | 77 | 50 | 70 | 50 | 62 |
| Chukar | 90 | 57 | 77 | 58 | 70 |
| Coda | 74 | 61 | 73 | 63 | 68 |
| Rhode | 73 | 44 | 77 | 58 | 63 |
| **Average** | 78 | 53 | 74 | 57 | 66 |
| Overall Average | 70 | 61 | 76 | 61 | 67 |
| LSD (0.10) | 19 | 6 | 13 | 14 | 7 |
| CV (%) | 20 | 8 | 15 | 19 | -- |

Table 8. Grain yield averages for winter wheat varieties tested for three years in northern Idaho.

| Variety or Selection | 2006-2007 | 2007-2008 | 2008-2009 | Average |
|---|---|---|---|---|
| Number of sites | 5 | 5 | 4 | 5 |
| **Soft White** | | ----------bu/acre---------- | | |
| Bitterroot | 68 | 78 | 62 | 69 |
| Brundage 96 | 73 | 74 | 79 | 75 |
| IDO 587 | 64 | 71 | 72 | 69 |
| Lambert | 68 | 74 | 74 | 72 |
| Madsen | 69 | 70 | 73 | 71 |
| ORCF-101 | 68 | 74 | 79 | 74 |
| ORCF-102 | 68 | 79 | 68 | 72 |
| Simon | 69 | 77 | 68 | 72 |
| Stephens | 67 | 72 | 78 | 72 |
| Tubbs 06 | 69 | 78 | 65 | 71 |
| IDO 655 | 62 | 72 | 67 | 67 |
| UICF-Lambert | 71 | 75 | 66 | 71 |
| ID 93-64901A | 75 | 80 | 69 | 75 |
| ID 02-859 | 70 | 79 | 74 | 74 |
| **Average** | 69 | 75 | 68 | 71 |
| **Hard Wheat** | | | | |
| MDM | 64 | 75 | 57 | 65 |
| Boundary | 70 | 74 | 59 | 68 |
| Bauermeister | 70 | 75 | 58 | 68 |
| IDO 621 | 72 | 75 | 68 | 72 |
| **Average** | 69 | 75 | 62 | 69 |
| **Club** | | | | |
| Cara | 63 | 74 | 62 | 66 |
| Chukar | 65 | 74 | 70 | 70 |
| Coda | 65 | 69 | 68 | 67 |
| Rhode | 72 | 72 | 63 | 69 |
| **Average** | 66 | 72 | 66 | 68 |
| Overall Average | 68 | 75 | 67 | 70 |
| LSD (0.10) | 4 | 4 | 7 | -- |

## Spring Wheat

Table 9. Spring wheat variety performance results at Craigmont, 2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Alturas | 56 | 13.2 | 34 | 57.7 | 27 | 0 |
| Cataldo | 57 | 12.2 | 12 | 57.4 | 26 | 0 |
| Eden | 58 | 13.3 | 22 | 60.3 | 25 | 0 |
| Louise | 67 | 11.9 | 18 | 58.3 | 30 | 0 |
| Nick | 66 | 12.3 | 17 | 58.8 | 27 | 0 |
| Penawawa | 60 | 12.9 | 14 | 57.8 | 28 | 0 |
| Whit | 70 | 12.8 | 16 | 58.4 | 29 | 0 |
| Babe[1] | 65 | 14.4 | 14 | 58.5 | 29 | 0 |
| WA8090 | 75 | 11.9 | 19 | 59.5 | 31 | 0 |
| BZ604-002 | 67 | 12.9 | 20 | 59.3 | 28 | 0 |
| JD[2] | 62 | 11.5 | 24 | 59.7 | 30 | 0 |
| **Average** | 64 | 12.7 | 19 | 58.7 | 28 | 0 |
| **Hard White** | | | | | | |
| Lolo | 64 | 12.3 | 60 | 60.2 | 31 | 0 |
| Otis | 62 | 14.2 | 62 | 58.9 | 32 | 0 |
| Lochsa | 51 | 13.7 | 62 | 56.7 | 27 | 0 |
| OR 4201261 | 59 | 12.7 | 65 | 57.2 | 27 | 0 |
| **Average** | 59 | 13.2 | 62 | 58.2 | 29 | 0 |
| **Hard Red** | | | | | | |
| Cabernet | 52 | 12.8 | 45 | 59.0 | 25 | 0 |
| Hank | 58 | 12.6 | 57 | 57.7 | 26 | 0 |
| Jedd | 57 | 14.7 | 89 | 58.8 | 24 | 0 |
| Jefferson | 59 | 13.7 | 64 | 58.4 | 27 | 0 |
| Jerome | 58 | 13.1 | 55 | 58.9 | 26 | 0 |
| Kelse | 60 | 14.6 | 58 | 58.8 | 29 | 0 |
| Tara 2002 | 52 | 14.5 | 52 | 58.4 | 28 | 0 |
| UI Winchester[3] | 59 | 14.3 | 51 | 58.3 | 25 | 0 |
| Bullseye | 50 | 15.0 | 72 | 59.4 | 23 | 0 |
| BZ901-717 | 59 | 14.4 | 69 | 58.0 | 28 | 0 |
| **Average** | 56 | 14.0 | 61 | 58.6 | 26 | 0 |
| Overall Average | 60 | | | 58.6 | 28 | 0 |
| LSD (0.10) | 8 | -- | -- | 1.1 | <1 | -- |
| C.V. (%) | 11 | -- | -- | 1.6 | 6 | -- |

