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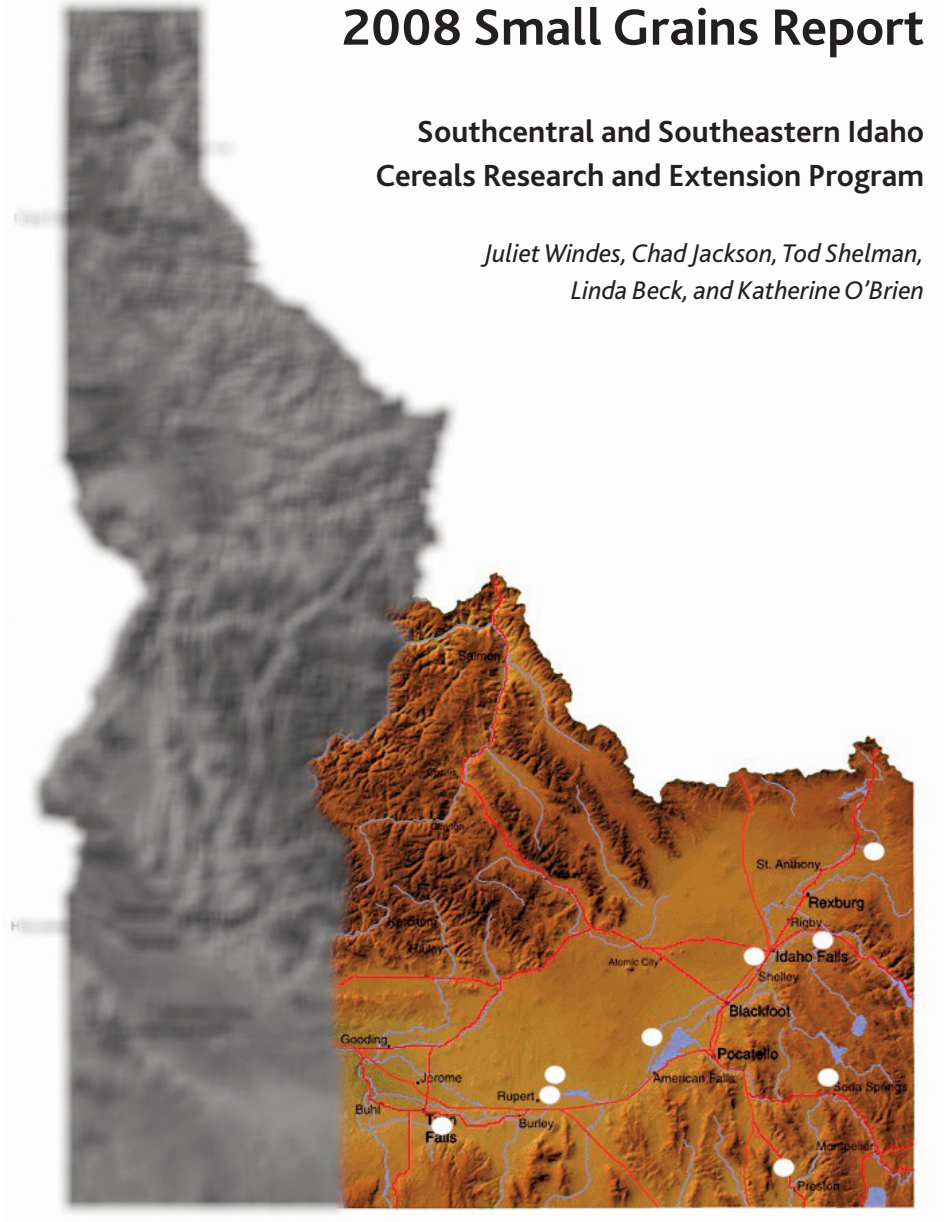
2008 Small Grains Report

Southcentral and Southeastern Idaho Cereals Research and Extension Program

Juliet Windes, Chad Jackson, Tod Shelman, Linda Beck, and Katherine O'Brien



University of Idaho
College of Agricultural and Life Sciences

Southcentral and Southeastern Idaho Cereals Research and Extension Program

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Grower Cooperators

Don Ayers- Soda Springs
Dave Cook- Ririe
Don Marotz- Ashton
Rodney Stuart- Rupert
Ned Moon and Melvin Barfuss of Jentzch-Kearl Farms- Rupert
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Disclaimer Statement

This report represents research in progress and results may change with additional testing. Recommendations for use or non-use of any variety tested in these trials is not stated or implied. Inclusion of a variety in these trials cannot be construed as recommending that variety over varieties not included in the trials.

ALWAYS read and follow the instructions printed on the pesticide label. The pesticide recommendations in this UI publication do not substitute for instructions on the label. Due to constantly changing pesticide laws and labels, some pesticides may have been cancelled or had certain uses prohibited. Use pesticides with care. Do not use a pesticide unless both the pest and the plant, animal, or other application site are specifically listed on the label. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock. Trade names are used to simplify information; no endorsement or discrimination is intended

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Additions and Changes:

For 2008, the Aberdeen precipitation data for the 2007-2008 growing season was compared to precipitation data from year 1914 to 2006 instead of the 30 year average used previously in order to compare the growing season to a longer time interval.

Introduction

Increases in cereal grain yields result from a combination of genetic improvements in varieties and from improved agronomic practices. Studies have shown that genetic improvements have contributed more than 50 percent of the total improvement in yield over the past 30 or 40 years. The objective of the University of Idaho Small Grain Performance Trials is to provide an unbiased appraisal and evaluation of currently available varieties and advanced experimental lines. This information will assist Idaho growers in comparing and selecting varieties best suited to their particular area and growing conditions.

Varietal development programs strive not only for greater yield potential, but also for improved end-use quality, better disease and insect resistance, yield stabilization through improved winter hardiness, better straw strength, etc. A more detailed description of variety development, cooperative extension testing and evaluation, and seed production programs is given in the University of Idaho publication titled, "Small Grain Variety Development and Adaptation in Idaho", CIS 976. Bringing a new variety to the market place is a cooperative effort by many individuals.

Varieties are best evaluated by comparing performance over a number of locations and preferably over more than one year. Varietal performance can change in response to both environmental and cultural/management conditions. This report summarizes small grain trials conducted throughout South-Central and Southeastern Idaho that were harvested in 2008, as well as milling and baking data from trials harvested in 2007.

Materials & Methods

Locations

Cereal trials were established at four winter and five spring locations throughout SC and SE Idaho during the fall of 2007 and the spring of 2008. For location details, please see the data tables on pages 5 to 9. The Ririe winter and Soda Springs trials were grown under dryland conditions, all other trials were grown under irrigation. The trials at Aberdeen and Kimberly were grown at UI Research and Extension Centers, and the remaining trials were grown in producers' fields.

Agronomic Practices

Untreated seed was planted at the following rates:

- Irrigated Wheat: 1,000,000 seeds per acre or approximately 95 pounds per acre.
- Irrigated Barley: 800,000 seeds per acre or approximately 80 pounds per acre.
- Dryland Wheat: 700,000 seeds per acre or approximately 65 pounds per acre.
- Dryland Barley: 600,000 seeds per acre or approximately 60 pounds per acre.

Row spacing was set at 7 inches using double disk opener row-units for all locations except the Ririe dryland location where a 10 inch row spacing and hoe-type row-units were used.

Plots at all locations except for Aberdeen were planted 5 feet wide by 14 feet long then sprayed back to 10 feet long using glyphosate herbicide. Aberdeen plots were planted 5 feet wide by 13.3 feet long then sprayed back to 9.3 feet long. All entries were replicated 4 times at each location in a randomized complete block design. Except for planting and harvest operations, nitrogen fertilization, and miscellaneous maintenance, trials established in producers' fields received the same "grower management" or cultural operations as applied to the surrounding commercial wheat or barley field.

Nitrogen fertilizer in irrigated locations was managed according the following methodology: Yield goals were set for each class at each location using historical yield data. These yield goals were used to calculate optimal fertility amounts according to the following methods- Soft white winter, soft white spring, and winter barley: nitrogen lbs/acre needed = 2 times yield goal. Hard winter and hard spring wheat: nitrogen lbs/acre needed = 2.5 times yield goal, plus 40 lbs/acre nitrogen topdress at flowering. Spring 2 row and 6 row barley: nitrogen lbs/acre needed = 1.7 times yield goal. Nurseries deficient for the combined nitrogen amount of a 24 inch deep soil test and grower applied nitrogen, received the remaining balance of nitrogen in urea (46-0-0) topdressed at tillering using hand broadcast spreaders. Fertilizers and pesticides applied are listed on pages 7 to 11. Planting and harvesting operations by university personnel were timed to approximately coincide with corresponding cooperator operations.

Description of Agronomic Data

Each entry at each location was measured for grain yield, test weight, plant height, heading date, and lodging (when present).

- Yield is calculated for wheat at 60 pounds per bushel, and 48 pounds per bushel for barley.
- Test weight is reported in pounds per standard bushel.
- Plant height is reported in inches from the soil surface to the tip of the heads, awns excluded.
- Heading date is reported as the date when 50 percent of heads are fully emerged from the boot.
- Lodging is reported as the percent of the plot area that was not standing straight prior to harvest.

Description of End-use Quality Data

Grain protein for each variety in 2008 was analyzed with a Perten 9100 grain analyzer. Protein data are found in conjunction with the agronomic data noted above in tables 4 to 55. These protein values are best utilized in comparisons between varieties within a nursery.

Due to the time necessary to complete milling and baking evaluations, test results from the Idaho Wheat Quality Laboratory are not available for the 2008 harvest in this report. Data are given for these characteristics from the 2007 harvest and are found in tables 63 to 74.

Milling and baking tests and plump seed evaluations use standardized testing methods and are described below:

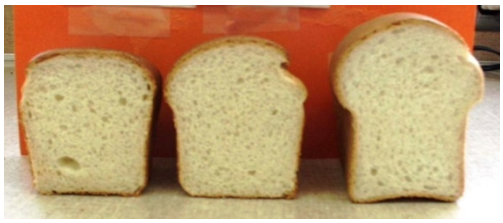
- Flour protein: this is the flour protein content, measured on a fixed 14 percent moisture basis. Lower numbers are better for soft wheat; higher numbers are preferred for hard wheat.
- Break flour yield: represents ease of milling or kernel softness; higher numbers are preferred.
- Flour yield: the percent of flour obtained from a sample of wheat; higher percentages are better.

- Whole grain protein percent: protein content of the whole grain, 12 percent moisture basis. Lower percentages are preferred for soft wheat; higher percentages are preferred for hard wheat.
- Hardness value: a measure of kernel hardness; generally soft white wheats are below 35, hard white wheats are between 40-55 and hard red wheats are above 40.

Additional evaluations include the following:

Hard Wheats

- Bake volume: This is the volume of an experimental loaf of bread measured in cubic centimeters; higher volume is preferred.



Soft Wheats

- Cookie diameter: diameter of a cookie in centimeters; larger numbers are better.

- Cookie top grain score is a measure of the "islanding" or number of surface cracks on a cookie top. Higher is better.

Barley:

- Plump seed percentage is the percent of a sample that stayed on top of a 5.5/64 screen after shaking and consists of the 6/64 and 5.5/64 percentages combined. Both screen percentages are included in the report for increased precision.
- Thin percentage is that percent of a sample that passed through a 5.5/64 screen after shaking.

Statistical Interpretation

Most tables have a least significant difference (LSD) statistic at the bottom of the table. This statistic is given at the 5 percent error level and is an aid in comparing varieties. If the measured values of any two varieties within a table differ by the LSD value or more, they may be considered different with a confidence level of 95 percent. If the measured values are less than the LSD value, the differences may be due to random error rather than real differences. Coefficient of variation (CV percent) statistic is a general measurement of the precision of each experiment. Lower CV values indicate less experimental variation and greater precision. Most tables that do not have the LSD and CV statistic are averages over locations or years where specific statistical analyses were not run on the combined data or are from data that was obtained from only one replication (e.g. quality data). Most tables from individual locations also contain yield data from two previous years. The average, LSD, and CV for these data represent the original data set, not just the selected varieties presented in these tables. The Pr>F value shows the validity of the LSD value above it; if the Pr>F value is equal to or greater than .05, then the LSD value is void. This does not mean there are not differences between the varieties in a category with a void LSD, it simply means differences cannot be

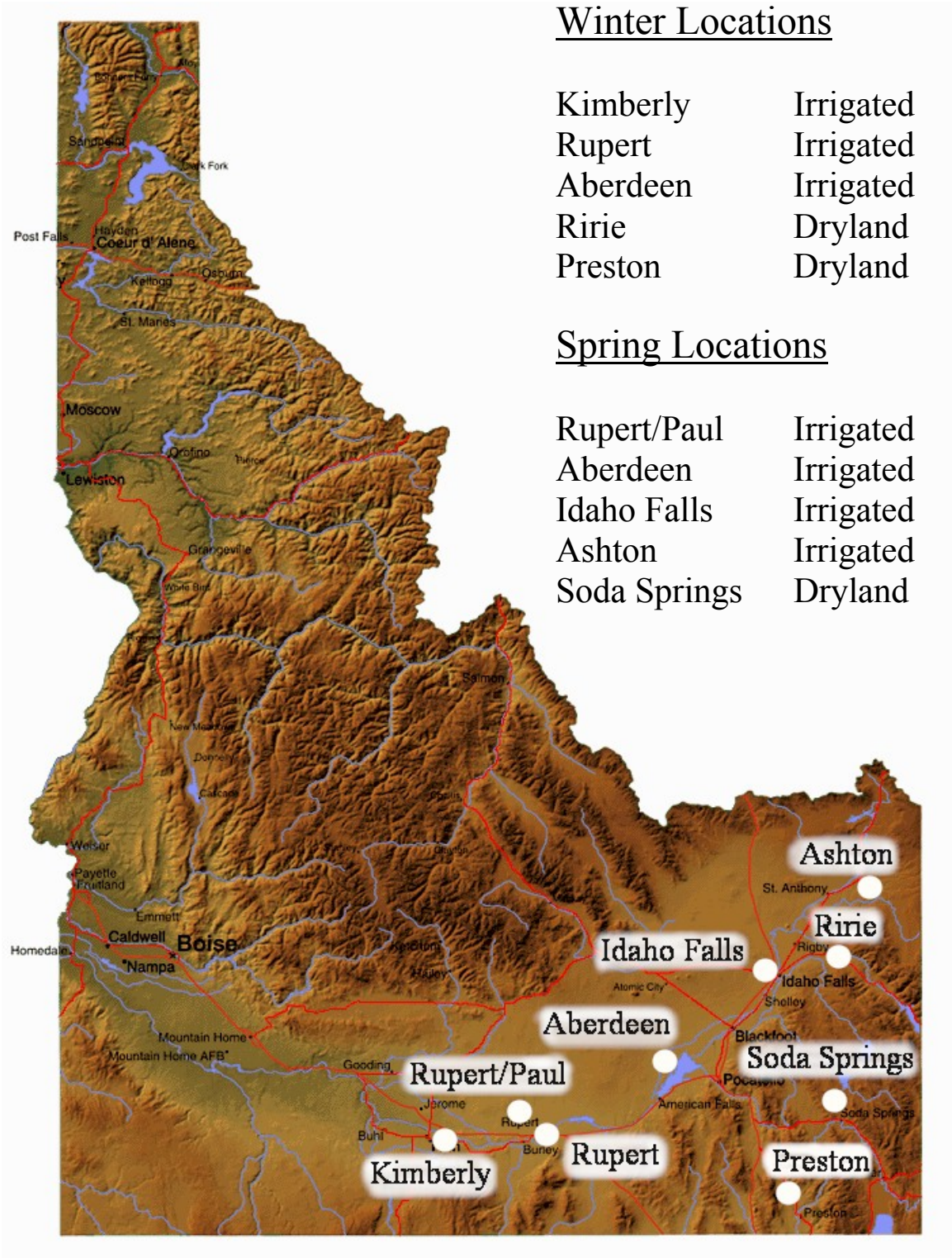
determined at the 95% confidence level we set.

Varieties Tested

A list of released varieties tested in 2007-2008 is given in Table 1. Included in this table are seed size, number of seeds per pound, and the adjusted seeding rate. Information is also given on the year of release and the releasing agency or company. A short description of new varieties is given in Table 2. Additional information is available from the releasing agency or company.

Seasonal average measurements of several plant growth characteristics from the variety trials are shown in Table 3 for the period 1998-2008.

District III and IV Cereal Variety Trial Locations



Winter Locations

Kimberly	Irrigated
Rupert	Irrigated
Aberdeen	Irrigated
Ririe	Dryland
Preston	Dryland

Spring Locations

Rupert/Paul	Irrigated
Aberdeen	Irrigated
Idaho Falls	Irrigated
Ashton	Irrigated
Soda Springs	Dryland

Location Descriptions

Kimberly Winter Irrigated:

3825 N. 3600 E. Kimberly, ID

Coordinates: 42° 32’ 58.28” N. 114° 20’ 06” W.
Elevation: 3900 ft.
Soil Type: #10 Bahem silt loam 1-4% slopes.
Twin Falls County Soil Type Acreage: 24,748
County Soil Type Percentage: 1.6%
Previous Crop: Dry Beans
Planting Date: October 3, 2007
Harvest Dates: July 29, 2008 - Barley
August 7, 2008 - Wheat
Chemicals applied: 13 oz/A Bronate Advanced + 2/3 pt/A Starane

Fertility:

	Organic matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	1.4	8.0	9.5	90	90	20 ppm	225 ppm	42 ppm
Fertilizer applied (#/A)				277	237	62	0	72
Total	**1.4**	**8.0**	**9.5**	**367**	**327**	**20 ppm**	**225 ppm**	**42 ppm**

Rupert Winter Irrigated:

Located at approximately 200 N. 100 E. Rupert, Idaho

Coordinates: 42° 39’ 22.44” N. 113° 34’ 08.23” W.
Elevation: 4160 ft.
Soil Type: #41 Tindahay loamy sand, 0-1% slopes
Minidoka County Soil Type acreage: 5,499
County Soil Type Percentage: 1.7%
Previous Crop: Dry Beans
Planting Date: September 28, 2007
Harvest Dates: July 31, 2008 - Barley
August 6, 2008 - Wheat
Chemicals applied: 20 oz Maestro + 12 oz/A MCPA ester
Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	.8	7.3	<1	40	40	46 ppm	154 ppm	19 ppm
Fertilizer applied (#/A)				290	250	0	0	0
Total	**.8**	**7.3**	**<1**	**330**	**290**	**46 ppm**	**154 ppm**	**19 ppm**

Location Descriptions

Aberdeen Winter Irrigated:

1693 S. 2700 W. Aberdeen, ID

Coordinates: 42° 57' 51.61" N. 112° 49' 23.39" W.
Elevation: 4400 ft.
Soil Type: DeA Declo Loam, 0-2% slopes
Bingham County Soil Type Acreage: 40,748
County Soil Type Percentage: 4.5%
Previous Crop: green manure oats
Planting Date: September 26, 2007
Harvest Dates: August 15, 2008 - Wheat
August 28, 2008 - Barley
Chemicals applied: 2 pts/A Maestro MA
Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	1.3	8.3	5.6	148	148	17 ppm	187 ppm	25 ppm
Fertilizer applied (#/A)				240	200	80	0	100
Total	**1.3**	**8.3**	**5.6**	**367**	**348**	**17+ppm**	**187 ppm**	**25+ppm**

Ririe Winter Dryland:

Approximately 2 miles south of Ririe Reservoir Dam on Meadow Creek Road

Coordinates: 43° 33' 35.84"N. 111° 43' 16.07" W.
Elevation: 5500 ft.
Soil Type: #42 Ririe silt loam, 4-12% slopes
Bonneville County Soil Type Acreage: 74,713
County Soil Type Percentage: 11.4%
Previous Crop: Wheat
Planting Date: September 20, 2007
Harvest Dates: August 13, 2008
Chemicals applied: .44oz/A Amber + 7oz/A MCPA ester + 2oz/A Clarity
Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	1.2	7.9	1.7	25	25	11 ppm	204 ppm	14 ppm
Fertilizer applied (#/A)				6	6	30	0	0
Total	**1.2**	**7.9**	**1.7**	**31**	**31**	**11+ppm**	**204 ppm**	**14 ppm**

Location Descriptions

Rupert Spring Irrigated:

Corner of 800 N. and Highway 24 Rupert, ID

Coordinates: 42° 44' 07.11" N, 113° 31' 20" W.
Elevation: 4246 ft.
Soil Type: #36 Sluka silt loam 1 to 4% slopes
Minidoka County Soil Type Acreage: 35,802
County Soil Type Percentage: 11.1%
Previous Crop: Sugar Beets
Planting Date: April 16, 2008
Harvest Date: August 20, 2008
Chemicals applied: 1 ¼ pt Bronate Advanced + 2/3 pt Starane
Fertility:

	Organic Matter	pH	Free Lime %	Hard Spring wheat N#/A	Soft white spring wheat & spring barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	1.1	8.2	8.5	90	90	40 ppm	347 ppm	27 ppm
Fertilizer applied (#/A)				120	90	35	0	120
Total	**1.1**	**8.2**	**8.5**	**210**	**180**	**40+ppm**	**347 ppm**	**27+ppm**

Aberdeen Spring Irrigated:

1693 S. 2700 W. Aberdeen, ID

Coordinates: 42 ° 57' 46.95" N., 112° 48' 59.54" W.
Elevation: 4400 ft.
Soil Type: DeA Declo Loam, 0-2% slopes
Bingham County Soil Type acreage: 40,748
County Soil Type Percentage: 4.5%
Previous Crop: Green manure oats
Planting Date: April 14, 2008
Harvest Date: August 18 & 19, 2008
Chemicals applied: 2 pts Maestro MA + ¼ pt Starane

Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	.8	8.4	5.3	151	151	18 ppm	158 ppm	25 ppm
Fertilizer applied (#/A)				150	110	80	0	100
Total	**.8**	**8.4**	**5.3**	**301**	**261**	**18+ppm**	**158 ppm**	**25+ppm**

Location Descriptions

Idaho Falls Spring Irrigated:

1/4 mile east of intersection of 45th West and 17th South roads

Coordinates: 43° 28' 55.37" N., 112° 06' 59.24" W.
Elevation: 4684 ft.
Soil Type: #22 Pancheri silt loam, 0-2% slopes
Bonneville County Soil Type Acreage: 25,605
County Soil Type Percentage: 3.9%
Previous Crop: potatoes
Planting Date: April 18, 2008
Harvest Date: August 26, 2008
Chemicals applied: 1 pt Bronate Advanced + 2/3pts Starane

Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	1.4	8.1	9.8	130	130	17 ppm	174 ppm	18 ppm
Fertilizer applied (#/A)				90	50	0	0	0
Total	**1.4**	**8.1**	**9.8**	**220**	**180**	**17 ppm**	**174 ppm**	**18 ppm**

Ashton Spring Irrigated:

1/10 mile south of the intersection of Cave Falls Highway (1400 N) and 4200 E on 4200 E. road.

Coordinates: 44° 05' 01.15" N., 111° 18' 49.88" W.
Elevation: 5628 ft.
Soil Type: #92 Rin silt loam, 1-4% slopes
Fremont County Soil Type Acreage: 6,879 acres
County Soil Type Percentage: 1.1%
Previous Crop: Barley
Planting Date: June 5, 2008
Harvest Date: October 9 & 16, 2008
Chemical applied: 1 pt Bronate Advanced + 9oz Achieve SC
Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	3.0	5.7	<1	62	62	53 ppm	332 ppm	28 ppm
Fertilizer applied (#/A)				100	60	0	0	30
Total	**3.0**	**5.7**	**<1**	**162**	**122**	**53 ppm**	**332 ppm**	**28+ppm**

Location Descriptions

Soda Springs Spring Dryland:

Approximately 3 miles North of Hooper Springs on Government Dam Road.

Coordinates: 42° 43' 27" N., 111° 37' 40" W.
Elevation: 6000 ft.
Soil Type: 485A Lantonia-Chinahat silt loam
Caribou County Soil Type Acreage: Information not available
County Soil Type Percentage: Information not available
Previous Crop: Barley
Planting Date: June 2, 2008
Harvest Date: October 2, 2008
Chemicals applied: 1 pt Bronate Advanced + 1/2pt Starane + 6.9oz Achieve SC

Fertility:

	Organic Matter	pH	Free Lime %	Hard winter wheat N#/A	Soft white winter wheat & winter barley N #/A	P	K	S
12" soil test results (N & S= 0-24")	1.9	6.2	<1	40	40	41 ppm	286 ppm	33 ppm
Fertilizer applied (#/A)				45	45	10	0	27
Total	**1.9**	**6.2**	**<1**	**85**	**85**	**41+ppm**	**286 ppm**	**33+ppm**

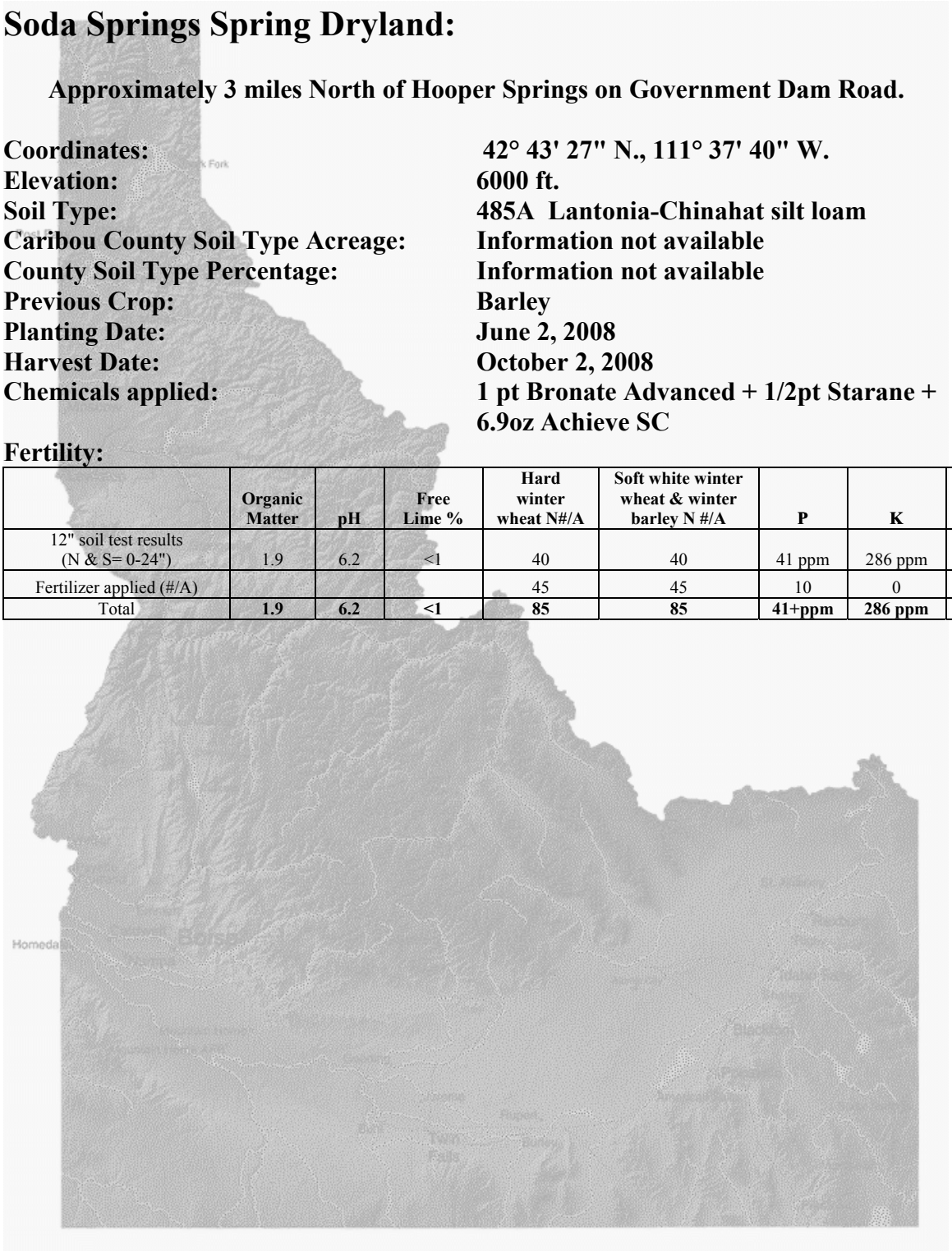


Table 1. Released varieties in 2007-2008 with seed size and adjusted seeding rate.

Variety	Exp. No.	1000 Kernel Weight (g)	Seeds per Pound	Adjusted Seeding Rate[1] (lb/A)	Year Released	Developer(s)/Distributor of variety
Soft White Winter Wheat						
Bitterroot	92-22407A	41	11,063	90	2007	Idaho AES, USDA
Bruehl (club)		41	11,063	90	2000	Washington AES, USDA
Brundage	ID86-14502B	45	10,080	99	1996	Idaho AES, USDA
Brundage 96	ID-B-96	44	10,309	97	2002	Idaho AES, USDA
Cara		34	13,341	75	2007	Washington and Oregon AES, USDA
Chukar	WA7855	34	13,341	75	2001	Washington and Oregon AES, USDA
Clearfirst		40	11,340	88	2002	BASF / General Mills
Coda		38	11,937	84		Washington AES, USDA
Daws	WA6099	42	10,800	93	1976	Washington AES, USDA
IDO 587	IDO 587	50	9,072	110	2004	Idaho AES, USDA
Lambert	ID85-153	53	8,558	117	1993	Idaho AES, USDA
Madsen	WA7163	44	10,309	97	1988	Washington, Idaho & Oregon AES, USDA
Masami	ORCW8113	42	10,800	93	1987	Oregon & Idaho AES, USDA
Mohler	BU6W93-477	50	9,072	110	2001	WestBred, LLC
ORCF-101	OR2010051	46	9,861	101	2003	Oregon AES, USDA
ORCF-102	OR2010007	49	9,257	108	2005	Oregon AES, USDA
Salute		47	9,651	104	2007	AgriPro
Simon	ID91-34302A	41	11,063	90	2002	Idaho AES, USDA
Skiles	ORH010085	52	8,723	115	2007	Oregon State AES, USDA-ARS
Stephens		44	10,309	97	1977	Oregon AES, USDA
Tubbs 06	OR939526 reselect	49	9,257	108	2002	Oregon AES, USDA
UICF Brundage	02-859	36	12,777	78	2009	Idaho AES
UICF Lambert	99-435	45	10,080	99	2008	Idaho AES, USDA
WestBred 528	BZ6W98-528	44	10,309	97	2005	WestBred, LLC
Xerpha	WA7973	40	11,340	88	2007	Washington AES
Hard Red and White (W) Winter Wheat						
AgriPro Paladin	W96-355	45	10,080	99	2005	AgriPro
Bauermeister	WA7939	47	9,755	103	2005	Washington AES, USDA
Bonneville	IDO421	48	9,549	105	1993	Idaho AES, USDA
Boundary	IDO467	45	10,080	99	1996	Idaho AES, USDA
Deloris	UT2030-32	45	10,193	98	2002	Utah AES, USDA
Dumas		40	11,340	88	1994	AgriPro
DW	ID0513	41	11,200	89	2001	Idaho AES, USDA
Eddy		32	14,175	71		WestBred, LLC
Garland	UT1706-1	41	11,200	89	1992	Utah AES, USDA
Gary (W)	IDO550	46	9,861	101	2002	Idaho AES, USDA
Golden Spike (W)	UT1944-158	44	10,309	97	1999	Utah AES, USDA
Juniper	IDO 575	45	10,080	99	2005	Idaho AES, USDA
Mannning	UT89099	45	10,080	99	1979	Utah AES, USDA
MDM (W)	WA7936	45	10,193	98	2005	Washington AES, USDA
Moreland	IDO517	39	11,631	86	2003	Idaho AES, USDA
Neeley	RL4200	46	9,861	101	1980	Idaho AES, USDA
NuDakota (W)		37	12,259	82	2005	AgriPro
NuHills (W)		42	10,800	93		General Mills, Great Falls, MT
NuHorizon (W)	GM10002	41	11,063	90	2001	General Mills, Great Falls, MT
Palomino (W)	W96-359W	44	10,309	97	2006	AgriPro
Promontory	UT1567-51	41	11,063	90	1990	Utah AES, USDA
UI Darwin (W)	IDO 604	50	9,164	109	2005	University of Idaho
Utah 100	UT1650-150	44	10,309	97	1997	Utah AES, USDA
Weston		47	9,755	103	1978	Idaho AES, USDA
Whetstone	W98-344	39	11,782	85	2008	AgriPro
Yellowstone	MT00159	40	11,484	87	2005	Montana State University

[1]Adjusted to plant 1 million seeds per acre according to the number of seeds per pound for each variety.

Table 1 (cont'd). Released varieties tested in 2007-2008 with seed size and adjusted seeding rate.

Variety	Exp. No.	1000 Kernel Weight (g)	Seeds per Pound	Adjusted Seeding Rate[1] (lb/A)	Released	Developer(s)/Distributor of variety
Soft White Spring Wheat						
Alpowa	WA7677	36	12,777	78	1993	Washington, Oregon, & Idaho AES, USDA
Alturas	ID0526	32	14,175	71	2002	Idaho AES, USDA
Cataldo	IDO642	34	13,540	74	2007	Idaho AES, USDA
Challis	BZ692-108	38	11,937	84	2000	WestBred, LLC
Jubilee	IDO525	33	13,745	73	2000	Idaho AES, USDA
Nick	BZ698-31	39	11,782	85	2000	WestBred, LLC
Penawawa		34	13,540	74	1985	Washington AES, USDA
Skookum	ML042-409-1,5	35	13,148	76	2005	Fossum Cereals
Treasure		28	16,495	61	1986	Idaho AES, USDA
UI Pettit	IDO632	36	12,777	78	2006	Idaho AES, USDA
Waxy Penawawa	WA7996	34	13,540	74	2006	USDA-ARS
Hard Red Spring						
Buckpronto		42	10,800	93	2004	Trigen
Bullseye	B02-0081	32	14,175	71	2009	AgriPro
Cabernet		43	10,549	95	2007	Pacer Corp
Choteau	MT9929	33	13,745	73	2003	Montana State University
Iona	IDO492	35	12,960	77	1999	Idaho AES, USDA
Jefferson	IDO462	37	12,427	80	1998	Idaho AES, USDA
Jerome	IDO 566	42	10,930	91	2004	Idaho AES, USDA
Summit		33	13,745	73		General Mills, Great Falls, MT
Tara 2002	WA7824	40	11,340	88	2001	Washington AES, USDA
UI Winchester	IDO578	35	12,960	77	2008	Idaho AES, USDA
WestBred 936	PH986-61	38	11,937	84	1992	WestBred, LLC
Hard White Spring Wheat						
Blanca Grande		43	10,549	95	2002	General Mills, Great Falls, MT
Blanca Royale	02W50076W	39	11,631	86		Resource Seeds, Inc.
Idaho 377s	IDO377s	31	14,872	67	1996	Idaho AES, USDA
Klasic		44	10,428	96	1982	Northrup-King Co., Minneapolis, MN
Lochsa	IDO 597	40	11,484	87	2005	Idaho AES, USDA
Lolo	IDO533	37	12,259	82	2000	Idaho AES, USDA
Otis	WA7931	31	14,632	68	2002	Washington AES, USDA
Pristine	Bz991-408	48	9,450	106	1999	WestBred, LLC
Snow Crest		38	11,937	84	2004	WestBred, LLC
Spring Durum Wheat						
Alzada		49	9,257	108	2005	WestBred, LLC
AP 1526		43	10,673	94		General Mills
Kronos		49	9,257	108	1996	Arizona Plant Breeders
Matt		46	9,969	100	2000	Simplot Agrisource, Burley, Idaho
Utopia		38	11,937	84	1997	World Wide Wheat, L.L.C.
Winter Barley				99		
Charles	94Ab1274	46	9,861	81	2005	USDA-ARS, Aberdeen
Eight-twelve	79Ab812	38	11,937	67	1988	Idaho AES, USDA
Endeavor	95Ab2299	43	10,549	76	2008	Idaho AES, USDA
Maja-Grande	STAB-113	42	10,930	73	2007	Oregon AES, USDA
Schuyler		35	12,960	62	1969	Cornell AES, USDA
Sprinter		38	12,096	66	1987	WestBred, LLC
Strider	ORW6	42	10,800	74	1998	Oregon AES, USDA
Sunstar Pride	SDM204-B	35	12,960	62	1995	Sunderman Breeding, Twin Falls, ID

[1]Adjusted to plant 1 million seeds per acre (800,000 for barley) according to the number of seeds per pound for each variety.

Table 1 (cont'd). Released varieties tested in 2007-2008 with seed size and adjusted seeding rate.

