A3868

Wisconsin Winter Wheat Performance Tests

2013

Shawn Conley, Adam Roth and John Gaska

Department of Agronomy

College of Agricultural and Life Science

University of Wisconsin-Madison

www.coolbean.info

UW Extension
Cooperative Extension

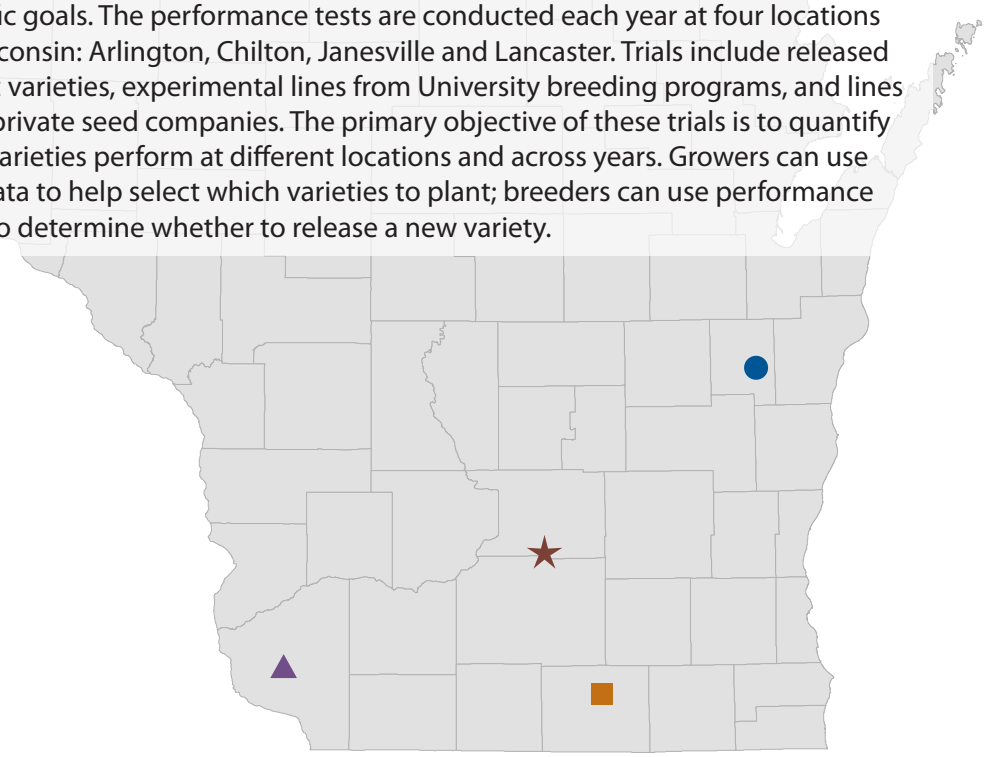
Table of Contents

A3868

Wisconsin Winter Wheat Performance Tests—2013

Shawn Conley, Adam Roth, and John Gaska

The Wisconsin Winter Wheat Performance Tests are conducted each year to give growers information to select the best-performing varieties that will satisfy their specific goals. The performance tests are conducted each year at four locations in Wisconsin: Arlington, Chilton, Janesville and Lancaster. Trials include released public varieties, experimental lines from University breeding programs, and lines from private seed companies. The primary objective of these trials is to quantify how varieties perform at different locations and across years. Growers can use this data to help select which varieties to plant; breeders can use performance data to determine whether to release a new variety.



Chilton
Cooperator: Kolbe Seeds
Loam soil
7.5 inch row spacing
Applied 75 lb N/a
Post-emergent herbicide: Huskie
Planted: September 26, 2012
Harvested: August 2, 2013

Arlington
Cooperators: Mike Bertram, Matt Repking
Silt loam soil
7.5 inch row spacing
Applied 55 lb N/a (nitrogen credited from previous legume)
Post-emergent herbicide: Huskie
Planted: September 24, 2012
Harvested: July 24, 2013

Lancaster
Cooperator: Tim Wood
Silt loam soil
7.5 inch row spacing
Applied 75 lb N/a
Post-emergent herbicide: Huskie
Planted: September 27, 2012
Harvested: July 24, 2013

Janesville
Cooperators: Jim Stute, Rock Co. Farm
Silt loam soil
7.5 inch row spacing
Applied 55 lb N/a (nitrogen credited from previous legume)
Post-emergent herbicide: Huskie
Planted: October 9, 2012
Harvested: July 18, 2013

2013 Year in Review

Acreage and Growing Conditions

Wisconsin's harvested winter wheat acres are forecasted at 280,000 in 2013, up 12% from the previous year. The forecasted yield for the 2013 crop is 61 bu/a, down 14 bu/a from last year. Decreased yield was primarily due to poor establishment during the 2012 drought coupled with severe winterkill in the spring of 2013. Wheat establishment was a challenge due to extreme drought across much of the WI winter wheat growing regions. Wheat germinated late and had poor tiller development prior to winter dormancy. This led to thin spring stands and weed control problems. Wheat broke dormancy in April and continued to progress one to two weeks behind for much of the growing season. Winterkill and severe spring flooding led to thousands of wheat acres sprayed out and replanted to either corn or soybean. Furthermore, saturated fields delayed or prohibited many operations to the wheat crop including spring nitrogen, herbicide, and fungicide applications. (Source: USDA National Agricultural Statistics Service (www.nass.usda.gov))

Overall, winter wheat yield and test weights were average in 2013. Wheat yields at the Arlington, Chilton, Janesville and Lancaster locations averaged 85, 89, 67 and 87 bu/a, respectively. Winterkill was moderate at Arlington and severe at Chilton in 2013.

Diseases

Statewide incidence and severity of powdery mildew was relatively light in 2013. Low incidence of barley yellow dwarf virus visual symptoms was observed at all variety trial locations. Stripe rust followed by leaf and stem rust appeared in June at the Janesville site. Leaf rust appeared in June at the Arlington site. The timing of flowering coincided with weather conditions that were not favorable for Fusarium head blight in 2013.

Using This Data to Select Top-Yielding Varieties

As with any crop, variety selection is the most important factor to consider in maximizing winter wheat yield and profitability. When choosing a winter wheat variety, several factors must be considered. These include winter survival, insect and disease resistance, heading date, lodging, test weight, and most importantly, yield. Since no variety is ideal for every location, it is important to understand the crop environment and pest complex that affects your specific region to maximize yield.

▶ **Yield** is based on the genetic potential and environmental conditions in which the crop is grown. Therefore, by diversifying the genetic pool that is planted, a grower can hedge against crop failure. Select those varieties that perform well, not only in your area, but across experimental sites and years. This will increase the likelihood that, given next year's environment (which you cannot control), the variety you selected will perform well. (Table 2 gives an overview of yields across all locations.)