[1] previously listed as WA 8039

[2] previously listed as WA 8047

[3] previously listed as IDO 578

Table 10. Spring wheat variety performance results at Genesee, direct seed, 2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Alturas | 54 | 11.0 | 16 | 58.3 | 29 | 0 |
| Cataldo | 57 | 11.2 | 13 | 57.6 | 31 | 0 |
| Eden | 51 | 10.8 | 19 | 60.4 | 29 | 0 |
| Louise | 59 | 10.9 | 17 | 58.9 | 34 | 0 |
| Nick | 55 | 12.7 | 19 | 60.1 | 30 | 0 |
| Penawawa | 55 | 11.7 | 15 | 59.3 | 30 | 0 |
| Whit | 65 | 11.0 | 17 | 59.5 | 31 | 0 |
| Babe[1] | 66 | 11.3 | 14 | 60.2 | 32 | 0 |
| WA8090 | 61 | 10.8 | 19 | 59.5 | 33 | |
| BZ604-002 | 60 | 11.0 | 17 | 61.0 | 31 | 0 |
| JD[2] | 59 | 11.6 | 20 | 60.8 | 33 | 0 |
| **Average** | 58 | 11.3 | 17 | 59.6 | 31 | 0 |
| **Hard White** | | | | | | |
| Lolo | 57 | 12.8 | 57 | 60.8 | 33 | 0 |
| Otis | 55 | 12.1 | 52 | 60.4 | 36 | 0 |
| Lochsa | 55 | 13.1 | 61 | 58.6 | 31 | |
| OR 4201261 | 57 | 11.7 | 60 | 59.5 | 29 | 0 |
| **Average** | 56 | 12.4 | 58 | 59.8 | 32 | 0 |
| **Hard Red** | | | | | | |
| Cabernet | 45 | 13.0 | 45 | 58.9 | 26 | 0 |
| Hank | 59 | 15.1 | 54 | 58.2 | 31 | 0 |
| Jedd | 49 | 13.6 | 81 | 60.1 | 28 | 0 |
| Jefferson | 57 | 13.1 | 58 | 60.6 | 30 | 0 |
| Jerome | 50 | 13.3 | 53 | 60.1 | 30 | 0 |
| Kelse | 51 | 14.0 | 55 | 60.3 | 33 | 0 |
| Tara 2002 | 51 | 14.3 | 50 | 60.2 | 33 | 0 |
| UI Winchester[3] | 54 | 14.3 | 48 | 60.0 | 31 | 0 |
| Bullseye | 57 | 13.5 | 66 | 61.6 | 29 | 0 |
| BZ901-717 | 57 | 14.2 | 64 | 60.5 | 32 | 0 |
| **Average** | 53 | 13.8 | 57 | 60.1 | 30 | 0 |
| Overall Average | 56 | | | 59.8 | 31 | 0 |
| LSD (0.10) | 6 | -- | -- | 0.9 | 1 | -- |
| C.V. (%) | 9 | -- | -- | 1.3 | 4 | -- |

[1] previously listed as WA 8039

[2] previously listed as WA 8047

[3] previously listed as IDO 578

Table 11. Spring wheat variety performance results at Bonners Ferry, direct seed, 2009.

| Variety or Selection | Seed Yield | Seed Protein | Hardness Score | Test Weight | Plant Height | Lodging |
|---|---|---|---|---|---|---|
| | bu/acre | % | 0-100 | lb/bu | inches | % |
| **Soft White** | | | | | | |
| Alturas | 25 | 12.7 | 4 | na | 22 | 0 |
| Cataldo | 19 | 14.5 | 17 | na | 20 | 0 |
| Eden | 20 | 13.3 | 23 | na | 19 | 0 |
| Louise | 21 | 13.2 | 23 | na | 22 | 0 |
| Nick | 12 | 14.5 | 18 | na | 20 | 0 |
| Penawawa | 15 | 14.8 | 18 | na | 19 | 0 |
| Whit | 34 | 14.1 | 19 | na | 24 | 0 |
| Babe[1] | 17 | 14.5 | 18 | na | 21 | 0 |
| WA8090 | 20 | 12.8 | 17 | na | 22 | 0 |
| BZ604-002 | 23 | 13.7 | 15 | na | 22 | 0 |
| JD[2] | 27 | 13.0 | 13 | na | 22 | 0 |
| **Average** | 21 | 13.7 | 17 | na | 21 | 0 |
| **Hard White** | | | | | | |
| Lolo | 19 | 14.8 | 63 | na | 21 | 0 |
| Otis | 24 | 14.1 | 61 | na | 24 | 0 |
| Lochsa | 16 | 15.5 | 67 | na | 20 | 0 |
| OR 4201261 | 17 | 13.9 | 62 | na | 19 | 0 |
| **Average** | 19 | 14.6 | 63 | na | 21 | 0 |
| **Hard Red** | | | | | | |
| Cabernet | 10 | 15.5 | 55 | na | 17 | 0 |
| Hank | 21 | 14.9 | 62 | na | 21 | 0 |
| Jedd | 16 | 15.6 | 89 | na | 19 | 0 |
| Jefferson | 16 | 15.4 | 67 | na | 21 | 0 |
| Jerome | 18 | 14.5 | 58 | na | 21 | 0 |
| Kelse | 13 | 16.2 | 64 | na | 22 | 0 |
| Tara 2002 | 12 | 16.2 | 64 | na | 21 | 0 |
| UI Winchester[3] | 9 | 15.5 | 61 | na | 17 | 0 |
| Bullseye | 17 | 15.1 | 71 | na | 18 | 0 |
| BZ901-717 | 17 | 16.1 | 76 | na | 22 | 0 |
| **Average** | 15 | 15.5 | 67 | | 20 | 0 |
| Overall Average | 18 | 14.6 | 44 | na | 21 | 0 |
| LSD (0.10) | 4 | -- | -- | -- | 2 | -- |
| C.V. (%) | 21 | -- | -- | -- | 7 | -- |

[1] previously listed as WA 8039

[2] previously listed as WA 8047

[3] previously listed as IDO 578

na - Test weights were not calculated for this trial due to insufficient yields

Table 12. Combined spring wheat performance data for Craigmont, Genesee, and Bonners Ferry, 2009.

| Variety or Selection | Seed Yield | | | | Average of 3 sites | | | |
|---|---|---|---|---|---|---|---|---|
| | Craigmont | Genesee | B. Ferry | Average | Seed Protein | Hardness Score | Test Weight* | Plant Height |
| | ----------bu/acre---------- | | | | % | 0-100 | lb/bu | inches |
| **Soft White** | | | | | | | | |
| Alturas | 56 | 54 | 25 | 46 | 12.3 | 18 | 58.0 | 26 |
| Cataldo | 57 | 57 | 19 | 45 | 12.6 | 14 | 57.5 | 25 |
| Eden | 58 | 51 | 20 | 44 | 12.5 | 21 | 60.4 | 25 |
| Louise | 67 | 59 | 21 | 50 | 12.0 | 19 | 58.6 | 28 |
| Nick | 66 | 55 | 12 | 39 | 13.2 | 18 | 59.4 | 26 |
| Penawawa | 60 | 55 | 15 | 43 | 13.1 | 16 | 58.5 | 26 |
| Whit | 70 | 65 | 34 | 56 | 12.6 | 17 | 58.9 | 28 |
| Babe[1] | 65 | 66 | 17 | 49 | 13.4 | 15 | 59.3 | 28 |
| WA8090 | 75 | 61 | 20 | 51 | 11.8 | 18 | 59.5 | 29 |
| BZ604-002 | 67 | 60 | 23 | 49 | 12.5 | 17 | 60.2 | 27 |
| JD[2] | 62 | 59 | 27 | 49 | 12.0 | 19 | 58.0 | 28 |
| **Average** | 64 | 58 | 21 | 47 | 12.6 | 18 | 58.9 | 27 |
| **Hard White** | | | | | | | | |
| Lolo | 64 | 57 | 19 | 47 | 13.3 | 60 | 57.5 | 28 |
| Otis | 62 | 55 | 24 | 47 | 13.5 | 58 | 60.4 | 30 |
| Lochsa | 51 | 55 | 16 | 41 | 14.1 | 63 | 58.8 | 26 |
| OR 4201261 | 59 | 57 | 17 | 44 | 12.8 | 62 | 59.4 | 25 |
| **Average** | 59 | 56 | 19 | 45 | 13.4 | 61 | 59.0 | 27 |
| **Hard Red** | | | | | | | | |
| Cabernet | 52 | 45 | 10 | 36 | 13.8 | 48 | 59.0 | 24 |
| Hank | 58 | 59 | 21 | 46 | 14.2 | 58 | 58.0 | 28 |
| Jedd | 57 | 49 | 16 | 40 | 14.6 | 86 | 59.5 | 26 |
| Jefferson | 59 | 57 | 16 | 44 | 14.1 | 63 | 59.5 | 26 |
| Jerome | 58 | 50 | 18 | 41 | 13.6 | 55 | 59.5 | 26 |
| Kelse | 60 | 51 | 13 | 41 | 14.9 | 59 | 59.6 | 28 |
| Tara 2002 | 52 | 51 | 12 | 38 | 15.0 | 55 | 59.3 | 27 |
| UI Winchester[3] | 59 | 54 | 9 | 40 | 14.7 | 53 | 59.2 | 24 |
| Bullseye | 50 | 57 | 17 | 41 | 14.5 | 70 | 60.5 | 24 |
| BZ901-717 | 59 | 57 | 17 | 43 | 14.9 | 70 | 59.3 | 27 |
| **Average** | 56 | 53 | 15 | 41 | 14.4 | 62 | 59.3 | 26 |
| Overall Average | 60 | 56 | 18 | 44 | 13.4 | 42 | 59.1 | 27 |
| LSD (0.10) | 8 | 6 | 4 | 4 | -- | -- | 0.7 | 1 |
| C.V. (%) | 11 | 9 | 21 | -- | -- | -- | -- | -- |

