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Wisconsin Winter Wheat Performance Trials

2020

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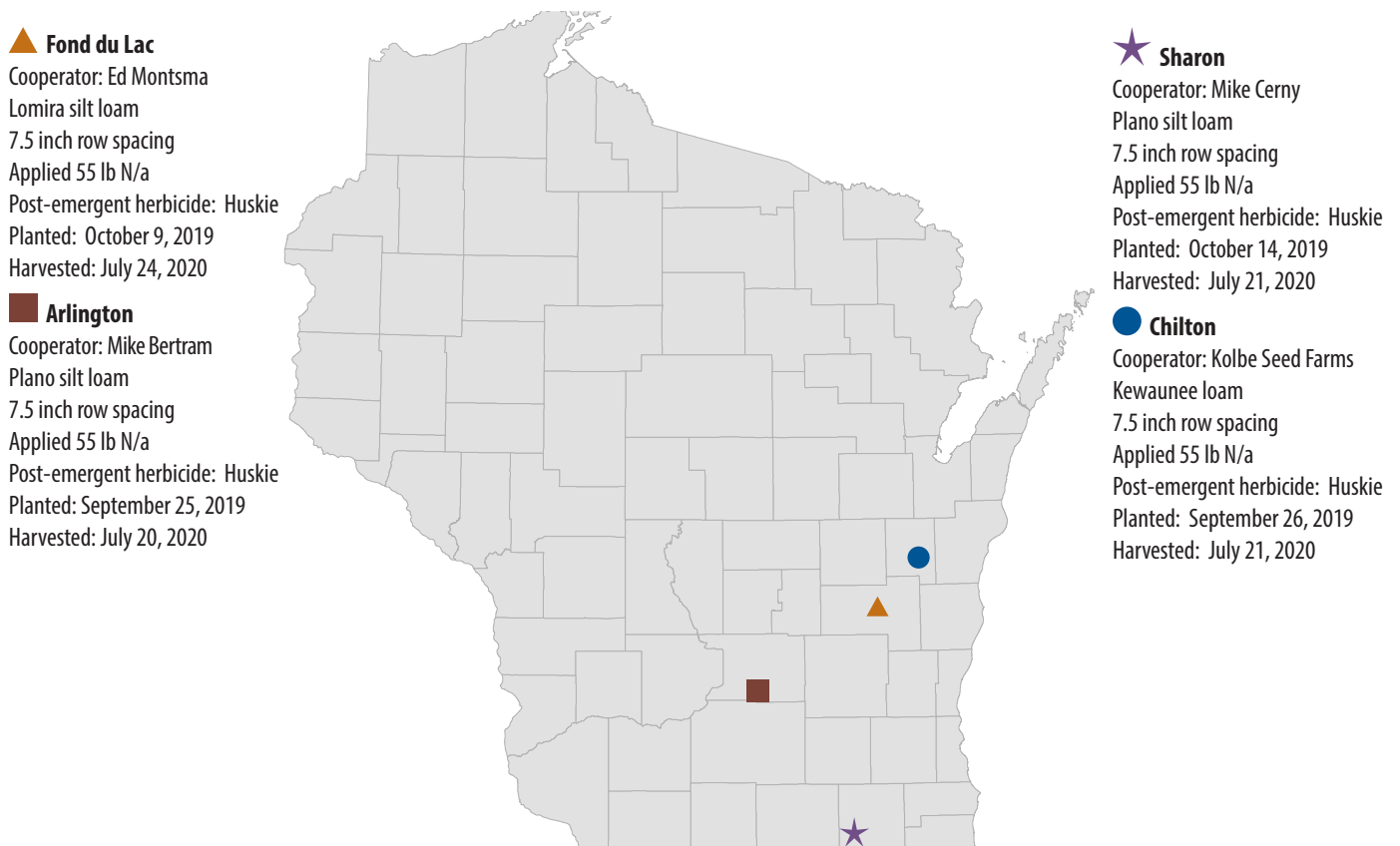
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The Wisconsin Winter Wheat Performance Trials are conducted each year to give growers information to select the best-performing varieties that will satisfy their specific goals. The performance trials are conducted each year at four locations in Wisconsin: Arlington, Chilton, Fond du Lac and Sharon. Trials include released 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.



Acres and Growing Conditions

Wisconsin saw a 18% decrease in winter wheat acres planted (160,000) in the 2019-2020 growing season compared to the previous year; 120,000 acres are forecasted to be harvested for grain, compared to 150,000 in 2019. The forecasted yield for the 2020 crop is 70 bu/a, up 6 bu/a from 2019. Some wheat was planted late due to delayed corn and soybean harvest caused by substantial rains and early snow falls. Mild winter conditions resulted in good winter survival. Wheat broke dormancy in early April and crop development was delayed all season due to lower than average GDU accumulation. In general, the crop was relatively short in stature.