▶ **Test weight** is also an important factor to consider when selecting a variety. The minimum test weight to be considered a U.S. #2 soft red winter wheat is 58 lb/bu. Wheat at lower test weights may be discounted. Both environment and pests may affect test weight; therefore, selecting a variety that has a high test weight potential in your region is critical to maximizing economic gain.

▶ Select a variety that has the specific **insect and disease resistance** characteristics that fits your needs. By selecting varieties with the appropriate level of resistance, crop yield loss may be either reduced or avoided without the need of pesticides. Careful management of resistant cultivars through crop and variety rotation, are required to ensure that these characteristics are not lost.

▶ **Crop height** and **lodging potential** are also important varietal characteristics that may be affected by your cropping system. If the wheat crop is intended for grain only, it may be important to select a variety that is short in stature and has a low potential for lodging. This may decrease yield loss due to crop spoilage and harvest loss as well as increase harvesting rate. However, if the wheat crop is to be used as silage or is to be harvested as both grain and straw, then selecting a taller variety may be warranted.

Experimental Procedures

At Planting

Site details: Summarized in front page graphic.

Seedbed preparation: Conventional and conservation tillage methods.

Seeding rate: 1.5 million viable seeds per acre.

Seed treatments: Identified in Table 1.

Fertilizer and herbicides: Nitrogen was applied in spring according to UWEX recommendations. Phosphorus and potassium were applied as indicated by soil tests. Herbicides were applied for weed control as necessary.

Planting: A grain drill with a 9 row cone seeder was used to plant the plots, all 25 feet in length. To account for field variability and for statistical analysis, each variety was grown in four separate plots (replicates) in a randomized complete block design at each location.

Harvest

Yield: The center seven rows of each plot were harvested with a self-propelled combine. Grain was weighed and moisture and test weight were determined in the field using electronic equipment on the plot harvester. Yield is reported as bu/a (60 lb/bu) at 13.5% moisture content.

Lodging: Lodging scores were based on the average erectness of the main stem of plants at maturity. 1 = all plants erect, 2 = slight lodging, 3 = plants lodged at 45° angle, 4 = severe lodging, 5 = all plants flat.

Data Presentation

Yield: Listed in Tables 2-6. Data for both 2012 and 2013 are provided if the variety was entered in the 2012 trials.

Least significant difference: Variations in yield and other characteristics occur because of variability in soil and other growing conditions that lower the precision of the results. Statistical analysis makes it possible to determine, with known probabilities of error, whether a difference is real or whether it may have occurred by chance.

Growers can use the appropriate least significant difference (LSD) value at the bottom of the tables to determine true statistical differences. Where the difference between two selected varieties within a column is equal to or greater than the LSD value at the bottom of the column, there is a real difference between the two varieties in nine out of ten instances. If the difference is less than the LSD value, there may still be a real difference, but the experiment has produced no evidence of it. Data that does not differ is indicated by NS.

Table 1. Brand and Company Information of 2013 Entered Varieties and Seed Treatments

Brand & Company Information	2013 Varieties	Seed Treatments
AgriMAXX www.agrimaxxwheat.com AgriMAXX Wheat Company (855-629-9432)	413, 427, 434, 438, Exp. 1342	Dividend Extreme, Cruiser
Croplan Genetics www.answerplot.com Winfield Solutions (608-516-4636)	8925, 9012, 9101, 9201	Warden Cereals, Storicide II
Diener www.biotownseeds.com BioTown Seeds (219-984-6038)	D492W, D506W, D512W	Dividend Extreme, Cruiser, Storicide II
Dyna-Gro www.dynagroseed.com Dyna-Gro Seed (614-761-4110)	9042, 9223	Foothold Extra, Awaken
Equity Seed www.go2dei.com Direct Enterprises (888-895-7333)	Quest, Sienna, Guardian	Nforce ST (+ N-Hibit)
FS Seed www.fsseed.com/midwest Growmark, Inc. (309-660-5576)	FS 602, FS 622, FS 625, FS 626	Dividend Extreme, Cruiser
Jung www.jungseedgenetics.com Jung Seed Genetics (920-326-5891)	5820, 5855 5930	Dividend Extreme, Cruiser Dividend Extreme
LCS/ VanTreek VanTreek Seed Farms (920-467-2422)	L-423	Dividend Extreme, Cruiser
LCS/ Welter www.welterseed.com Welter Seed & Honey Co. (800-470-3325)	L-314	None
Legacy www.legacyseeds.com Legacy Seeds Inc. (715-467-2555)	LW 1065, LW 1155, LW 1210, LW 1230, LW 1250, LXW 1323 LW 1312, LW 1335 LW 1370 LXW 1375	Sativa IM, Sabrex Dividend Extreme, Cruiser Dividend Extreme, Apron XL Dividend Extreme
Limagrain Cereal Seeds Limagrain Cereal Seeds (970-498-2200) www.limagraincerealseeds.com	LCS 38686	Dividend Extreme, Cruiser
Pioneer www.pioneer.com DuPont Pioneer (507-625-3045)	25R34, 25R40, 25R46, 25R47	Dividend Extreme, Gaucho
PIP www.pipseeds.com Partners in Production (877-GRO-SEED)	702, 703, 721, 722, 726, 727, 729, 732, 733, 734, 735, 740, 748, 749, 752, 758, 759, 760, 761, 769, 781, 782, 783	Charter, Imidacloprid Charter, Imidacloprid Charter, Imidacloprid
Pro Seed Genetics Pro Seed Genetics Cooperative (920-388-2824)	PRO 200, PRO 260, PRO 320A, PRO Ex 370 ,PRO Ex 390 PRO Ex 310 PRO Ex 330 PRO Ex 350 PRO Ex 380	Dividend Extreme, Bio-Forge, Macho 600ST Difenoconazole Difenoconazole, Mefenoxam, Imidacloprid Dividend Extreme, Cruiser Dividend Extreme, Cruiser, Storicide II
Public WI Foundation Seeds (608-846-9761) www.wisconsinfoundationseeds.wisc.edu	Hopewell, Kaskaskia, Red Devil Brand, Sunburst	Dividend Extreme, Bio-Forge, Macho 600ST
Public-exp wcia.wisc.edu WI Crop Improvement Assn. (608-262-0167)	VA 09W-73	Raxil MD, Storicide II
Syngenta www.agriprowheat.com Syngenta Seeds (765-412-5420)	SY 483, SY 1526, W1104	Dividend Extreme, Cruiser 5FS
Tracy www.tracyseeds.com Tracy Seeds, LLC (608-752-2767)	TW30-12, TW73-12 TW52-13	Proceed, Gaucho Dividend Extreme, CruiserMaxx
Van Treeck VanTreek Seed Farms 920-467-2422	Exp. J-334	Dividend Extreme, Cruiser