* Test wights from Genesee and Craigmont only.

[1] previously listed as WA 8039

[2] previously listed as WA 8047

[3] previously listed as IDO 578

Table 13. Grain yield averages for spring wheat varieties tested for three years in northern Idaho.

| Variety or Selection | 2007 | 2008 | 2009 | Average |
|---|---|---|---|---|
| | ----------bu/acre---------- | | | |
| **Soft White** | | | | |
| Alturas | 42 | 34 | 45 | 40 |
| Cataldo | 40 | 29 | 44 | 38 |
| Eden | 48 | 33 | 43 | 41 |
| Louise | 47 | 33 | 49 | 43 |
| Nick | 43 | 34 | 44 | 40 |
| Penawawa | 42 | 32 | 43 | 39 |
| Whit [1] | 50 | 36 | 56 | 47 |
| Babe [2] | 42 | 35 | 49 | 42 |
| **Average** | 44 | 33 | 47 | 41 |
| **Hard White** | | | | |
| Lolo | 44 | 32 | 47 | 41 |
| Otis | 46 | 33 | 47 | 42 |
| Lochsa | 39 | 30 | 41 | 37 |
| OR 4201261 | 40 | 32 | 44 | 39 |
| **Average** | 42 | 32 | 45 | 41 |
| **Hard Red** | | | | |
| Cabernet | 42 | 30 | 36 | 36 |
| Hank | 43 | 33 | 46 | 41 |
| Jefferson | 46 | 34 | 44 | 41 |
| Jerome | 41 | 30 | 42 | 38 |
| Kelse | 40 | 33 | 41 | 38 |
| Tara 2002 | 38 | 31 | 38 | 36 |
| UI Winchester[3] | 39 | 32 | 40 | 37 |
| **Average** | 41 | 32 | 41 | 38 |
| Overall Average | 43 | 32 | 42 | 40 |
| LSD (0.10) | 3 | 2 | 2 | -- |

[1] previously listed as WA8008

[2] previously listed as WA8039

[3] previously listed as IDO 578

## Spring Barley

Table 14. Spring barley variety performance results at Bonners Ferry, 2009.

| Variety or Selection | Seed Yield | Test Weight | Plant Height | Plumps >6/64 | Thins <5.5/64 |
|---|---|---|---|---|---|
| | bu/acre | lb/bu | inches | % | % |
| **2 Row Barley** | | | | | |
| Baronesse | 40 | 48.0 | 27 | 97 | 1 |
| Bear (hulless) | 39 | 52.0 | 28 | 58 | 8 |
| Camas | 44 | 48.1 | 27 | 95 | 1 |
| Champion | 46 | 47.8 | 26 | 95 | 1 |
| Conrad | 42 | 48.0 | 23 | 97 | 1 |
| Harrington | 34 | 48.8 | 24 | 88 | 2 |
| Lenetah | 62 | 49.5 | 26 | 98 | 1 |
| Merit | 50 | 47.7 | 29 | 96 | 1 |
| AC Metcalfe | 43 | 47.9 | 28 | 97 | 1 |
| Salute | 48 | 48.2 | 25 | 99 | 0 |
| Spaulding | 49 | 49.4 | 26 | 96 | 1 |
| Tetonia | 56 | 49.4 | 25 | 97 | 1 |
| 01AH2812 | 52 | 47.6 | 25 | 97 | 0 |
| Radiant | 46 | 48.0 | 26 | 96 | 1 |
| **2 Row Average** | 47 | 48.6 | 26 | 93 | 1 |
| **6 Row Barley** | | | | | |
| Steptoe | 40 | 46.2 | 26 | 97 | 0 |
| Tradition | 35 | 47.8 | 26 | 94 | 1 |
| **6 Row Average** | 38 | 47.0 | 26 | 96 | 1 |
| Overall Average | 45 | 48.4 | 26 | 94 | 1 |
| LSD (0.10) | 12 | 1.0 | 3 | <1 | <1 |
| CV (%) | 22 | 1.7 | 9 | 2 | 47 |

Table 15. Spring barley variety performance results at Moscow, direct seed, 2009.

| Variety or Selection | Seed Yield | Test Weight | Plant Height | Plumps >6/64 | Thins <5.5/64 |
|---|---|---|---|---|---|
| | bu/acre | lb/bu | inches | % | % |
| **2 Row Barley** | | | | | |
| Baronesse | 78 | 50.5 | 31 | 97 | 1 |
| Bear (hulless) | 69 | 53.1 | 32 | 71 | 3 |
| Camas | 75 | 50.5 | 31 | 97 | 0 |
| Champion | 83 | 51.4 | 31 | 97 | 0 |
| Conrad | 82 | 49.8 | 31 | 99 | 0 |
| Harrington | 79 | 50.2 | 34 | 95 | 1 |
| Lenetah | 79 | 50.7 | 31 | 97 | 0 |
| AC Metcalfe | 82 | 48.7 | 32 | 96 | 1 |
| Salute | 86 | 50.2 | 35 | 99 | 0 |
| Spaulding | 78 | 49.4 | 32 | 99 | 0 |
| Tetonia | 74 | 51.9 | 31 | 97 | 0 |
| Radiant | 78 | 51.3 | 30 | 97 | 0 |
| M69 | 80 | 49.0 | 27 | 98 | 0 |
| C83 | 84 | 50.2 | 29 | 96 | 0 |
| **2 Row Average** | 79 | 50.5 | 31 | 95 | 1 |
| **6 Row Barley** | | | | | |
| Steptoe | 78 | 46.0 | 31 | 98 | 0 |
| Tradition | 88 | 48.3 | 38 | 97 | 0 |
| **6 Row Average** | 83 | 47.2 | 34 | 98 | 0 |
| Overall Average | 80 | 50.1 | 32 | 96 | 1 |
| LSD (0.10) | 14 | 0.4 | 2 | >1 | >1 |
| CV (%) | 14 | 0.7 | 7 | 2 | 64 |