Overall, winter wheat yield and test weights were average in 2020. Wheat yields at the Arlington, Chilton, Fond du Lac and Sharon locations averaged 92, 102, 97, and 91 bu/a, respectively.

* Source: USDA National Agricultural Statistics Service (www.nass.usda.gov)

Diseases

Statewide, winter wheat disease pressure was lower than the previous several seasons. However, some disease was observed across all locations. The major disease of winter wheat in Wisconsin in 2020 was Fusarium head blight (FHB) caused by *Fusarium graminearum*. FHB could be found in many fields throughout the state, with incidence and severity depending on variety and location. Severity was lower than in the previous two seasons, but FHB could be found at all locations examined.

Septoria leaf blotch was found at all locations, with severity high enough to score at the Sharon and Arlington locations. This foliar disease had not been prevalent over the last two seasons, but wet weather early in the spring caused this disease to be more active.

Stripe rust was found at extremely low levels at the Arlington and Chilton sites. However, hot, dry weather mid-season kept this disease in check and a major epidemic never materialized. Leaf rust was observed at all locations as well, but this disease moved in late enough in the season that its impact on yield was negligible.

Cephalosporium stripe, caused by the fungus *Cephalosporium gramineum*, was observed at the Arlington location. Severity and incidence was low. However, this disease has become increasingly prevalent in recent years with major epidemics at the Sharon and Fond du Lac locations in the 2019 season. This is the first time we have observed Cephalosporium stripe at the Arlington location. The pathogen causes leaf striping and plant stunting. Cephalosporium stripe is favored by cool wet conditions, reduced tillage, and short rotations.

Finally, powdery mildew was observed but never advance past a curiosity at any location.



Using 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 also 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 3](#) 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 will be discounted. [Both environment and pests](#) may greatly 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 disease resistance** characteristics that fit your cropping needs. By selecting varieties with the appropriate level of resistance, crop yield loss may be either reduced or avoided without the need for pesticides. Careful management of resistant cultivars through crop and variety rotation are required to ensure that these characteristics are not lost.
- ▶ **Plant 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.

At Planting

Site details: Summarized on page 3.

Seedbed preparation: Conventional and no-till methods.

Seeding rate: 1.75 million seeds per acre.

Seed treatments: Identified in Table 2.

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.

Midseason

Disease assessments: Foliar disease assessments were made at all trial locations during June at Feekes 10.0 (emerging heads). Assessments were made in the field by visual estimation of incidence (number of plants with symptoms) and average severity (magnitude of damage on plants with symptoms) across the plot using pre-made rating scale diagrams generated using the Severity Pro software (F. Nutter, Iowa State University). Fusarium head blight assessments were made two weeks after the completion of anthesis at all trial locations. Entire plots were visually assessed for Fusarium head blight incidence and severity using pre-made rating scale diagrams.

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 3-7. Data for both 2019 and 2020 are provided if the variety was entered in the 2019 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 is not significant is indicated by NS.

If an entrant is not listed for a brand, the entry was submitted either by the listed company or by the testing program.

The Wisconsin Winter Wheat Performance Trials 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.

Additional Information

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, contact:

Wisconsin Crop Improvement Association
8520 University Green
Middleton, WI 53562
(800) 892-1341, wcia.wisc.edu

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

For more information on wheat production please also follow Dr. Conley on [Twitter @badgerbean](https://twitter.com/badgerbean)

Please click for [A Visual Guide to Winter Wheat Development and Growth Staging](#)



Table 1. 2020 Company Information

Brand (Entrant)	Company Name	Phone	Website
AgriMAXX	AgriMAXX Wheat Company	(855) 629-9432	www.agrimaxxwheat.com
AgriPro	AgriPro	(815) 953-2041	agriprowheat.com
CROPLAN by Winfield United	WinField United	(855) 494-6343	www.winfieldunited.com
Diener	BioTown Seeds Inc.	(219) 984-6038	www.biotownseeds.com
Dyna-Gro	Dyna-Gro Seed	(608) 756-2934	www.dynagroseed.com
FS Wheat	GROWMARK, Inc.	(309) 242-3439	www.fsseeds.com
Jung	Jung Seed Genetics	(800) 242-1855	www.jungseedgenetics.com
Kennel Seed Farms	Kennel Seed Farms	(608) 379-0585	
Kratz Farms	Kratz Farms LLC	(414) 507-4632	www.kratzfarms.com
KWS Cereals	KWS Cereals	(217) 800-1008	www.kws.com
L-Brand (Ag Pro)	Ag Pro Enterprises, LLC	(920) 904-1758	www.limagraincerealseeds.com
L-Brand (Welter)	Welter Seed and Honey Company	(800) 470-3325	www.welterseed.com
LCS (Albert Lea)	Albert Lea Seed	(800) 352-5247	www.alseed.com
Legacy	Legacy Seeds Inc.	(715) 467-2555	www.legacyseeds.com
Limagrain Cereal Seeds	Limagrain Cereal Seeds	(970) 498-2200	www.limagraincerealseeds.com
MCIA	Michigan Crop Improvement Association	(517) 332-3546	www.michcrop.com
MSU	Michigan State University	(517) 353-0142	wheat.psm.msu.edu
Pioneer	Corteva Agriscience	(515) 535-3200	www.pioneer.com
PiP	Partners in Production	(608) 335-2112	www.pipseeds.com
Pro Seed Genetics	Pro Seed Genetics Cooperative	(920) 388-2824	
Public	WI Foundation Seeds	(608) 262-9954	www.wisconsinfoundationseeds.wisc.edu
U of IL (Albert Lea)	Albert Lea Seed	(800) 352-5247	www.alseed.com
Van Treeck's	Van Treeck's Seed Farm	(920) 467-2422	
Viking	Albert Lea Seed	(800) 352-5247	www.alseed.com