Table 2. Combined 2013 Winter Wheat Performance Test Results (continued on next page)

Brand	Entry	2013 4-test average Yield (bu/a)	2013 4-test average Test wt. (lb/bu)	★ Arlington Yield (bu/a)	★ Arlington Test wt. (lb/bu)	● Chilton Yield (bu/a)	● Chilton Test wt. (lb/bu)	■ Janesville Yield (bu/a)	■ Janesville Test wt. (lb/bu)	▲ Lancaster Yield (bu/a)	▲ Lancaster Test wt. (lb/bu)	2012 4-test average Yield (bu/a)
AgriMAXX	413	* 89	58.9	85	57.1	* 104	60.1	73	60.5	93	58.0	109
	427	80	57.5	80	56.5	86	58.4	68	57.4	88	57.7	111
	434	82	58.8	85	57.6	84	58.4	66	59.9	92	59.3	--
	438	85	58.1	88	57.3	87	57.7	* 74	58.5	92	59.0	--
	Exp. 1342	72	58.7	78	56.8	70	58.3	62	60.5	81	59.2	--
Croplan Genetics	8925	81	60.2	79	59.0	* 95	61.2	70	61.7	82	59.0	100
	9012	* 87	60.4	* 92	58.4	93	59.6	71	61.8	92	61.7	96
	9101	84	59.2	89	57.4	80	59.5	73	61.1	95	59.0	111
	9201	76	58.7	82	57.7	73	58.4	63	59.8	85	59.0	--
Diener	D492W	* 91	59.5	* 92	57.3	* 101	59.5	72	60.9	98	60.2	109
	D506W	73	56.3	81	55.9	70	56.4	65	56.1	78	56.8	104
	D512W	81	58.1	84	57.3	84	57.7	70	58.4	86	59.0	--
Dyna-Gro	9042	82	58.8	77	57.4	89	58.9	68	59.0	96	60.0	113
	9223	* 87	58.1	84	56.5	* 95	58.5	* 74	58.8	94	58.7	113
Equity Seed	Quest	78	57.3	75	55.9	78	57.6	65	57.6	93	57.9	105
	Sienna	83	58.6	90	57.3	84	58.9	65	59.1	94	59.2	104
	Guardian	80	58.8	87	56.8	79	59.2	64	58.8	91	60.5	--
FS Seed	FS 602	* 87	59.0	89	57.2	* 98	59.4	71	60.9	90	58.6	109
	FS 622	83	61.1	84	59.4	* 96	61.8	66	62.2	88	61.0	107
	FS 625	80	57.3	82	56.4	86	58.1	67	56.8	87	57.8	112
	FS 626	77	58.7	84	57.7	85	59.0	60	59.0	80	59.2	--
Jung	5820	84	60.1	* 93	58.3	85	60.0	71	61.8	87	60.3	101
	5855	* 86	58.8	88	57.8	93	59.3	66	58.5	98	59.8	103
	5930	84	58.7	* 93	56.4	92	60.1	66	59.2	86	59.1	--
LCS / Van Treek	L-423	78	60.3	73	57.9	84	60.2	68	61.6	86	61.3	--
LCS / Welter	L-314	80	59.6	75	57.1	85	59.9	70	60.9	90	60.5	--
Legacy	LW 1065	82	59.8	81	58.9	93	60.6	67	60.1	87	59.5	99
	LW 1155	83	59.1	77	56.4	92	59.8	71	60.7	92	59.4	105
	LW 1210	84	60.4	89	57.7	90	60.3	70	62.2	89	61.3	100
	LW 1230	78	59.5	78	57.8	* 94	60.4	59	59.4	81	60.5	99
	LW 1250	80	60.5	82	59.4	90	61.9	60	59.9	89	61.0	92
	LW 1312	84	58.1	87	56.6	85	57.5	* 76	59.2	88	59.0	--
	LW 1335	81	59.8	84	58.8	* 98	62.0	55	58.5	85	59.6	--
	LW 1370	82	59.1	85	59.0	93	59.5	63	58.8	87	59.2	--
	LXW 1323	85	59.7	87	57.7	88	59.7	73	61.4	91	60.2	--
	LXW 1375	* 91	59.0	89	55.1	* 95	60.1	* 75	59.7	* 105	61.0	--
Limagrain Cereal Seeds	LCS 38686	83	59.1	78	57.2	* 97	60.3	* 74	60.8	81	58.0	--
Pioneer	25R34	83	58.5	89	56.7	* 105	59.4	67	59.3	68	58.5	* 117
	25R40	84	60.0	91	58.8	83	59.9	71	61.4	93	59.9	* 122
	25R46	* 86	60.4	* 94	58.5	90	60.7	71	61.2	87	61.0	--
	25R47	* 88	58.3	91	56.6	* 103	59.7	64	58.5	93	58.5	* 117
PIP	702	84	59.0	85	57.8	93	59.7	69	59.2	89	59.2	104
	703	85	58.8	82	57.2	93	59.3	* 77	59.7	89	58.9	--
	721	85	57.7	* 92	56.7	87	57.6	68	57.4	93	59.2	113

Table 2. Combined 2013 Winter Wheat Performance Test Results (continued from previous page)