Table 16. Spring barley variety performance results at Genesee, direct seeded, 2009.

| Variety or Selection | Seed Yield | Test Weight | Plant Height | Plumps >6/64 | Thins <5.5/64 |
|---|---|---|---|---|---|
| | bu/acre | lb/bu | inches | % | % |
| **2 Row Barley** | | | | | |
| Baronesse | 82 | 47.1 | 28 | 93 | 1 |
| Bear (hulless) | 66 | 55.4 | 29 | 55 | 9 |
| Camas | 75 | 51.0 | 28 | 91 | 1 |
| Champion | 86 | 51.3 | 29 | 92 | 2 |
| Conrad | 83 | 49.4 | 29 | 93 | 2 |
| Harrington | 76 | 50.2 | 28 | 83 | 3 |
| Lenetah | 77 | 49.9 | 28 | 91 | 1 |
| Merit | 68 | 44.9 | 28 | 90 | 2 |
| AC Metcalfe | 67 | 50.3 | 30 | 94 | 1 |
| Salute | 75 | 50.5 | 29 | 96 | 1 |
| Spaulding | 74 | 51.6 | 29 | 90 | 2 |
| Tetonia | 84 | 50.6 | 28 | 89 | 2 |
| 01AH2812 | 82 | 49.3 | 27 | 91 | 2 |
| Radiant | 88 | 50.9 | 29 | 91 | 2 |
| **2 Row Average** | 77 | 50.2 | 28 | 88 | 2 |
| **6 Row Barley** | | | | | |
| Steptoe | 70 | 47.6 | 28 | 95 | 1 |
| Tradition | 72 | 50.4 | 32 | 94 | 1 |
| **6 Row Average** | 71 | 49.0 | 30 | 94 | 1 |
| Overall Average | 77 | 50.0 | 29 | 89 | 2 |
| LSD (0.10) | 8 | 2.9 | 2 | <1 | <1 |
| CV (%) | 9 | 4.9 | 6 | 3 | 34 |

Table 17. Combined spring barley performance data for Craigmont, Genesee, Moscow and Bonners Ferry, 2009.

| Variety or Selection | Seed Yield | | | | Average of 3 sites | | | |
|---|---|---|---|---|---|---|---|---|
| | B.Ferry | Genesee | Moscow | Average | Test Weight | Plant Height | Plumps >6/64 | Thins <5.5/64 |
| | ----------bu/acre---------- | | | | lb/bu | inches | % | % |
| **2 Row Barley** | | | | | | | | |
| Baronesse | 40 | 82 | 78 | 67 | 48.5 | 28 | 96 | 1 |
| Bear (hulless) | 39 | 66 | 69 | 58 | 53.5 | 30 | 61 | 7 |
| Camas | 44 | 75 | 75 | 65 | 49.9 | 29 | 94 | 1 |
| Champion | 46 | 86 | 83 | 72 | 50.2 | 29 | 95 | 1 |
| Conrad | 42 | 83 | 82 | 69 | 49.1 | 28 | 96 | 1 |
| Harrington | 34 | 76 | 79 | 63 | 49.7 | 29 | 89 | 2 |
| Lenetah | 62 | 77 | 79 | 73 | 50.0 | 28 | 95 | 1 |
| Merit | 50 | 68 | 82 | 67 | 47.1 | 30 | 94 | 1 |
| AC Metcalfe | 43 | 67 | 86 | 66 | 49.5 | 31 | 97 | 1 |
| Salute | 48 | 75 | 78 | 67 | 49.4 | 29 | 98 | 0 |
| Spaulding | 49 | 74 | 74 | 66 | 51.0 | 29 | 94 | 1 |
| Tetonia | 56 | 84 | 78 | 73 | 50.4 | 27 | 94 | 1 |
| 01AH2812 | 52 | 82 | 80 | 71 | 48.6 | 26 | 95 | 1 |
| Radiant | 46 | 88 | 84 | 73 | 49.7 | 28 | 94 | 1 |
| **2 Row Average** | 47 | 77 | 79 | 68 | 49.8 | 29 | 92 | 1 |
| **6 Row Barley** | | | | | | | | |
| Steptoe | 40 | 70 | 78 | 63 | 46.6 | 28 | 97 | 1 |
| Tradition | 35 | 72 | 88 | 65 | 48.8 | 32 | 95 | 1 |
| **6 Row Average** | 38 | 71 | 83 | 64 | 47.7 | 30 | 96 | 1 |
| Overall Average | 45 | 77 | 80 | 67 | 49.5 | 29 | 93 | 1 |
| LSD (0.10) | 12 | 8 | 14 | 6 | 0.8 | 1 | >1 | >1 |
| CV (%) | 22 | 9 | 14 | -- | -- | -- | -- | -- |

Table 18. Grain yield averages for spring barley varieties tested for three years in northern Idaho.

| Variety or Selection | 2007 | 2008 | 2009 | Average |
|---|---|---|---|---|
| | ----------bu/acre---------- | | | |
| **2 Row Barley** | | | | |
| Baronesse | 74 | 66 | 67 | 69 |
| Bear (hulless) | 64 | 60 | 58 | 61 |
| Camas | 75 | 58 | 65 | 66 |
| Conrad | 69 | 61 | 69 | 66 |
| Harrington | 71 | 53 | 63 | 62 |
| Merit | 70 | 52 | 67 | 63 |
| AC Metcalfe | 70 | 60 | 66 | 65 |
| Spaulding | 76 | 62 | 66 | 68 |
| Radiant | 83 | 61 | 73 | 72 |
| **Average** | 72 | 59 | 66 | 66 |
| **6 Row Barley** | | | | |
| Steptoe | 74 | 55 | 63 | 64 |
| Tradition | 69 | 55 | 65 | 63 |
| **Average** | 72 | 55 | 64 | 64 |
| Overall Average | 72 | 58 | 66 | 65 |
| LSD (0.10) | 3 | 4 | 6 | -- |