Table 2. 2020 Entered Varieties and Seed Treatments

Brand (Entrant)	Variety	Seed Treatment(s)	Brand (Entrant)	Variety	Seed Treatment(s)
AgriMAXX	463	PRIME ST	Diener	D480W	CruiserMaxx, Vibrance
	485	PRIME ST		D491W	Resonate, Warden Cereals II
	496	PRIME ST		D498W	Resonate, Warden Cereals II
	498	PRIME ST		D499W	Resonate, Warden Cereals II
	503	PRIME ST		D511W	Resonate, Warden Cereals II
	505	PRIME ST		XW2013	CruiserMaxx, Vibrance
	Exp 2003	PRIME ST			
AgriPro	SY 547	CruiserMaxx, Vibrance	Dyna-Gro	9002	Awaken ST, Foothold Virock
	SY 576	CruiserMaxx, Vibrance		9070	CruiserMaxx, Vibrance
	SY Viper	CruiserMaxx, Vibrance		9151	Awaken ST, Foothold Virock
CROPLAN by Winfield United	CP8015	Resonate, Warden Cereals II		9172	Awaken ST, Foothold Virock
	CP8022	Resonate, Warden Cereals II		9182	Awaken ST, Foothold Virock
	CP8081	Resonate, Warden Cereals II		9862	Awaken ST, Foothold Virock
	CP8800	Resonate, Warden Cereals II		9941	Awaken ST, Foothold Virock
			WX20737	Awaken ST, Foothold Virock	

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Table 2. 2020 Entered Varieties and Seed Treatments

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Brand (Entrant)	Variety	Seed Treatment(s)	Brand (Entrant)	Variety	Seed Treatment(s)		
FS Wheat	FS 601	CruiserMaxx, Vibrance	MCIA	Harpoon	Warden Cereals II		
	FS 603	CruiserMaxx, Vibrance	MSU	MI15R0388	Dividend Extreme		
	FS 616	CruiserMaxx, Vibrance		MI16R0720	Dividend Extreme		
	FS 624	CruiserMaxx, Vibrance		MI16R0906	Dividend Extreme		
	FS WX20A	CruiserMaxx, Vibrance		MI17R0357	Dividend Extreme		
Jung	5850	CruiserMaxx, Vibrance Extreme	Pioneer	25R25	LumiGEN		
	5855	CruiserMaxx, Vibrance Extreme		25R40	LumiGEN		
	5888	CruiserMaxx, Vibrance Extreme		25R74	LumiGEN		
	5915	CruiserMaxx, Vibrance Extreme	PiP	703	Charter, imidacloprid		
	5930	CruiserMaxx, Vibrance Extreme		704	Charter, imidacloprid		
Kennell Seed Farms	KS 1618	Ceres US IM		705	Charter, imidacloprid		
	Kratz Farms	EX KF 809		Vibrance Extreme	706	Charter, imidacloprid	
		KF 15241		Vibrance Extreme	714	Charter, imidacloprid	
		KF 15334	Vibrance Extreme	715	Charter, imidacloprid		
		KF 15639	Vibrance Extreme	721	Charter, imidacloprid		
KF 667		Vibrance Extreme	735	Charter, imidacloprid			
KWS Cereals	KWS280	Cruiser 5FS, Vibrance Extreme	736	Charter, imidacloprid			
	L-Brand (Ag Pro)	L-244	Sativa IM RTU, SabrEx	745	Charter, imidacloprid		
L-418		SabrEx	750	Charter, imidacloprid			
L-420		TebuStar IM	754	Charter, imidacloprid			
L-424		SabrEx	762	Charter, imidacloprid			
L-430		TebuStar IM	787	Charter, imidacloprid			
L-488		SabrEx	788	Charter, imidacloprid			
L-Star		SabrEx	789	Charter, imidacloprid			
L-334		SabrEx	790	Charter, imidacloprid			
L-Brand (Welter)	LCS (Albert Lea)	LCS 3334	Raxil T	791	Charter, imidacloprid		
		Legacy	LW 1785	SabrEx, Tebustar	Pro Seed Genetics	PRO 410	metalaxyl, tebuconazole
			LW 1911	CruiserMaxx, Vibrance		PRO 470A	Charter, imidacloprid
LW 2022	CruiserMaxx, Vibrance		PRO Ex 450	Charter, imidacloprid			
LWX 2011	CruiserMaxx, Vibrance		Public	Kaskaskia	Ceres US IM		
LWX 2012	Dfender			Sunburst	Athena		
LWX 2021	CruiserMaxx, Vibrance		U of IL (Albert Lea)	Erisman	Raxil T		
LWX 2023	CruiserMaxx, Vibrance			Van Treeck's	Alpha	CruiserMaxx, Vibrance	
Limagrain Cereal Seeds	L11809		Awaken, CruiserMaxx, Vibrance Extreme		Gold Reserve	CruiserMaxx, Vibrance	
	L11919	Awaken, CruiserMaxx, Vibrance Extreme	XL 007		CruiserMaxx, Vibrance		
	L11920	Awaken, CruiserMaxx, Vibrance Extreme	Viking	Volla SRW	CruiserMaxx, Vibrance		