Usage:	Variety	Exp. No.	1000 Kernel Weight (g)	Seeds per Pound	Adjusted Seeding Rate[1] (lb/A)	Year Released	Developer(s)/Distributor of variety
feed/malt	**Two-Row Spring Barley**						
m	AC Metcalfe		43	10,673	75	1997	Agriculture Canada
m	B1202		42	10,930	73		Busch Agricultural Resources, Inc., Ft. Collins, CO
f	Baronesse	NS078054	43	10,673	75	1992	Westbred, LLC
f	Boulder		48	9,549	84	2005	WestBred, LLC
f	Burton	98ID251	49	9,353	86	2004	Idaho AES, USDA
f	Calgary		47	9,755	82		Arizona Plant Breeders
f	Camas	ND9147	42	10,800	74	1998	Idaho AES, USDA
f	CDC Bold		46	9,969	80	1999	University of Saskatchewan
f	CDC McGwire		37	12,427	64	1999	University of Saskatchewan
m	CDC Stratus		46	9,861	81	1994	University of Saskatchewan
f	Champion		50	9,072	88	2007	Westbred, LLC
f	Clearwater	01ID435H	39	11,782	68	2007	Idaho AES, USDA
m	Conrad	B5057	42	10,930	73	2004	Busch Agricultural Resources, Inc., Ft. Collins, CO
m	Craft		44	10,309	78	2006	Montana AES
f	Eslick	MT960228	42	10,800	74	2005	Montana AES
m	Geraldine		43	10,549	76	2007	Montana AES
m	Harrington		41	11,063	72	1984	University of Saskatchewan
f	Haxby	MT950186	47	9,755	82	2002	Montana AES
f	Hayes		38	11,937	67	2004	Montana AES
m	Hockett		46	9,969	80	2007	Montana AES
f	Idagold II		43	10,549	76		Coors Brewing Co. Inc., Burley, ID
f	Lenetah	01Ab11107	46	9,861	81	2008	Idaho AES, USDA
m	Merit	2B91-4947	42	10,800	74	1997	Busch Agricultural Resources, Inc., Ft. Collins, CO
m	Moravian 69	C69	47	9,755	82	2005	Coors Brewing Co. Inc., Burley, ID
m	Pinnacle	2ND21863	51	8,894	90	2007	North Dakota AES, USDA
f	Primo	B-99-AL-616	43	10,673	75	2008	Agripro
f	Radiant	98NZ223	40	11,484	70	2003	Washington State University, IAES, OAES, USDA-ARS
f	Spaulding	PB1-95-2R-522	44	10,309	78	2006	Plant Breeders 1 Inc., Moscow, Idaho
f	Tetonia	98AB11720	42	10,800	74	2007	Idaho AES, USDA
f	Valier	MTLB30	42	10,800	74	1999	Montana AES, USDA
f	Xena	BZ594-19	45	10,193	78	2000	WestBred, LLC
	Six-Row Spring Barley						
f	Aquila	UT95B1480-1632	44	10,428	77	2005	Utah AES, USDA
f	Colter	79Ab10719-66LC	40	11,484	70	1991	Idaho AES, USDA
f	Creel	93Ab688	41	11,200	71	2002	Idaho AES, USDA
m	Drummond	ND15477	42	10,930	73	2000	North Dakota AES, USDA
m	Foster	ND11055	44	10,428	77	1995	North Dakota AES, USDA
f	Goldeneye	UT95B1216-4087	42	10,930	73	2005	Utah AES, USDA
f	Herald	00ID1550	42	10,800	74	2006	Idaho AES, USDA
m	Lacey	M98	47	9,651	83	2000	Minnesota AES, USDA
m	Legacy	6B93-2978	42	10,930	73	1998	Busch Agricultural Resources, Inc., Ft. Collins, CO
f	Millennium	UT004603	39	11,782	68	2000	Utah AES, USDA
m	Morex		40	11,340	71	1978	Minnesota AES, USDA
f	Steptoe		46	9,969	80	1973	Washington AES, USDA
m	Tradition		42	10,800	74	2003	Busch Agricultural Resources, Inc., Ft. Collins, CO

[1]Adjusted to plant 1,000,000 seeds per acre (800,000 for barley) according to the number of seeds per pound for each variety.

Results and Discussion

Planting Conditions

The fall of 2007 generally provided good moisture and temperature conditions for planting. Soils were dry at Kimberly for planting, and irrigation was required to germinate the seed. The winter variety trials were all established with great stands heading into the winter. Ririe soils were moist in the 3-10" range, but were dry below. The new hard winter wheat trial planted in Preston was planted into very dry soil.

Spring planting at most locations occurred in moist soil and excellent seed beds. The exceptions were Ashton and Soda Springs, where spring planting was delayed about two weeks due to cool temperatures, excess precipitation, and a slow warming trend.

Weather Conditions

Planting in the Soda Springs dryland area was followed by no precipitation until, of course, harvest began in September. Grain maturity was delayed due to lack of heat units needed to dry the crop. Harvest was postponed due to several rain events in September.

The summer of 2008 was very cool, resulting in excellent grain filling conditions for most of the irrigated trials. However, a mid-July frost and cool temperatures in eastern Idaho damaged the filling grain, resulting in poor grain quality resembling sprout damage (i.e. low-falling numbers) at harvest. There was very little precipitation during the summer, so as long as the irrigation supplied the necessary water, yields were excellent. Some locations did have rain prior to harvest, also resulting in sprout damaged grain.

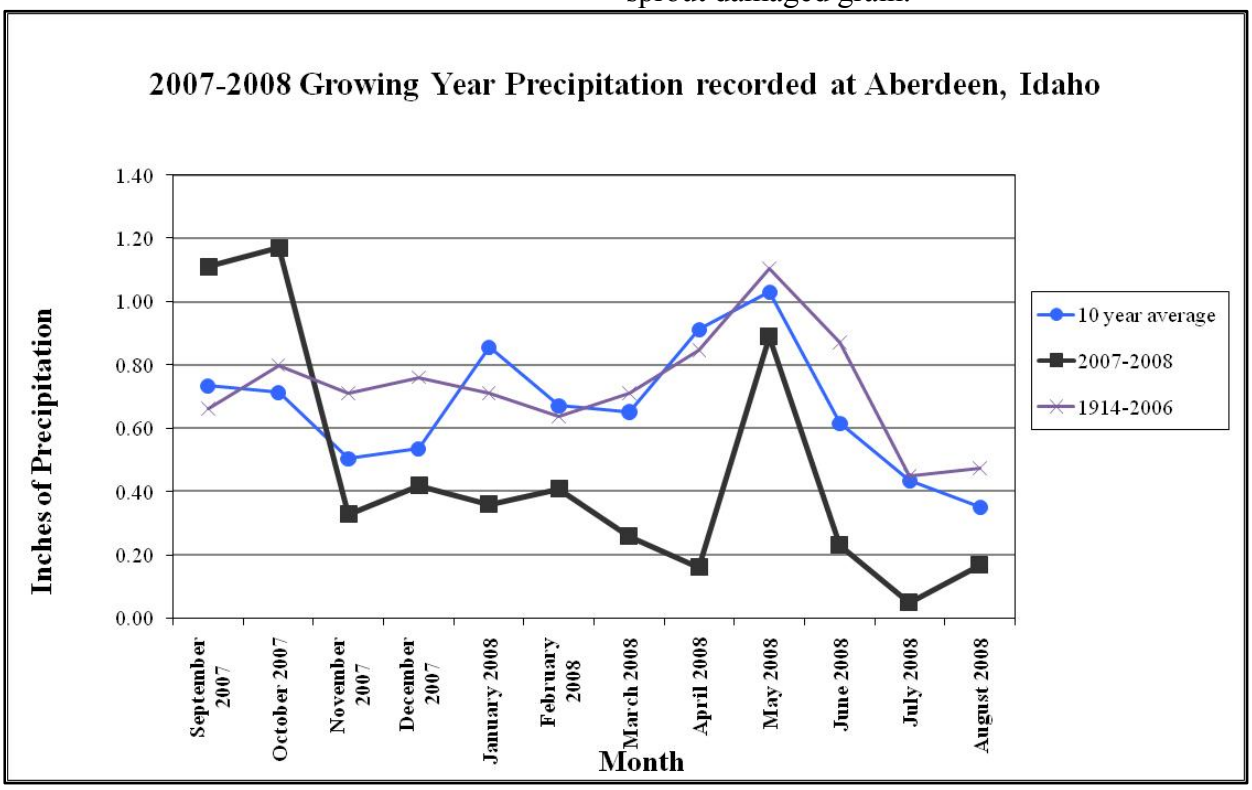


Chart 1. 2007-2008 Growing season precipitation versus 30 and 93 year averages.

Disease and Insect Conditions

Wireworms severely damaged spring crops in many upper elevation dryland production areas (Swan Valley and Ririe). Barley mealy bugs were also present in dryland areas, but did not reach highly damaging levels. Mites damaged wheat and barley in the Soda Springs area early in the spring, but they dissipated early in the spring.

Pythium damping-off affected spring wheat and barley planted in cold, wet soils from Soda Springs to Ashton. There was no one foliar disease that was a widespread problem. Stripe rust was almost non-existent, except for in one field of irrigated Moreland above Ririe.

Discussion of Location Conditions and Data Results

Kimberly Research and Extension Center, Winter Grain

The winter nurseries were planted into very dry soils, and had to be irrigated after planting to improve emergence. The winter barley yielded very well, ranging from 147 to 264 bu/A and the varieties in the trial averaged 190 bu/A. The top yielding named varieties included Sprinter, Sunstar Pride and Eight-Twelve. Charles, a two-row winter malt variety, yielded an average of 162 bu/A. Endeavor, a new two-row winter malt variety released in 2008, yielded 193 bu/A.

The hard winter wheat group yielded from 109 to 162 bu/A. Bauermeister, a hard white wheat from Washington, yielded very well at 162 bu/A and had good test weight. Moreland, MDM and Golden Spike were the next highest yielding varieties. Grain protein average for the location was 12.4%, and test weight average was 63.2 lbs/bu. Using the three-year averages (Table 4), the top yielding hard wheats are Promontory (125 bu/A), Yellowstone (123 bu/A), Golden Spike (121 bu/A) and Whetstone (117 bu/A), a new hard red winter released by AgriPro.

In the soft white winter group, yield varied from 122 to 152 bu/A. Bruehl, Tubbs 06, Brundage, Xerpha and Salute were the highest yielding named varieties (at 152, 151,149, 146, 145 bu/A respectively). Grain protein average for the location was 9.9%. The top yielding soft white winter varieties over the last three years over all locations were WestBred 528 (125 bu/A), Mohler, Tubbs 06, Brundage (all at 123 bu/A), Brundage 96 (122 bu/A) and Simon (121 bu/A). WB528, Brundage, Brundage 96 and Simon are rated Q+ for quality by the Idaho Wheat Commission. Mohler is rated AQ for Acceptable Quality.

Rupert, Jentschz-Kearl Farms, Winter Grain

Very little winter injury occurred in Rupert to the winter barley, but average yields were 72 bushels less than those at Kimberly, and ranged from 79 to 142 bu/A. Sunstar Pride was the highest yielding named variety (134 bu/A), followed by Schuyler (126 bu/A) and Sprinter (119 bu/A).

The highest yielding varieties in the hard winter wheat trial included Promontory (118 bu/A), Deloris (113 bu/A) and NuDakota (113 bu/A). The yields varied from 87 to 118 bu/A, with an average yield of 102 bu/A, about 10 bushels less than 2007. Proteins were adequate, averaging 13.7%.

The soft white winter group yielded from 72 to 104 bu/A. The highest yielding varieties were Mohler (104 bu/A), Daws (101 bu/A), Brundage 96 (93 bu/A), Clearfirst (92 bu/A) and

Brundage (90 bu/A). Test weights were low at this location and grain protein was higher than those at Kimberly at about 12.4%, which is high for the soft white winter class.

Aberdeen R&E Center, Winter Grain

The winter barley at Aberdeen was badly damaged by the winter conditions, with the average spring stand at 30%. Some plots were empty of all but a few plants and yields as low as 10 bu/A. This year and this location was an excellent test for survival, with a few varieties having 50 – 81% stand. Some varieties with higher winter survival rates yielded as high as 150 bu/A. Schuyler (142 bu/A), Strider (135 bu/A), and Sunstar Pride (124 bu/A) were the highest yielding named varieties. As in 2007, this location was not a reliable test for winter barley yield.

The winter wheat survival fared much better. The hard winter wheat yields were lower than expected and varied from 74 to 117 bu/A, with the average at 95 bu/A. Protein was excellent at an average of 15.7%. Bonneville (117 bu/A), Bauermeister (112 bu/A), Golden Spike and Neeley (both at 110 bu/A) were the top yielding varieties. Bauermeister had low protein and was taller than average. While nitrogen was excessive as indicated by high grain protein, yields were lower than expected with very little lodging, meaning irrigation was not adequate for maximum yield.

The soft white winter wheat yields varied from 93 to 126 bu/A, averaging 107 bu/A. Average proteins were high for this soft group at 12.7%, and yields were lower than expected. Nitrogen fertilizer was high and lodging was very low, also indicative of inadequate irrigation to meet maximum yield. The top-yielders were Xerpha (126 bu/A) ORCF-101 (115 bu/A), Coda (114 bu/A) and Brundage 96 (114 bu/A).

Ririe, LDS Church Farm, Dave Cook, Winter Grain

This location is our only dryland location for winter grain. We usually plant one replication of winter barley here to test for winter hardiness, and very little of it survived. This location suffered from spring / summer drought, and yields of the soft white group averaged 19 bu/A, similar to 2007 at 20 bu/A, as compared to the 2006 average of 36 bu/A, and the 2005 average of 58 bu/A. The test weights were low, averaging 58 lbs/bu, and grain protein averaged 9.8%. Over three years (2005-2007), the highest yielding varieties at this location were WestBred 528 (27 bu/A), Lambert (27 bu/A) and UICF Lambert (26 bu/A). The test weights were low and protein high, typical of drought-stressed conditions.

The hard winter group also had significantly reduced yields at 23 bu/A in comparison to 2006 at 36 and 2005 at 49 bu/A. The range this year went from a low of 17 bu/A to a high of 28 bu/A. Under the drought conditions, Utah 100 yielded about 28 bu/A, Deloris and Dumas yielded 27 bu/A, and Bonneville, Golden Spike and MDM yielded 26 bu/A. Utah 100, Golden Spike and Deloris have been the top yielding hard winter wheat varieties, and the past three years have yielded 28, 25, and 24 bu/A, respectively. Also yielding higher under dryland conditions in the past three years have been Boundary (24 bu/A), Juniper, Yellowstone, Bonneville and Gary (all at 23 bu/A).

Preston, Hard Winter Wheat

A hard winter wheat trial was added at Preston in cooperation with the winter wheat breeding program at Aberdeen to expand the number of testing sites for this group. Unfortunately, drought conditions damaged the crops, and the trial yielded an average of 10 bu/A. The highest yielding variety under these extreme circumstances was Weston, a hard red winter wheat that is still widely grown in the area, even though certified seed is no longer available. Golden Spike, another variety bred for the area, yielded "relatively well" at 20 bu/A (Table 28).

Rupert, Rodney Stuart, Spring Grain

The variety trials in Rupert did not experience any major weather-related problems. Average yield for hard spring wheat was 132 bu/A, compared to 99 bu/A in 2007, 88 bu/A in 2006 and 101 bu/A in 2005. Test weight average was 63.2 lbs/bu, and average protein was 11.4%. The yields were unexpectedly high, and soil nitrogen levels were not high enough to meet grain protein requirements for hard spring wheat. The top yielding varieties were Jerome (158 bu/A), Iona (139 bu/A), Jefferson (138 bu/A) and Bullseye (138 bu/A) (all hard reds), and the hard white varieties Lolo (138 bu/A), Blanca Grande (138 bu/A), Idaho 377s (137 bu/A) and Otis (137 bu/A). The hard white lines Pristine and Snowcrest and the hard red Choteau had the highest protein levels at 13.3, 13, and 12.7% respectively. Over the past three years over all irrigated locations, the highest yielding varieties were hard white varieties Lolo (108 bu/A), Otis (105 bu/A), and Idaho 377s (105) and the hard red spring wheat Jerome (101 bu/A). Test weight for Otis was average, maturity is a little later than average and it is tall. While it was developed for dryland conditions, lodging has been minimal under high input situations, and has been significantly less than Idaho 377s.

The soft white spring wheat yield average was 144 bu/A. In 2007, the average yield at the Rupert location was 104 bu/A, in 2006 it was 87 bu/A, and in 2005 it was 112 bu/A. Penawawa yielded 152 bu/A, Waxy Penawawa 150 bu/A, and UI Pettit 147 bu/A. Protein average was 9.6%. Three year averages over all location put Alturas at the highest yield (108 bu/A), followed by Skookum (106), UI Pettitt (106) and Alpowa (105 bu/A). Last year's conditions were unusually cool and altered the usual yield ranking.

The barley yields this year in Rupert were 26 bu/A less than 2007. The six-row spring barley trial at Rupert yielded an average of 129 bu/A, with a range from 101 to 162 bu/A. Millennium (162 bu/A) and Herald (160 bu/A) were the top yielding feed barleys, and Drummond (126 bu/A) and Legacy (125 bu/A) were the top named varieties in the malt varieties. Test weights averaged 51.5 lbs/bu, proteins were a little low at 10.2%, and plumps were high.

The two-row barley yields averaged 151bu/A. The malt variety Moravian 69 yielded 157 bu/A, and two advanced malt lines yielded 177 bu/A (Coors' C83) and 164 bu/A (USDA-ARS line 01Ab7163). Lenetah, a new feed barley released this year by the USDA-ARS at Aberdeen and the Idaho Ag Experiment Station, yielded 178 bu/A. The highest yielding feed barleys over the last three years (over all locations) were Calgary (128 bu/A), CDC Bold (127 bu/A), Primo (124 bu/A), Tetonia (124 bu/A) and Burton (124 bu/A). The feed barley average

stayed slightly ahead of the malt lines, with the average for the feed varieties being 154 bu/A and the average for the malt lines at 147 bu/A. Three year averages for the malt varieties puts Pinnacle, Conrad, Geraldine and Hockett at the top, with Coors' Moravian lines doing very well in the Magic Valley, and the Anheuser Busch line Conrad doing well in the Upper Valley areas.

Aberdeen R&E Center, Spring Grain

Aberdeen's average yields of hard spring wheat was 97 bu/A, down from last year's (2007) average of 119 bu/A. Average grain protein was 13.4%. In 2006, yields were 77 bu/A, and in 2005 average yield was 106 bu/A. The range in 2008 yield was 73-125 bu/A. Blanca Grande (hard white spring), which seems to thrive in hotter summers, was the top yielding variety (135 bu/A), last year, but this year's cooler weather completely changed the ranking of varieties. The cooler summer favored locally adapted Lolo, Idaho 377s, Iona, Otis, and Jerome. Of the durum wheat, Matt was the highest yielding variety at 99 bu/A. Test weights were excellent, at 63 lbs/bu.

The soft white spring wheat yields at Aberdeen averaged 115 bu/A, with a range from 103 to 121 bu/A. Excellent yields were obtained from Alturas (121 bu/A), Alpowa (119 bu/A), and Treasure (119 bu/A). Test weights averaged 62 lbs and grain proteins were at 9.6%.

Six-row barley did well in Aberdeen, averaging 151 bu/A, ranging from 128 bushels (Morex) to 161 bu/A (Creel and Aquila). Not far behind was Goldeneye and Millennium at 159 and 158 bu/A, respectively. For the six-row malt lines, Lacey was highest at 153 bu/A with Legacy at 144 and Drummond at 143 bu/A. Test weight average was 52.5 lbs/bu, protein 12.2% and plumps 91%.

Two-row lines averaged 143 bu/A, and ranged from 111 to 165 bu/A. Xena yielded well at 165 bu/A, followed by Calgary and Champion at 164 and 159 bu/A, respectively. The hulless barley varieties CDC McGwire and Clearwater yielded low, but still yielded well at 130-131 bu/A, and had excellent test weights (61 and 60 lbs/bu, respectively). In the two-row malt group, Conrad, Pinnacle, and Geraldine lead the group at 153, 143 and 141 bu/A, respectively. Overall, test weights were 53.8 lbs/bu, protein was 13% and plumps 88%.

Idaho Falls, Marc Thiel, Spring Grain

Excellent growing conditions in Idaho Falls resulted in average hard spring wheat yield of 132 bu/A, and a range of 115 – 145 bu/A. Average grain protein was 12.2%, and test weight was 63 lbs/bu. Additional nitrogen should have been applied at flowering to increase the protein in light of the very high yields absorbing available soil nitrogen. The high yielding lines were Snowcrest at 145 bu/A, Tara 2002 (144 bu/A), and Bullseye (141 bu/A), a newly released hard red spring line from AgriPro. Idaho 377s, Summit, Lolo, and Otis also yielded very well (139-141 bu/A). Of the durums, Matt yielded the highest at 141 bu/A.

Alturas topped the yield chart for the named soft white spring varieties at Idaho Falls, yielding 152 bu/A, followed by Treasure and Skookum, both at 150 bu/A. Test weights were at 62.5 lbs/bu, and grain protein averaged 10.8%.

Six-row feed lines yielded from 157-175 bu/A in Idaho Falls, with Creel at 174 bu/A, Steptoe at 172 bu/A, and

Millennium at 165 bu/A. In the six-row malt lines, the yield ranged from 89-129 bu/A, with yields of Legacy, Morex, and Drummond at 129, 121, and 121 bu/A, respectively. Overall average was 143 bu/A. Test weights averaged 51.8 lbs/bu, protein 11.4% and plumps were 91%.

The two-row lines at Idaho Falls averaged 147 bu/A. Champion, the new feed barley from WestBred, averaged 187 bu/A and had 54.8 lb test weight and 93% plumps. Xena was right behind with 184 bu/A, 54 lb test weight, and 94% plumps. Other high yielders include Spaulding (174 bu/A), Calgary (172 bu/A), Idagold II (169 bu/A), and Burton (168 bu/A). The hulless feed barleys CDC McGwire and Clearwater yielded 143 and 136 bu/A and had high test weights of 61.3 and 59 lbs/bu, respectively. In the malt group, the high yielders were Conrad (147 bu/A), Geraldine (143 bu/A), Craft (142 bu/A), and Pinnacle (140 bu/A), all with excellent test weight, protein and plump.

Ashton, Don Marotz, Spring Grain

The Ashton location suffered cool temperatures and drought. Planting was two or more weeks late. Cool and damp conditions at planting resulted in extensive damage from Pythium damping off, causing seedling death and reduced stands in barley and wheat. The previous problems with barley mealy bug did not re-emerge this year, but there were some isolated pockets of crop damage. Failure of the grain to mature delayed grain harvest. The average yield for the hard spring wheat in the extension trials was 92 bu/A, compared to 72 bu/A in 2007, 57 bu/A in 2006 and 73 bu/A in 2005. Test weights were 60.5 lbs/A, and protein averaged 13.4%. The high yielding varieties were Idaho 377s (120 bu/A), Lolo (106 bu/A), Otis (106 bu/A), Cabernet (97 bu/A) and Blanca Royale (95 bu/A).

Alturas yielded 114 bu/A in the soft white spring trials, very close to Challis (112 bu/A) and Alpowa (111 bu/A). Average yield was 108 bu/A, 26 bu higher than the previous year. Test weights were low (58 lbs/bu), and protein was 10.6%.

Six-row barley variety yield ranged from 100 to 131 bu/A. The average was 114 bu/A, with the highest feed lines being Goldeneye (125 bu/A), Millennium (119 bu/A), and Steptoe (118 bu/A). Drummond, Foster, and Lacey were the top yielding malt varieties at 124, 115 and 112 bu/A, respectively. Proteins were very low at 9.7%

In the two-row barleys at Ashton, the yield average was higher than the six rows, at 127 bu/A. In the feed barley, Xena, Champion and Primo out-yielded the others at 153, 147, and 146 bu/A, respectively, with 52 lb test weights and 99% plumps. Radiant, Lenetah and Calgary were also very high yielding. The malt lines Hockett, CDC Stratus and Conrad yielded 127, 126 bu/A, and 125 bu/A. Test weights averaged 51.3 lb/bu, proteins were low (9.7 %) and plumps were high (98%).

Soda Springs, Don Ayers, Spring Grain

This is the second year in a row that Soda Springs had severe drought. The impact due to drought makes the available data unreliable. The Haanchen barley mealy bugs were not a serious threat, as distribution of the populations in the soil was sporadic. Plantings were delayed due to cool wet conditions, and directly after planting, no rain fell again until harvest. Harvest was very late, and high moisture grain required additional

drying before storage. Average yield of 2-row barley was 15.5 bu/A, and test weight was 43 lbs/bu. Average yield for the 6-row barley was 22 bu/A, with test weight at 45 bu/A.

The spring wheat in Soda Springs fared a little better, averaging 27 bu/A. Lolo yielded 40 bu/A, Idaho 377s yielded 36 bu/A, and Cabernet and Otis were both at 35 bu/A. Test weights were low (56.5 bu/A) and proteins were low at 12.7%. In the soft white wheat, yield average was 30 bu/A. Cataldo, UI Pettit, and Nick were the highest yielding named varieties, at 39, 33, and 32 bu/A, respectively. Test weights averaged 55 lbs/bu, and grain protein averaged 11.4%**.**

Table 2. New Variety Descriptions

SPRING BARLEY

Aquila (UT95B1480-1632) – is a six-row feed barley released by Utah State in 2005. Aquila has higher yields and much higher test weights than Steptoe under irrigation and dryland conditions. Aquila is early maturing and has excellent lodging resistance, comparable to Millennium.

Burton (98ID251) - is a two-row hulled spring feed barley released by the USDA-ARS in 2004 for resistance to the Russian Wheat Aphid (RWA). Yield is similar to Baronesse when RWA are absent, but yields significantly higher when the aphids are present. Burton has higher test weight and percent plump than Baronesse.

Boulder - is a large seeded two-row feed barley released by WestBred in 2005 as a replacement for Baronesse and Xena. Boulder is of average height and maturity with yields similar to Baronesse and less than Champion. Boulder has a very high test weight and very large kernels, with better lodging resistance than Baronesse.

Calgary – Released by Arizona Plant Breeders in 2002, Calgary is a high-yielding, two-row feed for irrigated conditions. Calgary is shorter than average, with better lodging resistance than Baronesse. Testweight and percent plumps are above average under high yield conditions.

Champion – a new release from WestBred, LLC., Champion is a high yielding, two-row spring feed barley. In 2007-08, combined over locations, Champion averaged higher than all other 2 row barleys under irrigation. Champion has above average test weight, average height and plumps, and heads 2-3 days earlier than Baronesse.

Clearwater (01ID435H) – a new release from the USDA-ARS in Aberdeen and the Idaho Ag Experiment Station (IAES) in 2007, Clearwater is the first named variety that is a low-phytic acid, hulless, two-row spring feed barley. The hulless, low-phytate characteristic should be valuable in the feed industry for monogastric animals, especially fish, where there is concern about high phosphorus concentrations in the waste stream. Clearwater is high-yielding among its specialty variety counterparts, and because of the hulless characteristic, has very high test weight. Maturity, height, and lodging are average, and Clearwater has a high percent protein.

Conrad (B5057) – two-row spring malt barley released by Busch Agricultural Resources in 2005. Conrad has above average yields and test weight. When compared to other malt varieties, Conrad is one of the highest yielding varieties and it yielded very well in the Upper Valley area, especially around Idaho Falls and Ashton.

Eslick – a two-row spring feed barley released by Montana State University in 2005. Eslick is recommended for irrigated production in Montana, but may lodge under higher input production. Yield is lower than Baronesse, test weight, maturity, and plumps are average, and protein is higher than average.

Goldeneye (UT95B1216-4087) – is a six-row feed barley released by Utah State in 2005. Goldeneye has very high yields under irrigated conditions, and above average yields under dryland production. Lodging is greater and test weight higher than Millennium. Yield, test weight, lodging resistance, and protein are better than Steptoe. When cut at soft dough, Goldeneye has proven to be a high-yielding forage variety.

Haxby (MT950186) - a two-row spring feed barley released by Montana State University in 2002. With yields similar to Baronesse, Haxby has high test weights, and does best under dryland conditions.

Herald (00ID1550) – Herald is a low-phytate, hulled 6-row feed barley. Seed characteristics make this an excellent feed barley for monogastric animals (swine), as phosphorus is reduced in the waste stream. Herald has a high yield potential, and may also prove useful in the fish food industry. Herald is agronomically similar to its parent, Colter, but has lower test weight and higher plump.

Hockett , Craft, Geraldine– two-row malt barleys released by Montana State University. Craft is being targeted for malt for specialty beers. Hockett should replace Harrington with higher yields and better malt quality under dryland conditions. Geraldine is the first Baronesse derivative with malt quality and high yield potential for dryland and irrigated conditions.

Lenetah (01Ab11107) – released in 2008 by the USDA-ARS in Aberdeen and the IAES, Lenetah is a two-row feed variety with excellent yield potential, especially in north Idaho and under rainfed conditions. Lenetah has excellent test weight, average heading, protein, plump and height, but may lodge under extreme conditions.

Millennium (UT004603) – a six-row spring feed barley that yields very well under irrigation, and has been in the top-yielding groups under dryland conditions when moisture was adequate. Millennium also has excellent straw strength, showing minimal lodging even under high-yield conditions. Millennium is among the lowest for plumps, and has below average test weight.

Moravian 69 (C69) - two-row spring malt barley released by Coors Brewing Co. Moravian 69 has similar yield and test weight than Moravian 37 under irrigated conditions, although Moravian 39 seems to do better under hotter temperatures. Height is similar but straw strength is less than Moravian 37. Yields are excellent in the Magic Valley.

Pinnacle (2ND21863) – two-row spring malt barley released by North Dakota State University and the USDA-ARS in 2007. Pinnacle was the top yielding malt variety in 2006 and second in 2007. Pinnacle has high test weight, early maturity, low protein and lodging, and high plumps.

Primo (B-99-AL-616) – a new two-row feed variety from AgriPro, Primo has yielded well under high stress conditions. Primo has been above average for irrigated yield and average for other agronomic characteristics.

Spaulding (PB1-95-2R-522) – a two-row spring feed variety, and a Plant Breeders 1 release, Spaulding has excellent yield potential for the Magic Valley, and yielded above average at all other irrigated locations. Spaulding has excellent test weight, average maturity, height and plump, and below average protein and lodging.

Tetonia (98AB11720) – two- row spring feed barley released in 2007 by the USDA-ARS in Aberdeen and the Idaho Ag Experiment Station. Tetonia has high yield potential over many locations, but is especially adapted to irrigated conditions. It is well adapted to Idaho and Montana. Tetonia out yielded Baronesse in the irrigated nurseries over three years (05-07) and had higher test weight.

Xena (BZ594-19) – two-row spring feed barley released by Western Plant Breeders. Xena has had very high yields over all of the locations tested, and was the highest

yielding irrigated feed barley in 2008. Its yield has been better than Baronesse under dryland conditions, and is about two inches taller under irrigation with similar straw strength. Test weight tends to be higher than Baronesse.

WINTER BARLEY

Charles (94Ab1274) – Charles is a two-row winter malt variety released by the USDA-ARS in 2005. Charles has average yield when compared to other winter feed barley varieties and above average test weight, and is the first winter variety released by the USDA-ARS in Aberdeen with malt quality. Charles is short, early maturing with average lodging. Charles has excellent plumps and yields very well in the Twin Falls area, even when winter kill damages stand.

Endeavor (95Ab2299) - Endeavor is the second two-row winter malt variety released by the USDA-ARS and the IAES. Endeavor has improved yield over Charles, especially in the Magic Valley area where winter kill is less of a problem than in eastern Idaho. Endeavor has excellent test weight and plumps, and is average for heading date, height and lodging. Foundation seed of Endeavor should be available in 2009.

Sunstar Pride (SDM204-B) – winter barley released by Sunderman Breeding in 1995. Sunstar Pride has been one of the highest yielding varieties in the three-year summaries, similar to Sprinter, and appears to have good winter hardiness. Sunstar Pride suffered high winter damage in 2006-07, and in 2008, suffered winter damage at Aberdeen. Test weight is similar to Eight-Twelve. Sunstar Pride is of average height with very good straw strength. Heading date is up to a week later than average, and percent plumps are low.

SPRING WHEAT

Alturas (IDO526) – soft white spring wheat released by Idaho AES and USDA-ARS. Alturas appears to be adapted to both irrigated and dryland conditions, but performs best under irrigation (see Table 10). It is similar in test weight, height and heading to Penawawa. End-use quality of Alturas is very good and is rated Q+. Alturas has adult plant resistance to stripe rust.

Blanca Grande – a hard white spring wheat distributed by General Mills that has average yield and excellent stripe rust resistance. Blanca Grande has above average test weight, grain protein, large loaf volume and good end use quality.

Blanca Royale (02W50076W) - a hard white spring wheat from Resource Seeds first included in the trials in 2008. Blanca Royale is most similar to Blanca Grande, and is widely grown in California. Yield in the 2008 irrigated trials was above average, with lower test weight and shorter than average height. Blanca Royale has excellent stripe rust resistance.

Buck Pronto – hard red spring distributed through Trigen. Buck Pronto has average yields and test weight in southern Idaho. Under high disease pressure in 2005, Buckpronto had good stripe rust resistance.

Bullseye (B02-0081) - Bullseye is a hard red spring wheat was just released by AgriPro, and was tested this year (2008) in the extension trials as B02-0081. Combined over irrigated locations, Bullseye was the top performing hard red spring wheat, had high test weight, and was at average for heading date, height and grain protein.

Cabernet – a hard red spring wheat from Resource Seeds, Cabernet yields better than WB936, with similar heading date and test weight, and is shorter with lower protein.

Cataldo (IDO642) – a soft white spring wheat released in 2007 from Idaho AES. Cataldo is very similar to Alturas, bred for Hessian Fly resistance for the rain-fed production areas of the PNW. It is earlier and shorter than Alturas and has adult plant resistance for stripe rust. End-use quality is similar to Alturas for cookies and Asian noodles.

Challis (Bz692-108) – soft white spring wheat released by WestBred, LLC. Challis has had average yields in both irrigated and dryland trials. It is average in test weight, height, heading date, and lodging resistance. Protein content is average and below Penawawa, and was rated Q+. Challis is very susceptible to stripe rust.

Choteau (MT9929) – is a hard red spring wheat released by Montana State University in 2005. Choteau has the solid-stem characteristic, which contributes to resistance to the stem saw-fly. Choteau is slightly taller and average in maturity and test weight. Yields and test weights were similar to WB936.

Jefferson (IDO462) – hard red spring wheat released by Idaho AES and USDA-ARS. Jefferson is primarily intended as a dryland variety due to it being taller than Probrand 751 and Westbred 926 (WB 926) and similar to ID0377s. Irrigated yields have been slightly below test average but have been higher when grown on dryland. Jefferson is rated Q+ when there is a minimum of 13 percent protein.

Jerome (IDO566) is a hard red spring wheat developed by the Idaho Agricultural Experiment Station and released in 2004. Jerome is well adapted to both irrigated and rain-fed production systems, and is similar to WPB936 in lodging resistance, milling and baking quality, and yields. Jerome is moderately resistant to stripe rust, and is Hessian Fly resistant. Jerome has lower grain protein than WB936 and Jefferson.

Lochsa (IDO597) – is a hard white spring wheat adapted to irrigated and rainfed production. Lochsa is similar to 'Jefferson' agronomically, with superior quality and higher protein than other hard whites. It is similar in lodging resistance to Westbred 936 (WB 936) and higher in yield. Lochsa is susceptible to stripe rust.

Lolo (IDO533) – hard white spring wheat released by the Idaho Agricultural Experiment station. This variety is similar to IDO377s in most agronomic characteristics, and has stronger straw. It has excellent yield and end-use quality characteristics for noodles. Lolo is moderately susceptible to stripe rust.

Otis (WA7931) – hard white spring wheat released by Washington State University with excellent yield potential and good end-use quality. Otis is tall and does well under irrigated and dryland conditions. Otis is moderately resistant to stripe rust.

Pristine (Bz991-408) – hard white spring wheat released by Western Plant Breeders. Yields have been similar to WB936 under both irrigated and dryland conditions. Test weight and protein are higher, height is taller, and heading date is slightly earlier. Pristine is red-chaffed with straw strength equal to WB936.

Skookum (ML042-409-1,5**) –** is a soft white spring wheat released in 2005 by Fossum Cereals. Irrigated yield was above the 3-year average and test weight is slightly below average. Skookum is a little taller and later than average, and yielded very well in the dryland trials, similar to Cataldo.

Snow Crest (WestBred) – a hard white spring wheat released by WestBred, LLC, in 2004. Snow Crest is very similar to Klasic in

its agronomic characteristics, is higher yielding, about 3 inches taller, with slightly higher protein.

Utopia - is a durum wheat with black awns released by World Wide Wheat, L.L.C. Utopia is shorter than average, but has excellent stripe rust resistance. Utopia yields are average for a durum, and it has average test weight.

UI Winchester (IDO578) – a hard red spring wheat released by the Idaho Ag Experiment Station for dryland production areas. UI Winchester performed similar to Jefferson in the extension trials, but had lower protein. UI Winchester will be released Spring 2009. Foundation seed will be available Fall, 2009.

Waxy Penawawa - Waxy-Pen is a fully-waxy, back-cross-five derivative of the soft white spring wheat variety 'Penawawa' (PI 495916) and is indistinguishable from Penawawa except for the waxy endosperm trait. Due to its unique amylose-free composition, several end-use quality traits including flour swelling volume and cookie diameter are dramatically altered. Waxy-Pen has received protection under U.S. Plant Variety Protection.

WINTER WHEAT

Bauermeister (WA7939) – hard red winter wheat released in 2005 from Washington State AES adapted to dryland conditions. Bauermeister yielded well under irrigated and dryland conditions, but had very low test weight, average protein and low loaf volume. Quality tested in the PNW Regional Quality Testing was poor.

Bitterroot (92-22407A) – Bitterroot is a soft white winter wheat released in 2007 by the Idaho AES. Bitterroot has been comparable to Stephens and Brundage for yield in the extension trials, and is about three inches taller than Stephens. Bitterroot has excellent quality characteristics and high test weights.

Brundage 96 (ID-B-96) – soft white winter wheat released by Idaho AES and USDA-ARS. Brundage 96 is a purified selection from Brundage with better resistance to stripe rust. Brundage 96 is similar to Brundage in being awnless, high yielding and having strong straw. Brundage 96 averages 1-2 inches taller than Brundage and is about three to five days later in heading. Test weight and yield of Brundage 96 is lower than for Brundage, and both have excellent quality, with Brundage 96 being slightly superior.

Deloris (UT2030-32) – hard red winter wheat released by Utah State University in 2002. Deloris has good yield potential under both irrigated and dryland production systems but is slightly taller than average under irrigation and may lodge. Test weight and heading are average. Deloris is resistant to dwarf bunt, and very susceptible to stripe rust, but performed well despite heavy stripe rust present in 2005.