Table 19. Green dry pea variety performance results at Nez Perce, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Vine Length | Canopy Height | Erect Index* |
|---|---|---|---|---|---|
| | lb/acre | g/100 | inches | inches | 0.0-1.0 |
| Aragorn | 1066 | 18.0 | 19 | 18 | 0.9 |
| Ariel | 1114 | 16.3 | 19 | 19 | 1.0 |
| Banner | 1299 | 17.6 | 24 | 23 | 0.9 |
| Banner NST+ | 840 | 17.2 | 21 | 19 | 0.9 |
| Columbian | 870 | 17.7 | 22 | 18 | 0.8 |
| Cruiser | 1143 | 17.2 | 23 | 22 | 0.9 |
| Joel | 1228 | 18.5 | 26 | 20 | 0.8 |
| Karita | 1164 | 20.4 | 20 | 20 | 1.0 |
| Medora | 1135 | 19.7 | 22 | 21 | 1.0 |
| Monarch | 1278 | 16.9 | 18 | 15 | 0.8 |
| Pacifica | 1285 | 20.6 | 22 | 20 | 0.9 |
| Pacifica NST+ | 1139 | 20.1 | 24 | 23 | 0.9 |
| Stirling | 959 | 17.8 | 20 | 16 | 0.8 |
| Stirling NST+ | 741 | 17.6 | 18 | 16 | 0.9 |
| PS03101445 | 1200 | 17.7 | 21 | 18 | 0.9 |
| Pro 081-6118 | 1027 | 18.6 | 21 | 20 | 1.0 |
| **Average** | 1093 | 18.3 | 21 | 19 | |
| LSD (0.10) | 292 | 1.1 | 2 | 2 | 0.1 |
| CV (%) | 23 | 4.8 | 9 | 10 | 7.8 |

+ NST = no seed treatment
* means canopy height/vine length; 1.0 = upright

Table 20. Yellow dry pea variety performance results at Nez Perce, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Vine Length | Canopy Height | Erect Index* |
|---|---|---|---|---|---|
| | lb/acre | g/100 | inches | inches | |
| Carousel | 1003 | 20.9 | 23 | 22 | 1.0 |
| Delta | 823 | 17.5 | 19 | 19 | 1.0 |
| Rex | 1025 | 20.0 | 20 | 19 | 0.9 |
| PRL 415 | 1061 | 18.5 | 23 | 21 | 0.9 |
| Shawnee | 1181 | 18.6 | 26 | 16 | 0.7 |
| Universal | 1101 | 19.2 | 21 | 20 | 1.0 |
| Pro 083-8709 | 1103 | 20.2 | 23 | 23 | 1.0 |
| Pro 083-8718 | 1071 | 21.0 | 23 | 22 | 1.0 |
| Pro 083-8739 | 1312 | 19.7 | 23 | 21 | 0.9 |
| **Average** | 1075 | 19.5 | 22 | 20 | 0.9 |
| LSD (0.10) | 292 | 1.1 | 2 | 2 | 0.1 |
| CV (%) | 23 | 4.8 | 9 | 10 | 7.8 |

* means canopy height/vine length; 1.0 = upright

Table 21. Green dry pea variety performance results at Moscow, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Vine Length | Canopy Height | Erect Index* |
|---|---|---|---|---|---|
| | lb/acre | g/100 | inches | inches | |
| Aragorn | 2092 | 20.1 | 30 | 30 | 1.0 |
| Ariel | 2422 | 17.3 | 28 | 28 | 1.0 |
| Banner | 2818 | 19.4 | 32 | 28 | 0.9 |
| Banner NST+ | 2266 | 19.0 | 29 | 28 | 1.0 |
| Columbian | 1410 | 18.2 | 32 | 15 | 0.5 |
| Cruiser | 2385 | 19.3 | 30 | 28 | 1.0 |
| Joel | 2347 | 20.2 | 37 | 14 | 0.4 |
| Karita | 1953 | 23.5 | 27 | 27 | 1.0 |
| Medora | 2307 | 19.3 | 34 | 34 | 1.0 |
| Monarch | 2161 | 18.6 | 23 | 20 | 0.9 |
| Pacifica | 2265 | 21.6 | 28 | 26 | 0.9 |
| Pacifica NST+ | 2465 | 21.4 | 28 | 25 | 0.9 |
| Stirling | 1833 | 20.1 | 21 | 20 | 1.0 |
| Stirling NST+ | 2021 | 19.6 | 21 | 21 | 1.0 |
| PS03101445 | 2387 | 18.8 | 25 | 25 | 1.0 |
| Pro 081-6118 | 2266 | 19.0 | 29 | 29 | 1.0 |
| **Average** | 2212 | 19.7 | 28 | 25 | 0.9 |
| LSD (0.10) | 350 | 1.1 | 4 | 4 | 0.1 |
| CV (%) | 14 | 4.7 | 11 | 12 | 8.1 |

+ no seed treatment
* means canopy height/vine length; 1.0 = upright

Table 22. Yellow dry pea variety performance results at Moscow, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Vine Length | Canopy Height | Erect Index* |
|---|---|---|---|---|---|
| | lb/acre | g/100 | inches | inches | |
| Carousel | 2162 | 22 | 29 | 29 | 1.0 |
| Delta | 2142 | 21 | 25 | 25 | 1.0 |
| Rex | 2158 | 24 | 27 | 24 | 0.9 |
| PRL 415 | 2426 | 20 | 30 | 28 | 0.9 |
| Shawnee | 1403 | 20 | 32 | 10 | 0.3 |
| Universal | 2633 | 22 | 29 | 30 | 1.0 |
| Pro 083-8709 | 2196 | 22 | 27 | 27 | 1.0 |
| Pro 083-8718 | 1869 | 23 | 29 | 29 | 1.0 |
| Pro 083-8739 | 2468 | 22 | 27 | 27 | 1.0 |
| **Average** | 2162 | 21.8 | 28 | 25 | 0.9 |
| LSD (0.10) | 350 | 1.1 | 4 | 4 | 0.1 |
| CV (%) | 14 | 4.7 | 11 | 12 | 8.1 |

* means canopy height/vine length; 1.0 = upright

Table 23. Combined green dry pea variety performance data for Nez Perce and Moscow, 2009.