		2013 4-test average		Arlington		Chilton		Janesville		Lancaster		2012 4-test average
Brand	Entry	Yield (bu/a)	Test wt. (lb/bu)	Yield (bu/a)	Test wt. (lb/bu)	Yield (bu/a)	Test wt. (lb/bu)	Yield (bu/a)	Test wt. (lb/bu)	Yield (bu/a)	Test wt. (lb/bu)	Yield (bu/a)
PIP (cont'd)	722	77	57.3	80	56.6	85	58.1	63	57.7	81	57.0	* 114
	726	80	59.0	84	57.6	* 94	60.6	61	60.2	83	57.7	--
	727	83	60.3	86	59.2	* 96	61.7	59	60.2	92	60.1	--
	729	84	60.1	87	59.0	* 97	61.2	64	60.5	89	59.5	109
	732	79	58.8	83	56.9	82	58.6	62	59.2	92	60.4	111
	733	* 92	58.8	* 99	57.6	* 98	58.8	* 79	60.4	94	58.6	--
	734	* 89	61.2	* 92	59.5	* 97	61.3	* 76	62.6	94	61.3	--
	735	* 87	59.3	91	57.9	* 97	59.6	69	61.2	91	58.7	--
	740	78	58.1	80	57.2	86	57.6	69	59.5	78	58.2	105
	748	82	60.5	89	58.9	* 95	61.1	59	61.2	87	60.7	--
	749	85	57.8	86	56.1	* 94	57.8	71	58.4	88	59.0	--
	752	83	58.8	81	57.8	86	58.2	* 74	59.6	91	59.6	106
	758	81	60.0	82	58.8	92	61.5	60	59.9	90	60.0	--
	759	84	58.1	90	57.3	89	58.1	71	58.6	87	58.3	--
	760	85	59.7	91	57.5	92	61.1	67	59.7	91	60.5	91
	761	84	59.2	90	57.3	* 96	61.1	64	59.4	84	58.8	92
	769	81	57.4	84	56.5	88	57.4	68	58.1	86	57.8	--
	781	74	59.0	74	56.3	80	59.3	60	60.4	81	59.8	--
	782	85	62.7	* 92	60.9	91	63.6	69	63.1	86	63.2	--
	783	85	60.1	87	58.0	89	59.8	71	60.9	95	61.6	--
Pro Seed Genetics	PRO 200	84	60.7	89	59.4	* 99	61.0	67	61.9	79	60.7	93
	PRO 260	80	58.0	82	57.6	93	58.7	69	59.1	77	56.5	104
	PRO 320A	80	59.7	83	57.9	84	60.2	71	62.5	84	58.2	105
	PRO Ex 310	84	58.3	91	57.4	91	58.9	62	58.8	93	58.2	104
	PRO Ex 330	77	57.2	80	56.0	75	56.7	60	57.0	93	59.1	106
	PRO Ex 350	81	57.7	82	57.3	84	58.3	67	57.7	88	57.7	106
	PRO Ex 370	79	57.8	81	57.5	91	58.7	66	58.7	77	56.3	--
	PRO Ex 380	84	62.3	87	60.5	90	63.2	* 79	64.1	80	61.6	--
	PRO Ex 390	80	59.6	81	58.4	83	59.2	66	59.6	90	61.4	--
Public	Hopewell	82	59.6	79	58.5	* 94	60.6	71	60.2	83	59.4	99
	Kaskaskia	83	61.4	89	59.9	* 95	62.2	67	62.7	83	60.7	97
	Red Devil Brand	80	59.7	83	59.1	* 98	60.7	64	61.4	75	57.8	106
	Sunburst	* 86	61.7	83	59.6	* 103	62.5	69	62.7	90	62.1	107
Public-exp	VA 09W-73	43	54.2	49	54.4	26	55.9	49	58.3	42	49.3	--
Syngenta	SY 483	85	58.6	80	55.2	89	59.6	* 81	60.0	89	59.8	108
	SY 1526	72	58.1	84	57.2	74	59.1	57	58.5	73	57.6	--
	W1104	79	57.7	82	55.8	72	57.4	* 75	60.3	85	57.4	109
Tracy	TW30-12	79	59.0	88	57.7	89	60.9	58	58.2	82	59.3	--
	TW52-13	79	59.8	87	59.6	* 94	61.5	56	58.7	80	59.2	--
	TW73-12	* 86	58.6	81	56.3	* 104	60.0	69	60.5	90	57.7	--
Van Treeck	Exp. J-334	82	59.9	87	59.7	* 103	61.0	53	58.8	85	60.2	--
	Mean	82	59.1	85	57.6	89	59.6	67	59.9	87	59.2	102
	LSD (.10)	6	1.1	7	1.2	11	1.1	7	1.1	7	1.4	8

* Yield is not significantly different (0.10 level) than that of the highest yielding cultivar

Table 3. Arlington 2013 Winter Wheat Performance Test Results (continued on next page)

Brand	Entry	2013 means Yield (bu/a)	Test weight (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test weight (lb/bu)
AgriMAXX	413	85	57.1	32	1.0	9	120	62.5
	427	80	56.5	33	1.0	15	128	60.8
	434	85	57.6	32	1.0	14	--	--
	438	88	57.3	35	1.0	9	--	--
	Exp. 1342	78	56.8	32	1.0	20	--	--
Croplan Genetics	8925	79	59.0	35	1.0	19	113	62.5
	9012	* 92	58.4	35	1.0	16	113	63.5
	9101	89	57.4	33	1.0	16	121	63.1
	9201	82	57.7	33	1.0	13	--	--
Diener	D492W	* 92	57.3	32	1.0	13	121	62.4
	D506W	81	55.9	32	1.0	19	121	60.6
	D512W	84	57.3	35	1.0	15	--	--
Dyna-Gro	9042	77	57.4	32	1.0	19	129	61.9
	9223	84	56.5	35	1.0	6	121	60.5
Equity Seed	Quest	75	55.9	33	1.0	19	120	61.0
	Sienna	90	57.3	37	1.0	15	116	60.8
	Guardian	87	56.8	35	1.0	11	--	--
FS Seed	FS 602	89	57.2	31	1.0	9	115	62.5
	FS 622	84	59.4	34	1.0	20	126	64.2
	FS 625	82	56.4	33	1.0	13	126	61.9
	FS 626	84	57.7	34	1.0	19	--	--
Jung	5820	* 93	58.3	36	1.0	15	117	63.6
	5855	88	57.8	36	1.0	11	114	60.5
	5930	* 93	56.4	35	1.0	15	--	--
LCS / VanTreek	L-423	73	57.9	32	1.0	9	--	--
LCS / Welter	L-314	75	57.1	36	1.0	24	--	--
Legacy	LW 1065	81	58.9	34	1.0	11	107	62.4
	LW 1155	77	56.4	31	1.0	20	117	62.3
	LW 1210	89	57.7	37	1.0	11	117	63.7
	LW 1230	78	57.8	33	1.0	10	99	62.6
	LW 1250	82	59.4	34	1.0	11	99	63.3
	LW 1312	87	56.6	35	1.0	21	--	--
	LW 1335	84	58.8	34	1.0	10	--	--
	LW 1370	85	59.0	33	1.0	13	--	--
	LXW 1323	87	57.7	35	1.0	14	--	--
	LXW 1375	89	55.1	32	1.0	16	--	--
Limagrain Cereal Seeds	LCS 38686	78	57.2	32	1.0	8	--	--
Pioneer	25R34	89	56.7	36	1.0	9	* 139	61.9
	25R40	91	58.8	32	1.0	11	* 143	64.3
	25R46	* 94	58.5	32	1.0	18	--	--
	25R47	91	56.6	33	1.0	9	* 138	61.6
PIP	702	85	57.8	33	1.0	11	120	61.0
	703	82	57.2	33	1.0	20	--	--
	721	* 92	56.7	36	1.0	11	128	60.9

Table 3. Arlington 2013 Winter Wheat Performance Test Results (continued from previous page)