DW (IDO513) – hard red winter variety released by Idaho AES and USDA-ARS. DW is best adapted to dryland environments. Yields are average but may lodge under irrigated conditions. DW tends to be slightly lower in yield compared to Boundary and Bonneville under dryland conditions. DW does have moderate resistance to stripe rust.

Gary (IDO550) – hard white winter wheat released by Idaho AES and USDA-ARS. Gary is lower in yield than Golden Spike, similar in test weight and heading, but a little taller. Inadequate straw strength will limit acreage under irrigated conditions. Quality of Gary is similar to Golden Spike, but has lower flour yield.

Golden Spike (UT1944-158) – a hard white winter variety released by Utah AES, for

dryland production areas where dwarf bunt is endemic. Golden Spike yields are above average under irrigated conditions with slightly below average test weights. Golden Spike is a Q+ hard white when it has a minimum 12 percent protein.

MDM (WA7936) – a hard white winter wheat released by Washington State University in 2005. MDM had above average yield in 2008 irrigated and dryland trials. Test weight is low and end-use quality is average.

Moreland (IDO517) – hard red winter wheat released by Idaho AES and USDA-ARS. Moreland is similar in yield to Boundary and higher than Garland. Moreland yields well under irrigation, with earlier heading and shorter height than Boundary. Straw strength is very good. Best adapted under irrigated conditions. Moreland is a Q+ wheat when protein is above 12 percent. Moreland is very susceptible to diseases such as stripe rust, black chaff and Fusarium foot rot.

NuHorizon (GM10002) – hard white winter wheat released by General Mills. NuHorizon is lower in yield compared to Golden Spike but has higher test weight, earlier heading and shorter straw. NuHorizon has better baking quality than NuFrontier and is similar to Golden Spike.

ORCF-101 (OR2010051) – ORCF-101 was the first soft white winter imidazolinone (IMI) herbicide-tolerant variety released from Oregon AES in 2003. ORCF-101 has yielded a little less than Stephens over the last four years with similar test weights, heading dates, height and protein. ORCF-101 has less tendency to lodge than does Stephens.

ORCF-102 (OR20100007) – this IMI tolerant soft white winter wheat yields better than ORCF-101 and is similar to Stephens in our extension trials. It is slight taller than Stephens.

Agripro Paladin (W96-355) – a hard red winter wheat released by AgriPro in 2005 for irrigated production. Paladin had higher than average yields and test weight, and has shorter straw. Paladin had average grain and flour protein. Loaf volume was average to low, with average flour yield.

Palomino (96-359W) – a hard white sister line to Agripro Paladin, with very similar agronomic characteristics, but lower yielding than Paladin.

Salute - is a tall semi-dwarf, soft white winter wheat with white chaff and early to mid-maturity and good straw strength for a taller wheat. Salute has good resistance to current prevalent races of stripe rust and above average winter-hardiness and snow mold tolerance. Salute has excellent yield potential with average test weights. Salute performed well in irrigated trials in Kimberly in 2008 and, like all AgriPro varieties, is a PVP, Title V variety.

Skiles (ORH010085) – Skiles is a soft white winter wheat jointly released in 2007 by OSU and USDA-ARS. Skiles has improved resistance to Cephalosporium stripe, and has yielded well in Kimberly and Rupert in the first year (2008) of the extension trials. Skiles is shorter than average with average heading dates and had higher protein than average.

Simon (ID91-34302and is A) – Simon is a soft white winter wheat released by the Idaho AES in 2002. Yields of Simon have been comparable to Brundage in the last three years of extension testing. Simon heads 5-7 days later than Brundage and is about 3 inches taller. Protein is about 0.5% greater than Brundage, and is rated a Quality Plus variety.

Tubbs 06 (OR939526) – is soft white winter wheat reselected from Tubbs, and released by Oregon State University in 2006. Tubbs 06 is higher or equal in yield, lower in test weight, later in maturity and taller than Brundage. It is similar in test weight and height to Stephens but has stronger straw.

UICF Lambert (99-435) – UICF Lambert is an herbicide-tolerant Lambert designed to be used in areas with hard-to-control grassy weeds, such as jointed goat grass and Italian ryegrass. Agronomic and quality characteristics are very similar to Lambert.

UICF Brundage (02-859) – UICF Brundage is an herbicide-tolerant Brundage designed to be used in areas with hard-to-control grassy weeds, such as jointed goat grass. Agronomic and quality characteristics are very similar to Brundage. UICF Brundage will be released in fall 2009. Foundation seed will be available fall 2009.

UI Darwin (IDO 604) – a hard white winter wheat intended as a replacement for the hard red winter cultivar 'Bonneville.' UI Darwin is similar to Bonneville in appearance, agronomic and quality characteristics, and does best in dryland production areas. UI Darwin has some adult plant resistance to stripe rust, is resistant to dwarf bunt and has moderate resistance to snow mold.

Westbred 528 (BZ6W98-528) – soft white winter wheat released by Westbred intended as a replacement for WB 470. Yields are excellent, better than WB470 in both dryland and irrigated trials, but test weight tends to be lower. WB 528 has much better quality than WB 470. WB 528 has higher than average test weight, is shorter and earlier than average, and is also resistant to stripe rust.

Whetstone (W98-344) - is a hard red winter wheat that was originally bred for the Great Plains. AgriPro began testing this line in the PNW in 2000 and since that time it has been a consistent, high-yielding, high test weight wheat in their program. Whetstone is a medium height semidwarf with buckskin colored chaff at maturity. Whetstone is an early maturing wheat with a good level of winter-hardiness and is resistant to the current prevalent races of stripe rust. Whetstone has good straw strength and has performed well in irrigated production in the UI extension trials. Whetstone produces good protein and has good bread baking quality. WHETSTONE is a PVP, Title V variety.

Xerpha – soft white winter wheat released in 2007 by Washington State Agricultural Experiment Station. Xerpha is widely adapted to irrigated and dryland conditions and has yielded well in southeast Idaho. Quality is acceptable for a soft white winter.

Yellowstone (MT00159) – a hard red winter wheat with excellent yield potential in irrigated and dryland conditions of southeast Idaho. Yellowstone has average test weight, height and heading dates and has excellent lodging resistance under irrigation. Quality characteristics are average to with above average loaf volume.

Table 3. Ten year averages of selected agronomic characteristics, 1998-2007 compared to 2008.

NOTE: "Average" values are for years 1998 to 2007

Winter Wheat

YIELD			TEST WEIGHT			PLANT HEIGHT			HEADING DATE				LODGING		
	# of			# of			# of			# of		Days		# of	
Year	Loc.	bu/A	Year	Loc.	lb/bu	Year	Loc.	in.	Year	Loc.	date	fr. Jan.1	Year	Loc.	%
2004	3	122	2000	4	61.4	1998	4	38	1999	3	6/18	170	2007	4	9
2000	4	108	2004	3	61.1	2005	4	38	2008	5	6/14	166	2006	4	8
1998	4	104	2008	5	61	2004	3	36	1998	4	6/12	164	2003	4	7
2005	4	104	2001	4	60.9	2000	4	34	2002	4	6/10	162	2008	5	4
2003	4	101	2006	4	60.8	**Avg.**	---	**33**	2001	4	6/8	160	2005	4	4
Avg.	---	**98**	1998	4	60.4	2006	4	32	2005	4	6/7	159	**Avg.**	---	**4**
2006	4	98	2007	4	60.3	2003	4	32	**Avg.**	---	**6/7**	**159**	1998	4	3
2007	4	96	**Avg.**	---	**60**	2001	4	32	2004	3	6/3	155	2000	4	2
1999	3	93	2003	4	59.7	1999	3	31	2000	4	6/2	154	2004	3	2
2001	4	89	2005	4	59.3	2002	4	31	2006	4	6/1	153	1999	3	0
2002	4	88	1999	3	59.0	2007	4	30	2003	3	5/31	152	2001	4	0
2008	5	80	2002	4	57.8	2008	4	30	2007	4	5/30	151	2002	4	0

Spring Wheat

YIELD			TEST WEIGHT			PLANT HEIGHT			HEADING DATE				LODGING		
	# of			# of			# of			# of		Days		# of	
Year	Loc.	bu/A	Year	Loc.	lb/bu	Year	Loc.	in.	Year	Loc.	date	fr. Jan.1	Year	Loc.	%
2008	5	102	2006	5	62.1	2003	4	34	2008	5	7/10	192	2003	4	62
2003	4	96	2000	6	61.6	1998	5	33	1999	7	7/4	186	1998	6	23
2005	5	87	2001	7	61.4	2005	5	32	2005	5	7/3	186	**Avg.**	---	**10**
2007	5	81	2002	7	60.8	2004	4	32	1998	6	7/1	183	1999	7	7
Avg.	---	**81**	2008	5	61	**Avg.**	---	**31**	2004	4	7/1	183	2006	5	6
2000	6	80	2005	5	60.2	1999	7	30	2002	7	6/29	181	2007	5	5
2004	4	79	**Avg.**	---	**60**	2007	5	30	**Avg.**	---	**6/29**	**181**	2005	5	2
2001	7	79	2004	4	59.6	2008	5	30	2003	4	6/28	180	2001	7	1
1998	6	73	2003	4	59.4	2000	6	29	2006	5	6/27	179	2004	4	1
2006	5	72	1999	7	59.1	2001	7	29	2001	6	6/24	176	2008	5	0
1999	7	70	2007	5	58.6	2002	7	29	2007	5	6/21	173	2000	6	0
2002	7	67	1998	6	57.8	2006	5	29	2000	6	6/19	171	2002	7	0

Spring Barley

YIELD			TEST WEIGHT			PLANT HEIGHT			HEADING DATE				LODGING		
	# of			# of			# of			# of		Days		# of	
Year	Loc.	bu/A	Year	Loc.	lb/bu	Year	Loc.	in.	Year	Loc.	date	fr. Jan.1	Year	Loc.	%
2008	5	114	2005	5	52.0	1998	6	34	2008	5	7/11	193	2003	4	78
2005	5	103	2006	5	51.5	2004	4	34	2005	5	7/4	186	2007	5	35
2003	4	102	2000	6	50.9	2002	7	32	1999	7	7/4	186	1998	6	29
2001	7	101	2004	4	50.7	2003	4	32	1998	6	6/30	182	**Avg.**	---	**27**
2000	6	99	2008	5	51	2005	5	32	2004	4	6/29	181	2001	7	25
2004	4	99	1999	7	50.1	2008	5	31	**Avg.**	---	**6/28**	**180**	1999	7	23
2007	5	99	2002	7	50.1	**Avg.**	---	**30**	2006	5	6/28	180	2004	4	23
Avg.	---	**98**	**Avg.**	---	**50**	2000	6	29	2002	7	6/26	178	2002	7	22
2002	7	96	2003	4	49.2	2001	7	29	2001	6	6/25	177	2005	5	21
1999	7	94	2007	5	49.2	1999	7	28	2007	5	6/23	175	2006	5	21
1998	6	84	2001	7	48.4	2007	5	27	2003	4	6/20	172	2008	5	15
2006	5	82	1998	6	47.8	2006	5	26	2000	6	6/18	170	2000	6	2

Table 4. Hard Winter Wheat Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Promontory	125.1	63.4	97	6/1	35	6	12.8
IDO 621	124.8	62.9	98	5/30	31	4	12.1
Yellowstone	123.2	62.6	97	5/31	35	2	12.9
Golden Spike (W)	120.8	61.8	97	6/2	37	13	12.8
Whetstone	116.5	62.9	97	5/25	32	1	13.7
NuHorizon (W)	116.2	63.6	97	5/27	35	6	12.6
Utah 100	116.0	61.5	97	6/2	39	0	13.0
Deloris	115.8	62.7	96	6/1	37	7	13.0
AgriPro Paladin	115.4	62.8	97	5/30	34	0	13.4
Neeley	114.5	62.4	96	6/3	36	9	13.6
Moreland	113.9	61.1	95	5/28	32	0	13.5
Manning	113.7	62.2	97	6/1	34	16	13.0
DW	113.5	62.2	97	6/2	34	12	13.3
Garland	112.7	60.8	94	6/2	27	0	13.1
Boundary	112.5	61.7	94	6/1	33	4	12.6
Gary (W)	110.7	61.1	94	6/2	37	22	12.6
Bonneville	109.0	63.0	96	6/4	40	15	14.4
Palomino (W)	108.2	62.0	97	5/26	31	0	13.5
NuHills	107.9	63.5	96	5/25	32	6	14.2
Dumas	106.5	63.2	97	5/25	33	3	13.0
Weston	102.3	63.4	95	5/29	39	19	13.8
Average	114.3	62.4	96	151.8	34	7	13.2
LSD (α =.05)	5.7	0.5	2.9	1.1	1.2	6.3	0.5
CV%	10.7	1.6	6.4	1.6	7.7	195.5	3.7
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 5. Soft White Winter Wheat Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
WB 528	124.6	61.6	98	5/28	32	5	11.5
Mohler	123.4	60.3	94	6/3	34	4	11.7
Tubbs 06	123.4	59.3	97	6/3	34	3	11.3
Brundage	122.7	61.5	96	5/28	30	0	11.0
Brundage 96	121.9	59.3	97	6/3	30	0	11.2
Simon	121.3	60.1	96	6/3	33	0	11.6
ORCF-102	120.2	58.3	95	6/3	34	1	11.4
Daws	120.1	60.7	96	6/4	34	4	11.5
Madsen	119.4	59.9	95	6/5	32	2	11.7
Stephens	119.1	60.1	96	6/1	32	6	11.5
Bitterroot	118.9	60.5	97	6/4	35	4	11.7
UICF Lambert	118.4	59.4	96	6/2	36	3	12.3
Lambert	118.0	60.4	97	6/1	35	6	11.6
IDO 620	117.9	59.8	95	6/6	35	29	11.8
ORCF-101	115.7	59.2	96	6/3	33	0	11.8
Bruehl	115.0	57.8	94	6/7	36	11	12.3
IDO 587	114.2	58.9	94	5/31	32	1	11.6
Clearfirst	111.2	59.9	97	6/4	33	0	12.0
Average	119.2	59.8	96	6/3	33	4	11.6
LSD (α =.05)	5.2	1.3	2.8	0.6	0.9	5.2	0.5
CV%	9.3	4.7	6.4	0.9	5.8	261.6	4.2
Pr > F	<.0001	<.0001	<.001	<.0001	<.0001	<.0001	<.0001

Table 6. Winter Barley Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plumps 6/64	Plumps 5.5/64	thins
91Ab36	147.5	48.5	80	5/29	29	2	10.4	78.0	13.9	8.5
86Ab474	140.9	50.3	78	5/25	27	0	10.6	72.5	16.9	10.8
Schuyler	138.7	50.3	79	5/30	31	2	11.5	63.3	24.6	12.6
97BX42-116-17A	137.3	49.1	83	5/29	30	7	11.3	71.5	19.8	9.0
Sprinter	137.0	49.8	78	5/30	31	5	11.1	69.8	20.4	11.4
Sunstar Pride	135.5	49.0	69	6/5	29	3	8.9	64.0	19.8	16.6
96AB69	135.0	48.6	76	5/25	26	3	10.4	61.0	22.3	17.1
Eight-Twelve	127.7	49.3	71	5/26	28	4	10.7	78.9	13.3	8.2
97Ab11	127.4	50.5	72	6/2	31	3	10.2	77.5	15.0	7.5
Strider	126.4	49.4	74	5/24	29	3	11.6	85.7	9.6	5.1
92Ab561	125.8	50.6	74	5/27	28	1	10.8	75.7	15.4	9.3
91Ab23	124.9	48.5	68	5/28	26	0	10.5	71.3	18.5	11.0
93Ab631	124.4	46.7	70	5/25	28	4	9.4	68.8	19.1	12.6
Boyer	123.4	48.6	71	5/29	30	0	10.8	73.8	16.2	10.3
92Ab1308	122.8	48.7	67	5/24	30	18	11.4	76.7	14.5	8.7
94Ab1777	119.9	49.9	68	5/25	33	9	11.1	73.9	16.5	10.1
Endeavor	104.0	51.2	61	5/29	32	6	12.5	82.6	10.7	7.0
88Ab536B	97.3	49.9	74	5/22	33	8	22.3	81.2	11.9	7.3
Charles	93.1	49.3	63	5/26	28	11	12.4	85.8	7.2	7.5
Average	125.7	49.4	72	5/28	29	5	11.5	74.3	16.1	10.0
LSD (a =.05)	9.3	0.7	5.0	0.9	1.4	4.9	6.5	6.6	3.3	3.8
CV%	15.9	3.1	15.0	1.3	9.9	227.0	60.8	9.5	22.3	40.3
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.2	<.0001	<.0001	<.0001

Table 7. Hard Winter Wheat Dryland Nurseries 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Utah 100	28.2	60.1	89	6/15	25	0	15.0
Golden Spike (W)	24.9	59.5	81	6/15	23	0	15.1
Deloris	24.0	60.1	87	6/15	24	0	14.9
IDO 616	23.9	60.8	86	6/15	25	0	14.7
Boundary	23.6	59.2	90	6/10	20	0	14.8
Juniper	23.5	60.9	88	6/15	24	0	14.7
Yellowstone	23.4	60.2	79	6/14	22	0	15.4
Bonneville	23.4	60.9	84	6/16	25	0	15.6
Gary (W)	23.3	60.0	80	6/15	23	0	14.4
Dumas	23.2	61.3	84	6/13	21	0	15.1
NuHorizon (W)	23.1	61.1	85	6/13	20	0	14.3
Moreland	22.9	59.3	82	6/14	20	0	14.8
Neeley	22.7	60.4	85	6/15	22	0	15.0
DW	22.3	60.9	80	6/14	20	0	14.8
Weston	21.8	61.2	85	6/13	25	0	15.5
Promontory	21.7	60.6	88	6/14	23	0	14.9
UI Darwin (W)	21.3	61.2	83	6/14	24	0	15.7
Palomino (W)	21.1	60.4	81	6/14	19	0	15.4
Garland	20.8	59.2	83	6/16	16	0	15.3
NuHills	20.7	61.5	85	6/13	20	0	16.0
Average	23.0	60.4	84	6/14	22	0	15.1
LSD (α =.05)	3.0	1.1	9.6	3.7	1.0	0.0	0.8
CV%	18.4	2.6	14.2	3.2	5.4	0.0	3.9
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	0	<.0001

Table 8. Soft White Winter Wheat Dryland Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
WB 528	26.6	57.8	81	6/15	21	0	11.2
Lambert	26.5	56.9	81	6/15	22	0	11.5
UICF Lambert	26.4	57.8	84	6/13	22	0	11.7
Tubbs 06	26.1	57.7	84	6/13	22	0	11.9
Bruehl	25.7	58.1	77	6/16	22	0	12.6
Simon	25.2	57.6	76	6/15	21	0	11.5
Stephens	25.1	58.3	80	6/15	21	0	12.1
92-22407A	24.6	58.3	76	6/17	20	0	11.9
IDO 587	24.5	57.9	73	6/15	21	0	12.3
Clearfirst	24.5	58.8	80	6/14	20	0	12.9
ORCF-102	24.5	58.2	76	6/15	20	0	12.1
ORCF-101	24.0	59.7	73	6/15	20	0	12.4
Daws	23.9	57.9	76	6/15	21	0	11.7
Madsen	23.7	57.6	82	6/14	21	0	12.7
Brundage	23.3	58.2	82	6/14	20	0	10.8
IDO 620	23.2	57.9	72	6/16	20	0	12.1
Brundage 96	21.7	56.4	81	6/16	20	0	11.4
Mohler	24.6	58.0	84	6/15	21	0	11.6
Average	24.7	58.0	79	6/15	21	0	11.9
LSD (α =.05)	3.1	1.7	12.7	1.9	1.3	0.0	0.9
CV%	15.5	3.5	20.0	1.4	7.7	0.0	4.6
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	0	<.0001

Table 9. Hard Spring Wheat Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Hard Spring Wheat							
Lolo (W)	107.5	61.6	99	6/25	34	9	13.1
Otis (W)	105.3	61.7	99	6/26	36	4	11.1
Idaho 377s (W)	105.3	60.7	98	6/25	32	14	13.7
Jerome	100.9	61.4	98	6/22	31	1	13.1
Iona	98.6	61.8	99	6/24	34	11	13.7
Jefferson	98.4	61.7	98	6/24	31	3	13.1
Lochsa (W)	97.9	60.7	99	6/25	32	0	12.6
Choteau	95.7	61.2	98	6/25	31	3	13.3
Pristine (W)	95.6	63.2	99	6/21	32	1	13.6
WB936	94.6	61.0	99	6/23	29	1	12.5
Summit	94.4	59.6	98	6/26	25	0	12.5
Buck Pronto	94.2	61.6	99	6/21	30	1	11.2
Tara 2002	92.4	61.3	98	6/22	33	4	11.0
Blanca Grande (W)	91.5	62.7	98	6/20	26	0	11.3
Klasic (W)	87.5	62.2	98	6/21	23	0	12.7
Durum Wheat							
Kronos	95.2	61.6	98	6/22	27	2	13.2
AP1526	94.1	62.3	98	6/27	35	8	12.3
Alzada	92.8	61.5	99	6/22	29	6	13.9
Utopia	92.0	60.5	98	6/24	27	4	13.3
Matt	88.1	62.0	97	6/23	28	5	11.1
Average	96.1	61.5	98	6/23	30	4	12.6
LSD (α =.05)	4.2	0.7	0.9	0.4	0.7	3.0	0.6
CV%	2.9	10.8	2.2	0.5	6.1	187.5	6.2
Pr>F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 10. Soft White Spring Wheat Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Alturas	108.4	61.1	98	6/19	32	2	10.3
Skookum	105.9	60.4	98	6/21	34	2	11.3
UI Pettit	105.6	61.4	98	6/14	28	0	11.0
Alpowa	105.4	61.3	98	6/20	33	6	11.2
Nick	104.8	61.7	99	6/16	31	2	11.3
Challis	104.5	60.3	98	6/19	32	6	10.7
Jubilee	104.2	61.5	98	6/20	34	1	10.9
Treasure	103.8	59.3	98	6/21	31	16	11.1
Penawawa	102.2	61.1	98	6/19	32	5	11.4
Cataldo	102.0	60.7	98	6/17	30	0	11.1
Average	104.7	60.9	98	6/19	32	4	11.0
LSD (α =.05)	3.8	0.3	0.7	1.7	0.7	3.0	0.4
CV %	8.9	1.3	1.8	2.5	5.3	188.9	4.4
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 11. 6-Row Barley Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (> 6/64)	Plump (>5.5/64)	% Thin
Feed										
Millennium	133.2	49.7	98	6/20	31.8	6.6	10.5	72.8	17.3	10.7
Goldeneye	127.3	51.4	98	6/23	30.7	16.3	11.2	84.9	9.8	5.6
Creel	126.8	50.5	98	6/23	31.2	30.7	9.0	78.2	13.8	8.4
Aquila	121.0	51.7	98	6/19	30.7	14.9	10.8	85.7	9.1	5.8
Colter	119.4	49.5	95	6/23	30.7	18.7	9.2	76.2	14.7	9.7
Herald	118.5	48.3	98	6/23	32.0	13.9	9.5	83.7	10.3	6.4
Steptoe	118.5	48.7	98	6/23	30.4	28.8	9.6	85.9	8.5	5.9
Malt										
Legacy	113.6	51.5	98	6/23	33.7	46.3	11.4	87.5	8.1	5.0
Lacey	111.6	52.2	97	6/22	32.1	31.2	11.7	88.5	7.7	4.2
Drummond	110.5	51.7	98	6/23	32.9	26.1	11.7	88.8	7.8	3.7
Tradition	108.2	51.9	98	6/24	33.0	26.4	11.6	89.8	7.0	3.5
Foster	102.2	51.1	98	6/22	33.0	28.8	11.0	89.9	6.3	4.0
Morex	100.1	50.6	98	6/25	33.1	49.7	11.5	76.4	14.1	9.8
Average	116.2	50.7	98	6/23	32	26	10.7	83.7	10.3	6.3
LSD (α =.05)	4.3	0.4	1.7	0.8	0.4	6.8	0.4	4.0	2.3	2.3
CV%	9.2	1.8	4.2	0.6	6.3	64.0	4.9	5.9	27.5	44.6
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 12. 2-Row Barley Irrigated Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (> 6/64)	Plump (5.5/64)	% Thin
Feed										
Calgary	128.4	53.4	99	6/29	26	18	10.6	90.7	6.4	3.2
CDC Bold	126.6	52.7	97	6/28	28	20	10.4	84.6	10.1	5.7
Primo	124.1	51.7	99	6/28	29	39	10.1	85.0	8.4	6.5
Tetonia	124.1	52.1	99	6/30	29	36	10.5	82.6	9.9	7.5
Burton	123.8	52.6	98	6/28	31	21	10.8	91.8	5.3	3.0
Baronesse	122.7	52.0	98	6/28	29	43	10.4	86.3	8.4	6.2
Idagold II	121.0	50.8	98	6/30	24	20	10.7	79.1	13.4	7.7
Boulder	120.8	53.9	99	6/27	28	31	10.4	91.2	5.0	3.9
Xena	119.7	51.9	98	6/24	29	41	9.6	83.1	10.5	6.5
Camas	119.1	52.7	99	6/27	30	32	10.9	84.0	9.2	6.9
Haxby	117.1	53.7	97	6/27	28	32	10.6	88.2	6.9	4.9
Radiant	117.1	51.8	99	6/28	29	41	9.9	77.8	12.7	9.8
Valier	115.4	52.3	99	6/29	30	33	11.6	82.6	10.0	7.7
Eslick	114.2	52.3	99	6/28	29	43	10.8	82.1	10.7	8.3
CDC McGwire	104.6	60.5	96	6/30	31	38	11.5	53.0	27.3	20.2
Clearwater	100.1	57.9	96	6/28	30	51	12.3	65.7	20.2	14.7
Hays	100.0	48.5	99	6/28	31	48	10.5	67.7	15.4	17.2
Malt										
2B99-2316	115.6	51.7	98	6/28	29	38	10.6	85.2	8.9	6.1
Pinnacle	115.3	53.2	98	6/26	31	23	10.0	94.1	3.3	2.5
Conrad	113.3	51.7	98	6/29	29	33	11.2	87.6	6.2	4.4
Geraldine	113.1	52.1	99	6/29	29	40	10.6	79.6	11.6	9.1
Hocket	110.9	52.6	99	6/27	28	34	11.1	88.1	6.7	5.4
Craft	110.3	52.7	99	6/27	31	34	11.2	88.5	6.8	5.1
B1202	109.9	51.0	99	6/29	29	35	11.4	87.5	8.2	4.6
Merit	107.5	50.1	99	7/1	30	33	10.5	79.7	11.5	8.9
2B99-2657	107.0	49.6	98	6/29	30	39	10.7	75.9	13.2	11.2
CDC Stratus	106.8	52.2	98	6/29	30	35	11.7	86.9	8.2	5.4
AC Metcalfe	103.6	52.0	97	6/27	31	35	11.2	88.8	7.1	4.4
Harrington	101.6	50.6	98	6/29	31	44	11.4	75.6	13.7	10.9
Average	114.3	52.4	98	6/28	29	35	10.8	82.5	10.2	7.5
LSD (α =.05)	4.8	0.5	1.6	0.5	0.9	7.3	0.5	5.9	2.9	3.6
CV%	10.2	2.5	4.0	0.6	7.7	51.6	5.9	8.9	34.9	59.2
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Table 13. Hard Spring Wheat Dryland Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Hard Spring Wheat							
Lolo (W)	29.6	59.0	93	7/13	22	0	14.0
Otis (W)	28.2	56.6	93	7/14	24	0	13.3
Idaho 377s (W)	27.9	56.9	92	7/13	21	0	15.3
UI Winchester	27.6	58.7	90	7/12	19	0	13.1
Jefferson	27.4	57.7	91	7/11	20	0	14.2
Jerome	25.4	56.8	91	7/10	21	0	13.9
WB936	25.1	57.4	93	7/10	20	0	15.1
Tara 2002	24.3	59.8	90	7/10	24	0	13.3
Lochsa (W)	24.0	58.0	90	7/12	22	0	13.6
Choteau	23.9	56.8	89	7/13	20	0	13.7
Blanca Grande (W)	23.8	60.2	88	7/9	19	0	13.2
Buck Pronto	23.8	57.6	91	7/11	20	0	12.8
Pristine (W)	23.3	59.6	87	7/9	20	0	13.4
Klasic (W)	22.7	56.1	90	7/9	16	0	14.3
Iona	21.1	58.7	89	7/14	20	0	14.2
Summit	20.7	56.1	88	7/15	15	0	12.3
Spring Durum							
Alzada	22.3	55.7	94	7/11	21	0	12.9
AP1526	20.1	57.1	95	7/14	21	0	14.6
Kronos	19.6	56.5	95	7/11	19	0	13.6
Matt	18.1	58.2	94	7/12	19	0	13.3
Utopia	18.1	58.9	95	7/11	18	0	14.2
Average	23.7	57.7	91	7/12	20	0	13.7
LSD (α =.05)	3.6	3.3	5.7	0.8	1.5	0.0	1.5
CV%	19.1	7.2	7.8	0.5	9.5	0.0	6.3
Pr>F	<.0001	<.0001	<.0001	<.0001	<.0001	0	<.0001

Table 14. Soft White Spring Wheat Dryland Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Cataldo	33.4	57.8	91	7/10	19	0	12.0
Skookum	29.8	54.9	94	7/16	22	0	12.6
UI Pettit	28.5	60.1	89	7/9	18	0	12.2
Alturas	28.0	56.9	88	7/16	19	0	12.2
Jubilee	27.9	56.9	92	7/16	20	0	13.1
Alpowa	27.0	57.6	95	7/16	21	0	12.6
Treasure	26.8	56.2	93	7/16	20	0	12.7
Challis	26.2	57.7	92	7/16	21	0	12.0
Penawawa	26.0	59.2	92	7/15	19	0	12.5
Average	28.2	57.5	92	7/14	20	0	12.4
LSD (α =.05)	3.8	3.9	4.4	1.0	2.1	0.0	1.0
CV%	16.2	8.4	5.9	0.6	13.1	0.0	4.8
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	0.0	<.0001

Table 15. 6-Row Barley Dryland Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	(6/64)	Plump (5.5/64)	% Thin
Feed										
Creel	28.7	44.8	96	7/14	18	0	9.9	52.5	22.3	25.7
Goldeneye	28.6	46.7	94	7/17	19	0	12.7	61.5	20.5	18.5
Aquila	28.4	46.9	95	7/13	19	0	12.3	75.4	14.7	10.9
Steptoe	27.9	46.6	93	7/14	18	0	10.6	67.8	16.6	16.1
Millennium	26.6	47.9	92	7/12	18	0	11.7	39.8	30.0	30.9
Colter	25.6	42.8	94	7/14	18	0	10.2	51.3	23.9	25.6
Herald	24.8	42.8	94	7/15	17	0	10.5	57.3	20.5	23.1
Malt										
Drummond	28.2	44.5	91	7/15	19	0	12.7	63.0	20.9	16.4
Foster	27.1	44.3	93	7/16	18	0	13.5	61.7	19.1	19.9
Lacey	27.1	44.3	93	7/16	18	0	13.5	61.7	19.1	19.9
Legacy	26.3	45.9	93	7/15	18	0	12.4	63.3	20.1	17.5
Morex	26.1	47.6	93	7/17	19	0	12.8	64.1	21.4	15.1
Tradition	25.9	45.1	94	7/17	19	0	13.1	42.0	25.4	33.3
Average	27.0	45.4	93	7/15	18	0	12.0	58.6	21.1	21.0
LSD	4.8	3.5	4.3	1.8	1.4	0.0	1.3	7.7	6.6	8.4
CV%	22.0	9.3	5.7	1.1	9.8	0.0	6.4	7.8	18.8	23.6
Pr>F	<.0001	<.0001	<.0001	<.0001	<.0001	0.0	<.0001	<.0001	<.0001	<.0001

Table 16. 2-Row Barley Dryland Nurseries, 3-Year Averages (2006-2008)

Variety	Yield (bu/A)	Test Wt (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (> 6/64)	Plump (>5.5/64)	% Thin
Feed										
Xena	32.2	48.1	96	7/16	18	0	11.7	55.9	23.6	20.7
Boulder	31.7	46.6	96	7/17	15	0	11.2	63.1	18.2	19.0
Camas	30.9	48.1	94	7/17	17	0	11.8	50.9	23.8	25.6
Valier	30.3	48.4	95	7/21	17	0	13.4	40.6	15.0	10.7
Primo	29.9	45.7	95	7/19	16	0	12.0	54.3	24.2	21.2
Calgary	29.1	45.6	96	7/23	14	0	6.3	55.5	18.6	17.7
Baronesse	29.0	44.4	96	7/20	17	0	12.3	59.2	20.7	20.0
CDC Bold	27.7	46.3	92	7/19	16	0	12.5	45.8	27.8	26.4
Tetonia	27.0	45.6	94	7/22	16	0	12.3	51.4	23.5	24.9
Haxby	26.6	48.6	95	7/16	16	4	12.6	46.9	23.2	29.5
Burton	26.4	44.9	95	7/21	17	0	11.8	58.4	20.7	21.0
Radiant	26.0	45.7	95	7/20	16	0	11.7	43.2	28.2	28.6
Eslick	25.5	46.4	96	7/19	16	0	12.2	52.8	24.8	23.1
Hays	25.0	45.2	96	7/19	16	0	11.6	54.5	21.1	24.2
Clearwater	24.4	53.9	89	7/19	18	0	13.1	8.4	22.0	69.6
Idagold II	24.0	44.9	96	7/18	16	0	12.1	50.6	28.3	21.5
CDC McGwire	23.3	56.9	90	7/19	18	0	13.1	5.8	16.3	78.2
Malt										
AC Metcalfe	33.6	48.4	94	7/16	18	0	13.2	71.7	17.7	10.6
Craft	31.4	49.3	96	7/14	20	0	11.8	69.7	18.9	11.5
Pinnacle	30.4	50.3	95	7/14	17	0	11.6	65.8	15.2	18.9
CDC Stratus	29.3	45.3	95	7/23	17	0	13.1	57.7	24.2	18.4
Conrad	28.0	46.2	93	7/21	17	0	12.6	60.4	19.7	20.0
Harrington	26.9	44.2	95	7/22	17	0	12.5	51.5	25.7	22.8
2B99-2316	26.8	48.2	90	7/21	16	0	12.8	38.4	15.3	13.0
B1202	26.7	45.8	96	7/20	16	0	13.2	46.8	25.6	27.4
Geraldine	25.8	43.3	95	7/23	16	0	12.6	44.1	26.4	29.7
Hocket	25.7	46.7	96	7/19	18	0	12.8	68.0	19.1	13.0
Merit	24.3	44.8	94	7/21	17	0	12.4	54.6	25.1	21.6
2B99-2657	23.9	45.6	95	7/20	17	0	13.2	46.1	25.1	28.9
Average	27.7	47.0	94	7/19	17	0	12.2	50.8	22.0	24.8
LSD (a =.05)	5.5	2.3	3.8	1.7	1.3	1.3	3.3	20.0	10.6	13.9
CV%	24.4	5.9	5.0	1.0	9.5	1138.4	16.7	24.1	29.1	34.3
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	0.064	<.0001	<.0001	0.0001	<.0001

Table 17. Irrigated Hard Winter Wheat Data Combined from Kimberly, Rupert, and Aberdeen, 2008.

Variety	Yield (bu/A)	Wt (lb/bu)	Spring Stand %	Heading Date	Height (in)	Lodging (%)	Protein (%)
Bauermeister	128.4	61.3	100	6/13	36	20	12.9
Golden Spike (W)	122.7	62.7	100	6/10	36	5	13.3
IDO 621	122.5	63.6	100	6/6	30	0	12.6
Moreland	121.8	62.2	100	6/4	32	0	13.9
Neeley	120.7	63.6	98	6/10	36	0	13.7
Deloris	120.4	63.6	100	6/8	35	0	13.1
NuDakota (W)	118.5	62.6	100	5/31	30	0	13.9
WA8023	117.5	60.7	100	6/11	34	0	12.4
MDM (W)	116.9	60.8	100	6/13	35	24	13.9
MT0495	116.2	62.7	100	6/4	32	0	14.0
Yellowstone	114.7	62.7	100	6/6	35	0	13.9
Whetstone	114.3	63.2	99	5/31	32	0	14.2
NuHorizon (W)	113.5	64.4	100	6/1	32	0	12.7
Manning	113.2	63.3	100	6/7	35	0	13.4
Bonneville	112.3	63.5	100	6/11	38	0	14.3
IDO 653	111.5	63.5	98	6/6	38	0	13.9
Gary (W)	111.5	62.4	100	6/10	37	10	12.5
DW	111.3	63.3	100	6/9	34	0	13.6
UT9325-55	110.7	62.9	100	6/4	36	0	14.4
Utah 100	110.5	62.3	100	6/9	39	0	13.5
Promontory	110.3	64.4	100	6/7	34	0	13.0
Garland	108.8	61.8	99	6/8	27	0	13.3
IDO680	108.2	63.0	100	6/11	38	0	14.4
IDO 651 (W)	108.2	61.8	100	6/7	39	0	14.7
Eddy	108.1	63.8	100	6/3	31	0	13.6
Boundary	106.8	61.8	100	6/8	31	0	13.2
TX97-F4-33-1B	105.6	63.5	100	6/2	31	0	12.8
UI Darwin (W)	105.2	64.0	99	6/8	37	0	14.1
IDO 658 (W)	103.9	64.0	100	6/7	32	0	13.6
MT0552	103.7	62.9	100	6/2	33	0	15.3
AgriPro Paladin	102.5	62.9	99	6/6	32	0	14.1
Palomino	102.1	62.1	97	6/2	30	0	13.8
NuHills	97.4	63.8	99	5/31	30	0	14.4
Weston	97.0	63.4	99	6/4	37	7	13.9
Dumas	93.4	63.2	99	6/1	31	0	13.7
Average	111.1	62.9	100	6/6	34	2	13.7
LSD (α = .05)	10.8	0.6	1.6	0.8	2.2	7.3	0.9
CV%	12.1	1.1	2.0	0.6	8.1	487.5	3.9
Pr >F	<.0001	<.0001	0.1515	<.0001	<.0001	<.0001	<.0001

Table 18. Irrigated Soft White Winter Wheat Data Combined from Kimberly, Rupert, and Aberdeen, 2008.