| Variety or Selection | Seed Yield | | | Seed Weight | | | Average of 2 sites | |
|---|---|---|---|---|---|---|---|---|
| | Nez Perce | Moscow | Average | Nez Perce | Moscow | Average | Vine Length | Canopy Height |
| | ----------lb/acre---------- | | | ----------g/100---------- | | | inches | inches |
| Aragorn | 1066 | 2092 | 1579 | 18.0 | 20.1 | 19.1 | 25 | 24 |
| Ariel | 1114 | 2422 | 1768 | 16.3 | 17.3 | 16.8 | 24 | 24 |
| Banner | 1299 | 2818 | 2059 | 17.6 | 19.4 | 18.5 | 28 | 26 |
| Banner NST+ | 840 | 2266 | 1553 | 17.2 | 19.0 | 18.1 | 25 | 24 |
| Columbian | 870 | 1410 | 1140 | 17.7 | 18.2 | 18.0 | 27 | 16 |
| Cruiser | 1143 | 2385 | 1764 | 17.2 | 19.3 | 18.3 | 27 | 25 |
| Joel | 1228 | 2347 | 1788 | 18.5 | 20.2 | 19.3 | 31 | 17 |
| Karita | 1164 | 1953 | 1558 | 20.4 | 23.5 | 21.9 | 23 | 23 |
| Medora | 1135 | 2307 | 1721 | 19.7 | 19.3 | 19.5 | 28 | 28 |
| Monarch | 1278 | 2161 | 1720 | 16.9 | 18.6 | 17.7 | 20 | 17 |
| Pacifica | 1285 | 2265 | 1775 | 20.6 | 21.6 | 21.1 | 25 | 23 |
| Pacifica NST+ | 1139 | 2465 | 1802 | 20.1 | 21.4 | 20.7 | 26 | 24 |
| Stirling | 959 | 1833 | 1396 | 17.8 | 20.1 | 18.9 | 20 | 18 |
| Stirling NST+ | 741 | 2021 | 1381 | 17.6 | 19.6 | 18.6 | 19 | 19 |
| PS03101445 | 1200 | 2387 | 1794 | 17.7 | 18.8 | 18.2 | 23 | 21 |
| Pro 081-6118 | 1027 | 2266 | 1646 | 18.6 | 19.0 | 18.8 | 25 | 24 |
| **Average** | 1093 | 2212 | 1653 | 18.3 | 19.7 | 19.0 | 25 | 22 |
| LSD (0.10) | 292 | 350 | 227 | 1.1 | 1.1 | 0.8 | 2 | 2 |
| CV (%) | 23 | 14 | -- | 4.8 | 4.7 | -- | -- | -- |

+ NST = no seed treatment

Table 24. Combined yellow dry pea variety performance data for Nez Perce and Moscow, 2009.

| Variety or Selection | Seed Yield | | | Seed Weight | | | Average of 2 sites | |
|---|---|---|---|---|---|---|---|---|
| | Nez Perce | Moscow | Average | Nez Perce | Moscow | Average | Vine Length | Canopy Height |
| | ----------lb/acre---------- | | | ----------g/100---------- | | | inches | inches |
| Carousel | 1003 | 2162 | 1583 | 20.9 | 22.4 | 21.7 | 26 | 25 |
| Delta | 823 | 2142 | 1483 | 17.5 | 20.8 | 19.2 | 22 | 22 |
| Rex | 1025 | 2158 | 1592 | 20.0 | 24.1 | 22.1 | 24 | 22 |
| PRL 415 | 1061 | 2426 | 1743 | 18.5 | 20.3 | 19.4 | 26 | 24 |
| Shawnee | 1181 | 1403 | 1292 | 18.6 | 20.0 | 19.3 | 29 | 13 |
| Universal | 1101 | 2633 | 1867 | 19.2 | 22.4 | 20.8 | 25 | 25 |
| Pro 083-8709 | 1103 | 2196 | 1649 | 20.2 | 22.2 | 21.2 | 25 | 25 |
| Pro 083-8718 | 1071 | 1869 | 1470 | 21.0 | 22.6 | 21.8 | 26 | 26 |
| Pro 083-8739 | 1312 | 2468 | 1890 | 19.7 | 21.6 | 20.7 | 25 | 24 |
| **Average** | 1075 | 2162 | 1619 | 19.5 | 21.8 | 20.7 | 25 | 23 |
| LSD (0.10) | 292 | 350 | 227 | 1.1 | 1.1 | 0.8 | 2 | 1 |
| CV (%) | 23 | 14 | -- | 4.8 | 4.7 | -- | -- | -- |

Table 25. Seed yield averages for green and yellow dry pea varieties tested for three years in northern Idaho.

| Variety or Selection | 2007 | 2008 | 2009 | Average |
|---|---|---|---|---|
| | ----------lb/acre---------- | | | |
| **Green pea** | | | | |
| Aragorn | 1710 | 1501 | 1579 | 1597 |
| Banner | 1900 | 1390 | 2059 | 1783 |
| Columbian | 1710 | 1100 | 1140 | 1317 |
| Cruiser | 1580 | 1437 | 1764 | 1594 |
| Joel | 1740 | 1315 | 1788 | 1614 |
| Karita | 1610 | 1356 | 1558 | 1508 |
| Medora | 1540 | 1411 | 1721 | 1557 |
| Monarch | 1930 | 1519 | 1720 | 1723 |
| Pacifica | 1650 | 1726 | 1775 | 1717 |
| Stirling | 1650 | 1492 | 1396 | 1513 |
| Stirling NST[+] | 1670 | 1373 | 1380 | 1474 |
| PS03101445 | 1900 | 1601 | 1794 | 1765 |
| **Average** | 1716 | 1435 | 1640 | 1597 |
| **Yellow pea** | | | | |
| Carousel | 1600 | 1489 | 1583 | 1557 |
| Delta | 1620 | 1455 | 1483 | 1519 |
| Rex | 1830 | 1632 | 1592 | 1685 |
| Shawnee | 1660 | 1180 | 1292 | 1377 |
| Universal | 1930 | 1584 | 1867 | 1794 |
| **Average** | 1728 | 1468 | 1563 | 1586 |
| Overall Average | 1719 | 1445 | 1617 | 1590 |
| LSD (0.10) | 101 | 165 | 227 | -- |

+ NST = no seed treatment

Table 26. Lentil variety performance results at Nez Perce (no-till) and Moscow (conventional-till), 2009.

| Variety or Selection | Seed Yield | | | Seed Weight | | | Plant Height | | |
|---|---|---|---|---|---|---|---|---|---|
| | Nezperce | Moscow | Average | Nezperce | Moscow | Average | Nezperce | Moscow | Average |
| | ----------lb/acre---------- | | | ----------g/100---------- | | | ----------inches---------- | | |
| Brewer | 312 | 1748 | 1030 | 4.8 | 5.8 | 5.3 | 12 | 17 | 15 |
| Eston | 457 | 2300 | 1379 | 3.1 | 3.2 | 3.1 | 13 | 18 | 16 |
| LC01202307E | 776 | 1572 | 1174 | 4.7 | 3.8 | 4.3 | 13 | 19 | 16 |
| LC06601231T | 521 | 2065 | 1293 | 4.5 | 4.5 | 4.5 | 12 | 18 | 15 |
| Pardina | 439 | 2343 | 1391 | 3.8 | 3.7 | 3.7 | 11 | 16 | 14 |
| LC06601228T | 482 | 2666 | 1574 | 4.2 | 4.6 | 4.4 | 11 | 18 | 14 |
| LC06601934T | 549 | 2186 | 1367 | 4.0 | 4.4 | 4.2 | 13 | 17 | 16 |
| LC05600043T | 461 | 2117 | 1289 | 4.3 | 4.3 | 4.3 | 13 | 18 | 15 |
| Crimson | 468 | 2733 | 1600 | 3.6 | 3.1 | 3.4 | 13 | 16 | 15 |
| LC05600840T | 419 | 2238 | 1328 | 3.8 | 4.2 | 4.0 | 13 | 17 | 14 |
| LC01602062T | 355 | 2401 | 1378 | 4.0 | 4.4 | 4.2 | 13 | 15 | 16 |
| Merritt | 449 | 2159 | 1304 | 5.6 | 6.0 | 5.8 | 14 | 17 | 17 |
| Riveland | 691 | 2268 | 1480 | 6.4 | 6.8 | 6.6 | 14 | 18 | 17 |
| Richlea | 690 | 1850 | 1270 | 5.3 | 4.6 | 5.0 | 13 | 21 | 16 |
| LC01602300R | 768 | 2575 | 1672 | 5.0 | 4.4 | 4.7 | 14 | 19 | 17 |
| LC06601550T | 596 | 2607 | 1601 | 3.7 | 3.8 | 3.7 | 12 | 18 | 16 |
| **Average** | 527 | 2239 | 1383 | 4.4 | 4.5 | 4.4 | 13 | 18 | 15 |
| LSD (0.10) | 206 | 580 | 278 | 0.3 | 0.3 | 0.2 | 1 | 1 | 1 |
| CV (%) | 28 | 19 | -- | 4.5 | 4.7 | -- | 7 | 7 | -- |