Brand	Entry	2013 means Yield (bu/a)	Test weight (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test weight (lb/bu)
PIP (cont'd)	722	80	56.6	34	1.0	15	131	61.2
	726	84	57.6	35	1.0	28	--	--
	727	86	59.2	35	1.0	13	--	--
	729	87	59.0	36	1.0	14	122	62.5
	732	83	56.9	32	1.0	15	128	62.7
	733	* 99	57.6	35	1.0	15	--	--
	734	* 92	59.5	35	1.0	8	--	--
	735	91	57.9	33	1.0	16	--	--
	740	80	57.2	32	1.0	24	123	63.2
	748	89	58.9	35	1.0	15	--	--
	749	86	56.1	35	1.0	19	--	--
	752	81	57.8	33	1.0	23	128	61.2
	758	82	58.8	35	1.0	15	--	--
	759	90	57.3	36	1.0	14	--	--
	760	91	57.5	37	1.0	16	91	61.3
	761	90	57.3	36	1.0	14	95	61.6
	769	84	56.5	35	1.0	15	--	--
	781	74	56.3	34	1.0	31	--	--
	782	* 92	60.9	36	1.0	13	--	--
	783	87	58.0	36	1.0	14	--	--
Pro Seed Genetics	PRO 200	89	59.4	37	1.0	3	95	61.8
	PRO 260	82	57.6	34	1.0	20	124	63.1
	PRO 320A	83	57.9	38	1.0	16	117	63.1
	PRO Ex 310	91	57.4	38	1.0	10	118	60.8
	PRO Ex 330	80	56.0	33	1.0	15	121	61.9
	PRO Ex 350	82	57.3	33	1.0	13	123	60.9
	PRO Ex 370	81	57.5	33	1.0	18	--	--
	PRO Ex 380	87	60.5	32	1.0	13	--	--
	PRO Ex 390	81	58.4	34	1.0	24	--	--
Public	Hopewell	79	58.5	35	1.0	9	110	62.6
	Kaskaskia	89	59.9	39	1.0	8	103	64.0
	Red Devil Brand	83	59.1	36	1.0	9	115	62.5
	Sunburst	83	59.6	30	1.0	13	123	64.9
Public-exp	VA 09W-73	49	54.4	29	1.0	48	--	--
Syngenta	SY 483	80	55.2	33	1.0	11	115	61.7
	SY 1526	84	57.2	32	1.0	20	--	--
	W1104	82	55.8	31	1.0	21	123	61.3
Tracy	TW30-12	88	57.7	37	1.0	8	--	--
	TW52-13	87	59.6	34	1.0	11	--	--
	TW73-12	81	56.3	31	1.0	9	--	--
Van Treeck	Exp. J-334	87	59.7	34	1.0	9	--	--
	Mean	85	57.6	34	1.0	15	113	62.3
	LSD(.10)	7	1.2	1	NS	10	6	0.7

* Yield is not significantly different (0.10 level) than that of the highest yielding cultivar

[1] Winterkill = visual estimate taken at green-up of the percent total plot stand loss due to winter injury

Table 4. Chilton 2013 Winter Wheat Performance Test Results (continued on next page)

Brand	Entry	2013 means					2012 means	
		Yield (bu/a)	Test weight (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	Yield (bu/a)	Test weight (lb/bu)
AgriMAXX	413	* 104	60.1	29	1.0	8	107	59.1
	427	86	58.4	32	1.0	35	* 114	60.1
	434	84	58.4	29	1.0	24	--	--
	438	87	57.7	33	1.0	40	--	--
	Exp. 1342	70	58.3	29	1.0	51	--	--
Croplan Genetics	8925	* 95	61.2	33	1.0	28	108	61.9
	9012	93	59.6	34	1.0	28	101	59.9
	9101	80	59.5	31	1.0	65	110	60.4
	9201	73	58.4	29	1.0	53	--	--
Diener	D492W	* 101	59.5	30	1.0	15	* 113	58.7
	D506W	70	56.4	30	1.0	65	107	59.4
	D512W	84	57.7	33	1.0	28	--	--
Dyna-Gro	9042	89	58.9	31	1.0	16	* 113	59.7
	9223	* 95	58.5	34	1.0	29	112	60.0
Equity Seed	Quest	78	57.6	31	1.0	34	109	59.4
	Sienna	84	58.9	35	1.0	53	104	58.7
	Guardian	79	59.2	31	1.0	29	--	--
FS Seed	FS 602	* 98	59.4	30	1.0	10	108	59.6
	FS 622	* 96	61.8	31	1.0	31	103	62.2
	FS 625	86	58.1	31	1.0	31	* 115	59.6
	FS 626	85	59.0	29	1.0	33	--	--
Jung	5820	85	60.0	31	1.0	41	97	59.3
	5855	93	59.3	35	1.0	41	108	58.2
	5930	92	60.1	32	1.0	19	--	--
LCS / VanTreek	L-423	84	60.2	32	1.0	40	--	--
LCS / Welter	L-314	85	59.9	35	1.0	31	--	--
Legacy	LW 1065	93	60.6	31	1.0	35	* 114	61.8
	LW 1155	92	59.8	29	1.0	30	* 117	59.4
	LW 1210	90	60.3	33	1.0	34	99	59.9
	LW 1230	* 94	60.4	31	1.0	10	105	61.4
	LW 1250	90	61.9	32	1.0	15	101	61.3
	LW 1312	85	57.5	34	1.0	25	--	--
	LW 1335	* 98	62.0	34	1.0	14	--	--
	LW 1370	93	59.5	32	1.0	24	--	--
	LXW 1323	88	59.7	35	1.0	44	--	--
	LXW 1375	* 95	60.1	32	1.0	40	--	--
Limagrain Cereal Seeds	LCS 38686	* 97	60.3	31	1.0	25	--	--
Pioneer	25R34	* 105	59.4	32	1.0	21	* 119	60.5
	25R40	83	59.9	27	1.0	34	111	60.8
	25R46	90	60.7	30	1.0	35	--	--
	25R47	* 103	59.7	30	1.0	6	* 119	59.7
PIP	702	93	59.7	31	1.0	10	102	58.4
	703	93	59.3	31	1.0	21	--	--
	721	87	57.6	33	1.0	29	* 119	59.7

Table 4. Chilton 2013 Winter Wheat Performance Test Results (continued from previous page)