Variety	Yield (bu/A)	Test Weight	Spring Stand	Heading Date	Height (in)	Lodging (%)	Protein (%)
00-475-2DH	119.6	62.4	100	6/11	32	0	11.7
Xerpha	118.8	60.8	100	6/14	33	0	11.4
IDO 620	117.5	61.5	100	6/13	33	1	11.4
Mohler	117.0	61.1	100	6/10	32	0	11.3
Brundage 96	114.9	59.4	100	6/9	29	0	11.1
93-64901A	114.6	61.0	98	6/13	31	0	10.7
Tubbs 06	114.0	60.0	100	6/10	32	0	11.2
ORCF-101	113.4	59.7	99	6/10	32	0	11.9
Brundage	111.8	61.1	100	6/5	30	0	11.5
Salute	111.7	59.9	100	6/9	32	0	11.9
Skiles	111.5	60.7	100	6/11	30	1	12.3
UICF Brundage	110.8	58.1	100	6/8	29	0	11.7
Bitterroot	110.7	61.4	100	6/11	32	0	11.9
Daws	110.7	61.3	100	6/11	33	0	11.3
Simon	110.6	60.6	100	6/9	31	0	11.5
Masami	110.6	60.1	99	6/13	32	0	11.5
Coda	110.4	62.5	100	6/13	33	1	12.7
Cara	109.5	59.5	99	6/15	31	0	11.9
Bruehl	108.4	59.6	98	6/15	33	0	12.5
UICF Lambert	108.1	60.5	99	6/10	34	0	12.0
Stephens	107.6	60.8	100	6/9	30	0	11.6
ORCF-102	107.4	54.6	99	6/10	32	0	11.8
WB 528	107.1	61.5	100	6/4	31	0	12.0
Chukar	106.7	59.7	100	6/16	32	0	11.8
Lambert	105.7	61.1	99	6/9	34	0	11.3
Clearfirst	105.6	60.4	100	6/11	32	0	11.6
IDO 587	104.9	60.0	98	6/6	31	0	11.8
IDO 655	104.8	62.0	99	6/11	33	0	11.3
Madsen	104.2	60.4	98	6/12	30	0	11.9
IDO 654	100.7	59.5	100	6/6	29	0	11.3
Average	110.3	60.4	99	6/10	32	0	11.7
LSD (α = .05)	9.3	2.8	1.4	1.5	1.8	0.8	1.0
CV %	10.5	5.8	1.8	1.1	6.9	977.3	5.2
Pr > F	0.0055	0.0018	0.1228	<.0001	<.0001	0.2066	0.1177

Table 19. Irrigated Winter Barley Data Combined from Kimberly, Rupert, and Aberdeen 2008.

Variety	Yield (bu/A)	Test Weight	Spring Stand	Heading Date	Height (in)	Lodging (%)	Protein (%)	Plump (>6/64)	Plump (>5.5/64)	% Thin
93Ab669	167.0	49.4	84	6/1	33	28	11.4	73.8	15.5	11.6
97BX42-116-17A	157.6	50.4	84	6/8	33	6	11.3	72.8	19.3	8.4
02Ab2732	157.4	47.8	70	6/4	33	0	9.4	80.2	13.5	6.7
Schuyler	155.2	51.4	79	6/7	34	3	11.5	68.8	21.8	10.2
Sunstar Pride	154.6	49.8	72	6/12	32	0	9.2	62.9	19.9	17.8
96AB69	153.9	48.9	83	5/31	28	4	10.8	59.2	22.8	18.7
02Ab2701	153.7	49.2	76	6/3	34	15	11.0	78.0	14.2	8.2
Sprinter	148.1	50.7	73	6/7	34	6	11.5	71.2	20.0	9.5
91Ab36	147.9	47.7	76	6/6	30	1	11.0	74.4	15.0	11.5
86Ab474	147.2	50.4	79	6/1	28	0	11.0	73.4	17.0	10.8
OR71	145.2	51.0	93	5/30	32	5	10.9	86.9	8.8	4.9
94Ab1777	141.0	49.9	75	6/2	37	24	10.8	68.7	19.2	13.0
Strider	139.9	49.8	81	5/30	31	4	11.7	85.9	9.3	5.6
Eight-Twelve	138.8	49.4	71	6/1	30	0	10.7	77.8	14.4	8.9
OR77	138.3	50.6	88	5/31	30	4	11.2	84.6	9.9	6.9
OR78	136.4	51.3	90	5/30	30	2	10.6	89.7	7.5	3.6
92Ab1308	135.8	48.1	69	5/30	33	32	11.3	74.8	16.4	9.6
91Ab23	134.9	48.2	69	6/5	28	0	10.7	69.4	19.5	12.1
02Ab2739	134.8	47.1	74	6/3	33	18	10.6	73.0	16.7	11.3
93Ab631	130.0	46.3	69	6/1	30	3	10.2	66.1	20.2	14.8
Boyer	129.4	48.9	70	6/5	32	0	11.0	74.0	16.0	10.6
92Ab561	125.1	50.7	72	6/3	29	0	11.0	75.9	16.4	8.5
02Ab339	120.7	50.8	63	6/8	34	5	12.1	81.0	11.5	8.3
97Ab11	117.8	51.3	67	6/10	31	0	10.6	80.1	13.9	6.1
88Ab536B	110.4	49.8	76	5/29	35	17	11.6	80.6	13.0	7.3
Endeavor	110.1	51.7	61	6/6	33	4	11.8	83.5	10.8	6.1
OR79	101.2	48.9	81	5/29	27	3	12.6	85.2	10.0	5.6
OR72	98.3	51.5	71	5/30	32	1	11.7	81.8	11.1	7.5
Maja-Grande	96.9	49.8	64	5/31	31	2	11.8	78.5	13.7	8.6
Charles	89.3	49.1	61	6/4	29	14	12.0	84.9	7.7	8.4
Average	133.9	49.7	75	6/3	32	7	11.1	76.6	14.8	9.4
LSD (α = .05)	16.1	1.2	7.74	1.7	2.3	9.4	1.2	12.6	6.5	7.3
CV %	14.9	2.9	12.91	1.36	9.0	172.9	6.8	10.1	26.7	47.8
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0007	0.0006	<.0001	0.0247

Table 20. Irrigated Hard Spring Wheat Data Combined from Rupert, Idaho Falls, Ashton, and Aberdeen, 2008.

Variety	Yield (bu/A)	Test Weight	Spring Stand	Heading Date	Height (in)	Lodging (%)	Protein (%)
Idaho 377s (W)	129.5	62.6	100	7/4	33	6	12.7
Lolo (W)	128.6	63.1	100	7/4	34	0	12.3
Otis (W)	123.3	62.0	100	7/5	37	0	12.7
Bullseye (HRS)	122.6	63.9	100	7/4	29	3	12.7
Jerome	121.1	62.0	99	7/2	31	0	12.5
Iona	120.9	63.0	100	7/4	35	2	12.8
IDO 667	118.8	63.9	100	7/3	31	2	13.0
Summit	116.9	61.3	100	7/4	24	0	12.9
Blanca Royale	116.6	61.7	100	7/2	24	0	12.2
Cabernet	114.5	62.8	100	7/3	26	0	12.5
WA007954 (HRS)	113.4	62.2	100	7/4	34	0	13.5
Choteau	113.2	61.7	100	7/4	32	0	14.2
Pristine (W)	113.0	63.4	100	7/2	32	0	14.3
Buck Pronto	112.8	62.5	100	7/1	31	0	13.6
Jefferson	112.4	61.9	100	7/3	31	0	12.9
Kronos	112.2	62.4	100	7/2	28	1	10.4
Matt	111.6	62.7	100	7/3	30	2	10.2
RSI50603	111.2	62.5	100	7/3	28	0	13.1
UI Winchester	111.0	62.8	99	7/3	30	0	12.4
Lochsa	110.2	61.5	100	7/4	32	0	13.4
WB936	110.0	62.1	100	7/3	28	0	13.1
03W10348	109.6	62.6	100	7/2	27	0	12.5
Alzada	109.5	60.8	100	7/2	30	3	10.7
AP1526	109.4	62.7	99	7/5	37	7	10.5
Snowcrest	108.7	63.0	100	6/30	26	0	13.6
Utopia	108.2	61.3	100	7/3	28	1	10.2
Tara 2002	106.4	61.5	100	7/2	33	0	13.4
Blanca Grande (W)	106.3	63.7	100	7/1	26	0	13.9
OR4990114	105.2	61.7	100	7/2	30	0	12.7
Klasic (W)	104.3	62.8	99	7/1	23	0	13.3
Average	113.7	62.4	100	7/3	30	1	12.6
LSD ($\alpha = .05$)	10.2	1.1	0.8	0.5	1.4	4.2	0.9
CV%	12.4	2.4	1.1	0.4	6.3	621.1	5.1
Pr > F	<.0001	<.0001	0.0534	<.0001	<.0001	0.1877	<.0001

Table 21. Irrigated Soft White Spring Wheat Data Combined from Rupert, Idaho Falls, Ashton, and Aberdeen 2008

Variety	Yield (bu/A)	Test Weight	Spring Stand	Heading Date	Height (in)	Lodging (%)	Protein (%)
IDO644	136.0	61.2	100	6/10	32	0	10.6
IDO669	133.8	62.2	100	6/12	36	2	10.6
Alturas	132.8	61.6	100	6/12	34	0	9.8
Treasure	132.0	59.9	100	6/14	32	0	10.6
Challis	131.2	60.9	99	6/11	34	0	10.4
IDO671	130.8	62.0	100	6/11	33	0	10.1
Waxy Penawawa	130.8	61.3	100	6/13	33	0	10.5
Alpowa	129.8	61.6	99	6/12	34	0	10.9
Penawawa	129.4	62.0	100	6/12	33	0	10.9
IDO668	128.5	62.3	99	6/10	33	0	10.7
IDO629	127.2	60.9	99	6/13	34	0	10.5
UI Pettit	126.8	61.6	100	6/9	29	0	11.1
Jubilee	126.2	62.0	100	6/12	34	0	10.7
Skookum	125.8	60.6	100	6/13	34	0	10.9
WA008008	125.6	62.1	100	6/11	33	3	10.6
Nick	124.8	62.4	100	6/11	32	0	10.9
Cataldo	124.2	61.8	100	6/10	32	0	10.9
IDO630	119.6	61.2	100	6/13	33	0	11.1
Average	128.6	61.5	100	6/12	33	0	10.7
LSD (α = .05)	8.8	0.5	0.7	0.8	1.4	2.5	0.7
CV%	9.5	1.1	0.9	0.7	6.1	1238.6	4.3
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	0.593	0.0467

Table 22. Irrigated 6-Row Spring Barley Data Combined from Rupert, Idaho Falls, Ashton, and Aberdeen, 2008

Variety	Yield (bu/A)	Test Weight	Spring Stand	Heading Date	Height (in)	Lodging (%)	Protein (%)	Plumps (>6/64)	Plumps (>5.5/64)	% Thin
Feed										
Herald	158.4	52.1	97	7/2	36	14	10.9	94.2	4.3	2.1
Aquila	153.2	50.7	98	6/30	36	1	10.8	86.6	8.8	5.0
Colter	146.8	51.5	97	7/1	36	29	9.0	90.9	6.4	3.3
Creel	146.7	49.6	98	7/1	37	12	9.6	94.1	4.4	2.0
Goldeneye	144.5	50.8	91	7/1	36	22	9.2	88.2	8.3	3.9
Millennium	141.8	52.9	98	6/29	36	18	11.1	94.1	4.6	2.3
Steptoe	139.8	48.8	98	7/1	35	46	10.3	90.1	5.7	4.6
UT04B2041-42	126.3	52.2	98	7/2	38	6	11.7	96.7	2.7	1.0
Malt										
Drummond	142.4	52.2	97	7/2	35	22	11.4	92.5	5.1	2.7
Foster	128.8	51.7	97	7/2	38	34	11.5	95.2	3.7	2.0
Lacey	120.4	52.6	98	7/1	37	19	11.8	95.7	3.1	1.6
Legacy	118.4	51.0	99	7/3	37	42	12.2	86.1	8.0	6.2
Morex	118.0	52.0	97	7/2	36	23	11.7	95.1	3.6	1.8
Tradition	109.8	51.4	98	7/1	37	30	11.3	95.3	3.2	2.1
Average	135.4	51.4	97.2	183.8	36.5	22.6	10.9	92.5	5.1	2.9
LSD (α = .05)	8.4	0.8	4.6	0.5	1.5	13.2	0.9	5.0	2.6	2.5
CV%	8.6	2.1	6.6	0.4	5.8	84.5	5.9	3.8	33.8	58.4
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0002	<.0001	0.0032

Table 23. Irrigated 2-Row Spring Barley Data Combined from Rupert, Idaho Falls, Ashton, and Aberdeen, 2008.

Variety	Yield (bu/A)	Test Weight	Spring Stand	Heading Date	Height (in)	Lodging (%)	Protein (%)	Plumps (>6/64)	Plumps (>5.5/64)	% Thin
Feed										
Xena	166.4	53.8	100	7/5	33	10	10.7	95.5	2.7	1.9
Champion	165.7	54.0	100	7/4	33	15	11.2	93.8	3.9	2.9
Calgary	163.4	54.8	100	7/6	29	6	11.0	97.3	1.7	1.3
Spaulding	159.2	54.4	100	7/5	33	8	10.1	92.4	4.4	3.4
Lenetah	159.1	53.8	100	7/6	33	19	11.3	94.3	3.1	3.0
02WA-1095	157.6	53.3	100	7/6	31	30	10.5	93.1	4.2	3.0
RWA 1758	156.0	54.6	100	7/5	32	14	10.7	96.3	2.4	1.6
Primo	153.6	53.5	99	7/6	32	19	10.8	95.1	2.6	2.2
02WA-7028.9	151.9	52.9	100	7/5	33	21	11.4	92.9	3.8	3.5
Burton	151.7	53.3	99	7/6	34	7	11.7	96.6	2.0	1.4
CDC Bold	151.5	53.8	98	7/6	32	9	10.9	93.5	4.3	2.9
Camas	150.1	53.7	100	7/5	35	11	11.4	92.4	4.3	3.7
Baronesse	147.8	53.2	99	7/6	33	34	11.5	94.0	3.7	2.8
Idagold II	147.0	52.3	99	7/7	27	2	11.2	93.7	4.4	2.2
Tetonia	145.2	52.8	100	7/7	33	31	11.7	90.5	4.8	4.8
Radiant	145.2	53.3	100	7/6	32	26	10.6	90.7	4.9	5.2
Boulder	144.4	54.6	100	7/4	32	22	11.6	94.0	3.4	3.1
Haxby	143.0	54.8	96	7/5	33	14	11.3	95.2	2.8	2.2
Eslick	142.7	54.1	100	7/6	33	20	11.1	92.5	4.4	3.5
Valier	138.2	52.8	100	7/6	33	19	12.8	90.3	4.8	5.4
CDC McGwire*	131.0	61.2	93	7/9	35	20	12.1	75.5	17.8	7.5
Clearwater *	125.3	59.3	95	7/7	35	41	12.7	84.8	10.3	6.5
Hays	122.4	50.3	100	7/6	34	27	11.3	85.6	6.4	8.6
Malt										
01Ab7163	146.9	53.4	100	7/7	33	18	10.7	95.9	2.2	1.9
Conrad	145.0	52.7	100	7/6	32	16	12.1	89.9	2.5	1.5
2B99-2316	140.0	53.2	100	7/6	33	17	11.1	94.4	3.5	2.1
Geraldine	139.0	53.6	100	7/8	32	20	10.7	93.3	4.5	3.3
Pinnacle	135.7	54.3	100	7/4	35	4	10.7	97.7	1.5	0.9
Craft	134.9	54.1	99	7/4	36	19	12.1	94.8	3.4	2.5
B1202	134.4	52.3	100	7/7	32	12	12.0	95.3	3.3	1.9
Hocket	134.0	53.6	100	7/5	32	18	11.9	93.9	3.4	2.8
02Ab17373	132.6	52.1	100	7/9	35	18	10.9	93.7	4.0	2.5
2B99-2657	131.5	51.3	100	7/7	34	21	10.8	90.0	6.8	4.1
Merit	131.0	51.8	100	7/9	34	13	10.2	92.7	4.6	2.6
02Ab17271	130.6	51.8	97	7/9	35	25	11.8	89.2	5.7	5.2
CDC Stratus	127.0	53.0	99	7/7	33	12	12.1	96.0	2.5	1.6
AC Metcalfe	125.2	52.8	94	7/6	33	19	12.1	94.2	3.7	2.6
Harrington	122.6	52.8	100	7/8	34	31	11.3	90.5	6.2	3.6
Average	142.9	53.6	99	7/6	33	18	11.3	92.7	4.3	3.2
LSD (α = .05)	10.0	0.7	4.1	0.7	1.9	14.2	1.0	4.9	2.4	2.5
CV%	9.6	1.8	5.7	0.5	8.0	116.8	6.0	3.7	39.7	57.4
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

* indicates hulless variety

Table 24. Agronomic data for winter wheat at Kimberly, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in.)**	**(%)**	**(%)**
Hard Winter Wheat									
Bauermeister	---	110.4	162.1	63.2	100	6/8	39	45	11.9
Moreland	132.8	106.1	154.8	62.8	100	5/31	36	0	13.2
MDM (W)	---	123.3	153.9	63.1	100	6/9	41	43	12.6
Golden Spike (W)	144.5	106.9	149.8	63.7	100	6/5	41	14	12.1
Neeley	131.7	108.0	148.3	64.6	100	6/5	42	0	12.5
IDO 621	130.5	121.4	147.5	64.2	100	6/2	37	0	11.3
Deloris	138.4	102.3	146.3	63.9	100	6/2	42	0	12.2
WA8023	---	---	142.7	61.1	100	6/5	40	0	11.4
Yellowstone	141.1	118.3	141.8	63.2	100	6/1	41	0	12.2
MT0495	---	---	138.2	62.9	100	5/31	35	0	12.8
TX97-F4-33-1B	---	96.8	135.5	63.7	100	5/28	37	0	11.2
NuDakota (W)	---	111.7	134.7	63.2	99	5/26	33	0	12.1
NuHorizon (W)	132.4	115.3	134.5	64.2	100	5/29	38	0	11.6
UT9325-55	---	---	132.6	63.9	100	5/31	41	0	13.4
Whetstone	135.0	108.2	132.3	63.6	100	5/26	37	0	13.2
IDO 658 (W)	---	---	132.1	64.4	100	6/3	40	0	12.3
Gary (W)	134.2	109.0	131.6	62.7	100	6/4	42	13	11.7
Garland	126.9	109.2	131.2	62.5	100	6/3	29	0	11.9
IDO 651 (W)	---	---	131.0	62.4	100	6/2	48	0	13.0
IDO 653	---	---	130.7	64.4	100	5/31	47	0	12.4
Promontory	136.7	114.6	130.6	64.4	100	6/2	41	0	11.6
Eddy	---	112.0	129.2	64.0	100	6/1	36	0	12.3
DW	137.2	102.9	127.5	63.6	99	6/4	39	0	12.8
UI Darwin (W)	---	102.5	127.3	64.2	100	6/2	44	0	12.9
Weston	128.7	97.2	127.2	64.1	100	5/30	47	3	12.3
Manning	125.1	105.7	126.2	63.5	100	6/3	41	0	12.6
IDO680	---	---	125.5	63.5	100	6/7	45	0	13.3
Bonneville	130.6	100.2	122.9	64.3	100	6/5	44	0	13.1
Boundary	125.2	115.9	122.5	62.6	99	6/3	36	0	12.2
AgriPro Paladin	135.3	110.6	119.4	63.8	100	6/1	36	0	13.1
Utah 100	139.5	112.4	119.3	62.5	100	6/5	46	0	12.5
MT0552	---	---	117.1	62.7	100	5/29	37	0	14.5
NuHills (W)	133.6	96.1	113.9	64.3	100	5/27	38	0	12.9
Palomino (W)	---	---	110.3	62.7	100	5/28	33	0	12.6
Dumas	129.7	87.6	109.2	63.3	100	5/27	36	0	12.9
Average	133.7	107.7	132.6	63.5	100	6/1	39	3	12.5
LSD (α=.05)	9.8	13.5	4.0	0.8	0.9	1.4	2.0	14.1	
CV %	5.2	8.9	13.5	0.9	0.6	0.6	3.7	303.4	
Pr > F	<.0001	0.0002	0.0045	<.0001	0.2082	<.0001	<.0001	<.0001	

Table 25. Agronomic data for winter wheat at Rupert, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in.)**	**(%)**	**(%)**
Hard Winter Wheat									
Promontory	129.8	126.8	117.9	63.9	100	6/9	34	0	13.1
Deloris	100.5	101.0	112.9	62.5	100	6/11	37	0	12.9
NuDakota (W)	---	132.1	112.6	61.8	100	6/1	32	0	14.6
Utah 100	116.3	114.2	112.5	61.3	100	6/11	38	0	13.2
Garland	109.0	111.5	111.4	60.5	100	6/10	28	0	13.4
NuHorizon (W)	116.8	113.3	111.4	64.4	100	6/1	34	0	12.3
UT9325-55	---	---	111.4	61.4	100	6/5	36	0	13.9
Whetstone	110.5	119.3	111.1	62.1	100	5/31	30	0	14.0
Bauermeister	---	98.1	110.8	58.6	100	6/16	37	0	13.4
IDO 621	113.9	126.5	110.5	62.7	100	6/8	29	0	13.2
Manning	102.1	111.7	110.2	61.7	100	6/9	34	0	13.4
DW	102.8	107.4	109.5	61.8	100	6/12	34	0	13.5
Golden Spike (W)	106.7	114.0	108.2	60.2	100	6/13	37	0	13.8
MT0495	---	---	108.0	61.8	100	6/5	32	0	13.1
IDO 653	---	---	107.3	61.5	100	6/9	37	0	14.0
Yellowstone	118.7	123.7	107.0	61.8	99	6/8	35	0	14.1
Palomino (W)	---	---	107.0	61.2	100	6/2	34	0	13.6
AgriPro Paladin	105.1	104.4	106.6	61.7	99	6/9	34	0	14.1
Boundary	105.9	109.2	105.9	60.6	100	6/10	32	0	13.2
MT0552	---	---	105.9	62.8	100	6/1	32	0	14.2
TX97-F4-33-1B	---	141.5	105.9	62.9	100	6/1	33	0	12.4
Moreland	91.2	118.6	105.3	61.1	100	6/3	29	0	13.9
WA8023	---	---	105.2	59.3	100	6/14	35	0	12.9
Gary (W)	95.2	108.8	104.6	61.1	100	6/13	37	0	12.7
NuHills (W)	110.6	115.7	104.4	63.9	100	5/31	29	0	13.4
Neeley	103.6	112.0	103.6	61.9	100	6/13	38	0	13.6
Eddy	---	116.2	102.1	62.7	100	6/2	30	0	13.1
Dumas	112.5	126.8	99.7	62.1	100	5/31	32	0	13.6
IDO 658 (W)	---	---	99.5	63.1	100	6/9	33	0	13.2
MDM (W)	---	103.0	99.1	57.2	100	6/16	37	9	14.5
IDO 651 (W)	---	---	98.9	60.4	100	6/8	38	0	15.4
Bonneville	90.1	93.8	97.2	62.0	100	6/15	39	0	15.2
IDO680	---	---	91.7	62.1	100	6/14	39	0	14.8
UI Darwin (W)	---	102.1	87.4	62.9	100	6/11	34	0	14.2
Weston	88.0	99.9	87.0	63.2	100	6/4	35	18	14.3
Average	106.3	112.8	105.4	61.7	100	6/8	34	1	13.7
LSD (α=.05)	17.1	20.2	11.3	1.2	0.9	1.6	4.2	9.3	
CV %	11.4	12.6	7.7	1.4	0.7	0.7	8.9	885.4	
Pr > F	0.0008	0.0004	<.0001	<.0001	0.6578	<.0001	<.0001	0.5261	

Table 26. Agronomic data for winter wheat at Aberdeen, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**
Hard Winter Wheat									
Bonneville	94.5	132.8	116.7	64.2	100	6/14	31	0	14.6
Bauermeister	---	129.9	112.4	62.3	100	6/15	32	15	13.3
Neeley	91.7	137.9	110.1	64.5	96	6/12	28	0	15.0
Golden Spike (W)	112.0	131.3	110.0	64.2	100	6/12	29	0	14.1
IDO 621	119.6	147.9	109.5	64.0	100	6/8	25	0	13.5
NuDakota (W)	---	138.8	108.1	62.7	100	6/5	24	0	15.0
IDO680	---	---	107.6	63.5	100	6/14	30	0	15.3
Moreland	104.7	130.2	105.4	62.9	100	6/8	31	0	14.8
WA8023	---	---	104.6	61.8	100	6/13	27	0	13.0
Manning	101.1	132.5	103.0	64.7	100	6/9	30	0	14.1
MT0495	---	---	102.4	63.4	100	6/8	28	0	16.1
Deloris	108.8	134.4	101.9	64.3	100	6/12	28	0	14.1
Utah 100	111.4	125.5	99.7	63.1	100	6/11	33	0	14.7
Whetstone	103.3	140.0	99.4	63.9	98	6/6	28	0	15.4
Gary (W)	107.7	112.2	98.3	63.5	100	6/12	31	18	13.1
MDM (W)	---	140.2	97.7	62.1	99	6/15	28	20	14.6
DW	106.0	140.4	97.0	64.4	100	6/12	30	0	14.5
IDO 653	---	---	96.7	64.5	94	6/10	30	0	15.3
UI Darwin (W)	---	126.5	96.4	64.7	99	6/10	33	0	15.1
Yellowstone	120.8	139.9	95.2	63.2	100	6/9	28	0	15.5
IDO 651 (W)	---	---	94.8	62.8	100	6/10	32	0	15.9
NuHorizon (W)	97.8	132.7	94.7	64.6	100	6/6	25	0	14.2
Eddy	---	138.4	93.2	64.6	100	6/7	27	0	15.3
Boundary	100.1	120.9	92.0	62.2	100	6/12	26	0	14.3
Palomino (W)	---	---	88.9	62.5	91	6/8	24	0	15.2
MT0552	---	---	88.3	63.2	100	6/7	29	0	17.2
UT9325-55	---	---	88.0	63.3	100	6/8	32	0	15.9
Promontory	120.6	138.6	87.6	64.9	99	6/9	26	0	14.5
Garland	104.1	122.4	83.9	62.6	98	6/11	25	0	14.8
IDO 658 (W)	---	---	80.2	64.6	100	6/10	24	0	15.4
AgriPro Paladin	113.5	145.5	77.3	62.9	97	6/9	26	0	15.3
Weston	86.7	123.0	76.8	62.9	98	6/9	29	0	15.3
TX97-F4-33-1B	---	117.3	75.3	63.9	100	6/6	23	0	14.9
Dumas	88.3	112.7	75.1	64.0	99	6/7	25	0	14.5
NuHills (W)	85.8	106.2	73.9	63.3	99	6/5	24	0	16.8
Average	102.6	130.0	95.5	63.5	99	6/10	28	2	14.9
LSD (α=.05)	12.6	20.8	18.3	0.8	4.6	1.3	4.8	14.1	
CV %	8.8	11.2	13.6	1.0	3.3	0.6	12.3	667.3	
Pr > F	<.0001	0.0062	<.0001	<.0001	0.0928	<.0001	<.0001	0.4753	

Table 27. Agronomic data for winter wheat at Ririe, dryland, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**
Hard Winter Wheat									
Utah 100	47.2	26.1	27.9	60.8	81	6/25	25	0	13.0
Deloris	38.4	23.2	27.3	61.7	87	6/24	25	0	12.7
WA007975	---	---	26.9	58.9	80	6/29	22	0	12.0
Dumas	30.9	22.4	26.9	62.3	76	6/26	22	0	13.1
IDO 616	35.9	23.4	26.5	61.6	85	6/23	25	0	12.3
UT9325-55	---	---	26.4	61.5	88	6/23	24	0	12.8
Bonneville	36.4	21.2	26.2	61.7	75	6/25	25	0	12.8
Golden Spike (W)	33.3	23.2	25.8	60.1	78	6/25	23	0	12.2
MDM (W)	---	20.2	25.6	59.4	93	6/28	21	0	12.7
Bauermeister	---	22.4	25.3	59.9	84	6/28	22	0	12.0
Weston	35.5	21.6	24.8	62.3	80	6/23	26	0	12.9
Boundary	32.2	24.1	24.7	59.5	89	6/26	20	0	11.4
IDO 573	---	---	24.4	62.2	86	6/24	24	1	12.4
IDO 682 (W)	---	---	24.2	60.8	75	6/24	26	1	11.9
Eddy	---	---	24.2	60.8	65	6/26	20	0	11.5
WA8023	---	---	24.1	57.4	69	6/28	22	0	12.4
Neeley	36.4	23.0	24.0	61.0	76	6/25	23	0	11.9
IDO 681 (W)	---	---	23.8	62.2	76	6/24	22	0	11.8
UI Darwin (W)	34.2	20.3	23.7	62.3	73	6/23	24	0	13.6
Yellowstone	37.9	23.6	23.0	60.9	70	6/25	22	0	11.7
MT0495	---	---	22.9	61.0	85	6/26	20	0	12.1
NuHorizon (W)	34.7	26.6	22.1	61.7	80	6/25	20	0	11.2
Promontory	35.4	22.6	22.0	62.0	87	6/25	23	0	12.0
DW	37.9	21.3	21.6	61.5	79	6/26	20	0	11.1
Gary (W)	36.0	23.0	21.3	60.8	65	6/25	22	0	10.8
Moreland	38.6	21.3	21.1	59.7	86	6/26	20	0	11.5
TX97-F4-33-1B	---	26.1	21.1	61.3	87	6/26	22	0	10.8
Manning	---	---	20.5	61.5	66	6/25	23	1	11.3
NuHills (W)	34.1	20.7	20.2	61.9	78	6/24	21	0	13.3
Juniper	41.5	20.8	20.0	59.7	85	6/26	17	0	12.0
MT0552	---	---	20.0	61.3	85	6/24	21	0	12.6
NuDakota (W)	---	26.3	19.7	60.2	68	6/25	20	0	11.4
Palomino (W)	33.6	21.2	17.7	60.5	69	6/26	18	0	11.8
Garland	31.5	22.3	17.4	59.5	75	6/27	17	0	12.5
Average	35.7	22.9	23.3	60.9	79	6/25	22	0	12.1
LSD (α=.05)	6.5	3.9	5.3	1.0	23.7	1.4	1.6	0.4	
CV %	13.0	12.1	16.2	1.1	21.5	0.6	5.1	563.3	
Pr > F	0.0081	0.0401	0.0024	<.0001	0.7338	<.0001	<.0001	0.3471	

Table 28. Agronomic data for winter wheat at Preston, dryland, 2008.

Variety	Yield (bu/A) 2008	Test Wt. (lb/bu)	Heading Date	Protein (%)
Hard Winter Wheat				
Weston	22.0	58.1	6/19	18.1
IDO 682 (W)	21.3	56.5	6/22	19.2
Golden Spike (W)	19.8	57.6	6/20	17.8
MT0495	18.3	57.8	6/21	19.2
IDO 681 (W)	17.7	59.0	6/22	19.1
Moreland	14.5	58.3	6/18	18.8
IDO 573	14.3	57.3	6/20	18.6
Manning	13.1	57.7	6/19	19.4
Gary (W)	10.0	57.1	6/20	18.4
Deloris	9.7	57.1	6/20	17.9
DW	9.6	55.2	6/20	19.3
Garland	9.6	58.3	6/21	18.4
NuDakota (W)	9.3	57.9	6/15	18.7
MDM (W)	9.2	55.3	6/22	19.0
Bonneville	9.1	59.3	6/23	19.4
MT0552	9.1	58.8	6/18	19.2
Utah 100	8.7	51.4	6/21	19.5
Bauermeister	8.7	58.3	6/23	18.8
Neeley	8.6	57.6	6/21	18.9
Promontory	8.5	54.7	6/19	18.7
Palomino (W)	8.4	57.1	6/18	20.3
NuHorizon (W)	8.3	58.0	6/16	17.7
Juniper	8.1	58.3	6/22	18.9
IDO 616	7.8	57.4	6/22	18.8
Boundary	7.8	58.0	6/20	18.6
NuHills	7.0	58.6	6/15	19.3
Yellowstone	6.4	61.3	6/21	18.6
UT9325-55	6.2	51.9	6/20	19.2
UI Darwin (W)	5.9	60.3	6/22	18.4
WA007975	5.8	60.6	6/23	19.0
Eddy	5.6	59.3	6/18	19.0
TX97-F4-33-1B	4.7	60.3	6/16	18.8
WA8023	3.8	60.6	6/22	18.6
Dumas	3.8	60.3	6/15	17.3
Average	10.0	57.8	6/20	18.8
LSD (a=.05)	9.6	6.3	2.2	
CV %	57.3	6.7	0.8	
Pr >F	0.0117	0.4108	<.0001	

Table 29. Agronomic data for winter wheat at Kimberly, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in.)**	**(%)**	**(%)**
Soft White Winter Wheat									
Bruehl	121.9	115.5	151.8	60.1	100	6/10	39	0	10.4
Tubbs 06	133.0	126.3	150.9	60.8	100	6/6	39	0	9.3
Brundage	129.7	117.6	149.1	62.4	99	6/1	36	0	9.6
00-475-2DH	---	---	148.6	63.5	100	6/5	39	0	9.7
Bitterroot	---	---	148.4	61.9	99	6/5	41	0	10.0
Xerpha	---	---	146.0	61.7	100	6/9	40	0	9.2
Salute	---	---	145.0	61.3	100	6/5	39	0	10.4
93-64901A	---	131.1	144.5	61.8	99	6/8	38	0	8.6
Masami	---	---	143.3	60.8	100	6/9	39	0	9.7
IDO 620	140.2	119.3	142.0	62.5	100	6/9	39	2.5	9.8
Skiles	---	---	141.6	62.2	100	6/7	36	2.5	10.1
Mohler	146.6	110.5	141.2	61.8	100	6/6	38	0	9.9
ORCF-101	127.6	110.8	141.2	61.3	100	6/8	37	0	10.3
WestBred 528	148.7	118.8	140.5	62.7	100	6/2	37	0	10.6
Brundage 96	127.5	118.3	138.5	60.2	100	6/4	33	0	9.8
UICF Lambert	129.1	118.7	138.4	61.4	99	6/5	40	0	10.0
Simon	133.9	112.9	136.8	61.1	100	6/5	37	0	9.5
Stephens	135.1	113.5	136.8	61.6	100	6/6	37	0	9.6
UICF Brundage	---	117.4	133.2	59.8	100	6/4	35	0	10.0
Chukar	---	101.4	131.8	59.9	99	6/10	39	0	10.6
Madsen	134.2	115.9	131.4	61.3	100	6/8	35	0	9.4
Cara	---	94.5	131.3	59.5	99	6/10	37	0	10.0
Daws	135.4	112.6	131.1	62.2	100	6/7	38	0	9.5
ORCF-102	128.6	121.2	130.4	61.0	100	6/6	37	0	9.5
IDO 655	---	---	130.0	63.0	100	6/6	40	0	10.5
IDO 587	129.6	115.9	129.5	61.1	99	6/2	36	0	10.4
Coda	---	119.7	129.3	63.2	100	6/7	38	1.3	11.2
IDO 654	---	---	127.8	60.4	100	6/1	35	0	9.4
Lambert	135.4	120.1	124.5	61.7	99	6/4	41	0	10.1
Clearfirst	121.5	104.0	122.4	61.3	100	6/6	37	0	10.5
Average	133.5	115.4	137.9	61.4	100	6/6	38	0	9.9
LSD (α=.05)	10.1	15.7	19.9	0.6	1.0	3.6	3.2	1.9	
CV %	5.4	9.7	10.3	0.7	0.7	1.6	6.1	657.3	
Pr > F	<.0001	0.0223	0.1556	<.0001	0.4238	<.0001	0.0003	0.5619	

Table 30. Agronomic data for winter wheat at Rupert, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in.)**	**(%)**	**(%)**
Soft White Winter Wheat									
Mohler	---	---	103.5	58.5	100	6/12	31	0	11.2
IDO 620	110.5	93.7	101.6	59.0	99	6/16	33	0	11.3
Daws	128.9	118.3	100.5	58.7	100	6/13	32	0	11.3
Skiles	---	---	95.2	58.3	100	6/12	29	0	12.5
Brundage 96	124.9	123.4	92.5	57.0	100	6/12	29	0	11.7
Clearfirst	107.3	110.6	92.4	57.9	100	6/14	32	0	11.3
Brundage	132.6	130.6	89.7	58.1	100	6/5	29	0	13.2
00-475-2DH	---	---	88.8	60.1	100	6/14	29	0	12.6
UICF Lambert	109.8	129.0	87.9	58.0	100	6/10	32	0	13.4
Tubbs 06	106.0	115.6	87.8	57.5	100	6/12	30	0	12.2
Coda	---	108.6	87.6	60.7	100	6/16	31	0	13.4
Lambert	120.6	117.5	87.5	59.1	100	6/11	31	0	11.4
WestBred 528	128.6	128.5	87.0	58.9	100	6/2	29	0	12.1
Salute	---	---	86.3	57.0	100	6/9	30	0	12.4
UICF Brundage	---	117.4	85.6	54.2	100	6/9	28	0	13.6
Simon	123.2	122.8	85.4	58.5	100	6/9	30	0	12.5
Cara	---	117.7	84.9	58.7	100	6/17	28	0	12.8
IDO 587	107.9	110.4	84.9	57.1	96	6/6	30	0	12.2
ORCF-102	118.9	119.1	84.4	40.8	100	6/12	31	0	13.5
IDO 655	---	---	84.3	59.8	100	6/14	31	0	11.7
Xerpha	---	---	84.3	58.8	99	6/16	31	0	12.9
ORCF-101	106.0	109.0	84.1	56.8	100	6/10	30	0	12.9
Masami	---	---	82.3	57.4	100	6/16	29	0	12.2
Madsen	128.2	120.3	81.6	57.7	100	6/15	28	0	12.9
Stephens	125.3	118.9	81.4	58.0	100	6/10	28	0	12.9
IDO 654	---	---	81.0	57.2	100	6/8	27	0	12.2
93-64901A	---	122.6	77.7	59.2	100	6/15	27	0	12.1
92-22407A	---	---	77.0	59.1	100	6/14	30	0	12.6
Chukar	---	109.7	76.7	59.4	100	6/19	31	0	11.8
Bruehl	112.1	110.6	72.1	57.3	95	6/19	30	0	13.7
Average	117.1	117.3	86.5	57.6	100	6/12	30	0	12.4
LSD (α=.05)	19.6	14.5	13.9	8.5	3.3	2.5	2.9	0	
CV %	11.8	8.8	11.4	10.5	2.4	1.1	7.1	0	
Pr > F	0.0054	0.0011	0.005	0.1969	0.6341	<.0001	0.0052	0	