Table 27. Chickpea variety performance results at Moscow, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Plant Height |
|---|---|---|---|
| | lb/acre | g/100 | inches |
| Dwelley | 503 | 45.8 | 16 |
| Dylan | 278 | 46.4 | 14 |
| Myles | 619 | 14.6 | 14 |
| Sierra | 784 | 41.3 | 16 |
| Spanish White | 243 | 43.7 | 14 |
| Troy | 278 | 46.2 | 13 |
| CA0090B347C | 732 | 34.5 | 16 |
| CA0469C020C | 621 | 34.7 | 16 |
| 025C | 547 | 34.1 | 14 |
| 007C | 342 | 44.6 | 14 |
| **Average** | 495 | 38.6 | 14 |
| LSD (0.10) | 218 | 2.2 | 1 |
| CV (%) | 37 | 4.7 | 4 |

Table 28. Seed yield averages for lentil and chickpea varieties tested for three years in northern Idaho.

| Variety or Selection | 2007 | 2008 | 2009 | Average |
|---|---|---|---|---|
| | ----------lb/acre---------- | | | |
| **Lentil** | | | | |
| Brewer | 1140 | 981 | 1030 | 1050 |
| Eston | 1280 | 1114 | 1376 | 1257 |
| Pardina | 1330 | 1094 | 1391 | 1272 |
| Crimson | 1225 | 875 | 1600 | 1233 |
| Merrit | 1235 | 1131 | 1304 | 1223 |
| Riveland | 1760 | 1347 | 1480 | 1529 |
| Richlea | 1325 | 1307 | 1270 | 1301 |
| LC01202307E | 1295 | 1178 | 1174 | 1216 |
| LC01602062T | 1445 | 1276 | 1378 | 1366 |
| LC01602300R | 1465 | 1248 | 1672 | 1462 |
| **Average** | 1350 | 1155 | 1368 | 1291 |
| LSD (0.10) | 70 | 95 | 278 | -- |
| **Chickpea** | | | | |
| Dwelley | 1000 | 1946 | 503 | 1150 |
| Dylan | 1650 | 2622 | 278 | 1517 |
| Myles | 1690 | 2712 | 619 | 1674 |
| Sierra | 1460 | 2878 | 784 | 1707 |
| Spanish White | 1530 | 2201 | 243 | 1325 |
| Troy | 1315 | 1932 | 278 | 1175 |
| CA0090B347C | 1725 | 2909 | 732 | 1789 |
| CA0469C020C | 1810 | 2987 | 621 | 1806 |
| **Average** | 1523 | 2523 | 507 | 1518 |
| LSD (0.10) | 140 | 365 | 218 | -- |

Table 29. No-till dry pea variety performance results at Genesee, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Vine Length | Canopy Height | Erect Index* |
|---|---|---|---|---|---|
| | lb/acre | g/100 | inches | inches | 0.0-1.0 |
| Aragorn | 1857 | 19.7 | 23 | 23 | 1.0 |
| Columbian | 1472 | 20.2 | 28 | 16 | 0.6 |
| Cruiser | 1601 | 18.6 | 24 | 23 | 1.0 |
| Joel | 1694 | 20.8 | 37 | 17 | 0.5 |
| Karita | 1833 | 23.9 | 25 | 25 | 1.0 |
| Monarch | 1527 | 19.7 | 22 | 19 | 0.9 |
| Pacifica | 2200 | 20.5 | 32 | 22 | 0.7 |
| Stirling | 1765 | 19.3 | 27 | 19 | 0.8 |
| Carousel | 2060 | 21.8 | 9 | 26 | 1.0 |
| Rex | 1374 | 23.8 | 23 | 19 | 0.8 |
| Shawnee | 1492 | 22.1 | 33 | 12 | 0.3 |
| Universal | 2149 | 21.8 | 25 | 24 | 1.0 |
| **Average** | 1752 | 21.0 | 25 | 20 | 0.8 |
| LSD (0.10) | 294 | 1.2 | 6 | 3 | 0.2 |
| CV (%) | 14 | 4.7 | 20 | 12 | 16.2 |

Table 30. No-till dry pea variety performance results at Moscow, 2009.

| Variety or Selection | Seed Yield | Seed Weight | Vine Length | Canopy Height | Erect Index* |
|---|---|---|---|---|---|
| | lb/acre | g/100 | inches | inches | 0.0-1.0 |
| Aragorn | 820 | 14.1 | 24 | 23 | 1.0 |
| Columbian | 249 | 15.3 | 31 | 19 | 0.6 |
| Cruiser | 714 | 12.6 | 24 | 24 | 1.0 |
| Joel | 703 | 15.7 | 35 | 20 | 0.6 |
| Karita | 1182 | 20.1 | 26 | 25 | 1.0 |
| Monarch | 476 | 12.9 | 19 | 18 | 1.0 |
| Pacifica | 731 | 15.0 | 27 | 24 | 0.9 |
| Stirling | 733 | 14.2 | 19 | 18 | 1.0 |
| Carousel | 1017 | 16.2 | 28 | 27 | 1.0 |
| Rex | 697 | 17.5 | 24 | 22 | 0.9 |
| Shawnee | 550 | 15.1 | 31 | 14 | 0.5 |
| Universal | 864 | 15.1 | 26 | 26 | 1.0 |
| **Average** | 728 | 15.3 | 26 | 22 | 0.9 |
| LSD (0.10) | 244 | 1.0 | 4 | 2 | 0.1 |
| CV (%) | 28 | 5.6 | 12 | 9 | 7 |

Table 31. Combined no-till dry pea variety performance data for Genesee and Moscow, 2009.