Brand	Entry	2013 means Yield (bu/a)	Test weight (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test weight (lb/bu)
PIP (cont'd)	722	85	58.1	31	1.0	35	* 115	59.4
	726	* 94	60.6	33	1.0	44	--	--
	727	* 96	61.7	33	1.0	18	--	--
	729	* 97	61.2	33	1.0	18	* 113	61.6
	732	82	58.6	29	1.0	23	* 122	59.7
	733	* 98	58.8	32	1.0	11	--	--
	734	* 97	61.3	33	1.0	23	--	--
	735	* 97	59.6	32	1.0	30	--	--
	740	86	57.6	32	1.0	46	111	59.3
	748	* 95	61.1	33	1.0	21	--	--
	749	* 94	57.8	33	1.0	19	--	--
	752	86	58.2	32	1.0	23	110	60.2
	758	92	61.5	33	1.0	25	--	--
	759	89	58.1	34	1.0	26	--	--
	760	92	61.1	33	1.0	18	105	61.7
	761	* 96	61.1	35	1.0	10	105	61.9
	769	88	57.4	33	1.0	26	--	--
	781	80	59.3	31	1.0	66	--	--
	782	91	63.6	34	1.0	14	--	--
	783	89	59.8	33	1.0	35	--	--
Pro Seed Genetics	PRO 200	* 99	61.0	36	1.0	5	104	59.7
	PRO 260	93	58.7	32	1.0	23	* 114	60.1
	PRO 320A	84	60.2	35	1.0	18	96	60.3
	PRO Ex 310	91	58.9	36	1.0	50	* 115	59.2
	PRO Ex 330	75	56.7	31	1.0	35	106	58.8
	PRO Ex 350	84	58.3	31	1.0	44	* 113	59.9
	PRO Ex 370	91	58.7	32	1.0	33	--	--
	PRO Ex 380	90	63.2	31	2.0	11	--	--
	PRO Ex 390	83	59.2	32	1.0	53	--	--
Public	Hopewell	* 94	60.6	35	1.0	15	101	61.2
	Kaskaskia	* 95	62.2	37	1.0	13	101	62.4
	Red Devil Brand	* 98	60.7	33	1.0	8	111	61.0
	Sunburst	* 103	62.5	31	1.0	11	* 113	63.9
Public-exp	VA 09W-73	26	55.9	26	1.0	96	--	--
Syngenta	SY 483	89	59.6	32	1.0	34	* 114	61.1
	SY 1526	74	59.1	32	1.0	56	--	--
	W1104	72	57.4	30	1.0	68	108	59.6
Tracy's	TW30-12	89	60.9	35	1.0	13	--	--
	TW52-13	* 94	61.5	34	1.0	18	--	--
	TW73-12	* 104	60.0	30	1.0	20	--	--
Van Treeck	Exp. J-334	* 103	61.0	35	1.0	6	--	--
	Mean	89	59.6	32	1.0	29	107	60.5
	LSD (.10)	11	1.1	2	0.2	20	9	0.9

* Yield is not significantly different (0.10 level) than that of the highest yielding cultivar

[1] Winterkill = visual estimate taken at green-up of the percent total plot stand loss due to winter injury

Table 5. Janesville 2013 Winter Wheat Performance Test Results (continued on next page)

Brand	Entry	2013 means Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test wt. (lb/bu)
AgriMAXX	413	73	60.5	30	1.0	0	* 94	62.6
	427	68	57.4	31	1.0	0	* 102	60.0
	434	66	59.9	30	1.0	0	--	--
	438	* 74	58.5	33	1.0	0	--	--
	Exp. 1342	62	60.5	30	1.0	0	--	--
Croplan Genetics	8925	70	61.7	31	1.0	0	83	62.4
	9012	71	61.8	33	1.0	0	82	62.9
	9101	73	61.1	31	1.0	0	* 94	61.7
	9201	63	59.8	30	1.0	0	--	--
Diener	D492W	72	60.9	28	1.0	3	87	62.2
	D506W	65	56.1	32	1.0	0	86	61.9
	D512W	70	58.4	34	1.0	3	--	--
Dyna-Gro	9042	68	59.0	30	1.0	0	* 95	62.2
	9223	* 74	58.8	33	1.0	0	* 102	60.7
Equity Seed	Quest	65	57.6	32	1.0	0	86	61.0
	Sienna	65	59.1	33	1.0	0	* 93	61.3
	Guardian	64	58.8	32	1.0	0	--	--
FS Seed	FS 602	71	60.9	27	1.0	0	* 98	62.2
	FS 622	66	62.2	30	1.0	0	91	63.9
	FS 625	67	56.8	30	1.0	0	* 102	60.1
	FS 626	60	59.0	30	1.0	0	--	--
Jung	5820	71	61.8	32	1.0	0	89	63.2
	5855	66	58.5	34	1.0	3	87	61.5
	5930	66	59.2	31	1.0	0	--	--
LCS / VanTreek	L-423	68	61.6	32	1.0	0	--	--
LCS / Welter	L-314	70	60.9	33	1.0	0	--	--
Legacy	LW 1065	67	60.1	30	1.0	0	80	62.3
	LW 1155	71	60.7	28	1.0	4	89	61.8
	LW 1210	70	62.2	33	1.0	0	81	62.8
	LW 1230	59	59.4	29	1.0	0	89	63.1
	LW 1250	60	59.9	29	1.0	0	81	62.6
	LW 1312	* 76	59.2	33	1.0	0	--	--
	LW 1335	55	58.5	31	1.0	0	--	--
	LW 1370	63	58.8	32	1.0	0	--	--
	LXW 1323	73	61.4	32	1.0	0	--	--
	LXW 1375	* 75	59.7	33	1.0	0	--	--
Limagrain Cereal Seeds	LCS 38686	* 74	60.8	29	1.0	0	--	--
Pioneer	25R34	67	59.3	33	1.0	0	* 102	61.5
	25R40	71	61.4	27	1.0	0	* 101	62.7
	25R46	71	61.2	30	1.0	0	--	--
	25R47	64	58.5	30	1.0	0	* 101	61.3
PIP	702	69	59.2	33	1.0	3	79	60.6
	703	* 77	59.7	31	1.0	0	--	--
	721	68	57.4	33	1.0	0	90	61.3

Table 5. Janesville 2013 Winter Wheat Performance Test Results (continued from previous page)