Table 31. Agronomic data for winter wheat at Aberdeen, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Soft White Winter Wheat									
Xerpha	---	---	126.1	62.0	100	6/16	29	0	12.2
93-64901A	---	160.8	121.5	62.1	95	6/16	29	0	11.5
00-475-2DH	---	---	121.4	63.6	100	6/14	27	0	12.9
ORCF-101	120.8	127.2	115.0	61.0	96	6/13	29	0	12.6
Coda	---	142.3	114.5	63.7	100	6/17	31	3	13.5
Brundage 96	119.7	138.2	113.7	61.0	100	6/12	26	0	11.8
UICF Brundage	---	140.9	113.6	60.4	100	6/10	25	0	11.4
Cara	---	132.0	112.4	60.2	99	6/17	27	0	13.1
Chukar	---	130.0	111.6	59.7	100	6/18	28	0	13.0
Simon	128.7	138.4	109.7	62.1	100	6/13	26	0	12.5
IDO 620	106.1	145.4	109.0	63.0	100	6/15	27	0	12.9
ORCF-102	126.2	154.3	107.5	62.0	98	6/12	28	0	12.3
92-22407A	---	---	106.7	63.0	100	6/13	26	0	13.0
Mohler	129.7	136.5	106.4	63.0	100	6/13	28	0	12.8
Masami	---	---	106.2	62.2	99	6/16	29	0	12.6
Lambert	120.6	130.9	105.3	62.5	98	6/12	30	0	12.5
Stephens	121.9	134.4	104.5	62.8	100	6/13	27	0	12.3
Salute	---	---	103.7	61.3	100	6/13	27	0	12.9
Tubbs 06	134.1	153.8	103.3	61.9	100	6/13	27	0	12.3
Clearfirst	114.4	126.0	101.9	62.1	100	6/14	28	0	13.0
Bruehl	105.1	144.1	101.4	61.5	100	6/17	29	0	13.3
IDO 587	115.6	134.0	100.4	61.7	100	6/11	28	0	12.8
Daws	122.7	131.0	100.4	63.1	100	6/14	29	0	13.0
IDO 655	---	---	100.0	63.2	99	6/13	30	0	11.8
Madsen	127.3	136.2	99.7	62.1	95	6/14	27	0	13.4
UICF Lambert	115.9	139.2	98.0	62.2	99	6/14	30	0	12.7
Skiles	---	---	97.7	61.6	100	6/14	25	0	14.4
Brundage	111.0	147.7	96.6	62.7	100	6/9	25	0	11.6
WestBred 528	126.2	148.9	93.8	63.0	100	6/8	28	0	13.3
IDO 654	---	---	93.4	61.1	100	6/10	26	0	12.3
Average	120.0	139.1	106.5	62.0	99	6/13	28	0	12.7
LSD (α=.05)	13.8	16.9	14.1	0.9	2.7	1.0	3.0	1.3	
CV %	8.2	8.4	9.4	1.0	1.9	0.4	7.8	1095.4	
Pr > F	0.0002	0.0138	0.0002	<.0001	0.0008	<.0001	0.0056	0.4798	

Table 32. Agronomic data for winter wheat at Ririe, dryland, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)
Soft White Winter Wheat									
93-64901A	---	21.7	23.1	58.5	59	6/29	21	0	9.4
00-475-2DH	---	---	22.2	60.6	88	6/27	19	0	10.5
Xerpha	---	---	22.0	58.0	77	6/29	20	0	9.9
IDO 620	38.0	23.9	21.2	59.6	65	6/29	21	0	10.4
Lambert	32.6	17.9	21.2	57.0	86	6/26	22	0	10.1
ORCF-102	35.8	23.1	20.4	58.4	69	6/27	20	0	10.3
WestBred 528	39.6	21.1	20.3	58.8	87	6/27	21	0	8.5
Bruehl	37.1	18.5	20.0	58.7	57	7/1	22	0	11.1
Tubbs 06	34.9	24.3	20.0	57.5	70	6/27	22	0	9.6
Madsen	35.1	21.1	19.8	57.0	86	6/28	20	0	10.7
Salute	---	---	19.7	56.8	73	6/28	21	0	9.7
Skiles	---	---	19.6	57.2	53	6/29	19	0	11.0
IDO 655	---	---	19.6	59.6	68	6/26	22	0	10.1
UICF Lambert	36.3	20.6	19.5	57.3	68	6/26	23	0	9.7
Simon	36.7	19.7	19.0	57.5	74	6/27	20	0	9.5
Masami	---	---	19.0	57.1	72	6/30	21	0	9.4
Brundage	35.0	22.7	18.9	59.1	81	6/26	20	0	8.9
IDO 587	31.6	20.7	18.7	57.8	69	6/26	21	0	10.0
ORCF-101	34.3	19.5	18.7	58.1	63	6/28	20	0	10.1
Mohler	33.1	16.6	18.3	58.0	78	6/27	21	0	9.8
Daws	37.1	23.3	17.6	59.1	75	6/27	20	0	10.3
Chukar	---	17.1	17.6	55.7	74	7/1	17	0	9.4
Brundage 96	37.9	22.2	17.3	56.0	79	6/27	19	0	8.7
UICF Brundage	---	20.1	16.8	56.7	60	6/26	19	0	9.4
Clearfirst	32.3	15.0	16.5	57.5	72	6/28	20	0	10.3
Stephens	33.2	17.9	16.4	54.2	56	6/28	20	0	9.9
92-22407A	---	---	16.4	56.1	41	6/29	20	0	10.1
Cara	---	16.4	15.6	55.1	63	7/1	17	0	9.1
Coda	---	20.1	15.6	59.0	50	6/29	19	0	9.9
IDO 654	---	---	14.0	56.1	46	6/28	21	0	9.7
Average	35.5	20.3	18.8	57.6	69	6/28	20	0	9.8
LSD (α=.05)	4.4	4.5	5.3	2.8	29.8	2.1	1.4	0	
CV %	8.9	15.6	20.0	3.5	30.9	0.8	5.0	0	
Pr > F	<.0001	0.0001	0.1789	0.0056	0.1622	<.0001	<.0001	0	

Table 33. Agronomic data for winter barley at Kimberly, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
02Ab2732	---	163.6	263.8	48.2	99	5/26	37	1	7.9	88.1	9.6	2.4
02Ab339	---	153.7	229.1	54.3	93	5/28	39	15	9.3	96.6	2.5	1.6
93Ab669	---	153.2	227.4	50.0	99	5/23	38	85	10.0	87.6	9.0	4.2
02Ab2701	---	134.1	216.1	49.6	100	5/25	35	46	9.4	85.0	10.6	5.1
Sprinter	159.9	170.2	206.7	50.5	97	5/28	38	6	9.3	85.7	10.5	4.8
Sunstar Pride	166.6	139.9	205.9	50.0	97	6/5	37	0	7.6	71.9	17.9	10.7
Eight-Twelve	158.7	136.0	204.5	49.6	98	5/25	32	0	9.3	90.5	8.0	2.9
96AB69	152.1	150.3	202.0	48.0	99	5/23	30	13	9.3	67.7	22.2	11.1
02Ab2739	---	163.4	201.6	47.5	100	5/26	36	53	8.5	86.5	10.3	4.0
97BX42-116-17A	165.1	150.2	199.5	50.3	98	5/31	34	19	8.9	89.5	8.4	2.9
91Ab36	171.1	163.8	198.0	47.3	98	5/29	30	3	9.0	87.0	10.4	3.5
Schuyler	156.3	168.5	197.4	51.2	98	5/30	38	3	9.3	82.5	13.3	5.3
86Ab474	150.7	155.3	195.9	49.3	98	5/24	28	0	9.0	80.0	13.8	7.5
Endeavor *	152.1	150.5	193.0	54.1	94	5/25	34	11	8.8	92.2	5.3	3.1
93Ab631	152.7	148.1	190.9	45.8	100	5/22	33	5	8.1	76.8	16.5	8.2
91Ab23	161.7	132.5	189.2	48.5	99	5/28	28	0	8.7	85.2	10.8	4.8
92Ab1308	157.7	164.2	188.0	47.8	100	5/22	33	97	9.5	81.5	12.7	6.4
OR71	---	---	184.6	51.9	99	5/22	36	16	9.9	93.2	5.0	2.5
94Ab1777	159.2	127.6	179.9	50.0	99	5/25	40	55	9.9	78.0	15.9	7.4
97Ab11	153.1	153.5	176.4	51.2	98	6/3	35	0	8.5	83.1	12.7	5.1
OR78	---	---	174.4	52.2	100	5/23	32	5	9.6	95.5	3.6	1.6
OR77	---	---	173.8	52.0	99	5/23	33	5	9.5	96.9	3.4	1.7
Boyer	158.7	155.6	173.4	49.0	93	5/29	35	0	9.0	85.4	9.9	4.7
Strider	151.7	154.1	172.9	49.9	100	5/22	32	11	9.7	94.3	4.8	1.7
92Ab561	165.7	160.0	168.8	50.7	99	5/26	31	0	8.6	90.1	6.4	3.9
Maja-Grande	---	123.4	164.5	52.4	100	5/21	35	3	9.8	91.8	6.2	2.8
OR72	---	---	163.8	52.0	100	5/20	36	4	10.1	84.8	9.6	5.7
Charles	149.6	134.4	161.6	50.1	99	5/22	32	42	9.4	94.8	3.4	2.9
88AB536B	126.1	128.9	151.2	50.8	100	5/21	38	43	10.0	85.0	10.8	5.3
OR79	---	---	146.7	49.6	99	5/22	28	10	10.2	89.0	8.1	4.0
Average	155.7	146.9	190.0	50.1	98	5/25	34	18	9.2	86.5	9.7	4.6
LSD (a=.05)	17.5	27.1	29.7	0.8	4.4	1.2	4.2	25.2				
CV %	8	12.9	11.1	1.5	3.17	0.97	8.8	97.9				
Pr > F	0.0025	0.0016	<.0001	<.0001	0.0776	<.0001	<.0001	<.0001				

* Endeavor was previously tested as 95Ab2299

Table 34. Agronomic data for winter barley at Rupert, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
94Ab1777	124.7	131.3	141.9	50.3	96	5/30	40	18	9.3	59.5	24.2	17.6
96AB69	148.8	156.3	137.4	47.5	99	5/28	30	0	9.6	35.1	29.9	35.5
02Ab2732	---	145.6	136.1	48.0	95	6/4	34	0	8.2	62.1	24.1	14.9
92Ab561	143.1	141.3	135.3	49.9	98	5/31	31	0	10.2	56.9	28.7	15.2
Sunstar Pride	147.8	156.1	134.0	48.0	98	6/15	35	0	8.6	34.1	30.9	35.7
92Ab1308	132.2	129.9	132.3	48.7	97	5/28	36	0	9.7	58.8	25.6	16.5
OR71	---	---	129.1	49.7	99	5/30	32	0	9.4	73.5	16.7	10.2
91Ab36	120.6	174.2	126.8	45.9	97	6/2	35	0	10.2	46.6	26.7	27.6
Schuyler	119.0	138.8	126.0	51.6	96	6/4	35	6	11.4	50.8	32.7	17.0
93Ab631	127.0	131.7	123.5	45.8	97	5/31	32	3	9.4	39.9	31.1	30.2
93Ab669	---	156.5	123.2	48.3	98	5/28	34	0	11.4	48.3	26.9	25.7
91Ab23	134.6	129.9	123.2	47.7	95	6/1	30	0	9.2	44.3	33.0	23.8
97BX42-116-17A	137.2	107.8	123.2	49.8	98	6/8	37	0	11.2	49.6	33.7	17.0
OR78	---	---	122.7	50.9	96	5/30	32	0	8.9	80.5	13.8	6.9
02Ab2701	---	109.0	120.5	49.9	96	6/1	35	0	9.6	66.3	21.0	13.0
OR77	---	---	120.3	48.5	99	5/30	32	8	10.6	64.1	20.6	16.9
Sprinter	118.2	146.1	118.8	50.8	96	6/6	36	13	10.6	54.0	30.8	15.8
Maja-Grande	---	116.4	115.8	49.8	90	5/27	31	3	9.5	63.5	21.3	15.2
02Ab2739	---	127.3	114.7	47.2	97	6/1	34	0	10.6	50.7	27.9	22.5
86Ab474	122.4	170.4	114.1	49.6	98	5/28	30	0	10.9	58.9	23.8	18.6
02Ab339	---	104.9	113.8	52.0	94	6/8	32	0	10.3	84.1	10.4	6.4
Boyer	114.3	148.0	113.1	48.5	97	6/2	34	0	9.8	54.7	26.7	19.6
Strider	132.4	145.6	111.7	48.2	97	5/27	32	1	10.7	66.5	20.4	14.1
88AB536B	69.5	119.1	107.7	50.8	97	5/28	36	8	102.0	68.3	19.9	12.8
97Ab11	128.0	143.4	105.9	52.0	92	6/11	36	0	9.5	71.0	18.5	9.4
Eight-Twelve	144.1	128.9	105.5	48.4	91	5/30	32	0	9.6	54.4	26.4	19.8
Endeavor *	116.0	72.3	100.8	52.3	84	6/7	33	0	11.0	71.5	18.9	10.1
Charles	114.2	64.7	95.7	50.1	82	6/3	29	0	10.0	81.0	10.2	9.6
OR79	---	---	94.2	48.1	99	5/26	32	0	12.2	72.2	17.3	11.3
OR72	---	---	79.0	50.3	93	5/29	31	0	10.6	70.3	17.0	13.1
Average	122.5	130.6	118.2	49.3	95	6/1	33	2	13.1	59.7	23.6	17.4
LSD (α=.05)	26.1	28.9	19.3	2.1	10.0	3.0	4.0	13.1				
CV %	14.9	15.6	11.6	3.0	7.4	1.4	8.5	483.2				
Pr > F	<.0001	<.0001	<.0001	<.0001	0.1465	<.0001	<.0001	0.7054				

* Endeavor was previously tested as 95Ab2299

Table 35. Agronomic data for winter barley at Aberdeen, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	2006	2007	2008	(lb/bu)	Stand %	Date	(in.)	(%)	(%)	(>6/64)	(>5.5/64)	% Thin
93Ab669	128.6	128.5	150.5	49.8	54	6/13	29	0	12.7	85.6	10.6	4.9
97BX42-116-17A	91.6	111.4	150.0	51.3	56	6/18	27	0	13.8	79.2	15.9	5.4
Schuyler	99.8	95.2	142.1	51.4	44	6/17	30	0	13.7	73.1	19.3	8.3
Strider	118.7	15.7	135.0	51.4	45	6/8	28	0	14.6	97.0	2.7	1.0
86Ab474	135.8	91.9	131.6	52.4	40	6/13	27	0	13.1	81.2	13.3	6.4
02Ab2701	---	99.8	124.5	48.2	31	6/13	31	0	13.9	82.8	11.1	6.5
Sunstar Pride	129.3	16.3	123.8	51.4	20	6/17	25	0	11.5	82.6	10.9	6.9
96AB69	103.4	42.6	122.4	51.2	50	6/12	25	0	13.5	74.9	16.2	9.6
OR71	---	---	121.9	51.5	81	6/8	29	0	13.5	94.1	4.6	2.0
OR77	---	---	120.8	51.4	66	6/9	26	0	13.5	92.8	5.8	2.2
91Ab36	141.7	119.2	119.0	49.9	34	6/16	25	0	13.9	89.5	7.9	3.5
Sprinter	108.8	85.6	118.8	50.7	25	6/18	30	0	14.5	74.0	18.6	8.0
OR78	---	---	112.2	50.9	75	6/8	27	0	13.4	93.0	5.2	2.2
Eight-Twelve	95.2	70.4	106.3	50.3	24	6/11	26	0	13.1	88.4	8.7	3.9
Boyer	113.3	32.6	101.9	49.3	19	6/15	26	0	14.1	82.0	11.5	7.6
94Ab1777	87.3	26.2	101.3	49.4	30	6/13	32	0	13.3	68.7	17.4	14.1
91Ab23	142.9	17.8	92.3	48.4	13	6/16	25	0	14.3	78.6	14.7	7.7
02Ab2739	---	88.0	88.3	46.5	26	6/14	29	0	12.6	81.7	11.8	7.4
92Ab1308	102.9	12.8	87.2	48.0	10	6/10	30	0	14.8	84.2	10.8	5.8
93Ab631	118.6	51.6	75.8	47.3	10	6/13	24	0	13.0	81.5	13.1	6.1
02Ab2732	---	89.9	72.2	47.2	16	6/14	30	0	12.2	90.5	6.7	2.9
88Ab536B	56.5	27.5	72.2	47.7	30	6/9	32	0	14.5	88.4	8.3	3.9
92Ab561	107.1	35.3	71.3	51.5	20	6/15	24	0	14.3	80.7	14.1	6.3
97Ab11	128.6	86.9	71.2	50.7	10	6/17	23	0	13.7	86.1	10.5	3.9
OR79	---	---	62.8	49.1	46	6/6	21	0	15.4	94.4	4.5	1.6
OR72	---	---	52.2	52.3	20	6/10	30	0	14.5	90.2	6.7	3.7
Endeavor *	103.8	11.4	36.5	47.6	6	6/18	32	0	15.6	86.8	8.1	5.1
02Ab339	---	5.5	19.2	44.6	3	6/18	30	0	16.7	62.2	21.7	17.0
Charles	112.5	4.5	10.6	47.3	2	6/17	27	0	16.5	78.8	9.4	12.7
Maja-Grande	---	14.2	10.4	47.2	4	6/15	28	0	16.1	80.3	13.7	7.7
Average	106.9	56.2	93.5	49.5	30	6/13	27	0	14.0	83.4	11.1	6.1
LSD (α=.05)	27.0	58.5	33.5	3.9	20.8	3.7	3.8	0				
CV %	17.3	74.1	25.5	3.9	48.9	1.6	9.9	0				
Pr > F	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0				

* Endeavor was previously tested as 95Ab2299

Table 36. Agronomic data for spring wheat at Rupert, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in)**	**(%)**	**(%)**
Hard Spring Wheat									
Jerome	90.4	104.2	158.0	62.8	100	6/26	36	0	11.2
IDO 667	---	---	142.3	64.6	100	6/26	36	8	12.1
Iona	89.9	109.3	139.4	64.6	100	6/27	38	0	11.5
Jefferson	92.2	103.7	138.4	62.6	100	6/27	36	0	11.8
Lolo (W)	96.5	102.8	137.8	64.6	100	6/28	38	0	11.0
Blanca Grande (W)	84.0	102.2	137.7	65.0	100	6/24	30	0	12.1
Bullseye	---	---	137.5	64.8	100	6/28	32	10	10.9
Idaho 377s (W)	93.1	96.8	137.3	64.4	100	6/27	34	21	11.1
Otis (W)	97.8	98.6	136.5	62.8	100	6/28	40	0	11.5
Summit	80.8	96.9	136.0	62.3	100	6/27	27	0	11.3
Lochsa (W)	88.2	108.2	134.5	62.2	100	6/28	35	0	12.1
03W10348 (W)	---	94.7	133.0	63.4	100	6/25	32	0	11.1
Cabernet	---	97.5	131.8	63.5	100	6/26	28	0	10.9
Snowcrest (W)	---	94.1	130.5	63.0	100	6/24	29	0	13.0
RSI50603	---	---	129.2	63.9	100	6/27	31	0	12.0
Pristine (W)	83.2	100.1	128.9	63.9	100	6/26	37	0	13.3
Choteau	73.8	103.5	128.5	63.6	100	6/27	36	0	12.7
OR4990114	---	---	126.7	62.7	100	6/25	33	0	11.0
Buckpronto	82.5	101.6	126.7	63.5	100	6/24	35	0	12.6
Tara 2002	93.8	95.3	125.2	62.8	100	6/26	39	0	11.8
Klasic (W)	79.2	96.4	125.0	64.1	100	6/25	27	0	12.0
Blanca Royale (W)	---	---	123.9	62.7	100	6/25	25	0	11.5
WestBred 936	84.0	98.6	122.3	62.7	100	6/27	33	0	11.8
UI Winchester	---	---	121.0	63.8	100	6/27	34	0	11.0
WA007954	---	---	113.2	63.3	100	6/28	37	0	12.5
Durum Wheat									
Kronos	91.4	100.7	146.6	63.3	100	6/25	30	0	9.7
AP1526	91.4	86.2	136.1	64.2	100	6/28	41	13	9.9
Utopia	95.2	99.8	129.2	62.8	100	6/27	30	0	9.8
Matt	83.9	87.3	126.7	62.8	100	6/26	33	0	9.9
Alzada	81.8	99.7	126.2	56.8	100	6/26	33	0	9.7
Average	85.9	96.9	132.2	63.2	100	6/26	33	2	11.4
LSD (α=.05)	13.3	11.3	16.8	3.5	0.0	0.9	2.7	13.6	
CV %	11.0	8.3	9.0	3.9	0.0	0.3	5.8	565.5	
Pr > F	0.003	<.0001	0.0	0.1	0.0	<.0001	<.0001	0.5	

Table 37. Agronomic data for spring wheat, Aberdeen, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in)**	**(%)**	**(%)**
Hard Spring Wheat									
Lolo (W)	84.8	122.3	124.9	63.7	100	6/26	35	0	13.4
Idaho 377s (W)	84.2	104.5	117.2	62.1	100	6/25	34	0	14.1
Bullseye	---	---	113.2	64.6	100	6/25	30	0	13.8
Iona	77.6	106.6	109.6	63.6	100	6/25	36	0	13.7
Blanca Royale (W)	---	---	109.6	62.4	100	6/23	25	0	12.1
Otis (W)	89.6	122.0	107.7	62.7	100	6/26	36	0	13.6
Jerome	84.4	122.6	107.0	63.3	100	6/23	31	0	13.2
WA007954	---	---	106.4	62.5	100	6/25	34	0	13.2
Buckpronto	76.6	114.2	102.6	62.3	100	6/22	31	0	14.7
Pristine (W)	72.7	125.5	102.0	63.7	100	6/23	33	0	15.3
Cabernet	---	122.8	102.0	63.6	100	6/24	24	0	13.5
Choteau	79.6	117.9	101.5	61.8	100	6/25	30	0	14.4
UI Winchester	---	---	101.3	63.5	100	6/23	29	0	13.0
WestBred 936	78.3	119.8	99.3	63.0	100	6/24	30	0	14.4
Summit	68.8	114.3	95.3	61.6	100	6/24	24	0	15.4
Klasic (W)	70.5	119.0	93.9	62.7	100	6/22	23	0	14.5
Jefferson	82.9	123.2	93.6	62.7	100	6/24	29	0	13.7
IDO 667	---	---	93.2	64.8	100	6/24	30	0	13.4
Lochsa (W)	81.0	120.8	92.7	62.0	100	6/24	32	0	14.4
OR4990114	---	---	85.5	62.3	100	6/22	30	0	13.4
RSI50603	---	---	83.7	62.7	100	6/23	28	0	13.5
Blanca Grande (W)	62.4	134.8	79.6	63.3	100	6/21	24	0	14.6
Snowcrest (W)	---	117.2	75.1	63.0	100	6/21	24	0	13.0
Tara 2002	80.4	117.5	74.9	61.8	100	6/23	31	0	15.2
03W10348 (W)	---	127.2	72.9	62.1	100	6/23	24	0	13.5
Durum Wheat									
Matt	60.9	112.3	99.3	63.7	100	6/24	29	0	10.2
Utopia	80.5	107.7	94.4	62.3	100	6/24	27	0	11.3
Alzada	69.3	118.5	94.1	63.0	100	6/24	30	0	11.6
AP1526	77.9	122.8	93.6	62.6	100	6/28	36	13	10.6
Kronos	74.7	125.8	86.7	62.6	100	6/23	28	0	11.5
Average	76.9	117.7	97.1	62.9	100	6/24	29	0	13.4
LSD (α=.05)	5.6	8.5	26.4	1.5	0.0	1.1	3.6	6.4	
CV %	5.2	5.2	19.3	1.7	0.0	0.4	8.5	1095.4	
Pr > F	<.0001	<.0001	0.0	0.0	0.0	<.0001	<.0001	0.5	

Table 38. Agronomic data for spring wheat, Idaho Falls, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in)**	**(%)**	**(%)**
Hard Spring Wheat									
Snowcrest (W)	---	105.7	144.7	63.9	100	6/26	26	0	13.4
Tara 2002	83.5	103.3	143.9	62.0	100	6/27	34	0	12.3
IDO 667	---	---	141.3	64.2	100	6/29	32	1	12.4
Bullseye	---	---	141.3	64.6	100	6/29	29	0	12.4
Idaho 377s (W)	106.9	101.4	141.1	63.0	100	6/30	33	3	12.9
Summit	79.2	99.2	140.0	62.2	100	6/30	24	0	11.5
Lolo (W)	105.1	105.7	139.9	64.3	100	6/30	33	1	11.9
RSI50603	---	---	138.8	63.9	100	6/28	27	0	12.6
Otis (W)	111.8	102.6	138.8	63.6	100	7/1	38	0	12.2
WA007954	---	---	136.6	63.0	100	6/30	33	0	13.6
03W10348	---	---	135.3	63.2	100	6/26	27	0	12.2
Iona	93.7	97.7	133.7	63.1	100	6/30	35	9	13.1
Pristine (W)	94.2	102.3	132.6	64.3	100	6/27	32	0	13.5
Blanca Royale (W)	---	---	132.6	61.1	100	6/28	23	0	12.5
WestBred 936	88.3	99.6	132.5	62.1	100	6/28	28	0	13.0
Klasic (W)	65.3	102.3	128.5	63.3	100	6/26	23	0	12.6
Choteau	85.1	103.5	128.2	62.7	100	6/30	32	0	13.4
Blanca Grande (W)	73.0	103.8	128.0	64.8	100	6/26	27	0	12.6
UI Winchester	---	---	126.9	62.5	100	6/29	31	0	12.2
Buckpronto	84.8	102.6	126.5	63.2	100	6/26	31	0	13.0
Jefferson	90.5	102.8	126.0	62.1	100	6/30	32	0	12.2
Jerome	93.8	99.9	125.4	62.1	100	6/27	31	0	11.8
Cabernet	---	---	123.0	62.4	100	6/29	27	0	12.1
OR4990114	---	---	122.3	61.5	100	6/28	30	0	12.1
Lochsa (W)	92.0	108.0	117.3	62.0	100	6/29	33	0	13.1
Durum Wheat									
Matt	79.2	95.9	140.9	63.6	100	6/28	29	6	10.5
Alzada	77.7	105.2	131.6	63.5	100	6/28	31	13	10.9
Kronos	77.2	105.7	127.0	63.0	100	6/27	29	5	10.1
Utopia	79.4	95.2	126.0	62.4	100	6/29	29	4	10.3
AP1526	82.5	109.8	115.5	63.4	100	7/1	37	0	10.9
Average	87.5	100.9	132.2	63.0	100	6/28	30	1	12.2
LSD (α=.05)	11.4	10.9	17.7	1.1	0.0	1.0	1.3	4.2	
CV %	9.3	7.9	9.5	1.2	0.0	0.4	3.2	219.1	
Pr > F	<.0001	0.0777	0.0604	<.0001	0	<.0001	<.0001	<.0001	

Table 39. Agronomic data for spring wheat at Ashton, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in)	Lodging (%)	Protein (%)
Hard Spring Wheat									
Idaho 377s (W)	73.8	91.1	119.9	60.5	99	7/30	30	0	12.7
Lolo (W)	68.6	95.5	106.1	58.8	98	7/31	30	0	13.0
Otis (W)	67.9	84.9	105.9	58.1	98	7/31	34	0	13.7
Cabernet	---	---	97.1	61.2	99	7/30	24	0	13.4
Blanca Royale (W)	---	---	95.1	60.3	99	7/31	23	0	12.7
Iona	58.4	72.2	94.3	59.9	100	7/30	29	0	12.8
03W10348	---	---	92.9	61.3	99	7/29	24	0	13.2
WA007954	---	---	91.9	59.4	98	7/29	30	0	14.6
Lochsa (W)	61.4	77.4	91.7	59.2	100	7/30	27	0	14.2
IDO 667	---	---	91.6	61.7	98	7/29	25	0	14.1
Bullseye	---	---	90.2	60.7	100	7/30	25	0	14.0
Buckpronto	56.6	65.5	89.5	60.2	99	7/29	27	0	14.3
Summit	57.8	73.3	89.3	58.3	99	8/1	23	0	13.3
UI Winchester	---	---	89.2	61.0	97	7/29	26	0	13.3
Choteau	55.2	81.8	88.3	57.6	99	7/30	28	0	16.1
RSI50603	---	---	87.1	58.7	99	7/30	27	0	14.3
Jefferson	56.7	81.8	84.9	59.9	98	7/29	27	0	13.9
Jerome	62.5	73.9	84.8	59.3	94	7/28	26	0	13.8
Pristine (W)	59.4	62.7	80.0	61.4	99	7/28	27	0	15.1
OR4990114	---	---	79.8	59.9	98	7/28	25	0	14.3
WestBred 936	60.7	69.9	77.9	60.0	99	7/30	22	0	13.2
Snowcrest	---	54.5	76.6	61.7	99	7/29	23	0	15.1
Tara 2002	48.0	65.1	73.2	58.5	98	7/29	29	0	14.3
Blanca Grande (W)	52.9	62.8	71.1	61.3	98	7/29	22	0	16.3
Klasic (W)	54.9	49.2	58.5	60.8	94	7/28	19	0	14.3
Durum Wheat									
AP1526	52.2	72.7	86.6	60.1	96	7/31	33	0	10.6
Kronos	57.8	65.2	80.6	60.1	98	7/28	25	0	10.5
Alzada	57.9	69.1	78.3	59.6	98	7/28	27	0	10.8
Utopia	55.0	58.7	75.1	56.4	99	7/30	25	0	9.2
Matt	50.4	52.2	64.8	60.5	99	7/30	27	0	10.3
Average	57.2	71.5	86.4	59.9	98	7/29	26	0	13.4
LSD (α=.05)	8.2	13.8	18.0	1.6	4.2	1.3	2.9	0.0	
CV %	10.2	13.7	12.8	1.6	2.6	0.4	6.7	0.0	
Pr > F	<.0001	<.0001	<.0001	<.0001	0.6376	<.0001	<.0001	0	

Table 40. Agronomic data for spring wheat at Soda Springs, dryland, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in)**	**(%)**	**(%)**
Hard Spring Wheat									
Lolo (W)	41.6	7.4	39.9	57.6	94	7/25	26	0	12.1
Idaho 377s (W)	40.2	7.7	35.8	56.8	95	7/24	24	0	12.2
Cabernet	---	---	35.1	56.7	95	7/25	19	0	11.9
Otis (W)	39.5	10.3	34.7	55.9	95	7/26	26	0	11.5
Jefferson	36.2	14.4	31.6	56.9	95	7/24	22	0	13.2
UI Winchester	40.7	10.6	31.4	56.8	91	7/24	22	0	12.4
Snowcrest	---	12.7	31.0	56.5	95	7/20	21	0	14.1
WA007954	---	---	30.8	55.3	95	7/25	25	0	12.6
IDO 667	---	---	29.7	58.2	94	7/23	23	0	12.7
Pristine (W)	30.8	10.2	29.0	57.0	95	7/20	22	0	14.4
Lochsa (W)	36.1	7.0	28.9	55.4	95	7/24	25	0	13.2
Choteau	29.8	13.3	28.8	56.4	95	7/26	21	0	12.6
Jerome	34.4	13.2	28.5	57.3	95	7/22	22	0	12.9
Bullseye	---	---	27.0	58.2	95	7/24	19	0	13.2
WestBred 936	34.3	14.5	26.6	55.8	95	7/22	22	0	13.6
Blanca Grande (W)	29.8	15.6	26.2	57.8	95	7/21	20	0	12.5
Tara 2002	32.9	13.9	26.2	56.9	94	7/23	26	0	14.0
Buckpronto	33.6	12.5	25.4	55.1	95	7/23	22	0	14.4
RSI50603	---	---	25.3	55.3	95	7/26	22	0	12.9
Iona	31.5	7.8	23.9	57.0	93	7/26	22	0	12.6
Klasic (W)	31.6	13.4	23.3	54.6	95	7/21	19	0	11.9
IDO 665	---	---	23.0	56.3	95	7/24	18	0	12.1
OR4990114	---	---	22.3	56.8	95	7/23	20	0	13.5
Summit	31.0	9.0	22.3	55.5	95	7/27	17	0	11.8
Durum Wheat									
Alzada	31.6	13.4	21.9	57.0	94	7/24	22	0	12.6
Kronos	30.6	6.9	21.4	57.3	94	7/24	22	0	12.4
AP1526	30.0	10.1	20.3	56.0	94	7/27	23	0	12.0
Matt	27.9	7.6	18.9	57.8	90	7/25	21	0	11.7
Utopia	28.4	8.7	17.1	54.6	95	7/25	21	0	12.3
Average	33.8	10.2	27.1	56.5	94	7/24	22	0	12.7
LSD (α=.05)	5.5	6.9	6.7	2.4	3.4	0.9	2.1	0	
CV %	11.7	49.4	17.6	3.0	2.6	0.3	6.9	0	
Pr > F	<.0001	0.0261	<.0001	0.1	0.4	<.0001	<.0001	0	

Table 41. Agronomic data for spring wheat at Rupert, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand%	Heading Date	Height (in)	Lodging (%)	Protein (%)
Soft White Spring Wheat									
Penawawa	92.8	107.9	152.1	63.1	100	6/29	39	0	9.6
Waxy Penawawa	---	106.6	149.6	63.0	100	6/29	36	0	9.4
IDO669	---	---	149.5	63.2	100	6/28	40	0	9.4
WA008008	---	102.5	148.7	63.0	100	6/27	38	13	9.6
UI Pettit	64.1	106.0	147.4	61.6	100	6/25	34	0	9.9
Jubilee	93.3	100.2	145.9	62.8	100	6/28	37	0	9.7
Treasure	85.5	108.5	145.7	61.2	100	7/1	36	0	9.6
IDO668	---	---	145.3	62.6	100	6/28	38	0	9.8
IDO644	---	---	145.1	61.2	100	6/27	35	0	9.6
IDO629	---	---	145.0	62.2	100	6/30	39	0	9.9
Challis	92.1	108.3	144.9	62.0	100	6/28	39	0	8.9
IDO671	---	---	144.8	62.8	100	6/28	36	0	9.3
Skookum	95.4	96.3	141.8	61.3	100	6/30	37	0	9.1
Nick	96.2	98.8	141.6	63.2	100	6/27	36	0	9.2
Alpowa	90.2	109.4	140.2	63.0	100	6/30	37	0	9.2
Alturas	84.7	108.0	140.1	62.2	100	6/28	39	0	9.2
Cataldo	81.7	96.0	136.0	62.5	100	6/26	36	0	10.3
IDO630	---	---	131.5	61.9	100	6/30	34	0	10.4
Average	87.5	102.3	144.2	62.4	100	6/28	37	1	9.6
LSD (α=.05)	10.3	10.6	15.0	0.7	0	0.7	2.8	8.4	
CV %	8.2	7.3	7.2	0.8	0	0.3	5.3	848.5	
Pr > F	<.0001	0.0147	0.5227	<.0001	0	<.0001	0	0.4736	

Table 42. Agronomic data for spring wheat, Aberdeen, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand%**	**Date**	**(in)**	**(%)**	**(%)**
Soft White Spring Wheat									
IDO669	---	---	120.9	62.9	100	6/26	36	0	11.6
Alturas	88.3	132.4	120.7	62.3	100	6/25	33	0	10.5
IDO644	---	---	119.6	62.4	100	6/23	31	0	11.4
Alpowa	89.7	116.1	119.2	62.9	100	6/26	34	0	12.1
Treasure	76.7	93.3	119.1	61.2	100	6/28	31	0	11.9
Waxy Penawawa	---	124.2	119.1	61.8	100	6/27	33	0	11.7
IDO668	---	---	118.4	63.5	100	6/24	33	0	11.5
Challis	82.2	120.4	118.3	62.0	100	6/25	34	0	11.3
Jubilee	86.4	119.4	116.2	63.5	100	6/26	36	0	11.7
WA008008	---	116.2	114.8	62.7	100	6/23	32	0	11.6
Penawawa	84.2	119.4	114.4	62.8	100	6/25	32	0	11.5
Nick	83.6	127.0	113.4	63.0	100	6/24	31	0	12.1
UI Pettit	80.7	128.3	113.2	63.0	100	6/22	28	0	11.6
Cataldo	80.9	123.2	108.8	62.3	100	6/22	30	0	11.8
IDO671	---	---	108.0	62.6	100	6/25	32	0	11.0
IDO629	84.3	116.0	107.7	61.2	100	6/27	34	0	12.0
Skookum	83.3	125.6	105.8	61.6	100	6/27	33	0	12.1
IDO630	---	---	103.4	62.0	100	6/27	33	0	11.8
Average	82.6	119.0	114.5	62.4	100	6/25	32	0	11.6
LSD (α=.05)	5.9	9.7	24.5	1.1	0.0	1.1	3.4	0	
CV %	5.0	5.7	15.1	1.3	0.0	0.5	7.3	0	
Pr > F	<.0001	<.0001	0.9757	0.0012	0.0	<.0001	0.0	0	