| Variety or Selection | Seed Yield | | | Seed Weight | | | Average of 2 Sites | | |
|---|---|---|---|---|---|---|---|---|---|
| | Genesee | Moscow | Average | Genesee | Moscow | Average | Vine Length | Canopy Height | Erect Index* |
| | ----------lb/acre---------- | | | ----------g/100--------- | | | inches | inches | 0.0-1.0 |
| Aragorn | 1857 | 820 | 1339 | 19.7 | 14.1 | 16.9 | 24 | 23 | 1.0 |
| Columbian | 1472 | 249 | 861 | 20.2 | 15.3 | 17.7 | 29 | 17 | 0.6 |
| Cruiser | 1601 | 714 | 1157 | 18.6 | 12.6 | 15.6 | 24 | 23 | 1.0 |
| Joel | 1694 | 703 | 1199 | 20.8 | 15.7 | 18.2 | 36 | 19 | 0.5 |
| Karita | 1833 | 1182 | 1508 | 23.9 | 20.1 | 22.0 | 26 | 25 | 1.0 |
| Monarch | 1527 | 476 | 1002 | 19.7 | 12.9 | 16.3 | 20 | 18 | 0.9 |
| Pacifica | 2200 | 731 | 1466 | 20.5 | 15.0 | 17.7 | 29 | 23 | 0.8 |
| Stirling | 1765 | 733 | 1249 | 19.3 | 14.2 | 16.7 | 23 | 19 | 0.9 |
| Carousel | 2060 | 1017 | 1538 | 21.8 | 16.2 | 19.0 | 18 | 26 | 1.0 |
| Rex | 1374 | 697 | 1035 | 23.8 | 17.5 | 20.6 | 23 | 20 | 0.9 |
| Shawnee | 1492 | 550 | 1021 | 22.1 | 15.1 | 18.6 | 32 | 13 | 0.4 |
| Universal | 2149 | 864 | 1507 | 21.8 | 15.1 | 18.4 | 25 | 25 | 1.0 |
| **Average** | 1752 | 728 | 1240 | 21.0 | 15.3 | 18.1 | 26 | 21 | 0.8 |
| LSD (0.10) | 294 | 244 | 212 | 1.2 | 1.0 | 1.1 | 4 | 2 | 0.1 |
| CV (%) | 14 | 28 | -- | 4.7 | 5.6 | -- | -- | -- | -- |

Table 32. Seed yield and seed weight for no-till dry pea varieties tested for three years in northern Idahc

| Variety or Selection | Seed Yield | | | | Seed Weight | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | Average | 2007 | 2008 | 2009 | Average |
| | ----------lb/acre---------- | | | | ----------g/100---------- | | | |
| Aragorn | 2080 | 1393 | 1339 | 1604 | 21.9 | 20.1 | 16.9 | 19.6 |
| Columbian | 1880 | 1405 | 861 | 1382 | 17.2 | 17.5 | 17.7 | 17.5 |
| Cruiser | 2030 | 1326 | 1157 | 1830 | 18.2 | 19.1 | 15.6 | 17.6 |
| Joel | 1960 | 1755 | 1199 | 1638 | 19.0 | 19.9 | 18.2 | 19.1 |
| Karita | 2130 | 1332 | 1508 | 1920 | 23.3 | 23.9 | 22.0 | 23.1 |
| Monarch | 2200 | 1519 | 1002 | 2070 | 18.7 | 18.2 | 16.3 | 17.7 |
| Pacifica | 2140 | 1914 | 1466 | 1840 | 18.1 | 22.4 | 17.7 | 19.4 |
| Stirling | 2030 | 1773 | 1249 | 1860 | 22.4 | 19.9 | 16.7 | 19.7 |
| Carousel | 2210 | 1345 | 1538 | 1930 | 22.4 | 23.9 | 19.0 | 22.3 |
| Rex | 2160 | 1646 | 1035 | 1880 | 22.4 | 22.5 | 20.6 | 21.2 |
| Shawnee | 2010 | 1422 | 1021 | 1780 | 19.8 | 20.9 | 18.6 | 19.7 |
| Universal | 2420 | 1605 | 1507 | 1844 | 20.6 | 20.6 | 18.4 | 20.6 |
| **Average** | 2060 | 1536 | 1240 | 1798 | 20.3 | 20.8 | 18.1 | 19.8 |
| LSD (0.10) | 156 | 212 | 212 | -- | 0.6 | 1.1 | 1.1 | -- |

Table 33. No-till lentil variety performance results at Genesee and Moscow, 2009.

| Variety or Selection | Seed Yield | | | Seed Weight | | | Plant Height | | |
|---|---|---|---|---|---|---|---|---|---|
| | Genesee | Moscow | Average | Genesee | Moscow | Average | Genesee | Moscow | Average |
| | ----------lb/acre---------- | | | ----------g/100---------- | | | ----------inches---------- | | |
| Brewer | 739 | 274 | 506 | 5.5 | 5.0 | 5.2 | 14 | 14 | 14 |
| Eston | 555 | 379 | 467 | 3.1 | 3.5 | 3.3 | 14 | 14 | 14 |
| Pardina | 920 | 370 | 645 | 3.7 | 3.6 | 3.6 | 12 | 12 | 12 |
| Merrit | 818 | 526 | 672 | 6.0 | 5.9 | 5.9 | 14 | 15 | 14 |
| Riveland | 733 | 466 | 599 | 6.6 | 6.2 | 6.4 | 16 | 15 | 15 |
| Richlea | 787 | 466 | 627 | 4.7 | 4.7 | 4.7 | 15 | 15 | 15 |
| **Average** | 759 | 413 | 586 | 4.9 | 4.8 | 4.9 | 14 | 14 | 14 |
| LSD (0.10) | 187 | 181 | 130 | 0.2 | 0.3 | 0.2 | 1 | 1 | 1 |
| CV (%) | 20 | 35 | -- | 3.1 | 5.7 | -- | 6 | 6 | -- |

Table 34. Seed yield and seed weight for no-till lentil varieties tested for three years in northern Idaho.

| Variety or Selection | Seed Yield | | | | Seed Weight | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | Average | 2007 | 2008 | 2009 | Average |
| | ----------lb/acre---------- | | | | ----------g/100---------- | | | |
| Brewer | 1280 | 932 | 506 | 906 | 5.5 | 6.6 | 6.0 | 6.0 |
| Eston | 1210 | 1007 | 467 | 895 | 3.2 | 3.5 | 3.4 | 3.4 |
| Pardina | 1285 | 988 | 645 | 973 | 3.7 | 4.0 | 3.9 | 3.9 |
| Merrit | 1330 | 1195 | 672 | 1066 | 6.0 | 7.0 | 6.5 | 6.5 |
| Riveland | 1375 | 1147 | 599 | 1040 | 7.0 | 8.1 | 7.6 | 7.6 |
| Richlea | 1410 | 1131 | 627 | 1056 | 5.0 | 5.4 | 5.2 | 5.2 |
| **Average** | 1315 | 1067 | 586 | 989 | 5.1 | 5.8 | 5.4 | 5.4 |
| LSD (0.10) | NS | 179 | 130 | -- | 0.2 | 0.1 | 0.2 | -- |

NS - No Significant Differences