Table 3. 2020 Combined Winter Wheat Performance Trial Results

Brand (Entrant)	Entry	2020 4-test average		■ Arlington		● Chilton		▲ Fond du Lac		★ Sharon		2019 4-test average
		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)
AgriMAXX	463	94	56.7	86	55.7	103	56.3	93	58.3	92	56.6	87
	485	95	56.8	90	56.1	* 107	57.0	92	58.1	90	56.0	89
	496	93	56.9	* 96	56.1	104	57.5	88	57.3	86	56.4	88
	498	97	55.4	* 97	55.4	99	54.8	99	56.9	92	54.6	--
	503	97	57.1	93	56.2	104	57.1	97	58.7	94	56.5	--
	505	94	58.0	92	57.4	96	57.3	* 100	59.8	89	57.4	--
	Exp 2003	95	55.8	93	55.2	104	55.7	93	57.0	88	55.5	--
AgriPro	SY 547	97	58.2	92	56.8	* 110	58.9	96	60.0	90	57.0	* 91
	SY 576	94	56.8	87	56.0	102	55.6	96	59.8	90	55.9	87
	SY Viper	* 102	58.4	* 100	57.6	* 106	58.4	* 104	60.2	* 99	57.3	* 93
CROPLAN by Winfield United	CP8015	93	57.1	91	56.0	101	56.8	92	59.2	89	56.3	--
	CP8022	93	56.9	* 94	55.9	* 106	58.0	88	57.5	84	56.2	--
	CP8081	* 99	57.9	90	57.4	* 111	57.7	* 100	59.2	* 96	57.3	--
	CP8800	93	55.8	92	55.4	99	56.5	98	57.7	82	53.8	--
Diener	D480W	97	57.2	* 94	56.0	102	57.3	97	58.9	* 97	56.8	--
	D491W	* 101	56.2	* 96	55.8	104	55.1	* 102	57.7	* 100	56.2	90
	D498W	93	57.7	89	57.4	93	55.8	97	59.0	92	58.7	89
	D499W	96	58.1	* 95	57.0	* 106	58.5	94	59.4	91	57.7	--
	D511W	* 100	57.1	* 99	56.2	* 106	57.1	98	58.7	* 96	56.4	* 91
	XW2013	* 99	56.8	* 96	56.1	105	56.0	* 102	58.8	91	56.2	--
Dyna-Gro	9002	97	56.5	93	55.6	102	56.0	* 100	58.2	94	56.0	--
	9070	95	56.7	93	55.0	99	56.7	96	58.7	92	56.6	--
	9151	95	57.8	* 97	57.6	100	57.1	94	59.5	89	57.1	--
	9172	* 98	56.4	* 96	56.0	104	55.6	97	57.4	* 97	56.6	--
	9182	97	57.3	91	56.1	103	57.3	* 103	59.1	92	56.8	--
	9862	97	56.9	* 94	56.3	* 108	57.2	95	59.1	90	55.1	* 91
	9941	96	55.6	93	54.8	104	55.5	96	57.3	90	54.9	90
	WX20737	* 98	58.9	* 100	58.1	101	58.2	98	60.7	95	58.7	--
FS Wheat	FS 601	94	55.2	90	54.6	* 106	54.7	92	56.5	89	55.2	90
	FS 603	92	57.7	88	57.4	93	56.1	96	58.9	91	58.4	88
	FS 616	95	57.9	89	57.1	* 108	58.1	93	58.6	90	57.9	* 92
	FS 624	95	56.8	92	56.3	91	55.2	* 102	59.6	93	55.9	90
	FS WX20A	* 98	57.2	91	56.2	103	57.4	* 101	58.4	95	56.6	--
Jung	5850	85	55.4	85	56.0	97	54.6	82	56.1	78	54.8	85
	5855	92	56.5	87	55.6	101	56.9	92	57.6	88	55.8	87
	5888	93	56.3	83	54.9	101	56.1	97	58.0	89	55.9	* 91
	5915	90	57.3	87	56.3	98	56.4	87	59.8	87	57.0	--
	5930	93	57.4	90	56.7	99	56.4	99	59.0	84	57.4	84