Table 43. Agronomic data for spring wheat, Idaho Falls, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in)**	**(%)**	**(%)**
Soft White Spring Wheat									
IDO644	---	---	161.7	61.8	100	6/28	32	0	10.7
IDO671	---	---	153.9	62.9	100	6/29	33	0	10.2
Alturas	93.5	109.2	152.0	62.9	100	6/30	32	0	10.3
Treasure	93.1	95.6	150.4	60.8	100	7/4	34	0	10.8
Skookum	98.5	114.5	149.7	62.0	100	7/3	34	0	11.1
Penawawa	89.4	89.3	146.0	62.5	100	7/2	33	0	11.9
IDO669	---	---	145.8	63.2	100	6/30	35	6	10.4
Challis	87.4	93.9	145.1	61.7	100	7/2	34	0	10.8
Alpowa	93.5	106.0	143.9	62.9	100	7/2	34	0	11.3
Cataldo	78.5	102.8	141.0	62.3	100	6/29	32	0	10.8
Waxy Penawawa	---	92.3	140.8	62.2	100	7/3	33	0	11.5
IDO668	---	---	138.9	63.0	100	6/29	32	0	10.7
UI Pettit	88.3	118.0	138.0	62.6	100	6/27	28	0	10.6
Nick	94.8	113.3	137.7	63.3	100	6/29	32	0	11.0
IDO629	---	---	133.2	62.6	100	7/4	34	0	10.5
Jubilee	87.4	98.7	133.1	62.9	100	7/2	34	0	10.6
IDO630	---	---	133.1	61.8	100	7/3	32	0	11.8
WA008008	---	91.8	133.1	62.9	100	6/29	32	0	10.3
Average	89.1	100.0	143.2	62.5	100	7/1	33	0	10.8
LSD (α=.05)	9.7	11.6	13.1	0.8	0.0	1.0	1.4	4.2	
CV %	7.5	8.2	6.4	0.9	0.0	0.4	2.9	848.5	
Pr > F	0.0101	<.0001	0.0008	<.0001	0	<.0001	<.0001	0.4736	

Table 44. Agronomic data for spring wheat at Ashton, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in)**	**(%)**	**(%)**
Soft White Spring Wheat									
IDO629	---	---	121.4	56.3	97	8/4	30	0	9.7
Alturas	78.7	80.6	113.9	58.1	100	7/30	29	0	9.4
IDO669	---	---	113.8	58.7	100	7/30	33	0	10.7
IDO671	---	---	111.9	58.8	98	7/30	29	0	10.0
Challis	74.1	77.3	111.8	57.0	95	8/2	31	0	10.6
IDO644	---	---	111.5	58.9	99	7/28	29	0	10.8
Alpowa	67.8	78.8	111.4	56.4	97	7/31	29	0	11.0
Waxy Penawawa	---	65.3	107.9	57.3	100	8/4	28	0	9.6
IDO630	---	---	107.4	58.2	99	8/1	32	0	10.4
Treasure	76.9	95.5	106.5	55.3	98	8/2	27	0	10.2
Cataldo	81.4	82.8	106.5	59.5	100	7/28	28	0	10.6
IDO668	---	---	105.9	59.2	95	7/29	29	0	10.8
Skookum	70.1	94.0	104.8	56.5	98	7/31	33	0	11.2
Jubilee	77.3	88.2	104.1	57.7	99	7/31	31	0	10.6
UI Pettit	80.4	95.5	102.6	58.4	99	7/28	26	0	12.2
Nick	79.0	71.1	100.6	59.2	99	7/28	29	0	11.3
WA008008	---	67.2	99.3	59.2	100	7/29	30	0	10.9
Penawawa	62.7	70.4	96.9	58.6	99	7/31	29	0	10.5
Average	73.2	81.0	107.7	58.0	98	7/31	30	0	10.6
LSD (α=.05)	8.5	12.9	14.7	1.3	3.6	1.7	4.3	0	
CV %	8.0	11.2	8.2	1.3	2.2	0.5	8.7	0	
Pr > F	<.0001	<.0001	0.1983	<.0001	0.2239	<.0001	0.169	0	

Table 45. Agronomic data for spring wheat at Soda Springs, dryland, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in)**	**(%)**	**(%)**
Soft White Spring Wheat									
IDO644	---	---	42.2	56.6	95	7/22	25	0	10.7
Cataldo	42.9	18.9	38.5	57.0	91	7/23	22	0	11.2
IDO668	---	---	37.6	57.4	95	7/24	24	0	11.2
IDO671	---	---	36.4	55.9	95	7/27	24	0	10.3
IDO630	---	---	33.0	53.1	95	7/28	24	0	11.5
UI Pettit	35.0	17.5	33.0	58.1	93	7/22	20	0	11.4
IDO669	---	---	32.1	55.6	95	7/27	23	0	11.5
WA008008	---	13.8	31.9	56.3	95	7/23	23	0	11.8
Nick	38.5	22.0	31.5	58.1	95	7/22	20	0	11.8
Alturas	40.9	13.5	29.7	55.4	95	7/26	22	0	10.6
Jubilee	41.4	8.2	29.2	55.5	95	7/27	22	0	11.9
Penawawa	39.7	11.2	27.1	56.2	95	7/27	22	0	11.2
Waxy Penawawa	---	9.9	26.8	55.1	91	7/28	19	0	11.9
Challis	40.5	11.7	26.5	56.0	95	7/28	23	0	10.8
Alpowa	44.1	13.7	23.0	54.3	95	7/28	24	0	12.0
IDO629	36.5	16.8	22.0	51.2	95	7/30	24	0	11.1
Treasure	42.9	16.0	21.3	52.5	95	7/28	23	0	11.4
Skookum	41.2	14.0	18.8	53.6	95	7/29	24	0	12.4
Average	40.4	13.7	30.0	55.4	94	7/26	23	0	11.4
LSD (α=.05)	4.8	10.0	8.1	0.9	3.7	1.0	2.5	0.0	
CV %	8.3	47.8	18.9	1.1	2.8	0.3	7.9	0.0	
Pr > F	0.0173	0.1969	<.0001	<.0001	0.4736	<.0001	0.0	0	

Table 46. Agronomic data for spring barley at Rupert, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
6- Row Spring Feed Barley												
Millennium	138.4	177.0	162.1	51.5	100	6/20	45	3	10.6	85.2	9.7	5.6
Herald	114.7	152.7	159.8	50.0	100	6/24	44	38	9.7	91.6	6.2	2.6
UT04B2041-42	---	---	153.4	51.9	100	6/24	40	35	10.3	91.1	6.8	3.1
Colter	121.9	150.8	144.3	50.9	100	6/23	41	49	8.6	83.2	12.1	5.4
Creel	126.8	157.2	133.9	51.0	100	6/24	40	70	9.0	84.7	9.4	6.6
Aquila	121.5	158.3	130.8	54.1	100	6/20	41	24	10.0	94.6	4.9	2.5
Goldeneye	137.0	155.0	118.4	52.3	100	6/24	39	54	10.2	90.3	6.8	3.2
Steptoe	124.4	165.8	105.6	47.5	100	6/23	39	98	10.2	79.1	11.5	10.1
6- Row Spring Malt Barley												
Drummond	111.8	152.6	126.2	53.2	100	6/25	44	8	10.0	96.6	3.1	1.2
Legacy	121.4	146.6	124.6	51.6	100	6/24	42	84	10.4	90.0	6.7	3.9
Tradition	100.5	148.1	122.7	52.5	100	6/24	38	29	10.9	95.5	3.3	2.2
Lacey	119.3	162.8	110.0	53.4	100	6/23	41	40	10.4	96.8	2.9	0.8
Foster	110.2	140.3	108.6	51.3	100	6/24	40	83	10.3	92.6	4.7	4.2
Morex	97.3	153.3	101.3	50.1	100	6/25	44	85	11.9	73.9	14.0	12.7
Average	118.8	155.7	128.7	51.5	100	6/23	41	50	10.2	88.9	7.3	4.6
LSD (α=.05)	16.5	15.8	19.4	1.9	0.0	0.9	3.4	37.4				
CV %	9.7	7.1	10.4	2.6	0.0	0.4	5.8	54.6				
Pr > F	0.0003	0.0014	<.0001	<.0001	0	<.0001	0.0043	<.0001				

Table 47. Agronomic data for spring barley, Aberdeen, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
6-Row Spring Feed Barley												
UT04B2041-42	---	---	166.6	53.3	100	6/22	38	3	12.2	93.5	4.8	2.2
Creel	94.1	155.5	161.2	53.2	100	6/22	37	13	9.0	91.7	6.1	2.8
Aquila	64.9	171.4	160.8	53.8	100	6/20	37	19	12.1	91..9	6.5	2.8
Goldeneye	78.2	172.1	159.5	52.7	100	6/22	38	20	13.7	87.1	7.9	5.1
Millennium	90.3	172.1	158.3	51.2	100	6/19	36	0	12.8	79.1	12.5	9.2
Steptoe	77.9	126.9	157.9	51.0	100	6/22	39	5	11.2	94.4	3.5	2.4
Herald	78.9	153.0	155.7	50.3	100	6/21	37	0	10.2	93.7	4.6	2.0
Colter	80.0	142.1	155.5	51.3	100	6/21	39	18	10.3	83.4	10.8	6.3
6-Row Spring Malt Barley												
Lacey	68.4	150.1	152.5	53.6	100	6/22	38	0	13.9	92.9	4.2	2.9
Legacy	73.1	150.2	143.5	52.9	100	6/22	40	0	13.6	98.2	2.6	1.5
Drummond	73.7	137.7	142.5	53.0	100	6/21	38	0	13.4	96.2	2.8	1.2
Tradition	74.5	158.0	135.2	53.6	100	6/22	41	20	12.6	95.7	3.4	1.4
Foster	68.7	133.7	130.2	52.6	100	6/22	40	0	12.6	96.1	3.1	1.6
Morex	63.8	115.1	128.2	52.4	100	6/23	38	25	13.8	86.6	7.6	6.3
Average	77.1	148.3	150.5	52.5	100	6/21	38	9	12.2	91.4	5.7	3.4
LSD (α=.05)	9.0	20.9	15.0	1.8	0.0	1.2	3.1	27.9				
CV %	8.2	9.9	7.0	2.3	0.0	0.5	5.7	241.7				
Pr > F	<.0001	<.0001	<.0001	0.0022	0	<.0001	0.2255	0.5021				

Table 48. Agronomic data for spring barley at Idaho Falls, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
6 - Row Spring Feed Barley												
UT04B2041-42	---	---	175.4	52.7	100	6/27	36	15	11.8	93.9	3.7	2.4
Creel	127.1	138.3	173.5	52.1	100	6/26	35	26	9.5	90.4	6.7	2.8
Steptoe	109.4	129.8	172.1	48.9	100	6/27	35	68	10.8	87.8	6.5	5.5
Millennium	116.2	144.1	164.7	51.5	100	6/27	36	1	10.9	87.0	8.6	4.2
Goldeneye	131.2	153.2	162.3	53.0	100	6/27	34	8	12.7	93.9	4.2	2.0
Herald	101.8	137.4	157.9	50.4	100	6/27	37	6	9.6	92.4	5.0	2.5
Colter	113.8	130.7	157.7	51.6	78	6/26	34	16	8.9	89.1	7.3	3.5
Aquila	104.1	131.6	156.5	52.8	100	6/25	36	25	11.5	92.2	5.3	2.7
6 - Row Spring Malt Barley												
Legacy	108.5	119.4	128.9	52.2	100	6/27	37	45	11.6	93.5	4.5	2.0
Morex	98.8	88.3	121.5	51.8	100	6/29	38	48	12.8	86.7	7.8	5.1
Drummond	107.7	117.7	121.4	52.6	100	6/27	38	15	12.6	95.2	3.7	1.3
Lacey	114.7	114.6	114.0	52.6	100	6/26	37	33	11.8	93.4	4.3	2.3
Tradition	99.0	118.3	106.8	51.6	100	6/28	36	38	12.3	90.8	5.8	3.4
Foster	109.3	114.9	88.9	51.7	100	6/26	38	28	12.1	93.7	3.9	2.4
Average	110.2	125.3	143.0	51.8	98	6/27	36	26	11.4	91.4	5.5	3.0
LSD (α=.05)	17.8	13.6	18.3	1.4	16.6	1.1	1.8	18.3				
CV %	11.2	7.6	8.9	1.9	11.8	0.4	3.6	50.8				
Pr > F	0.0095	<.0001	<.0001	<.0001	0.4708	<.0001	0.0008	<.0001				

Table 49. Agronomic data for spring barley at Ashton, irrigated, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
6-Row Spring Feed Barley												
UT04B2041-42	---	---	131.3	49.8	85	8/2	28	0	9.4	98.3	1.8	0.6
Goldeneye	64.1	71.3	125.2	50.2	85	8/2	29	0	9.1	98.5	1.5	0.5
Millennium	65.6	82.6	119.4	47.9	90	8/1	27	0	9.0	95.2	4.2	1.0
Steptoe	61.8	71.7	118.2	47.6	89	7/31	25	0	8.9	99.1	1.2	0.5
Colter	58.1	63.1	112.6	49.1	85	7/31	27	0	9.0	97.2	2.9	0.5
Aquila	58.9	79.9	111.6	50.5	89	7/31	28	0	10.7	97.7	1.5	1.0
Creel	67.8	73.1	109.4	49.0	85	8/1	27	0	8.3	96.7	3.2	0.8
Herald	49.5	54.5	102.6	47.0	91	8/1	30	0	8.7	98.6	1.7	0.7
6-Row Spring Malt Barley												
Drummond	52.9	62.6	123.7	49.5	95	8/2	27	0	10.1	97.1	2.6	0.8
Foster	59.6	72.6	115.0	49.6	85	7/31	33	0	10.2	98.9	1.1	0.5
Lacey	53.3	58.6	111.9	49.4	89	7/31	29	0	10.3	98.7	1.1	0.2
Legacy	53.1	70.4	111.4	49.1	92	8/1	29	0	10.6	98.8	1.3	0.4
Morex	52.7	78.5	103.7	49.9	85	7/31	29	0	10.9	98.3	1.7	0.3
Tradition	58.4	71.7	100.4	50.0	91	7/31	30	0	11.0	99.6	1.1	0.4
Average	57.7	70.8	114.0	49.2	88	7/31	28	0	9.7	98.1	1.9	0.6
LSD (α=.05)	7.1	12.0	13.7	0.8	8.5	1.2	4.4	0				
CV %	8.6	11.9	7.1	0.9	5.8	0.3	9.2	0				
Pr > F	<.0001	0.0006	0.0019	<.0001	0.3566	0.0015	0.2552	0				

Table 50. Agronomic data for spring barley at Soda Springs, dryland, 2008.

	Yield (bu/A)			Test Wt.	Spring	Heading	Height	Lodging	Protein	Plump		
Variety	**2006**	**2007**	**2008**	**(lb/bu)**	**Stand %**	**Date**	**(in.)**	**(%)**	**(%)**	**(>6/64)**	**(>5.5/64)**	**% Thin**
6-Row Spring Feed Barley												
Goldeneye	51.0	9.9	24.8	45.1	95	7/27	18	0	9.5	69.2	19.9	11.3
Creel	50.0	12.3	23.7	45.7	95	7/29	18	0	7.2	56.0	24.3	20.5
Aquila	47.3	14.5	23.4	45.2	95	7/28	20	0	10.7	82.2	12.6	6.9
Herald	44.8	8.9	20.9	44.5	95	7/28	17	0	8.5	64.2	19.1	17.8
Millennium	46.5	13.9	19.4	44.8	95	7/29	19	0	8.7	40.0	32.1	28.7
Steptoe	51.5	13.4	18.7	44.4	91	7/28	18	0	8.8	78.4	13.4	8.9
UT04B2041-42	---	---	18.3	44.8	95	7/28	20	0	9.5	72.9	17.7	11.3
Colter	49.3	11.5	16.1	45.3	95	7/27	18	0	8.2	63.6	21.0	16.0
6-Row Spring Malt Barley												
Lacey	44.0	10.4	24.6	45.2	95	7/30	18	0	10.0	69.5	18.8	13.0
Morex	45.7	8.0	24.1	44.8	95	7/27	18	0	9.7	46.3	27.9	26.8
Drummond	48.6	12.4	23.7	46.2	95	7/26	20	0	10.1	70.6	19.0	10.9
Tradition	48.0	10.5	22.8	45.6	91	7/29	19	0	11.4	70.4	18.5	11.6
Legacy	44.7	10.8	22.8	45.2	95	7/30	17	0	10.4	71.1	18.1	11.5
Foster	46.6	6.9	21.1	45.2	95	7/29	19	0	9.6	72.1	16.1	12.0
Average	47.6	11.3	21.7	45.1	94	7/28	18	0	9.5	66.2	19.9	14.8
LSD (α=.05)	7.8	7.2	9.7	3.7	3.8	3.6	2.8	0.0				
CV %	11.6	44.3	32.0	5.7	2.8	1.2	10.6	0.0				
Pr > F	0.6771	0.6667	0.5707	0.4125	0.4708	0.4704	0.4807	0				

Table 51. Agronomic data for spring barley at Rupert, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protien (%)	Plump (>6/64)	(>5.5/64)	% Thin
2-Row Spring Feed Barley												
Lenetah	---	141.1	177.6	55.9	100	6/28	35	0	9.7	98.4	1.2	0.4
Calgary	114.2	142.1	173.2	56.3	100	6/29	28	0	9.0	98.6	1.0	0.4
02WA-1095	---	---	172.2	54.8	100	6/27	33	40	9.5	93.6	3.8	2.3
Spaulding	120.2	144.7	165.9	56.5	100	6/28	32	0	9.4	96.4	2.3	1.3
Champion	---	142.3	165.4	55.2	100	6/26	34	9	10.3	95.7	3.4	2.0
Idagold II	112.4	145.7	159.6	53.9	100	6/30	26	0	9.8	94.4	4.2	1.4
Xena	136.4	144.1	159.5	55.5	100	6/27	34	0	8.7	97.6	1.9	0.5
CDC Bold	122.2	140.5	159.1	55.3	100	6/28	32	0	9.5	97.5	3.3	1.4
Valier	107.1	139.9	156.1	54.9	100	6/29	35	15	10.6	97.2	2.9	2.5
Camas	103.8	140.5	154.7	54.6	100	6/27	37	13	11.1	92.9	4.4	4.5
Eslick	104.1	118.3	154.2	55.5	100	6/29	34	19	9.4	95.7	2.6	1.7
RWA 1758	---	---	152.2	55.5	100	6/27	32	5	9.2	96.9	1.9	1.2
Tetonia	136.2	147.8	152.2	53.5	100	6/29	36	44	11.4	87.1	7.2	5.7
Burton	121.6	140.4	151.3	55.1	100	6/29	35	0	10.5	99.0	0.5	0.5
Haxby	118.7	143.8	150.8	56.0	100	6/26	36	0	9.7	98.5	0.9	0.6
Primo	112.4	137.7	150.3	54.4	100	6/28	33	19	8.7	96.0	2.5	1.5
Baronesse	129.7	140.2	149.3	53.2	100	6/28	35	46	10.7	92.7	4.8	3.7
Boulder	113.6	142.7	147.8	55.8	100	6/25	35	25	9.7	95.8	2.2	3.1
Radiant	104.6	134.5	146.9	55.2	100	6/29	33	20	8.3	95.2	3.0	1.8
CDC McGwire*	101.1	123.2	143.0	62.6	100	7/1	35	23	11.1	74.5	19.8	8.0
02WA-7028.9	---	---	142.0	53.9	100	6/28	32	38	10.9	92.8	4.6	3.2
Hayes	80.7	125.0	139.5	53.6	100	6/28	37	13	9.0	95.8	2.4	1.8
Clearwater*	80.1	112.9	126.9	59.6	100	6/28	34	68	11.9	89.2	11.1	5.6
2-Row Spring Malt Barley												
C83	---	138.3	176.6	54.8	100	6/30	29	0	10.0	98.0	1.4	0.6
01Ab7163	---	---	163.9	54.8	100	6/29	33	5	9.6	98.3	1.1	0.6
Moravian 69	91.8	139.4	157.1	53.1	100	7/1	26	0	7.8	97.6	3.4	1.4
02Ab17271	---	---	154.2	53.4	100	7/1	35	28	11.2	93.2	3.0	3.8
2B99-2316	122.8	138.8	153.7	54.9	100	6/28	35	10	8.9	95.8	3.2	1.0
Hockett	100.6	122.2	150.8	55.4	100	6/27	34	5	10.6	97.6	1.5	0.9
Conrad	108.6	107.8	150.3	53.8	100	6/29	31	23	11.3	96.4	2.4	1.2
02Ab17373	---	---	146.9	53.6	100	7/1	33	0	8.2	98.0	1.4	0.6
B1202	108.0	130.8	146.9	53.7	100	6/29	33	10	11.4	97.3	2.5	1.6
Geraldine	104.6	134.6	146.4	54.8	100	7/1	33	20	9.4	94.5	4.3	4.1
Merit	96.6	125.1	146.4	53.7	100	7/1	33	0	8.0	95.2	3.4	1.0
2B99-2657	93.8	128.2	144.9	53.1	100	6/30	36	25	9.0	91.6	5.9	2.5
Pinnacle	120.3	135.1	142.0	55.4	100	6/25	36	0	8.7	98.2	1.2	0.6
AC Metcalfe	94.2	130.2	135.2	53.6	78	6/28	35	28	11.6	93.6	4.5	3.3
Craft	104.0	125.5	133.7	54.8	100	6/27	38	13	11.4	97.3	3.0	1.4
CDC Stratus	102.6	129.4	130.3	54.4	100	6/30	31	3	9.7	99.1	0.5	0.4
Harrington	88.7	117.8	126.9	54.4	100	6/30	34	18	9.3	96.1	3.1	2.0
Average	106.6	134.0	151.4	54.9	99	6/28	33	14	9.9	95.2	3.4	2.1
LSD (α=.05)	21.7	20.9	26.0	1.5	9.7	1.2	4.9	35.4				
CV %	14.4	11.1	12.2	1.9	7.0	0.5	10.5	183.7				
Pr > F	<.0001	0.0229	0.006	<.0001	0.483	<.0001	<.0001	0.0319				

* indicates hulless variety

Table 52. Agronomic data for spring barley, Aberdeen, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (>6/64)	(>5.5/64)	% Thin
2-Row Spring Feed Barley												
Xena	96.1	142.3	165.3	53.5	100	6/25	37	3	12.3	91.8	4.9	4.0
Calgary	104.2	154.6	164.3	54.9	100	6/26	32	8	13.1	92.8	4.2	3.6
Champion	---	149.5	158.7	54.1	100	6/23	37	0	12.6	87.6	8.2	5.4
RWA 1758	---	---	158.5	54.4	100	6/25	38	10	12.1	92.8	4.9	3.8
Spaulding	---	136.7	157.6	54.0	100	6/26	38	8	11.7	85.4	7.9	7.2
Camas	88.9	129.9	157.0	53.8	100	6/26	37	0	12.6	85.9	7.6	6.3
CDC Bold	101.6	170.5	156.4	54.1	100	6/28	35	9	12.6	88.1	7.9	4.5
Haxby	89.3	134.2	156.0	55.3	100	6/25	36	8	12.3	91.8	5.0	3.7
Primo	105.0	135.1	153.9	53.8	100	6/27	34	8	13.1	93.9	2.5	2.8
02WA-7028.9	---	---	152.3	53.2	100	6/24	38	0	12.9	85.5	7.1	7.9
Lenetah	---	127.5	152.0	53.2	100	6/25	36	23	13.6	88.5	5.9	6.9
02WA-1095	---	---	151.0	53.5	100	6/26	33	35	12.2	87.9	6.8	5.7
Eslick	93.7	123.3	149.3	55.1	100	6/26	36	0	12.4	90.7	6.0	5.2
Tetonia	97.3	130.6	148.3	53.2	100	6/29	35	5	13.2	87.3	4.9	8.0
Burton	100.9	143.2	147.4	53.0	100	6/26	37	0	14.0	93.2	4.3	2.8
Valier	93.1	127.9	142.3	52.7	100	6/27	35	3	14.5	83.1	7.6	8.8
Radiant	90.1	120.1	141.7	52.2	100	6/27	36	31	13.1	81.5	8.7	12.4
Boulder	95.0	141.5	141.5	55.5	100	6/25	32	0	13.7	91.9	5.2	3.6
Baronesse	89.8	138.6	140.5	53.6	100	6/26	36	36	12.9	90.6	5.9	4.3
Idagold II	98.7	133.1	138.2	52.2	100	6/27	31	0	13.4	88.5	7.2	4.8
CDC McGwire*	88.7	104.7	131.2	61.4	100	6/29	39	21	13.3	63.2	25.5	12.0
Clearwater*	84.6	102.7	130.6	59.8	100	6/28	38	39	13.6	81.0	12.1	7.2
Hayes	62.8	110.1	110.7	49.0	100	6/26	33	38	13.2	74.2	10.9	16.9
2-Row Spring Malt Barley												
Conrad	93.5	127.4	152.8	53.9	100	6/26	36	5	14.1	71.3	2.7	1.4
01Ab7163	---	---	150.3	54.0	100	6/27	38	18	12.3	93.8	3.5	3.1
Pinnacle	95.1	142.7	143.0	54.5	100	6/24	38	3	12.0	97.0	2.0	1.4
2B99-2316	81.9	131.7	142.0	53.8	100	6/26	34	15	12.5	92.8	4.6	3.4
Geraldine	87.8	123.2	140.7	53.4	100	6/30	36	21	12.5	88.2	7.2	5.4
Craft	94.3	133.4	139.6	54.6	100	6/24	40	19	13.1	91.9	4.7	4.4
CDC Stratus	81.6	118.4	131.5	54.0	100	6/27	37	13	14.1	93.8	4.2	2.5
02Ab17373	---	---	131.1	52.5	100	7/1	41	24	12.7	90.5	6.0	3.7
Merit	85.9	107.2	131.1	51.8	100	7/1	39	25	13.0	86.6	8.4	5.5
B1202	77.0	111.9	129.7	52.8	100	6/28	34	0	13.4	93.5	4.6	2.6
2B99-2657	85.5	99.6	129.6	51.2	100	6/28	38	8	13.1	83.8	12.1	7.5
Hockett	85.1	119.0	129.1	53.9	100	6/25	34	13	13.2	91.5	5.3	3.5
02Ab17271	---	---	125.4	52.7	100	7/1	38	28	13.6	84.8	9.3	6.4
AC Metcalfe	84.4	108.4	121.3	53.3	100	6/29	36	0	13.4	93.8	4.1	2.6
Harrington	76.3	115.6	121.1	53.4	100	6/30	36	41	13.9	83.5	11.0	5.6
Average	90.5	128.1	142.7	53.8	100	6/27	36	13	13.0	87.7	6.9	5.4
LSD (α=.05)	12.1	20.1	16.8	1.4	0.0	1.5	3.7	30.5				
CV %	9.6	11.2	8.4	1.8	0.0	0.6	7.4	171.2				
Pr > F	<.0001	<.0001	<.0001	<.0001	0	<.0001	<.0001	0.0705				

* indicates hulless variety

Table 53. Agronomic data for spring barley at Idaho Falls, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (>6/64)	(>5.5/64)	% Thin
2-Row Spring Feed Barley												
Champion	---	143.3	187.1	54.8	100	6/28	35	48	12.9	92.8	3.4	3.6
Xena	105.5	134.3	184.4	54.0	100	6/30	34	35	12.0	94.0	3.2	2.6
02WA-7028.9	---	---	174.6	54.2	100	6/29	34	43	12.6	94.8	2.8	2.3
Spaulding	---	144.6	173.6	54.9	100	6/29	33	23	11.0	89.6	5.7	4.5
Calgary	88.7	147.2	171.5	55.6	100	7/2	29	16	11.2	98.0	1.3	0.8
RWA 1758	---	---	171.0	55.4	100	6/29	32	38	11.0	96.4	2.2	1.3
Idagold II	93.2	140.4	168.5	52.2	100	7/3	27	8	11.8	92.8	5.1	2.2
Burton	97.4	142.9	168.3	54.1	100	6/30	35	28	12.8	95.2	2.7	2.0
Baronesse	98.1	135.6	167.5	54.0	100	6/29	33	44	12.1	93.6	3.5	2.9
Lenetah	---	147.1	163.1	54.0	100	6/30	32	48	12.6	90.8	4.6	4.4
Primo	131.3	98.0	162.4	53.2	100	6/30	32	45	12.1	91.0	5.0	4.0
Camas	93.2	138.8	159.8	54.5	100	6/30	34	29	12.2	91.8	4.6	3.5
02WA-1095	---	---	157.6	53.2	100	7/1	31	39	10.7	91.1	5.1	3.6
CDC Bold	101.4	145.7	156.4	54.4	100	6/30	32	25	12.0	89.8	4.9	5.2
Boulder	96.1	147.9	155.0	54.1	100	6/29	34	56	13.2	88.7	5.6	5.6
Radiant	104.9	124.6	151.1	53.4	100	6/30	32	45	12.6	86.9	6.8	6.2
Haxby	95.4	132.9	149.9	55.1	100	6/30	34	44	12.7	91.3	4.7	3.9
Tetonia	96.8	138.1	147.2	53.2	100	7/2	33	68	12.5	88.5	6.2	5.2
CDC McGwire*	81.3	119.5	143.3	61.3	100	7/3	35	30	13.4	80.7	13.7	5.7
Clearwater*	77.7	120.1	136.1	59.0	100	7/1	34	48	14.5	84.3	8.7	7.2
Eslick	102.3	118.6	134.2	53.3	100	6/30	32	55	13.0	84.6	8.5	6.8
Valier	104.7	130.5	122.0	51.7	100	6/30	35	53	15.6	81.4	8.3	10.1
Hayes	89.3	117.2	110.1	49.1	100	7/2	36	50	12.9	74.6	10.3	14.9
2-Row Spring Malt Barley												
Conrad	89.5	135.6	147.4	52.9	100	7/1	31	34	13.7	93.7	3.4	2.7
Geraldine	92.8	122.3	142.7	54.5	100	7/2	31	34	11.7	92.0	5.2	2.9
Craft	91.7	137.0	142.1	54.7	100	6/29	34	40	13.1	91.2	5.0	3.8
01Ab7163	---	---	141.6	53.8	100	7/1	33	45	12.1	92.7	3.5	3.6
Pinnacle	97.8	136.9	139.5	54.6	100	6/28	35	13	11.5	96.6	2.0	1.3
B1202	100.1	126.2	138.5	52.4	100	7/2	33	35	12.9	92.0	5.0	2.9
2B99-2316	87.3	131.0	130.5	52.7	100	6/29	33	39	12.4	91.7	4.7	3.3
Hockett	91.6	125.7	127.3	53.7	100	6/29	31	50	13.0	89.2	4.7	5.9
Merit	97.1	126.0	125.6	52.7	100	7/4	34	24	11.9	92.1	4.4	3.4
02Ab17373	---	---	125.1	52.2	100	7/3	35	45	13.8	88.6	6.4	4.9
AC Metcalfe	92.6	118.2	124.9	53.6	100	6/30	34	45	13.3	90.5	5.4	4.0
02Ab17271	---	---	123.2	51.3	100	7/4	34	38	13.8	81.8	8.3	9.8
2B99-2657	98.8	125.7	121.7	51.2	100	7/2	33	45	12.0	86.9	7.5	5.7
Harrington	84.4	104.6	121.4	52.0	100	7/1	33	56	12.6	85.1	8.7	6.1
CDC Stratus	87.7	132.4	120.2	53.8	100	7/2	34	29	13.3	93.2	3.9	2.9
Average	93.7	132.4	147.0	53.8	100	7/1	33	39	12.6	90.0	5.4	4.5
LSD (α=.05)	12.5	14.1	14.8	1.5	0.0	1.1	2.1	23.9				
CV %	9.6	7.6	7.1	1.9	0.0	0.4	4.6	47.5				
Pr > F	<.0001	<.0001	<.0001	<.0001	0	<.0001	<.0001	<.0001				

* indicates hulless variety

Table 54. Agronomic data for spring barley at Ashton, irrigated, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (>6/64)	(>5.5/64)	% Thin
2-Row Spring Feed Barley												
Xena	71.4	87.5	153.2	51.6	99	8/4	27	0	9.7	98.7	0.7	0.5
Champion	---	107.8	146.8	51.5	98	8/4	26	0	9.1	99.0	0.7	0.4
02WA-1095	---	---	146.8	51.3	99	8/6	26	0	9.6	99.6	0.9	0.4
Primo	77.1	88.3	145.8	52.5	97	8/5	26	0	9.1	99.4	0.3	0.3
Radiant	63.8	88.6	139.7	51.8	99	8/5	26	0	8.4	99.1	0.9	0.3
Lenetah	---	69.4	138.7	51.6	99	8/6	28	0	9.2	99.4	0.6	0.2
Calgary	67.2	77.8	138.4	51.7	99	8/5	26	0	10.5	99.6	0.2	0.2
RWA 1758	---	---	137.7	52.7	99	8/5	23	0	10.4	99.1	0.5	0.2
Burton	61.2	77.8	135.9	50.4	97	8/6	29	0	9.5	99.0	0.6	0.4
02WA-7028.9	---	---	134.4	49.6	100	8/5	27	0	9.3	98.6	0.8	0.6
Spaulding	---	81.9	133.1	51.5	98	8/5	29	0	8.3	98.2	1.7	0.5
Hayes	57.9	68.0	131.5	49.4	100	8/6	29	0	10.0	97.6	1.8	0.8
Valier	63.8	70.3	130.3	51.6	100	8/6	27	0	10.3	99.5	0.3	0.2
Eslick	69.4	77.1	129.7	51.9	99	8/5	28	0	9.5	98.8	0.6	0.4
Boulder	62.2	79.6	129.5	52.6	100	8/4	27	0	9.9	99.4	0.4	0.2
Tetonia	73.6	92.6	129.3	51.0	100	8/6	26	0	9.8	98.9	0.9	0.3
Baronesse	71.7	84.0	129.3	51.8	93	8/6	27	0	10.1	99.0	0.7	0.3
CDC Bold	64.3	73.1	128.6	50.4	88	8/6	29	0	9.5	98.6	1.2	0.6
Camas	70.2	71.6	122.0	51.5	100	8/4	30	0	9.6	99.1	0.5	0.6
Idagold II	67.4	80.1	113.2	50.5	96	8/8	24	0	9.6	98.9	0.9	0.4
Haxby	61.2	64.2	105.9	52.5	82	8/5	24	0	10.6	99.0	0.6	0.4
Clearwater*	55.8	72.5	101.8	58.6	73	8/7	32	0	10.9	84.8	9.3	6.0
CDC McGwire*	61.6	58.4	98.1	58.8	66	8/8	31	0	10.7	83.4	12.3	4.2
2-Row Spring Malt Barley												
2B99-2316	---	---	131.7	50.7	98	8/7	29	0	10.4	97.4	1.5	0.7
2B99-2657	61.1	71.2	129.2	49.1	98	8/6	28	0	9.1	97.6	1.8	0.7
Hockett	63.9	77.1	126.9	50.7	99	8/6	27	0	10.6	97.1	1.9	0.9
01Ab7163	---	---	126.8	50.2	99	8/7	26	0	8.9	98.9	0.8	0.3
CDC Stratus	51.8	54.2	125.9	49.0	97	8/8	32	0	11.4	98.0	1.5	0.6
02Ab17373	---	---	125.4	49.4	99	8/8	30	0	9.0	97.5	2.0	0.7
Conrad	71.2	96.7	124.6	49.5	99	8/7	29	0	9.3	98.1	1.3	0.5
Geraldine	61.6	67.5	122.1	51.2	99	8/8	29	0	9.1	98.3	1.3	0.7
Craft	61.7	69.6	120.8	51.6	97	8/5	31	0	10.6	98.8	0.8	0.4
Harrington	57.7	75.3	120.3	50.8	99	8/7	31	0	9.5	97.4	1.8	0.7
B1202	56.4	76.6	118.5	49.5	99	8/6	27	0	10.1	98.4	1.1	0.3
AC Metcalfe	57.4	62.6	117.7	50.2	98	8/4	27	0	9.9	99.0	0.8	0.4
Merit	63.2	67.3	117.6	48.3	98	8/8	31	0	8.0	97.0	2.1	0.6
02Ab17271	---	---	115.7	49.1	87	8/8	34	0	8.7	96.8	2.3	0.7
Pinnacle	57.3	73.0	112.3	52.2	98	8/4	31	0	10.4	99.0	0.7	0.2
Average	64.4	77.0	127.2	51.3	96	8/6	28	0	9.7	97.8	1.6	0.7
LSD (α=.05)	11.1	12.1	19.9	1.1	16.3	1.4	3.6	0				
CV %	12.4	11.2	9.7	1.3	10.4	0.4	8.0	0				
Pr > F	<.0001	<.0001	<.0001	<.0001	0.0453	<.0001	<.0001	0				

* indicates hulless variety

Table 55. Agronomic data for spring barley at Soda Springs, dryland, 2008.