Brand	Entry	2013 means Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test wt. (lb/bu)
PIP (cont'd)	722	63	57.7	30	1.0	0	* 101	60.4
	726	61	60.2	33	1.0	3	--	--
	727	59	60.2	32	1.0	0	--	--
	729	64	60.5	32	1.0	0	89	63.0
	732	62	59.2	28	1.0	0	87	61.8
	733	* 79	60.4	31	1.0	0	--	--
	734	* 76	62.6	34	1.0	0	--	--
	735	69	61.2	29	1.0	0	--	--
	740	69	59.5	30	1.0	0	87	62.1
	748	59	61.2	32	1.0	0	--	--
	749	71	58.4	33	1.0	0	--	--
	752	* 74	59.6	32	1.0	0	82	60.7
	758	60	59.9	30	1.0	3	--	--
	759	71	58.6	32	1.0	4	--	--
	760	67	59.7	32	1.0	0	76	60.5
	761	64	59.4	32	1.0	4	81	60.7
	769	68	58.1	33	1.0	0	--	--
	781	60	60.4	32	1.0	0	--	--
	782	69	63.1	32	1.0	0	--	--
	783	71	60.9	33	1.0	3	--	--
Pro Seed Genetics	PRO 200	67	61.9	32	1.0	0	87	62.9
	PRO 260	69	59.1	30	1.0	3	79	61.7
	PRO 320A	71	62.5	35	1.0	0	88	62.3
	PRO Ex 310	62	58.8	34	1.0	0	79	61.0
	PRO Ex 330	60	57.0	32	1.0	0	89	61.1
	PRO Ex 350	67	57.7	31	1.0	0	84	60.1
	PRO Ex 370	66	58.7	31	1.0	0	--	--
	PRO Ex 380	* 79	64.1	28	1.0	0	--	--
	PRO Ex 390	66	59.6	32	1.0	0	--	--
Public	Hopewell	71	60.2	33	1.0	3	86	62.3
	Kaskaskia	67	62.7	34	1.0	0	81	63.8
	Red Devil Brand	64	61.4	31	1.0	0	89	62.7
	Sunburst	69	62.7	28	1.0	0	89	65.3
Public-exp	VA 09W-73	49	58.3	30	1.0	15	--	--
Syngenta	SY 483	* 81	60.0	33	1.0	0	88	60.8
	SY 1526	57	58.5	31	1.0	0	--	--
	W1104	* 75	60.3	30	1.0	3	86	60.4
Tracy	TW30-12	58	58.2	34	1.0	0	--	--
	TW52-13	56	58.7	30	1.0	0	--	--
	TW73-12	69	60.5	30	1.0	0	--	--
Van Treeck	Exp. J-334	53	58.8	30	1.0	0	--	--
	Mean	67	59.9	31	1.0	1	87	62.0
	LSD (.10)	7	1.1	1	NS	5	10	0.9

* Yield is not significantly different (0.10 level) than that of the highest yielding cultivar

[1] Winterkill = visual estimate taken at green-up of the percent total plot stand loss due to winter injury

Table 6. Lancaster 2013 Winter Wheat Performance Test Results (continued on next page)

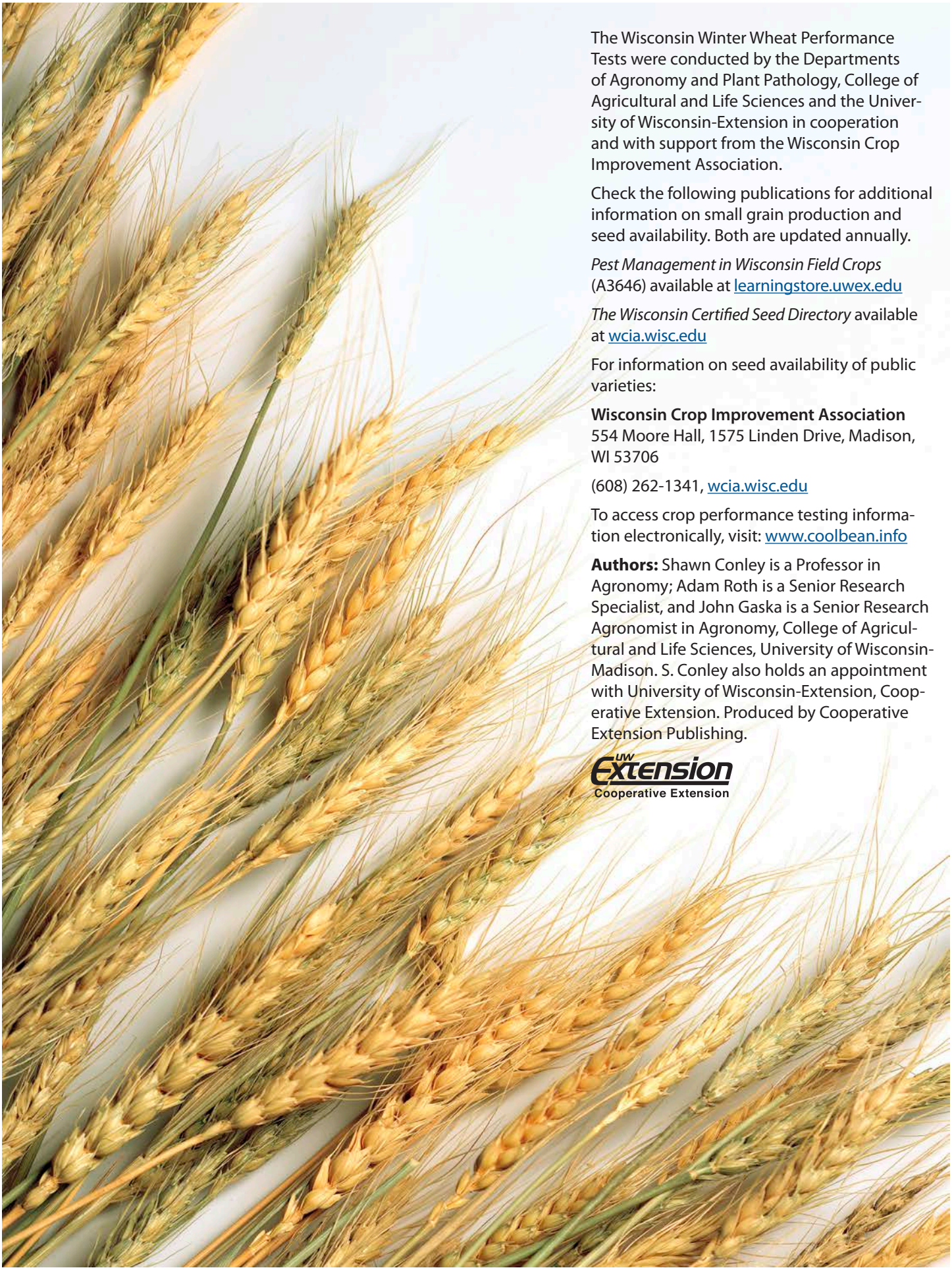
Brand	Entry	2013 means Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test wt. (lb/bu)
AgriMAXX	413	93	58.0	35	1.3	0	117	60.9
	427	88	57.7	36	1.0	3	96	59.0
	434	92	59.3	34	1.0	0	--	--
	438	92	59.0	38	1.0	3	--	--
	Exp. 1342	81	59.2	36	1.0	0	--	--
Croplan Genetics	8925	82	59.0	37	1.0	3	98	61.1
	9012	92	61.7	39	1.3	0	87	61.3
	9101	95	59.0	36	1.0	0	120	62.1
	9201	85	59.0	34	1.0	0	--	--
Diener	D492W	98	60.2	34	1.0	0	118	61.5
	D506W	78	56.8	35	1.3	6	104	59.4
	D512W	86	59.0	38	1.0	0	--	--
Dyna-Gro	9042	96	60.0	36	1.0	3	112	61.3
	9223	94	58.7	39	1.0	3	117	61.0
Equity Seed	Quest	93	57.9	35	1.0	6	104	60.2
	Sienna	94	59.2	40	1.0	0	102	59.6
	Guardian	91	60.5	37	1.0	3	--	--
FS Seed	FS 602	90	58.6	35	1.0	0	115	60.9
	FS 622	88	61.0	37	1.0	0	109	63.4
	FS 625	87	57.8	37	1.0	9	105	60.4
	FS 626	80	59.2	35	1.0	0	--	--
Jung	5820	87	60.3	39	1.0	0	100	61.5
	5855	98	59.8	41	1.0	0	104	61.1
	5930	86	59.1	36	1.0	3	--	--
LCS / VanTreek	L-423	86	61.3	36	1.3	3	--	--
LCS / Welter	L-314	90	60.5	37	1.0	3	--	--
Legacy	LW 1065	87	59.5	36	1.3	3	94	60.8
	LW 1155	92	59.4	35	1.0	0	96	60.6
	LW 1210	89	61.3	39	1.0	3	102	62.0
	LW 1230	81	60.5	36	1.0	0	101	61.9
	LW 1250	89	61.0	37	1.0	3	87	61.1
	LW 1312	88	59.0	38	1.0	0	--	--
	LW 1335	85	59.6	37	1.3	0	--	--
	LW 1370	87	59.2	37	1.0	0	--	--
	LXW 1323	91	60.2	38	1.0	0	--	--
	LXW 1375	* 105	61.0	38	1.0	0	--	--
Limagrain Cereal Seeds	LCS 38686	81	58.0	35	1.0	5	--	--
Pioneer	25R34	68	58.5	38	1.0	0	103	61.0
	25R40	93	59.9	32	1.0	0	* 135	62.7
	25R46	87	61.0	34	1.0	3	--	--
	25R47	93	58.5	35	1.0	3	109	60.7
PIP	702	89	59.2	36	1.0	0	114	60.7
	703	89	58.9	35	1.0	0	--	--
	721	93	59.2	39	1.0	0	116	60.5