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

Table 3. 2020 Combined Winter Wheat Performance Trial Results

continued from previous page

Brand (Entrant)	Entry	2020 4-test average		■ Arlington		● Chilton		▲ Fond du Lac		★ Sharon		2019 4-test average Yield (bu/a)
		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)	
Kennell Seed Farms	KS 1618	96	56.7	92	55.8	102	56.0	* 100	58.9	90	56.3	* 94
Kratz Farms	EX KF 809	* 99	55.7	* 94	55.2	* 109	54.5	* 100	58.5	93	54.7	--
	KF 15241	93	58.1	88	57.2	95	56.5	99	59.6	92	59.3	* 93
	KF 15334	92	57.8	89	57.2	99	57.2	95	59.7	85	57.3	89
	KF 15639	97	58.4	90	56.9	* 107	57.8	* 100	60.6	93	58.2	* 91
	KF 667	* 98	57.2	* 94	56.5	99	56.4	* 101	59.1	* 98	56.7	* 93
	KF 727	96	57.2	90	56.3	103	57.3	97	58.8	93	56.4	* 92
KWS Cereals	KWS280	97	58.0	* 95	57.1	* 108	58.6	96	59.8	90	56.4	--
L-Brand (Ag Pro)	L-244	93	55.8	88	54.7	94	53.6	* 100	58.5	91	56.5	--
	L-418	93	56.3	90	55.6	94	55.4	98	58.2	90	56.0	90
	L-420	* 98	56.9	93	56.3	103	56.7	* 100	58.7	93	55.9	--
	L-424	93	56.4	88	55.5	100	56.6	91	58.5	93	55.1	82
	L-430	95	58.3	* 94	57.9	103	57.7	91	59.2	92	58.3	--
	L-488	90	57.1	84	56.1	98	56.4	91	58.9	86	57.1	82
	L-Star	97	56.6	* 94	55.9	99	55.4	* 102	58.6	92	56.6	* 94
L-Brand (Welter)	L-334	90	57.8	85	56.7	99	57.5	93	59.3	84	57.8	87
LCS (Albert Lea)	LCS 3334	92	57.9	90	57.0	97	57.3	93	58.8	88	58.5	84
Legacy	LW 1785	94	56.5	93	55.0	* 106	56.8	91	58.1	84	56.2	89
	LW 1911	92	56.7	89	55.8	103	57.2	91	58.2	86	55.8	* 92
	LW 2022	97	58.2	92	57.3	* 108	58.0	97	60.0	90	57.8	--
	LWX 2011	97	56.1	93	55.4	98	55.0	99	58.7	* 97	55.4	--
	LWX 2012	* 99	57.6	89	56.5	* 110	58.6	* 100	58.4	* 96	57.0	--
	LWX 2021	97	57.3	91	56.0	105	57.5	* 103	59.3	92	56.5	--
	LWX 2023	* 98	57.0	* 94	56.3	* 106	56.1	97	59.1	* 96	56.8	--
Limagrain Cereal Seeds	L11809	* 98	55.6	92	55.2	* 109	54.8	97	57.6	93	54.9	--
	L11919	* 102	57.6	* 95	56.8	* 108	56.7	* 103	59.1	* 101	58.0	--
	L11920	* 101	55.9	92	54.8	* 110	54.0	* 102	57.9	* 101	56.8	--
MCIA	Harpoon	93	56.4	87	55.0	105	56.2	92	58.3	87	56.3	* 91
MSU	MI15R0388	92	55.6	91	54.7	98	55.8	94	57.7	86	54.4	--
	MI16R0720	94	52.3	92	52.2	92	49.6	* 100	54.9	93	52.7	--
	MI16R0906	90	53.2	93	53.7	93	50.7	96	55.9	80	52.8	--
	MI17R0357	94	56.2	90	55.1	99	55.4	95	58.3	90	55.9	--
Pioneer	25R25	94	55.3	* 94	55.7	96	54.7	* 100	56.2	87	54.8	* 92
	25R40	* 100	56.9	92	56.0	105	56.7	* 105	58.4	* 97	56.3	* 92
	25R74	* 98	56.9	* 95	56.3	* 106	57.2	96	57.7	* 96	56.5	* 94