Variety	Yield (bu/A) 2006	2007	2008	Test Wt. (lb/bu)	Spring Stand %	Heading Date	Height (in.)	Lodging (%)	Protein (%)	Plump (>6/64)	(>5.5/64)	% Thin
2-Row Spring Feed Barley												
Boulder	62.6	10.3	22.1	45.5	95	7/31	15	0	7.7	59.1	21.5	19.5
RWA 1758	---	---	21.9	45.4	95	7/31	15	0	8.3	63.5	20.5	16.5
Valier	58.9	4.3	21.1	44.8	95	8/3	18	0	9.8	43.2	29.9	26.7
Xena	64.9	11.1	20.6	44.8	95	7/31	17	0	8.6	53.3	25.4	22.4
Camas	62.2	10.7	19.9	44.9	95	7/30	18	0	8.0	38.1	29.4	33.0
Calgary	59.7	1.4	19.3	45.2	95	8/4	15	0	9.4	59.1	22.4	18.5
Tetonia	56.6	5.5	19.1	42.6	95	8/2	16	0	9.1	44.1	25.8	30.1
Primo	57.4	13.6	18.9	43.8	95	8/3	16	0	7.8	54.4	22.7	23.1
Radiant	54.7	3.1	18.3	41.4	95	8/3	18	0	7.4	37.7	31.4	31.3
02WA-7028.9	---	---	17.4	41.6	95	8/2	20	0	9.5	46.8	26.6	26.5
Baronesse	63.2	7.6	16.3	41.8	95	8/3	17	0	9.4	56.8	22.4	20.9
02WA-1095	---	---	15.9	43.7	95	8/1	17	0	8.1	35.5	30.0	34.8
Haxby	54.3	11.5	14.1	45.5	95	7/29	16	13	10.3	47.0	28.0	25.2
Eslick	58.0	5.0	13.4	40.9	95	8/2	17	0	7.9	56.3	24.8	20.1
Hayes	49.1	12.9	13.0	41.0	95	8/3	16	0	8.6	44.4	22.7	32.5
Burton	59.0	7.6	12.7	41.2	95	8/4	19	0	8.8	52.4	24.1	24.1
Idagold II	51.0	8.2	12.7	41.2	95	8/3	17	0	8.5	26.7	39.7	35.3
CDC Bold	60.4	11.1	11.6	40.6	91	8/3	17	0	9.6	27.4	32.8	40.4
Clearwater*	48.1	10.7	11.1	47.6	81	8/5	21	0	10.1	10.4	19.1	70.9
CDC McGwire*	46.2	13.2	10.6	53.3	85	8/6	19	0	10.1	4.3	11.9	84.4
Spaulding	---	3.1	10.4	41.3	95	8/6	20	0	8.6	30.7	27.0	42.4
Lenetah	---	2.7	7.3	40.4	95	8/9	19	0	9.9	51.2	24.7	24.0
2-Row Spring Malt Barley												
Craft	57.0	12.2	24.9	45.3	93	7/29	21	0	8.8	61.9	22.3	15.7
AC Metcalfe	56.3	8.0	23.6	46.3	95	7/29	19	0	10.6	65.1	20.3	14.7
B1202	51.9	7.5	20.8	42.0	95	7/31	18	0	9.3	40.3	27.2	32.1
C119	---	---	18.4	43.4	95	8/2	16	0	8.5	54.2	25.3	24.8
Pinnacle	56.4	17.2	17.6	46.5	95	7/28	18	0	9.5	61.4	18.8	20.2
Merit	48.6	8.6	15.6	40.6	95	8/4	18	0	9.1	44.1	29.2	31.4
02Ab17271	---	---	15.6	41.8	95	8/5	20	0	9.3	38.8	30.9	30.1
C83	---	---	14.5	44.1	95	8/5	19	0	10.4	66.6	18.9	16.3
02Ab17373	---	---	14.5	39.1	95	8/3	20	0	9.0	38.8	26.8	33.7
CDC Stratus	54.4	9.0	14.5	40.4	95	8/4	17	0	9.2	42.2	30.7	27.8
Conrad	58.1	12.2	13.8	40.2	95	8/4	18	0	9.1	53.5	22.6	24.0
Hockett	54.7	5.6	11.8	39.8	95	8/4	19	0	8.9	55.6	24.8	22.0
Geraldine	59.5	6.5	11.5	42.8	93	8/6	16	0	9.4	32.0	30.0	38.8
2B99-2316	53.5	5.4	10.7	42.9	95	8/3	16	0	9.5	42.4	29.2	28.5
01Ab7163	---	---	9.6	36.4	95	8/7	20	0	8.6	42.4	26.4	31.3
2B99-2657	47.2	12.5	9.1	41.0	95	8/3	17	0	10.7	37.7	26.3	36.2
Harrington	57.7	9.6	9.0	41.7	95	8/4	17	0	10.0	34.1	28.5	37.8
Average	55.2	9.1	15.5	42.9	94	8/3	18	0	9.1	45.0	25.7	29.9
LSD (α=.05)	10.7	9.9	8.3	3.3	5.0	3.5	2.3	3.2				
CV %	13.9	72.0	37.3	5.5	3.8	1.2	9.4	777.7				
Pr > F	0.0005	0.1685	0.0004	<.0001	0.0003	<.0001	<.0001	<.0001				

* indicates hulless variety

Table 56. Hard Winter Wheat Yield Percentage of Location Averages, 2008.

(100% =Average)

Variety	Kimberly	Rupert	Aberdeen	Ririe	Preston	Variety Average
IDO 682 (W)	---	---	---	104	213	158
IDO 681 (W)	---	---	---	102	176	139
Golden Spike (W)	110	106	115	111	198	128
IDO 573	---	---	---	105	142	123
MT0495	102	105	107	98	183	119
Weston	94	85	81	106	220	117
Moreland	114	103	111	90	144	112
IDO 621	109	108	115	---	---	110
Bauermeister	119	108	118	108	86	108
Deloris	108	110	107	117	97	108
Manning	93	108	108	88	130	105
W98-344	97	109	104	---	---	103
Neeley	109	101	116	103	86	103
MDM (W)	113	97	103	110	91	103
Bonneville	91	95	122	112	91	102
Utah 100	88	110	105	120	87	102
IDO 653	96	105	101	---	---	101
NuDakota (W)	99	110	113	85	93	100
Gary (W)	97	102	103	91	100	99
IDO680	92	90	113	---	---	98
DW	94	107	102	93	96	98
IDO 651 (W)	96	97	99	---	---	98
NuHorizon (W)	99	109	99	95	83	97
Promontory	96	115	92	94	85	96
IDO 616	---	---	---	114	78	96
UT9325-55	98	109	92	113	62	95
Boundary	90	103	97	106	78	95
Yellowstone	105	104	100	99	64	94
IDO 658 (W)	97	97	84	---	---	93
Garland	97	109	88	74	96	93
WA8023	105	103	110	103	38	92
MT0552	86	103	93	86	91	92
AgriPro Paladin	88	104	81	---	---	91
Eddy	95	100	98	104	56	90
UI Darwin (W)	94	85	101	101	58	88
Palamino (W)	81	104	93	76	84	88
WA007975	---	---	---	115	58	87
NuHills (W)	84	102	77	87	70	84
TX97-F4-33-1B	100	103	79	90	47	84
Juniper	---	---	---	86	81	83
Dumas	80	97	79	115	37	82
Location Average(bu/A)	136	102	95	23	10	

Table 57. Soft White Winter Wheat Yield Percentage of Location Averages, 2008.

	(100% =Average)				Variety
	Kimberly	Rupert	Aberdeen	Ririe	Average
00-475-2DH	108	101	114	118	110
Xerpha	106	96	118	117	109
IDO 620	103	116	102	113	108
93-64901A	105	89	114	123	108
Mohler	102	118	100	97	104
Tubbs 06	109	100	97	106	103
Stiles	103	108	92	104	102
ORCF-101	102	96	108	99	101
Salute	105	98	97	104	101
Brundage 96	100	105	107	92	101
Brundage	108	102	91	100	100
Lambert	90	100	99	112	100
Simon	99	97	103	101	100
ORCF-102	95	96	101	108	100
Masami	104	94	100	101	100
Daws	95	114	94	93	99
WestBred 528	102	99	88	108	99
UICF Lambert	100	100	92	104	99
Bruehl	110	82	95	106	98
UICF Brundage	97	97	107	89	97
IDO 655	94	96	94	104	97
Madsen	95	93	94	105	97
IDO 587	94	97	94	99	96
Coda	94	100	107	83	96
92-22407A	108	88	100	87	96
Chukar	96	87	105	93	95
Cara	95	97	106	83	95
Stephens	99	93	98	87	94
Clearfirst	89	105	96	87	94
IDO 654	93	92	88	75	87
Location Average(bu/A)	138	88	107	19	

Table 58. Winter Barley Yield Percentage of Location Averages, 2008.

	(100% =Average)			
	Kimberly	Rupert	Aberdeen	Variety Average
93Ab669	120	104	161	128
97BX42-116-17A	105	104	161	123
Schuyler	104	107	152	121
Sunstar Pride	108	113	132	118
96AB69	106	116	131	118
02Ab2701	114	102	133	116
86Ab474	103	97	141	113
91Ab36	104	107	127	113
OR71	97	109	130	112
Sprinter	109	101	127	112
02Ab2732	139	115	77	110
Strider	91	95	144	110
94Ab1777	95	120	108	108
OR77	91	102	129	107
OR78	92	104	120	105
Eight-Twelve	108	89	114	104
92Ab1308	99	112	93	101
91Ab23	100	104	99	101
02Ab2739	106	97	94	99
Boyer	91	96	109	99
93Ab631	100	104	81	95
92Ab561	89	114	76	93
97Ab11	93	90	76	86
88AB536B	80	91	77	83
02Ab339	121	96	21	79
Endeavor	102	85	39	75
OR79	77	80	67	75
OR72	86	67	56	70
Maja-Grande	87	98	11	65
Charles	85	81	11	59
Location Average(bu/A)	190	118	93	

Table 59. Hard Spring Wheat Yield Percentage of Location Averages, 2008.

			(100% =Average)		Soda	
Variety	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Springs**	**Variety Average**
Lolo (W)	104	129	106	115	147	120
Idaho 377s (W)	104	121	107	130	132	119
Otis (W)	103	111	105	115	128	112
Cabernet	100	105	93	105	129	106
Bullseye	104	117	107	98	99	105
Jerome	120	110	95	92	105	104
IDO 667	108	96	107	99	110	104
Blanca Royale (W)	94	113	100	103	---	102
WA007954	86	110	103	99	114	102
Iona	105	113	101	102	88	102
Jefferson	105	96	95	92	116	101
UI Winchester	92	104	96	97	116	101
Choteau	97	105	97	96	106	100
Pristine (W)	98	105	100	87	107	99
Lochsa (W)	102	95	89	99	107	98
Buckpronto	96	106	96	97	94	98
Summit	103	98	106	97	82	97
Snowcrest (W)	99	77	109	83	114	97
WestBred 936	92	102	100	84	98	95
RSI50603	98	86	105	94	93	95
03W10348 (W)	101	75	102	101	---	95
Blanca Grande (W)	104	82	97	77	97	91
Tara 2002	95	77	109	79	96	91
OR4990114	96	88	93	86	82	89
Klasic (W)	95	97	97	63	86	88
IDO 665	---	---	---	---	85	85
Durum Wheat						
Kronos	111	89	96	87	79	92
Alzada	95	97	100	85	81	91
AP1526	103	96	87	94	75	91
Matt	96	102	107	70	70	89
Utopia	98	97	95	81	63	87
Location Average (bu/A)	132	97	132	92	27	

Table 60. Soft White Spring Wheat Yield Percentage of Location Averages, 2008.

	(100% =Average)					
	Rupert	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Variety Average**
IDO644	100.6	104.5	112.9	103.6	140.6	112.5
IDO671	100.4	94.3	107.5	103.9	121.3	105.5
IDO668	100.8	103.4	97.0	98.4	125.2	104.9
IDO669	103.7	105.6	101.8	105.7	107.0	104.8
Cataldo	94.3	95.0	98.5	98.9	128.2	103.0
Alturas	97.2	105.4	106.1	105.7	98.9	102.7
UI Pettit	102.3	98.9	96.4	95.3	109.8	100.5
Challis	100.5	103.3	101.3	103.8	88.1	99.4
Waxy Penawawa	103.8	104.0	98.4	100.2	89.2	99.1
WA008008	103.1	100.3	92.9	92.2	106.1	98.9
Nick	98.2	99.0	96.2	93.4	104.8	98.3
Jubilee	101.2	101.5	93.0	96.7	97.3	97.9
Penawawa	105.5	99.9	102.0	90.0	90.1	97.5
IDO630	91.2	90.3	92.9	99.7	110.0	96.8
Alpowa	97.2	104.1	100.5	103.5	76.7	96.4
Treasure	101.1	104.0	105.0	98.9	71.1	96.0
IDO629	100.6	94.0	93.0	112.7	73.3	94.7
Skookum	98.4	92.4	104.5	97.4	62.5	91.0
Location Average (bu/A)	144.2	114.5	143.2	107.7	30.0	

Table 61. 6-Row Barley Yield Percentage of Location Averages, 2008.

	(100% =Average)					
	Rupert	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Variety Average**
Feed						
UT04B2041-42	119	111	123	115	84	110
Millennium	126	105	115	105	89	108
Goldeneye	92	106	114	110	114	107
Herald	124	103	110	90	96	105
Aquila	102	107	109	98	108	105
Colter	112	103	110	99	74	100
Steptoe	82	105	120	104	86	99
Foster	84	86	62	98	97	86
Malt						
Creel	104	107	121	96	109	107
Legacy	97	95	90	101	105	98
Drummond	98	95	85	98	109	97
Morex	79	85	85	108	111	94
Lacey	85	101	80	88	113	94
Tradition	95	90	75	91	105	91
Location Average (bu/A)	129	151	143	114	22	

Table 62. 2-Row Barley Yield Percentage of Location Averages, 2008.

	(100% =Average)					
	Rupert	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Variety Average**
Feed						
Champion	165	159	187	147	---	165
Xena	160	165	184	153	21	137
Calgary	173	164	171	138	19	133
02WA-1095	172	151	158	147	16	129
RWA 1758	152	159	171	138	22	128
Spaulding	166	158	174	133	10	128
Lenetah	178	152	163	139	7	128
Primo	150	154	162	146	19	126
02WA-7028.9	142	152	175	134	17	124
Burton	151	147	168	136	13	123
Camas	155	157	160	122	20	123
CDC Bold	159	156	156	129	12	122
Baronesse	149	141	167	129	16	121
Radiant	147	142	151	140	18	120
Tetonia	152	148	147	129	19	119
Boulder	148	142	155	129	22	119
Idagold II	160	138	169	113	13	118
Eslick	154	149	134	130	13	116
Haxby	151	156	150	106	14	115
Valier	156	142	122	130	21	114
CDC McGwire*	143	131	143	98	11	105
Clearwater*	127	131	136	102	11	101
Hayes	140	111	110	132	13	101
Malt						
Moravian 69	157	---	---	---	---	157
01Ab7163	164	150	142	132	11	120
Conrad	150	153	147	121	14	117
2B99-2316	154	142	130	127	11	113
B1202	147	130	139	125	24	113
Geraldine	146	141	143	119	9	111
02Ab17271	154	125	123	129	16	110
Craft	134	140	142	120	12	110
Pinnacle	142	143	139	112	9	109
02Ab17373	147	131	125	127	15	109
Hockett	151	129	127	118	18	108
Merit	146	131	126	116	18	107
AC Metcalfe	135	121	125	125	25	106
2B99-2657	145	130	122	126	10	106
CDC Stratus	130	131	120	122	14	104
Harrington	127	121	121	118	14	100
C83	177	---	---	---	16	96
C119	---	---	---	---	21	21
Location average (bu/A)	151	143	147	127	15	

* indicates hulless variety

2008 Winter Grain Yield Percentage Across All Locations Charts

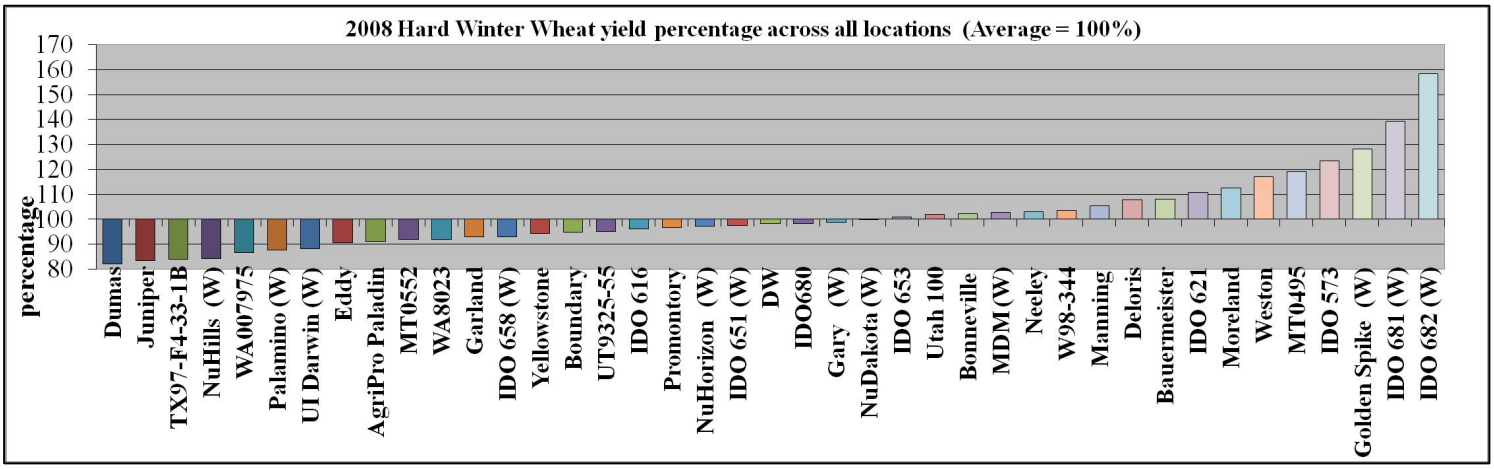


Chart 2. Hard Winter Wheat Yield Percentage Across All Locations.

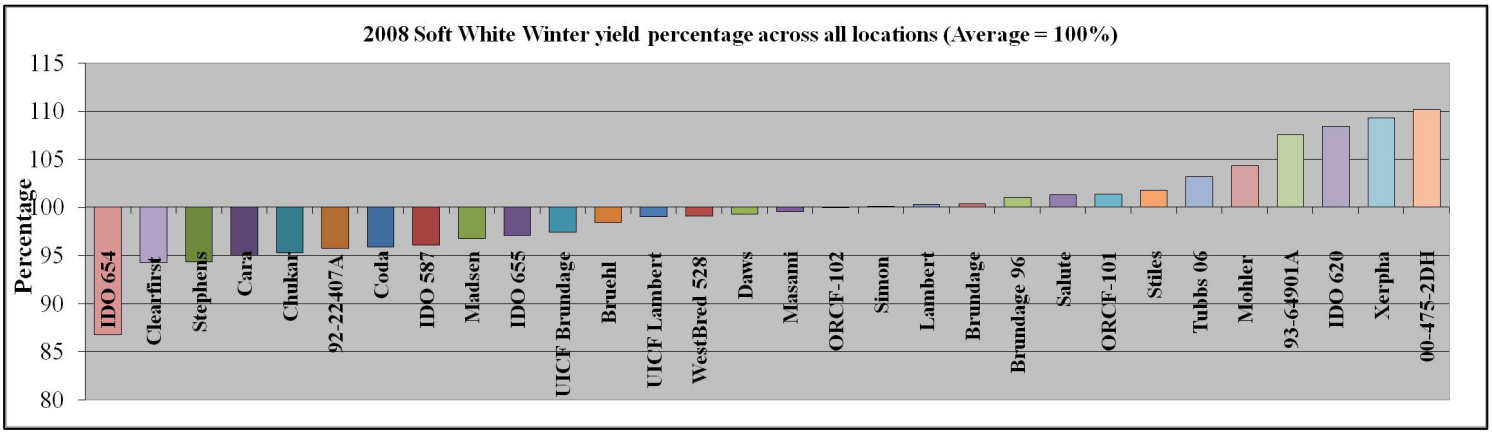


Chart 3. Soft White Winter Wheat Yield Percentage Across All Locations.

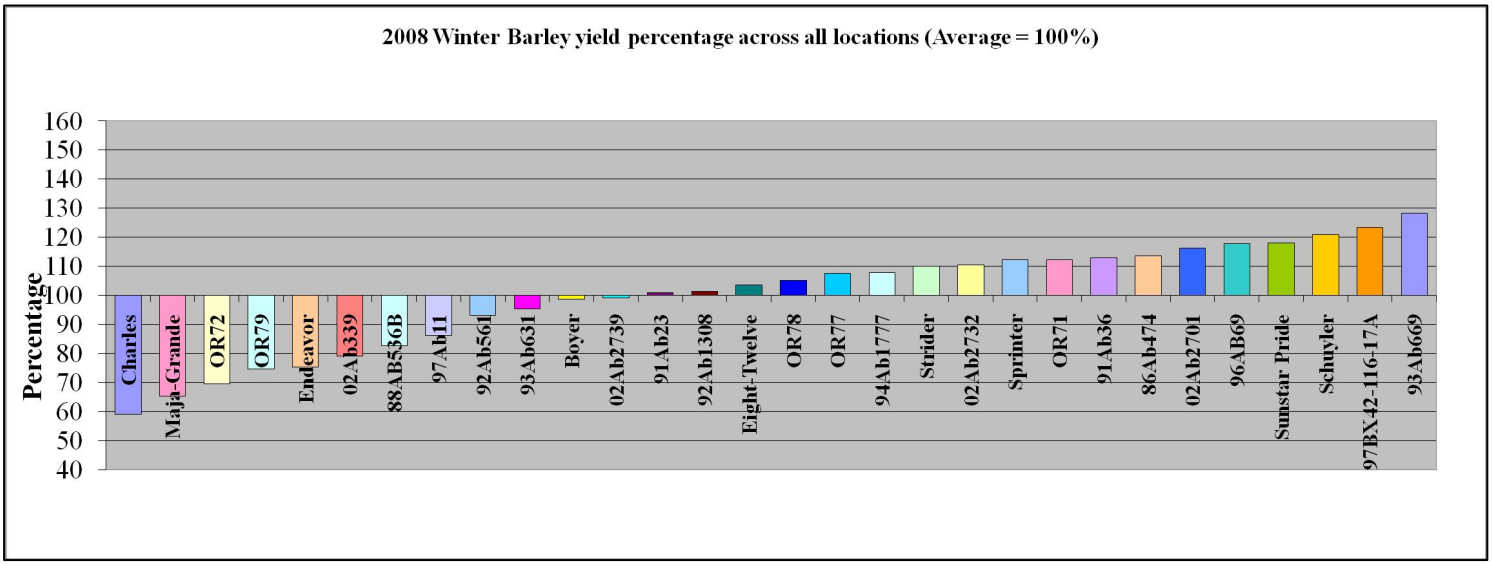


Chart 4. Winter Barley Yield Percentage Across All Locations.

2008 Spring Grain Yield Percentages Across Irrigated Locations Charts

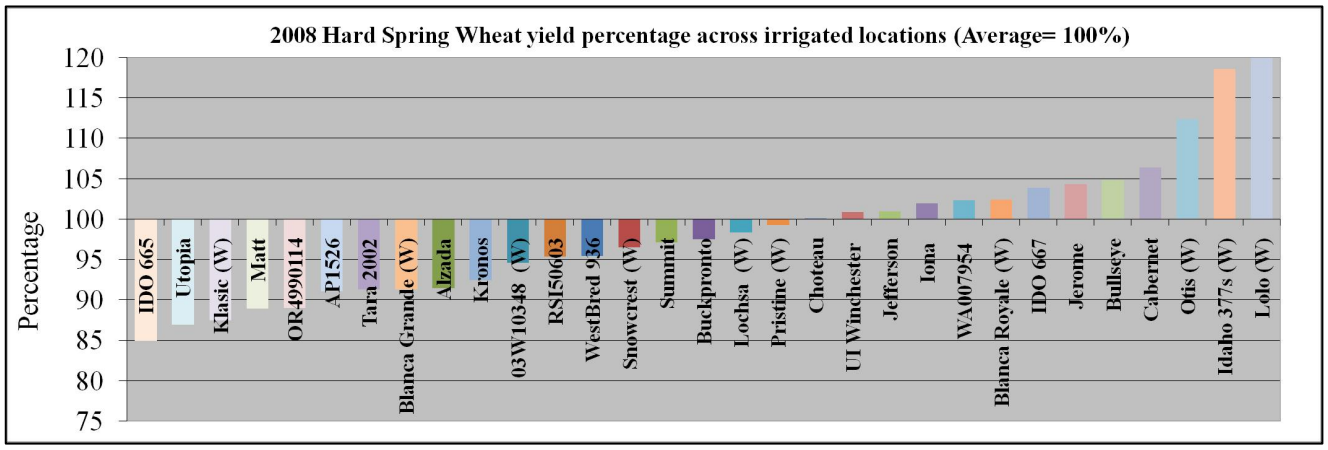


Chart 5. Hard Spring Wheat Yield Percentage Across Irrigated Locations.

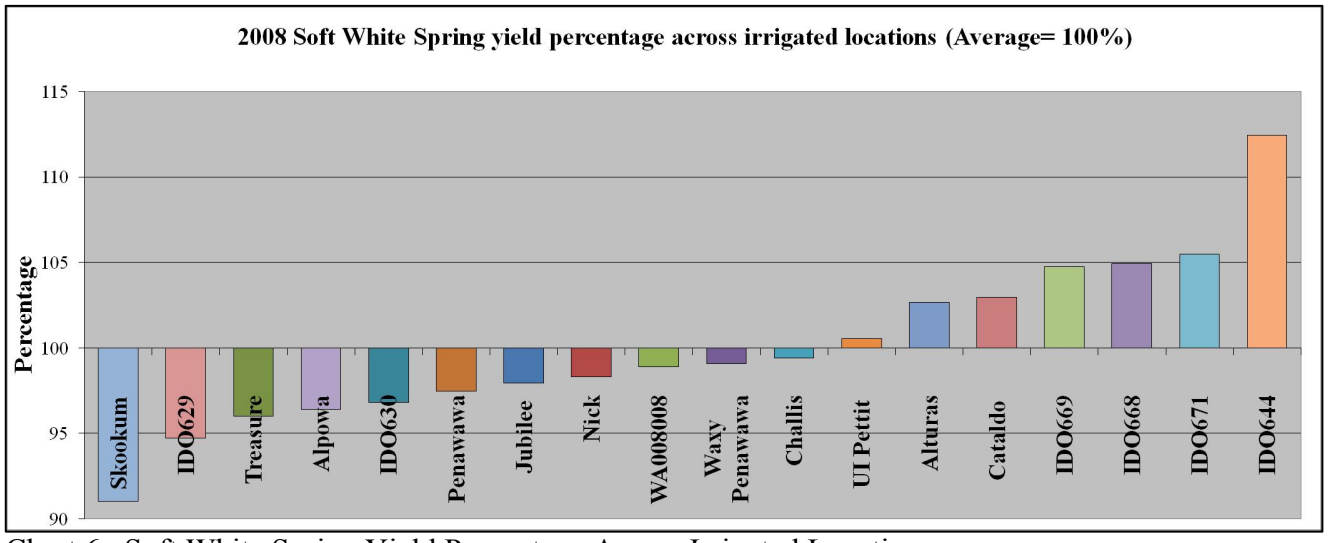


Chart 6. Soft White Spring Yield Percentage Across Irrigated Locations.

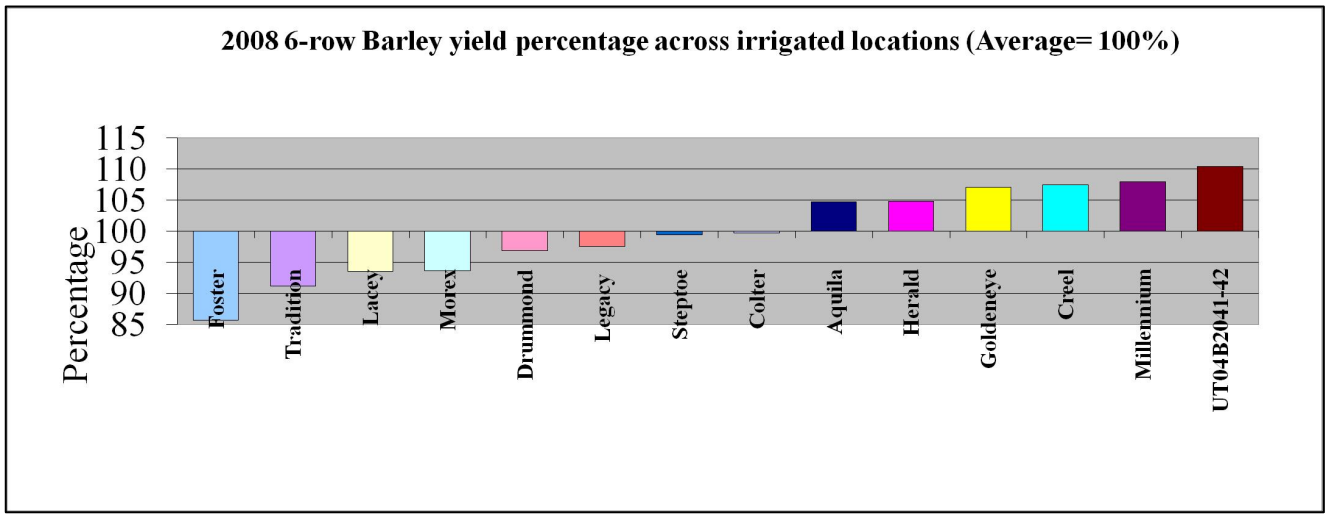


Chart 7. 6-Row Barley Yield Percentage Across Irrigated Locations.

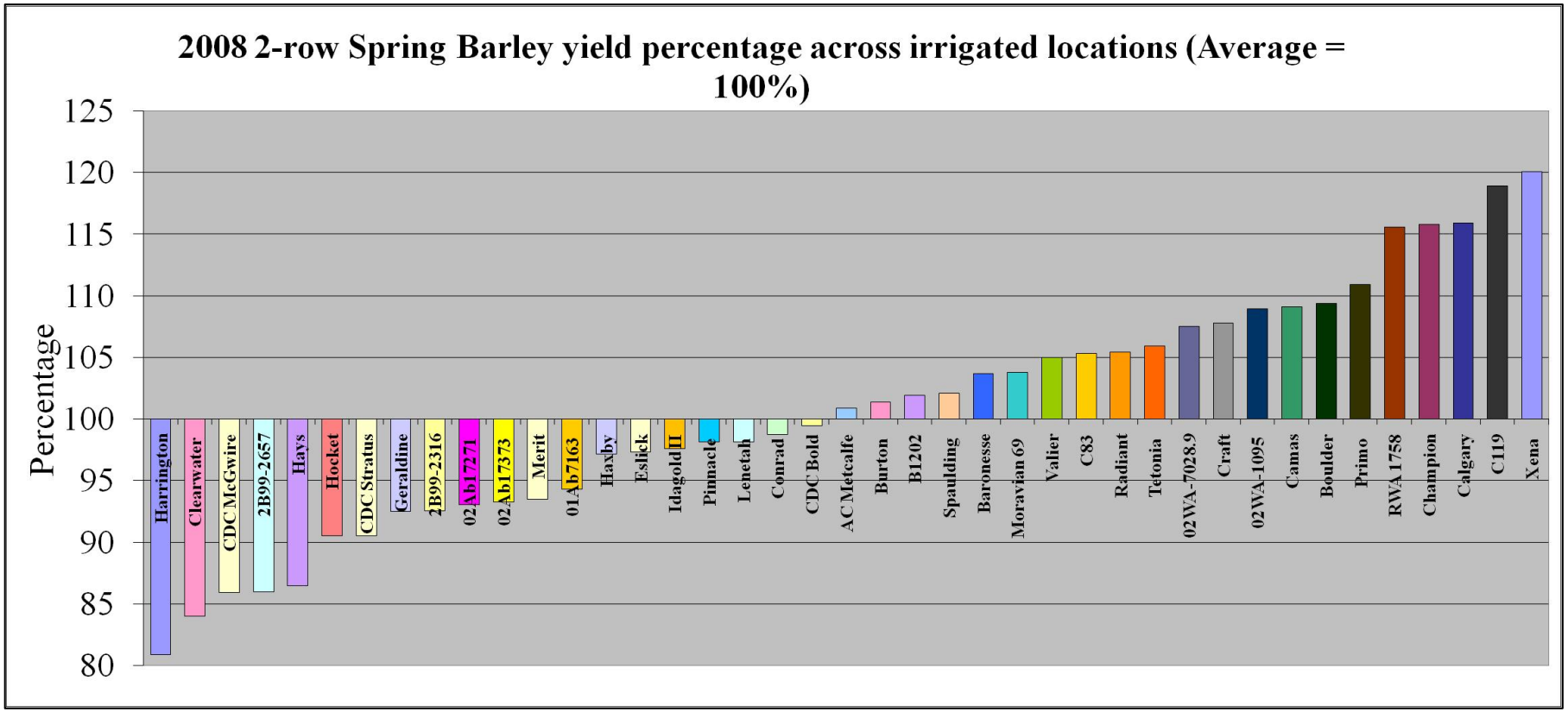


Chart 8. 2-Row Spring Barley Yield Percentage Across Irrigated Locations.

Table 63. Hard Winter Wheat Grain Protein & Kernel Hardness, 2007.

	----------Grain Protein %----------					----------Kernel Hardness 0-100----------				
Variety	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**
Bauermeister	12.9	12.0	13.5	14.4	**13.2**	62	51	56	57	**56.5**
Bonneville	14.1	12.6	14.5	14.7	**14.0**	56	55	61	64	**59.0**
Boundary	12.3	11.1	13.1	13.9	**12.6**	58	62	56	55	**57.8**
Deloris	13.5	11.5	13.6	13.5	**13.0**	58	61	57	62	**59.5**
Dumas	13.2	11.0	13.7	13.9	**12.9**	56	58	55	65	**58.5**
DW	13.4	11.2	13.4	14.2	**13.1**	57	59	61	64	**60.3**
Garland	13.2	11.6	13.6	14.4	**13.2**	54	54	55	58	**55.3**
Gary (W)	12.8	10.9	13.5	14.2	**12.9**	62	59	60	59	**60.0**
Golden Spike	12.7	10.8	12.9	13.9	**12.6**	55	53	57	56	**55.3**
IDO 616	13.1	13.0	13.8	14.6	**13.6**	61	59	56	70	**61.5**
IDO 621	12.2	10.7	12.4	---	**11.8**	58	5	55	---	**39.3**
IDO 641 (W)	12.8	11.0	13.2	---	**12.3**	53	51	50	---	**51.3**
Manning	12.9	11.4	13.1	---	**12.5**	63	58	60	---	**60.3**
MDM (W)	13.1	10.6	13.5	14.6	**13.0**	60	51	60	59	**57.5**
Moreland	13.6	11.1	13.7	13.6	**13.0**	59	53	53	54	**54.8**
Neeley	13.3	11.7	13.9	13.8	**13.2**	58	52	62	59	**57.8**
NuDakota	12.8	10.5	13.5	13.8	**12.7**	49	47	48	52	**49.0**
NuHills	14.3	12.4	14.6	14.9	**14.1**	61	57	54	65	**59.3**
NuHorizon (W)	12.3	10.8	12.2	13.0	**12.1**	58	50	48	58	**53.5**
AgriPro Paladin	13.1	11.8	13.3	14.4	**13.2**	52	55	52	59	**54.5**
Palomino (W)	13.6	11.2	13.9	14.2	**13.2**	50	54	53	62	**54.8**
Promontory	12.5	12.0	13.0	13.9	**12.8**	55	53	56	62	**56.5**
Eddy	13.0	11.1	13.2	---	**12.4**	54	45	52	---	**50.3**
TX97-F4-33-1B	13.4	10.8	13.1	14.2	**12.9**	61	49	50	59	**54.8**
UI Darwin (W)	14.1	11.4	13.8	14.1	**13.4**	61	59	52	62	**58.5**
Utah 100	13.3	11.6	13.8	13.5	**13.1**	62	64	65	65	**64.0**
Whetstone	14.2	11.3	13.9	13.7	**13.3**	61	59	59	63	**60.5**
WA7976	13.2	11.2	13.0	14.1	**12.9**	67.0	58.0	62.0	58.0	**61.3**
Weston	13.1	12.3	13.6	14.3	**13.3**	43.0	42.0	41.0	49.0	**43.8**
Yellowstone	12.9	11.5	13.0	14.4	**12.9**	64.0	58.0	51.0	66.0	**59.8**
Juniper	---	---	---	13.6	**13.6**	---	---	---	68.0	**68.0**
IDO 651	---	---	---	13.8	**13.8**	---	---	---	66.0	**66.0**
IDO 653	---	---	---	14.3	**14.3**	---	---	---	71.0	**71.0**
Quantum 542 Hybrid	---	---	---	14.0	**14.0**	---	---	---	57.0	**57.0**
Location Average	**13.2**	**11.4**	**13.5**	**14.1**	**13.1**	**57.6**	**53.0**	**55.2**	**60.8**	**57.3**

Table 64. Soft White Winter Wheat Grain Protein & Kernel Hardness, 2007.