Table 6. Lancaster 2013 Winter Wheat Performance Test Results (continued from previous page)

Brand	Entry	2013 means Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	Winterkill[1] (%)	2012 means Yield (bu/a)	Test wt. (lb/bu)
PIP (cont'd)	722	81	57.0	36	1.0	0	109	60.7
	726	83	57.7	39	1.0	0	--	--
	727	92	60.1	37	1.0	0	--	--
	729	89	59.5	37	1.0	0	113	61.2
	732	92	60.4	35	1.0	0	108	60.9
	733	94	58.6	36	1.0	3	--	--
	734	94	61.3	37	1.3	3	--	--
	735	91	58.7	34	1.0	0	--	--
	740	78	58.2	34	1.0	0	99	60.6
	748	87	60.7	37	1.0	0	--	--
	749	88	59.0	37	1.0	0	--	--
	752	91	59.6	35	1.0	3	104	61.1
	758	90	60.0	37	1.0	0	--	--
	759	87	58.3	38	1.5	3	--	--
	760	91	60.5	39	1.3	0	94	61.2
	761	84	58.8	39	1.0	0	86	61.3
	769	86	57.8	37	1.3	3	--	--
	781	81	59.8	36	1.3	6	--	--
	782	86	63.2	38	1.5	3	--	--
	783	95	61.6	38	1.0	0	--	--
Pro Seed Genetics	PRO 200	79	60.7	38	2.3	0	83	59.5
	PRO 260	77	56.5	36	1.0	0	97	60.6
	PRO 320A	84	58.2	41	1.3	4	120	61.0
	PRO Ex 310	93	58.2	40	1.0	3	105	60.8
	PRO Ex 330	93	59.1	37	1.0	3	110	59.9
	PRO Ex 350	88	57.7	36	1.0	0	104	60.5
	PRO Ex 370	77	56.3	36	1.0	3	--	--
	PRO Ex 380	80	61.6	33	2.0	0	--	--
	PRO Ex 390	90	61.4	37	1.5	3	--	--
Public	Hopewell	83	59.4	37	1.0	0	100	61.5
	Kaskaskia	83	60.7	41	1.3	0	104	62.5
	Red Devil Brand	75	57.8	37	1.0	0	107	60.9
	Sunburst	90	62.1	35	1.0	0	101	64.6
Public-exp	VA 09W-73	42	49.3	30	1.0	43	--	--
Syngenta	SY 483	89	59.8	36	1.4	0	114	61.5
	SY 1526	73	57.6	36	1.0	6	--	--
	W1104	85	57.4	34	1.3	6	119	61.2
Tracy	TW30-12	82	59.3	37	2.0	0	--	--
	TW52-13	80	59.2	37	1.8	0	--	--
	TW73-12	90	57.7	35	1.0	0	--	--
Van Treeck	Exp. J-334	85	60.2	37	2.0	0	--	--
	Mean	87	59.2	36	1.1	2	101	61.1
	LSD (.10)	7	1.4	1	0.3	5	14	1.4

* Yield is not significantly different (0.10 level) than that of the highest yielding cultivar

[1] Winterkill = visual estimate taken at green-up of the percent total plot stand loss due to winter injury



The Wisconsin Winter Wheat Performance Tests were conducted by the Departments of Agronomy and Plant Pathology, College of Agricultural and Life Sciences and the University of Wisconsin-Extension in cooperation and with support from the Wisconsin Crop Improvement Association.

Check the following publications for additional information on small grain production and seed availability. Both are updated annually.

Pest Management in Wisconsin Field Crops (A3646) available at learningstore.uwex.edu

The Wisconsin Certified Seed Directory available at wcia.wisc.edu

For information on seed availability of public varieties:

Wisconsin Crop Improvement Association
554 Moore Hall, 1575 Linden Drive, Madison, WI 53706

(608) 262-1341, wcia.wisc.edu

To access crop performance testing information electronically, visit: www.coolbean.info

Authors: Shawn Conley is a Professor in Agronomy; Adam Roth is a Senior Research Specialist, and John Gaska is a Senior Research Agronomist in Agronomy, College of Agricultural and Life Sciences, University of Wisconsin-Madison. S. Conley also holds an appointment with University of Wisconsin-Extension, Cooperative Extension. Produced by Cooperative Extension Publishing.

UW Extension
Cooperative Extension