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

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Table 3. 2020 Combined Winter Wheat Performance Trial Results

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Brand (Entrant)	Entry	2020 4-test average		■ Arlington		● Chilton		▲ Fond du Lac		★ Sharon		2019 4-test average
		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	703	* 98	55.5	93	55.2	* 106	54.9	* 102	57.2	90	54.7	--
	704	* 99	57.6	89	57.1	* 107	57.2	* 101	58.7	* 98	57.6	--
	705	96	57.1	* 95	56.2	98	56.7	99	58.7	94	56.8	--
	706	96	56.5	* 96	56.7	101	55.9	97	58.1	91	55.4	* 91
	714	96	56.6	93	56.0	101	56.1	98	58.9	91	55.6	* 92
	715	* 98	56.9	88	55.8	* 107	57.3	* 103	58.3	93	56.3	89
	721	95	55.4	93	55.0	90	53.6	* 104	57.9	92	55.0	* 93
	735	* 98	55.9	* 98	55.8	100	54.4	99	57.9	* 96	55.8	* 92
	736	96	56.8	* 95	56.3	95	55.9	* 101	58.8	93	56.1	* 92
	745	92	57.6	86	57.1	92	55.6	96	59.3	95	58.5	* 91
	750	92	58.0	84	57.0	* 106	58.3	92	59.1	86	57.5	* 95
	754	* 99	57.0	* 96	55.9	* 106	57.1	97	58.4	* 98	56.5	* 92
	762	97	57.4	90	56.3	* 106	57.5	* 100	59.0	92	56.7	* 93
	787	96	54.9	93	53.9	97	53.5	* 105	58.3	91	53.8	--
	788	95	57.2	* 97	56.8	103	57.2	93	58.4	89	56.2	--
	789	* 99	56.0	* 97	55.8	102	54.2	* 102	58.1	* 97	55.9	--
	790	* 99	56.8	* 99	56.4	102	55.6	* 103	58.5	91	56.5	--
791	* 98	58.8	* 94	57.9	104	58.4	* 102	60.5	93	58.6	--	
Pro Seed Genetics	PRO 410	87	55.9	90	56.3	92	55.0	88	58.5	79	53.9	86
	PRO 470A	* 100	56.6	* 96	56.0	* 109	56.9	* 104	58.2	93	55.5	--
	PRO Ex 450	93	58.6	83	57.2	105	58.7	91	59.9	93	58.5	* 92
Public	Kaskaskia	87	58.1	84	57.7	92	57.1	89	59.9	83	57.6	82
	Sunburst	88	58.4	85	57.2	101	59.6	92	60.3	76	56.4	85
U of IL (Albert Lea)	Erisman	90	58.8	87	57.5	98	59.6	91	59.4	85	58.8	--
Van Treeck's	Alpha	97	56.7	* 94	56.0	104	56.9	94	58.2	* 96	55.5	* 92
	Gold Reserve	95	57.3	* 95	57.0	100	55.4	94	59.2	93	57.8	* 92
	XL 007	93	56.3	91	56.2	96	55.7	99	58.1	87	55.4	--
Viking	Volla SRW	91	55.3	86	55.4	95	53.7	96	56.9	87	55.4	--
	Mean	95	56.9	92	56.1	102	56.4	97	58.6	91	56.4	89
	LSD(.10)	4	0.9	6	0.4	5	0.7	5	1.0	5	0.7	4