	--------Grain Protein %--------					--------Kernel Hardness 0-100--------				
Variety	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**
UICF Brundage	11.5	10.5	11.1	11.6	**11.2**	13	5	7	12	**9.3**
92-22407A	11.8	10.7	12.6	11.7	**11.7**	18	7	12	12	**12.3**
93-64901A	11.1	10.2	10.9	11.5	**10.9**	17	10	13	10	**12.5**
99-419	12.2	10.2	12.0	12.7	**11.8**	12	9	14	13	**12.0**
UICF Lambert	12.3	11.7	12.7	12.3	**12.3**	28	24	33	20	**26.3**
ARS00235	12.0	11.6	14.2	11.4	**12.3**	30	23	35	21	**27.3**
Bruehl	11.4	10.2	12.7	12.8	**11.8**	18	14	28	19	**19.8**
Brundage	10.9	10.5	11.3	11.6	**11.1**	22	14	26	22	**21.0**
Brundage 96	11.4	10.3	12.5	11.2	**11.4**	16	11	26	14	**16.8**
Cara	12.8	10.4	12.7	12.6	**12.1**	24	16	29	24	**23.3**
Chukar	11.7	10.4	12.8	12.8	**11.9**	24	19	33	24	**25.0**
Clearfirst	12.3	11.0	13.5	14.1	**12.8**	26	16	30	26	**24.5**
Coda	10.8	10.5	12.9	12.2	**11.6**	26	27	28	32	**28.3**
Daws	11.1	10.0	12.7	12.4	**11.6**	21	14	27	22	**21.0**
IDO 587	11.9	11.4	12.2	12.8	**12.1**	20	13	28	19	**20.0**
IDO 620	11.4	11.4	12.9	12.2	**12.0**	18	10	27	14	**17.3**
Lambert	11.4	10.5	12.7	13.6	**12.1**	25	21	32	29	**26.8**
Madsen	11.6	10.6	12.9	13.4	**12.2**	25	20	33	25	**25.8**
Malcolm	11.2	10.7	11.7	12.5	**11.5**	20	16	27	24	**21.8**
Mohler	11.3	11.3	13.2	13.1	**12.3**	23	18	27	28	**24.0**
ORCF-101	11.6	11.8	12.8	13.1	**12.4**	24	19	21	24	**22.0**
ORCF-102	11.2	10.7	12.0	12.9	**11.7**	21	19	29	22	**22.8**
ORH010920	10.8	10.5	12.2	12.6	**11.5**	19	13	24	23	**19.8**
Simon	12.1	10.6	12.3	13.0	**12.0**	22	19	26	25	**23.0**
Stephens	11.3	10.0	12.2	12.7	**11.6**	24	19	24	20	**21.8**
Tubbs reselect	11.1	10.5	13.2	12.2	**11.8**	23	19	31	25	**24.5**
WA7934	11.8	10.6	12.7	12.1	**11.8**	17	15	24	14	**17.5**
Xerpha	11.3	10.6	12.7	12.1	**11.7**	26	26	32	14	**24.5**
Westbred 470	12.3	11.4	13.0	12.0	**12.2**	23	15	26	20	**21.0**
Westbred 528	11.3	10.6	12.5	12.3	**11.7**	23.0	15.0	26.0	25.0	**22.3**
Location Average	**11.6**	**10.7**	**12.5**	**12.5**	**11.8**	**21.6**	**16.2**	**25.9**	**20.7**	**21.1**

Table 65. Hard Spring Wheat Grain Protein & Kernel Hardness, 2007.

	----------Grain Protein %----------						----------Kernel Hardness 0-100----------					
Variety	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**
Hard Red Spring												
Buckpronto	14.4	15.4	15.6	16.4	17.3	**15.8**	58	66	66	67	57	**62.8**
Choteau	14.5	15.2	15.4	16.1	16.5	**15.5**	70	71	72	66	53	**66.4**
Hollis	14.3	14.8	15.4	15.6	17.6	**15.5**	58	60	59	59	55	**58.2**
Cabernet	13.2	13.7	---	---	---	**13.5**	53	52	---	---	---	**52.5**
02W50603	13.7	14.4	---	---	---	**14.0**	63	66	---	---	---	**64.5**
Iona	14.0	15.2	15.1	15.9	15.5	**15.1**	66	59	59	59	47	**58.0**
Jefferson	13.7	14.3	15.0	15.2	17.1	**15.0**	65	64	61	59	60	**61.8**
Jerome	13.5	14.2	14.4	15.2	16.4	**14.7**	55	58	57	52	49	**54.2**
Saxon	14.0	14.3	15.3	15.8	17.2	**15.3**	76	77	75	77	65	**74.0**
Scarlet	13.6	14.8	15.0	14.7	17.0	**15.0**	62	69	65	55	53	**60.8**
Summit	13.2	13.6	14.2	14.2	15.0	**14.0**	50	55	52	49	41	**49.4**
Tara 2002	14.0	14.7	14.8	15.6	16.9	**15.2**	55	60	56	51	46	**53.6**
WB 936	14.2	14.7	15.4	15.9	16.8	**15.4**	57	60	60	58	46	**56.2**
UI Winchester	---	---	---	---	16.4	**16.4**	---	---	---	---	48.0	**48.0**
Hard White Spring												
OR4201104	13.6	14.7	15.2	14.2	16.8	**14.9**	68	69	66	56	68	**65.4**
02W0076W	13.9	14.0	---	---	---	**14.0**	52	59	---	---	---	**55.5**
03W10348	13.7	13.7	---	---	---	**13.7**	43	52	---	---	---	**47.5**
Blanca Grande	13.4	13.7	14.3	15.3	15.6	**14.5**	51	54	49	48	36	**47.6**
IDO 377s	13.8	14.8	15.7	15.0	16.9	**15.2**	60	59	60	58	61	**59.6**
Klasic	13.1	14.2	13.8	15.6	16.4	**14.6**	46	44	46	43	40	**43.8**
Lochsa	14.3	15.0	15.0	15.8	---	**15.0**	67	64	66	65	---	**65.5**
Lolo	13.5	14.0	14.7	14.8	---	**14.3**	65	57	63	65	---	**62.5**
Otis	13.5	14.0	14.7	14.3	15.5	**14.4**	67	61	65	60	51	**60.8**
Pristine	14.4	14.8	14.7	16.3	17.2	**15.5**	66	65	63	66	61	**64.2**
Snowcrest	13.6	14.2	14.8	16.0	16.2	**15.0**	46	41	44	43	37	**42.2**
Spring Durum												
Alzada	14.9	15.1	15.6	15.2	16.8	**15.5**	---	---	---	---	---	---
AP1526	15.0	15.3	15.9	15.0	15.6	**15.3**	---	---	---	---	---	---
Kronos	14.9	14.5	15.3	15.3	17.3	**15.5**	---	---	---	---	---	---
Matt	14.4	14.8	15.1	15.0	17.5	**15.4**	---	---	---	---	---	---
Topper	14.5	15.0	15.3	15.1	17.1	**15.4**	---	---	---	---	---	---
Utopia	14.4	15.3	16.4	15.0	17.1	**15.6**	---	---	---	---	---	---
Location Average	**14.0**	**14.5**	**15.1**	**15.3**	**16.6**	**15.0**	**59.1**	**60.1**	**60.2**	**57.8**	**51.3**	**57.7**

Table 66. Soft White Spring Wheat Grain Protein & Kernel Hardness, 2007.

	--------Grain Protein %--------						--------Kernel Hardness 0-100--------					
Variety	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**
Alpowa	9.7	13.4	12.9	11.5	10.7	**11.6**	8.2	8.2	7.9	7.9	7.7	**8.0**
Alturas	9.8	11.9	12.4	11.2	10.8	**11.2**	8.2	8.4	8.0	8.1	7.7	**8.1**
Cataldo	9.9	12.4	13.2	11.9	10.8	**11.6**	8.2	8.3	7.9	8.1	7.8	**8.1**
Challis	9.7	12.5	13.9	11.2	11.1	**11.7**	8.5	8.4	7.9	8.1	7.9	**8.2**
Eden	9.5	11.7	12.6	11.6	11.0	**11.3**	8.6	8.7	8.2	8.2	8.1	**8.4**
Jubilee	9.5	12.3	12.8	11.5	11.4	**11.5**	8.5	8.7	8.2	8.4	8.0	**8.4**
Louise	10.0	12.6	13.3	11.8	11.2	**11.8**	8.5	8.6	8.1	8.3	8.1	**8.3**
Nick	9.6	12.1	12.9	13.1	11.1	**11.7**	8.6	8.4	8.0	8.1	8.0	**8.2**
Penawawa	9.8	13.2	14.0	12.5	11.4	**12.2**	8.1	7.9	7.8	7.8	7.8	**7.9**
Skookum	9.4	12.7	13.1	12.7	11.4	**11.8**	8.6	8.2	8.1	7.9	8.1	**8.2**
Treasure	9.5	13.3	13.5	11.5	11.1	**11.8**	8.7	8.6	8.1	8.2	8.0	**8.3**
UI Pettit	9.6	11.5	11.8	12.0	10.8	**11.1**	8.8	8.7	8.3	8.2	8.0	**8.4**
Whitebird	9.5	12.3	13.1	11.2	11.4	**11.5**	8.7	8.5	8.3	8.0	7.8	**8.3**
Waxy Penawawa	9.6	13.3	14.1	12.2	11.5	**12.2**	7.5	7.0	7.0	7.2	7.4	**7.2**
WA008008	9.6	12.9	14.7	12.8	11.1	**12.2**	8.2	8.0	7.8	7.8	7.7	**7.9**
Location Average	**9.7**	**12.5**	**13.2**	**11.9**	**11.1**	**11.7**	**8.4**	**8.3**	**8.0**	**8.0**	**7.9**	**8.1**

Table 67. Percent flour protein and flour yield for soft white winter wheat at Kimberly, Rupert, Ririe, and Aberdeen, 2007.

	Flour Protein (%)					Flour Yield (%)				
Variety	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**
UICF Brundage	9.1	8.7	9.1	10.4	**9.3**	64.8	61.6	65.6	57.9	**62.5**
92-22407A	9.7	9.6	10.6	10.8	**10.2**	67.9	65.2	64.8	65.5	**65.9**
93-64901A	9.0	9.4	9.4	10.8	**9.7**	68.1	66.5	67.2	63.8	**66.4**
99-419	9.5	8.7	9.8	11.3	**9.8**	65.0	67.9	66.6	62.7	**65.6**
UICF Lambert	9.7	9.7	9.6	10.9	**10.0**	68.8	66.7	67.0	64.3	**66.7**
ARS00235	9.1	9.9	10.8	10.5	**10.1**	69.6	65.5	66.4	62.9	**66.1**
Bruehl	9.4	9.4	10.1	11.1	**10.0**	67.5	65.1	68.9	60.8	**65.6**
Brundage	8.6	9.2	9.1	10.0	**9.2**	68.8	66.6	66.6	65.9	**67.0**
Brundage 96	9.1	9.4	9.7	10.7	**9.7**	66.0	67.5	66.2	62.6	**65.6**
Cara	10.4	9.4	10.2	10.9	**10.2**	66.5	67.5	67.2	63.4	**66.2**
Chukar	9.5	9.3	10.0	11.0	**9.9**	66.6	67.9	68.9	60.8	**66.1**
Clearfirst	10.2	10.0	11.0	12.1	**10.8**	68.0	67.9	67.6	63.7	**66.8**
Coda	9.1	9.3	10.2	10.8	**9.9**	70.9	66.8	68.7	66.1	**68.1**
Daws	8.8	9.1	9.9	10.9	**9.7**	67.1	65.5	64.1	61.2	**64.5**
IDO 587	9.3	9.9	9.6	11.2	**10.0**	66.9	66.2	66.4	65.3	**66.2**
IDO 620	9.5	10.3	10.3	10.9	**10.3**	68.8	60.3	68.5	60.4	**64.5**
Lambert	8.6	9.4	9.6	11.1	**9.7**	69.0	67.5	67.6	65.4	**67.4**
Madsen	9.3	9.7	10.2	12.0	**10.3**	70.1	68.9	69.9	65.1	**68.5**
Malcolm	8.9	9.5	9.3	11.1	**9.7**	69.6	67.0	67.5	64.9	**67.3**
Mohler	9.4	10.2	10.7	10.7	**10.3**	69.9	68.6	67.2	65.8	**67.9**
ORCF-101	9.4	10.7	10.3	11.1	**10.4**	68.6	65.0	67.4	64.6	**66.4**
ORCF-102	8.7	9.2	9.3	11.1	**9.6**	68.1	65.6	69.3	65.0	**67.0**
ORH010920	8.6	9.2	9.6	10.6	**9.5**	66.9	65.4	65.9	64.9	**65.8**
Simon	9.8	9.3	10.1	10.4	**9.9**	69.8	69.6	71.7	67.2	**69.6**
Stephens	9.1	9.3	10.1	10.4	**9.7**	68.0	65.3	67.0	62.8	**65.8**
Tubbs reselect	9.0	9.4	10.0	10.2	**9.7**	70.0	66.3	70.5	66.1	**68.2**
WA7934	9.6	9.7	10.5	10.4	**10.1**	66.1	64.0	66.1	61.7	**64.5**
Xerpha	8.9	9.0	10.2	9.7	**9.5**	67.8	68.9	67.9	63.2	**67.0**
Westbred 470	9.8	9.7	10.6	9.8	**10.0**	66.3	59.8	65.1	63.5	**63.7**
Westbred 528	9.2	9.5	10.4	10.4	**9.9**	69.3	67.1	67.7	66.3	**67.6**
Location average	**9.3**	**9.5**	**10.0**	**10.8**	**9.9**	**68.0**	**66.1**	**67.4**	**63.8**	**66.3**

Table 68. Percent break flour yield and cookie diameter for soft white winter wheat at Kimberly, Rupert, Ririe, and Aberdeen 2007.

	Break Flour Yield (%)					Cookie Diameter (cm)				
Variety	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**
UICF Brundage	42.9	45.3	42.0	49.5	**44.9**	8.5	8.2	8.5	8.4	**8.4**
92-22407A	42.0	41.5	43.9	42.1	**42.4**	8.3	8.2	8.1	8.2	**8.2**
93-64901A	38.8	41.0	39.0	43.9	**40.7**	8.4	8.5	8.4	8.1	**8.4**
99-419	43.2	46.6	47.3	43.5	**45.2**	8.2	8.5	8.1	8.1	**8.2**
UICF Lambert	35.6	36.5	36.9	39.6	**37.2**	8.0	8.0	8.1	8.2	**8.1**
ARS00235	39.1	42.2	39.4	41.8	**40.6**	8.0	8.3	8.0	8.2	**8.1**
Bruehl	37.6	38.9	34.8	42.0	**38.3**	8.3	8.4	8.2	8.4	**8.3**
Brundage	34.5	39.7	36.4	46.4	**39.3**	8.4	8.5	8.2	8.4	**8.4**
Brundage 96	40.3	41.1	37.4	46.6	**41.4**	8.4	8.5	8.1	8.4	**8.3**
Cara	39.7	38.4	38.8	43.3	**40.1**	8.5	8.5	8.3	8.5	**8.5**
Chukar	45.2	40.5	40.6	45.5	**43.0**	8.4	8.5	8.4	8.4	**8.4**
Clearfirst	34.0	33.8	34.7	34.4	**34.2**	8.0	8.2	7.8	8.0	**8.0**
Coda	36.9	33.6	31.4	38.1	**35.0**	8.2	8.1	8.1	8.2	**8.2**
Daws	39.6	36.3	35.6	40.6	**38.0**	8.0	8.0	7.5	8.0	**7.9**
IDO 587	40.1	35.0	35.3	39.6	**37.5**	8.1	8.2	8.1	8.1	**8.1**
IDO 620	42.0	39.5	42.5	42.4	**41.6**	7.9	8.0	8.0	8.0	**8.0**
Lambert	34.2	35.7	35.9	42.8	**37.2**	7.9	8.1	7.9	8.3	**8.1**
Madsen	32.8	30.5	33.3	37.6	**33.6**	8.2	8.4	8.0	8.0	**8.1**
Malcolm	32.5	34.0	33.5	38.6	**34.7**	8.0	8.2	8.2	8.0	**8.1**
Mohler	35.5	29.9	33.5	38.5	**34.4**	8.0	8.1	8.0	8.0	**8.0**
ORCF-101	33.0	35.0	32.1	36.1	**34.1**	8.0	8.2	7.9	8.0	**8.0**
ORCF-102	33.5	38.5	34.0	36.4	**35.6**	8.1	8.1	8.0	7.8	**8.0**
ORH010920	34.3	33.8	29.1	35.7	**33.2**	8.1	8.4	8.2	7.7	**8.1**
Simon	30.7	32.2	32.5	36.6	**33.0**	8.0	8.2	7.9	8.1	**8.0**
Stephens	35.1	34.6	32.6	39.5	**35.5**	8.0	8.1	7.9	7.9	**8.0**
Tubbs reselect	31.3	31.5	33.8	39.2	**34.0**	8.0	8.0	7.8	7.9	**7.9**
WA7934	39.7	39.7	38.8	43.0	**40.3**	7.9	8.2	7.8	7.9	**8.0**
Xerpha	30.5	30.7	34.2	41.7	**34.3**	8.0	8.2	7.9	8.0	**8.0**
Westbred 470	28.8	34.3	34.2	38.0	**33.8**	7.8	8.1	7.8	8.1	**8.0**
Westbred 528	35.5	37.2	30.5	35.7	**34.7**	8.2	8.2	7.9	8.0	**8.1**
Location average	**36.6**	**36.9**	**36.1**	**40.6**	**37.6**	**8.1**	**8.2**	**8.0**	**8.1**	**8.1**

Table 69. Percent flour protein and flour yield for soft white spring wheat at Rupert, Aberdeen, Idaho Falls, Ashton, and Soda Springs, 2007.

	Flour Protein (14% mb)						Flour Yield (%)					
Variety	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**
Alpowa	9.1	10.2	10.1	9.9	9.8	**9.8**	66.5	61.8	59.8	61.9	53.7	**60.7**
Alturas	9.1	9.7	10.6	9.5	9.9	**9.8**	68.9	66.6	62.6	66.6	61.0	**65.1**
Cataldo	9.2	10.0	11.0	9.9	9.9	**10.0**	67.1	65.7	61.5	63.5	56.4	**62.8**
Challis	8.9	9.5	11.1	9.2	10.1	**9.7**	68.0	65.4	57.4	64.0	58.9	**62.7**
Eden	8.8	9.0	10.5	9.3	9.9	**9.5**	69.4	66.9	59.8	64.4	59.7	**64.0**
Jubilee	8.8	9.5	10.7	9.4	10.2	**9.7**	69.7	65.8	64.8	67.2	56.8	**64.9**
Louise	9.0	9.6	10.9	9.8	10.1	**9.9**	66.7	66.3	60.2	66.1	58.2	**63.5**
Nick	9.1	9.7	11.0	10.4	10.1	**10.1**	68.1	65.7	62.2	64.5	58.7	**63.8**
Penawawa	9.1	10.3	11.4	10.0	10.2	**10.2**	63.0	60.5	56.8	59.9	52.9	**58.6**
Skookum	8.8	9.9	10.8	10.0	10.1	**9.9**	67.3	64.3	63.0	65.8	58.7	**63.8**
Treasure	8.8	9.9	11.2	9.1	9.9	**9.8**	68.6	62.8	60.2	65.3	58.6	**63.1**
UI Pettit	8.8	9.2	9.3	9.6	9.9	**9.3**	67.7	67.9	66.9	68.0	60.2	**66.1**
Whitebird	8.8	9.4	10.2	9.1	10.2	**9.5**	69.2	66.7	63.0	65.6	55.0	**63.9**
Waxy Penawawa	9.0	10.5	11.3	10.0	10.4	**10.2**	50.5	49.6	49.8	48.6	41.7	**48.0**
WA008008	8.9	10.1	11.1	10.2	10.2	**10.1**	68.6	61.8	58.3	62.5	59.6	**62.2**
Location Average	**8.9**	**9.8**	**10.8**	**9.7**	**10.1**	**9.8**	**66.6**	**63.9**	**60.4**	**63.6**	**56.7**	**62.2**

Table 70. Percent break flour and cookie diameter for soft white spring wheat at Rupert, Aberdeen, Idaho Falls, Ashton, and Soda Springs, 2007.

	Break Flour (%)						Cookie Diameter (cm)					
Variety	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**
Alpowa	41.0	38.9	44.1	39.6	48.6	**42.4**	8.2	8.2	7.9	7.9	7.7	**8.0**
Alturas	41.9	36.4	41.4	38.0	46.9	**40.9**	8.2	8.4	8.0	8.1	7.7	**8.1**
Cataldo	40.9	35.5	41.2	38.0	42.5	**39.6**	8.2	8.3	7.9	8.1	7.8	**8.1**
Challis	42.6	37.6	42.0	41.7	42.1	**41.2**	8.5	8.4	7.9	8.1	7.9	**8.2**
Eden	44.4	39.7	39.9	42.4	39.3	**41.1**	8.6	8.7	8.2	8.2	8.1	**8.4**
Jubilee	44.8	42.7	45.5	46.8	45.2	**45.0**	8.5	8.7	8.2	8.4	8.0	**8.4**
Louise	39.6	43.0	37.7	41.0	44.1	**41.1**	8.5	8.6	8.1	8.3	8.1	**8.3**
Nick	36.7	35.6	41.3	34.7	38.2	**37.3**	8.6	8.4	8.0	8.1	8.0	**8.2**
Penawawa	39.8	40.2	43.7	41.0	43.3	**41.6**	8.1	7.9	7.8	7.8	7.8	**7.9**
Skookum	44.2	41.3	44.1	44.0	39.9	**42.7**	8.6	8.2	8.1	7.9	8.1	**8.2**
Treasure	42.3	42.3	46.8	42.1	39.7	**42.6**	8.7	8.6	8.1	8.2	8.0	**8.3**
UI Pettit	41.0	38.9	42.9	37.2	34.3	**38.9**	8.8	8.7	8.3	8.2	8.0	**8.4**
Whitebird	41.5	44.4	47.5	41.6	42.6	**43.5**	8.7	8.5	8.3	8.0	7.8	**8.3**
Waxy Penawawa	43.9	39.6	44.7	48.6	48.0	**45.0**	7.5	7.0	7.0	7.2	7.4	**7.2**
WA008008	45.5	39.1	45.5	43.2	45.7	**43.8**	8.2	8.0	7.8	7.8	7.7	**7.9**
Location Average	**42.0**	**39.7**	**43.2**	**41.3**	**42.7**	**41.8**	**8.4**	**8.3**	**8.0**	**8.0**	**7.9**	**8.1**

Table 71. Percent flour protein and flour yield for hard winter wheat at Aberdeen, Kimberly, Rupert and Ririe 2007.

	Flour Protein (14% mb)					Flour Yield (%)				
Variety	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**	**Kimberly**	**Rupert**	**Aberdeen**	**Ririe**	**Average**
Hard Red Winter Wheat										
Bauermeister	11.3	10.2	11.7	12.9	**11.5**	72.2	66.2	70.4	66.9	**68.9**
Bonneville	12.2	11.1	12.8	13.4	**12.4**	72.7	71.7	72.4	69.6	**71.6**
Boundary	10.5	9.5	11.4	12.4	**11.0**	73.0	70.9	72.2	67.6	**70.9**
Deloris	12.3	9.7	12.2	12.3	**11.6**	73.3	71.4	72.4	68.8	**71.5**
Dumas	11.4	9.1	12.2	12.4	**11.3**	70.8	69.9	69.3	69.1	**69.8**
DW	11.9	10.0	11.9	12.7	**11.6**	69.4	67.0	71.2	66.1	**68.4**
Eddy	11.2	9.5	11.9		**10.8**	71.5	70.8	73.5		**71.9**
Garland	11.2	9.5	11.7	12.7	**11.3**	67.0	64.8	65.9	63.9	**65.4**
IDO 616	11.8	11.5	12.5	13.5	**12.3**	72.3	70.5	71.8	69.0	**70.9**
IDO 621	10.2	9.1	10.7	---	**10.0**	72.3	70.3	71.6	---	**71.4**
IDO 651	---	---	---	12.3	**12.3**	---	---	---	64.6	**64.6**
IDO 653	---	---	---	12.5	**12.5**	---	---	---	66.4	**66.4**
Juniper	---	---	---	11.9	**11.9**	---	---	---	68.4	**68.4**
Manning	10.7	9.4	11.4	---	**10.5**	69.9	68.7	69.9	---	**69.5**
Moreland	11.8	9.3	12.0	12.0	**11.3**	70.6	67.7	70.0	65.1	**68.4**
Neeley	11.5	10.1	12.4	12.3	**11.6**	69.3	67.2	69.3	67.0	**68.2**
NuDakota	10.8	9.3	11.9	12.5	**11.1**	69.9	68.4	68.5	64.4	**67.8**
NuHills	12.1	10.3	13.1	13.3	**12.2**	66.3	65.0	65.4	65.7	**65.6**
Paladin	11.3	10.0	11.3	12.5	**11.3**	69.9	68.3	68.9	68.0	**68.8**
Promontory	10.8	9.8	11.5	12.6	**11.2**	71.6	68.3	71.8	70.1	**70.5**
Quantum 542 Hybrid	---	---	---	12.3	**12.3**	---	---	---	66.4	**66.4**
TX97-F4-33-1B	11.6	9.2	11.6	12.8	**11.3**	70.3	69.2	70.7	69.0	**69.8**
Utah 100	10.7	9.3	11.9	11.8	**10.9**	69.8	69.5	70.0	67.6	**69.2**
Whetstone	12.3	9.1	12.4	12.4	**11.5**	69.5	68.2	69.8	68.9	**69.1**
WA7976	10.8	9.0	11.4	12.6	**11.0**	69.9	67.9	69.7	64.7	**68.1**
Weston	12.1	11.3	12.6	12.9	**12.2**	70.6	67.6	69.2	65.4	**68.2**
Yellowstone	11.3	9.7	12.6	13.0	**11.6**	71.8	70.1	71.7	67.9	**70.4**
Location Average	**11.4**	**9.8**	**11.9**	**12.6**	**11.5**	**70.6**	**68.7**	**70.2**	**67.1**	**68.9**
Hard White Winter Wheat										
Palomino (W)	11.7	9.8	12.0	12.9	**11.6**	68.3	63.2	65.1	64.2	**65.2**
Gary (W)	10.7	9.5	11.5	12.6	**11.1**	68.8	66.7	67.1	67.0	**67.4**
IDO 641 (W)	11.0	9.7	11.6	---	**10.7**	70.7	68.1	69.1	---	**69.3**
MDM (W)	11.3	9.5	11.7	13.2	**11.4**	69.6	67.1	69.8	62.1	**67.2**
NuHorizon (W)	10.5	9.9	11.0	11.6	**10.7**	69.6	67.0	69.3	66.3	**68.1**
Golden Spike	11.1	9.0	11.4	12.2	**10.9**	72.9	70.1	72.3	66.9	**70.6**
UI Darwin (W)	11.7	10.2	12.1	12.8	**11.7**	69.2	68.7	68.7	67.9	**68.6**
Location Average	**11.1**	**9.7**	**11.6**	**12.5**	**11.2**	**69.9**	**67.3**	**68.8**	**65.7**	**68.0**

Table 72. Bake volume for hard winter wheat at Aberdeen, Kimberly, Rupert and Ririe 2007.

	Bake Volume (cc)				
Variety	**Aberdeen**	**Kimberly**	**Rupert**	**Ririe**	**Average**
Hard Red Winter Wheat					
AgriPro Paladin	1225	1075	1150	1125	**1144**
Bauermeister	1075	975	1050	1175	**1069**
Bonneville	1225	1150	1150	1300	**1206**
Boundary	1125	950	1150	1250	**1119**
Deloris	1250	1100	1200	1400	**1238**
Dumas	1075	975	1225	1075	**1088**
DW	1225	950	1225	1400	**1200**
Eddy	1400	1125	1225	---	**1250**
Garland	1125	950	1000	1400	**1119**
Golden Spike	1200	1000	1150	1400	**1188**
IDO 616	1250	1175	1400	1400	**1306**
IDO 621	1075	925	1050	---	**1017**
IDO 651	---	---	---	1400	---
IDO 653	---	---	---	1400	---
Juniper	---	---	---	1400	---
Manning	1150	1100	1058	---	**1103**
Moreland	1225	1150	1200	1400	**1244**
Neeley	1150	1100	1175	1400	**1206**
NuDakota	1175	1050	1075	1400	**1175**
NuHills	1225	1125	1275	1400	**1256**
Promontory	1175	1100	1150	1175	**1150**
Quantum 542 Hybrid	---	---	---	1125	---
TX97-F4-33-1B	1200	975	1075	1200	**1113**
Utah 100	1200	1050	1200	1175	**1156**
Whetstone	1400	1075	1175	1225	**1219**
WA7976	1000	875	975	1125	**994**
Weston	1200	1150	1275	1300	**1231**
Yellowstone	1400	1150	1175	1250	**1244**
Location Average	**1198**	**1052**	**1158**	**1292**	**1168**
Hard White Winter Wheat					
Palomino (W)	1225	1050	1200	1175	**1163**
Gary (W)	1150	1000	1175	1400	**1181**
IDO 641 (W)	1250	1075	1225		**1183**
MDM (W)	1175	1000	1050	1400	**1156**
NuHorizon (W)	1125	1050	1150	1100	**1106**
UI Darwin (W)	1225	1175	1200	1200	**1200**
Location Average	**1192**	**1058**	**1167**	**1255**	**1165**

Table 73. Percent flour protein and flour yield for hard spring wheat at Rupert, Aberdeen, Idaho Falls, Ashton, and Soda Springs, 2007.

	Flour Protein (14% mb)						Flour Yield (%)					
Variety	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**	**Rupert**	**Aberdeen**	**Idaho Falls**	**Ashton**	**Soda Springs**	**Average**
Hard Red Spring												
Buckpronto	13.0	13.9	14.0	15.1	16.3	**14.5**	69.8	67.8	65.0	65.9	60.2	**65.7**
Choteau	13.2	13.8	14.0	14.8	15.6	**14.3**	69.9	68.3	66.8	64.6	62.5	**66.4**
Hollis	12.9	13.5	14.0	14.4	16.2	**14.2**	69.1	68.7	65.0	68.8	64.9	**67.3**
Cabernet	12.2	12.8	---	---	---	**12.5**	70.9	70.4	---	---	---	**70.7**
02W50603	12.2	13.2	---	---	---	**12.7**	69.2	68.7	---	---	---	**69.0**
Iona	12.9	14.2	13.9	15.0	15.0	**14.2**	71.7	69.5	66.3	66.6	65.2	**67.9**
Jefferson	12.2	12.9	13.5	14.0	16.2	**13.8**	71.3	71.0	67.3	67.1	67.2	**68.8**
Jerome	12.0	12.6	13.1	14.2	15.8	**13.5**	70.2	69.8	64.4	68.0	67.1	**67.9**
Saxon	12.2	12.6	13.7	14.5	16.3	**13.9**	69.8	70.3	64.4	65.8	60.8	**66.2**
Scarlet	11.8	12.9	13.4	13.2	15.8	**13.4**	68.4	70.2	66.2	67.0	61.7	**66.7**
Summit	11.8	12.3	13.0	12.8	14.5	**12.9**	66.1	68.0	65.2	63.4	60.1	**64.6**
Tara 2002	12.6	13.0	13.4	14.4	15.8	**13.8**	69.7	69.0	67.0	66.9	64.0	**67.3**
UI Winchester	---	---	---	---	15.9	**15.9**	---	---	---	---	62.0	**62.0**
WB 936	12.8	13.4	14.5	15.0	15.9	**14.3**	69.3	70.1	66.0	65.8	64.8	**67.2**
Hard White Spring												
OR4201104	12.2	12.9	13.8	12.8	15.9	**13.5**	68.2	67.5	65.7	67.8	63.6	**66.6**
02W0076W	12.7	12.5	---	---	---	**12.6**	63.2	66.8	---	---	---	**65.0**
03W10348	12.1	12.6	---	---	---	**12.3**	65.5	68.2	---	---	---	**66.9**
Blanca Grande	12.1	12.5	13.2	14.3	14.7	**13.3**	66.6	68.1	62.7	61.3	61.4	**64.0**
IDO 377s	12.1	13.1	14.0	13.5	15.5	**13.7**	63.9	61.6	59.0	62.5	60.2	**61.4**
Klasic	11.9	12.9	12.9	14.8	15.4	**13.6**	69.5	70.2	66.2	62.1	62.7	**66.1**
Lochsa	12.7	13.5	13.5	14.4	---	**13.5**	70.3	69.6	67.1	67.2	---	**68.6**
Lolo	11.7	12.3	12.9	13.1	---	**12.5**	66.8	65.6	61.7	63.7	---	**64.5**
Otis	12.0	12.6	13.3	13.1	14.5	**13.1**	69.2	67.8	63.2	65.0	63.7	**65.8**
Pristine	12.5	12.9	13.0	14.6	15.5	**13.7**	70.0	69.5	66.8	65.1	64.1	**67.1**
Snowcrest	12.7	13.2	13.6	15.2	15.4	**14.0**	65.0	66.5	60.0	60.5	59.2	**62.2**
Spring Durum												
Alzada	13.0	13.7	13.5	13.0	15.5	**13.8**	57.5	53.8	52.7	46.2	50.1	**52.1**
AP1526	13.0	13.5	13.4	12.9	14.5	**13.5**	56.8	55.2	49.2	46.1	50.1	**51.5**
Kronos	12.9	13.4	13.1	13.4	15.9	**13.7**	56.1	53.1	49.9	49.2	46.1	**50.9**
Matt	12.6	13.6	13.0	13.3	16.3	**13.7**	**55.5**	**56.3**	**52.8**	**48.2**	**45.5**	**51.7**
Topper	12.2	13.4	13.4	13.6	16.6	**13.8**	55.3	54.1	51.5	48.1	49.2	**51.6**
Utopia	11.5	12.8	13.1	12.6	15.3	**13.1**	50.8	47.9	45.0	45.2	45.8	**46.9**
Location Average	**12.4**	**13.1**	**13.5**	**13.9**	**15.6**	**13.6**	**65.9**	**65.5**	**61.4**	**61.1**	**59.3**	**63.2**

Table 74. Bake volume for hard spring wheat, 2007.

	Bake Volume (cc)					
Variety	**Aberdeen**	**Ashton**	**Idaho Falls**	**Rupert**	**Soda Springs**	**Average**
Hard Red Spring Wheat						
02W50603	1300	1325	---	---	---	**1313**
Buckpronto	1200	1175	1175	1400	1125	**1215**
Cabernet	1350	1275	---	---	---	**1313**
Choteau	1300	1400	1300	1400	1300	**1340**
Hollis	1300	1325	1400	1300	1375	**1340**
Iona	1400	1400	1400	1400	1275	**1375**
Jefferson	1250	1300	1300	1275	1400	**1305**
Jerome	1300	1300	1400	1400	1400	**1360**
Saxon	1300	1225	1250	1400	1300	**1295**
Scarlet	1300	1275	1225	1375	1300	**1295**
Summit	1300	1275	1300	1300	1250	**1285**
Tara 2002	1300	1400	1400	1400	1400	**1380**
UI Winchester	---	---	---	---	1400	**1400**
WB 936	1300	1325	1400	1400	1400	**1365**
Location Average	**1300**	**1308**	**1323**	**1368**	**1327**	**1327**
Hard White Spring Wheat						
02W0076W	1300	1350	---	---	---	**1325**
03W10348	1300	1300	---	---	---	**1300**
Blanca Grande	1400	1400	1400	1400	1400	**1400**
IDO 377s	1225	1225	1225	1225	1150	**1210**
Klasic	1400	1300	1300	1400	1400	**1360**
Lochsa	1400	1275	1300	1400	---	**1344**
Lolo	1225	1200	1200	1275	---	**1225**
OR4201104	1300	1350	1400	1300	1325	**1335**
Otis	1400	1225	1400	1325	1250	**1320**
Pristine	1200	1175	1225	1225	1225	**1210**
Snowcrest	1400	1375	1400	1400	1400	**1395**
Location Average	**1323**	**1289**	**1317**	**1328**	**1307**	**1311**

Idaho Preferred Mix

Use of the following varieties could increase the overall functionality and consistency of Idaho wheat. This listing is not all-inclusive*. It is provided as a guide for producers to consider when making planting decisions. Growers are encouraged to contact extension agents and other industry representatives for local agronomic characteristics.

*Due to the large number of varieties available, the following list includes only (a) varieties that are being grown in Idaho as identified by the latest USDA, NASS survey and/or (b) varieties recently available that meet end user needs.

NOTE:
Ratings are based on variety performance in Idaho.
This list is based on Idaho growing conditions and is developed with input from end users of Idaho wheat. Approximately 60% of Idaho wheat is exported, 40% is used domestically.
Variations in states' ratings may occur due to different growing conditions and different end user needs.

Quality Plus (Q+)
Varieties in this group usually have above average milling and baking quality.

Acceptable Quality (AQ)
Most milling and baking attributes of these varieties are acceptable, but they are not above average for all properties.

Limited Markets (LM)
It is suggested that these varieties be grown only if a buyer is confirmed before the seed is planted. Putting these varieties into the general distribution channel erodes the overall quality and/or consistency of Idaho's wheat.

2008 Idaho Preferred Mix

Spring Varieties

	Soft White Spring		Hard Red Spring Min 13% Protein		Hard White Spring Min 13% Protein	
Q+	Alturas		**Q+**	Hollis	**Q+**	Klasic
	Challis			Jefferson		Lochsa
	Jubilee			Jerome		Macon
	Louise			Tara 2002		Snow Crest
	Nick			WB 936	**AQ**	377s
	Treasure					Blanca Grande
	Zak		**AQ**	Hank		Lolo
				Iona		Plata
AQ	Eden			Scarlet		Pristine
	Wakanz			Sunstar King		
	Wawawai			WB 926	**LM**	Winsome
LM	Alpowa		**LM**	Express		
	Penawawa			Rick		

Winter Varieties

	Soft White Winter			Hard Red Winter Min 12% Protein		Hard White Winter Min 12% Protein	
Q+	Brundage 96	Lewjain		**Q+**	Bonneville	**AQ**	Gary
	Brundage	Simon			Deloris		Golden Spike
	Hubbard	Stephens			DW		NuFrontier
	ID587	WB 528			Moreland		NuHorizon
AQ	Beamer	Hill 81	Mohler	**AQ**	Boundary	**Clubs**	
	Cashup	Lambert	ORCF 101		Falcon		
	Eltan	Madsen	Rod		Finley	**Q+**	Chukar Rely
	Finch	Malcolm	Sprague		Promontory		Edwin Tres
			Weatherford		Utah 100		Hiller
LM	Daws			**LM**	Declo Q 542	**AQ**	Coda
	MacVicar				Estica Weston		
	Tubbs				Garland	**LM**	Bruehl
	WB 470				Hatton		Rhode