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

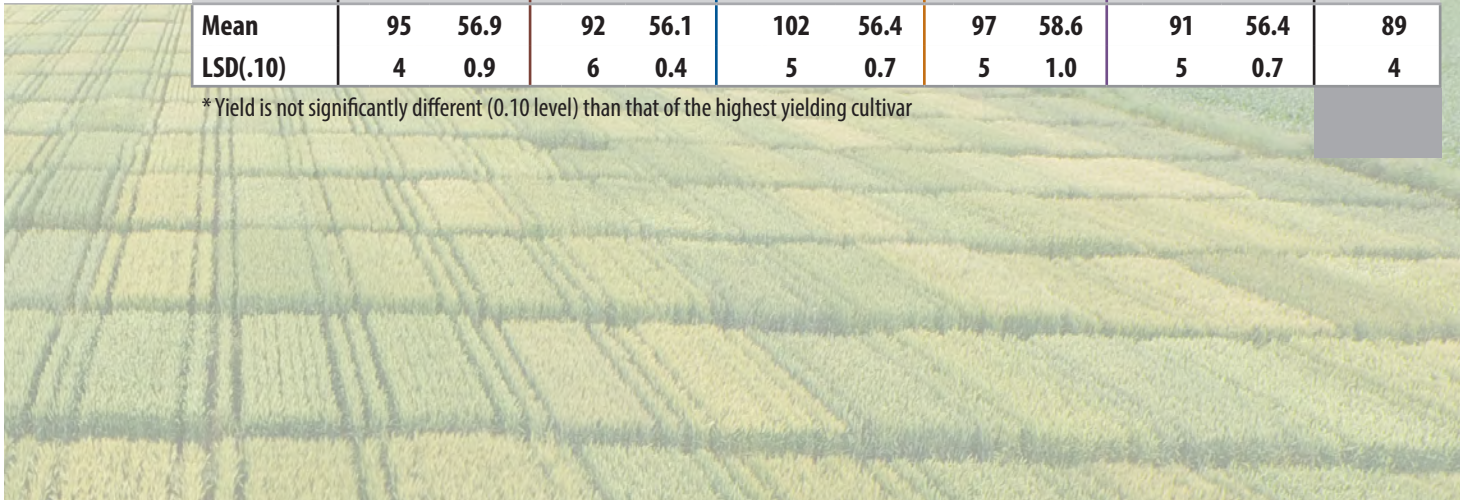


Table 4. 2020 Arlington Winter Wheat Performance Trial Results

Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	SLB ¹ l% ² s% ³		Yield (bu/a)	Test wt. (lb/bu)
AgriMAXX	463	86	55.7	29	1.0	100	13	* 92	55.2
	485	90	56.1	29	1.0	100	21	87	55.3
	496	* 96	56.1	29	1.0	95	13	84	54.1
	498	* 97	55.4	33	1.0	100	16	--	--
	503	93	56.2	30	1.0	100	17	--	--
	505	92	57.4	29	1.0	98	18	--	--
	Exp 2003	93	55.2	31	1.0	100	9	--	--
AgriPro	SY 547	92	56.8	32	1.0	100	23	88	54.9
	SY 576	87	56.0	31	1.0	100	19	88	56.3
	SY Viper	* 100	57.6	31	1.0	95	13	88	54.0
CROPLAN by Winfield United	CP8015	91	56.0	29	1.0	100	12	--	--
	CP8022	* 94	55.9	28	1.0	90	13	--	--
	CP8081	90	57.4	30	1.0	98	18	--	--
	CP8800	92	55.4	30	1.0	88	9	--	--
Diener	D480W	* 94	56.0	29	1.0	100	17	--	--
	D491W	* 96	55.8	30	1.0	100	16	* 90	54.6
	D498W	89	57.4	29	1.0	100	12	87	56.0
	D499W	* 95	57.0	31	1.0	98	16	--	--
	D511W	* 99	56.2	29	1.0	100	30	88	54.7
	XW2013	* 96	56.1	30	1.0	95	15	--	--
Dyna-Gro	9002	93	55.6	31	1.0	100	13	--	--
	9070	93	55.0	29	1.0	100	35	--	--
	9151	* 97	57.6	30	1.0	98	20	--	--
	9172	* 96	56.0	30	1.0	100	20	--	--
	9182	91	56.1	29	1.0	100	19	--	--
	9862	* 94	56.3	28	1.0	100	16	87	54.8
	9941	93	54.8	30	1.0	100	16	88	54.4
	WX20737	* 100	58.1	30	1.0	100	21	--	--
FS Wheat	FS 601	90	54.6	29	1.0	100	20	* 93	54.1
	FS 603	88	57.4	29	1.0	95	16	* 91	57.2
	FS 616	89	57.1	31	1.0	100	20	* 89	54.9
	FS 624	92	56.3	31	1.0	100	23	82	53.4
	FS WX20A	91	56.2	30	1.0	100	11	--	--
Jung	5850	85	56.0	31	1.0	95	7	81	50.7
	5855	87	55.6	33	1.0	95	12	81	53.8
	5888	83	54.9	34	1.0	100	49	86	54.2
	5915	87	56.3	30	1.0	100	19	--	--
	5930	90	56.7	31	1.0	93	9	80	54.6
Kennell Seed Farms	KS 1618	92	55.8	29	1.0	100	34	* 89	53.0

* Yield is not significantly different (0.10 level) than that of the highest yielding cultivar
¹ Septoria leaf blotch ² % incidence ³ % severity

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Table 4. 2020 Arlington Winter Wheat Performance Trial Results

continued from previous page

Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	SLB ¹ I% ² S% ³	Yield (bu/a)	Test wt. (lb/bu)	
Kratz Farms	EX KF 809	* 94	55.2	28	1.0	100 30	--	--	
	KF 15241	88	57.2	30	1.0	100 25	88	56.1	
	KF 15334	89	57.2	32	1.0	100 23	80	54.2	
	KF 15639	90	56.9	32	1.0	100 18	* 90	57.0	
	KF 667	* 94	56.5	28	1.0	100 46	* 89	54.3	
	KF 727	90	56.3	29	1.0	100 21	* 91	54.9	
KWS Cereals	KWS280	* 95	57.1	26	1.0	98 24	--	--	
L-Brand (Ag Pro)	L-244	88	54.7	28	1.0	100 33	--	--	
	L-418	90	55.6	29	1.0	100 35	* 93	57.3	
	L-420	93	56.3	27	1.0	100 31	--	--	
	L-424	88	55.5	31	1.0	100 18	78	52.5	
	L-430	* 94	57.9	29	1.0	100 39	--	--	
	L-488	84	56.1	29	1.0	100 24	77	54.8	
	L-Star	* 94	55.9	30	1.0	100 29	88	53.4	
L-Brand (Welter)	L-334	85	56.7	30	1.0	100 26	80	55.0	
LCS (Albert Lea)	LCS 3334	90	57.0	31	1.0	100 33	79	53.9	
Legacy	LW 1785	93	55.0	30	1.0	93 15	86	55.2	
	LW 1911	89	55.8	28	1.0	100 18	* 89	55.4	
	LW 2022	92	57.3	31	1.0	100 16	--	--	
	LWX 2011	93	55.4	29	1.0	100 19	--	--	
	LWX 2012	89	56.5	30	1.0	100 26	--	--	
	LWX 2021	91	56.0	29	1.0	100 24	--	--	
	LWX 2023	* 94	56.3	29	1.0	99 9	--	--	
Limagrain Cereal Seeds	L11809	92	55.2	30	1.0	100 36	--	--	
	L11919	* 95	56.8	29	1.0	100 15	--	--	
	L11920	92	54.8	26	1.0	100 31	--	--	
MCIA	Harpoon	87	55.0	30	1.0	100 23	* 92	55.3	
MSU	MI15R0388	91	54.7	32	1.0	100 19	--	--	
	MI16R0720	92	52.2	27	1.0	100 19	--	--	
	MI16R0906	93	53.7	29	1.0	100 16	--	--	
	MI17R0357	90	55.1	27	1.0	100 25	--	--	
Pioneer	25R25	* 94	55.7	30	1.0	100 8	* 90	54.7	
	25R40	92	56.0	28	1.0	100 35	* 91	54.7	
	25R74	* 95	56.3	28	1.0	90 15	* 94	55.8	

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

¹ Septoria leaf blotch ² % incidence ³ % severity

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Table 4. 2020 Arlington Winter Wheat Performance Trial Results

continued from previous page

Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	SLB ¹ I% ² S% ³	Yield (bu/a)	Test wt. (lb/bu)	
PiP	703	93	55.2	31	1.0	100	21	--	--
	704	89	57.1	28	1.0	100	34	--	--
	705	* 95	56.2	30	1.0	100	10	--	--
	706	* 96	56.7	29	1.0	100	18	88	55.5
	714	93	56.0	31	1.0	95	21	* 89	55.2
	715	88	55.8	33	1.0	95	15	79	53.9
	721	93	55.0	31	1.0	100	20	* 91	53.9
	735	* 98	55.8	30	1.0	100	24	* 92	54.5
	736	* 95	56.3	30	1.0	93	12	* 92	58.0
	745	86	57.1	28	1.0	100	20	* 92	56.7
	750	84	57.0	31	1.0	100	29	* 92	56.0
	754	* 96	55.9	28	1.0	100	26	* 91	54.4
	762	90	56.3	30	1.0	100	15	* 94	56.0
	787	93	53.9	28	1.0	100	21	--	--
	788	* 97	56.8	28	1.0	98	14	--	--
	789	* 97	55.8	31	1.0	100	13	--	--
	790	* 99	56.4	30	1.0	100	15	--	--
791	* 94	57.9	29	1.0	100	28	--	--	
Pro Seed Genetics	PRO 410	90	56.3	31	1.0	98	12	83	54.9
	PRO 470A	* 96	56.0	29	1.0	98	18	--	--
	PRO Ex 450	83	57.2	28	1.0	100	18	* 90	56.2
Public	Kaskaskia	84	57.7	34	1.0	100	58	80	57.0
	Sunburst	85	57.2	27	1.0	100	46	78	56.7
U of IL (Albert Lea)	Erisman	87	57.5	28	1.0	100	53	--	--
Van Treck's	Alpha	* 94	56.0	28	1.0	100	21	* 92	55.8
	Gold Reserve	* 95	57.0	29	1.0	100	30	* 94	56.1
	XL 007	91	56.2	30	1.0	98	11	--	--
Viking	Volla SRW	86	55.4	30	1.0	98	18	--	--
Mean		92	56.1	30	1.0	99	21	86	54.7
LSD (.10)		6	0.4	2	NS	6	14	5	1.3

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

¹ Septoria leaf blotch ² % incidence ³ % severity

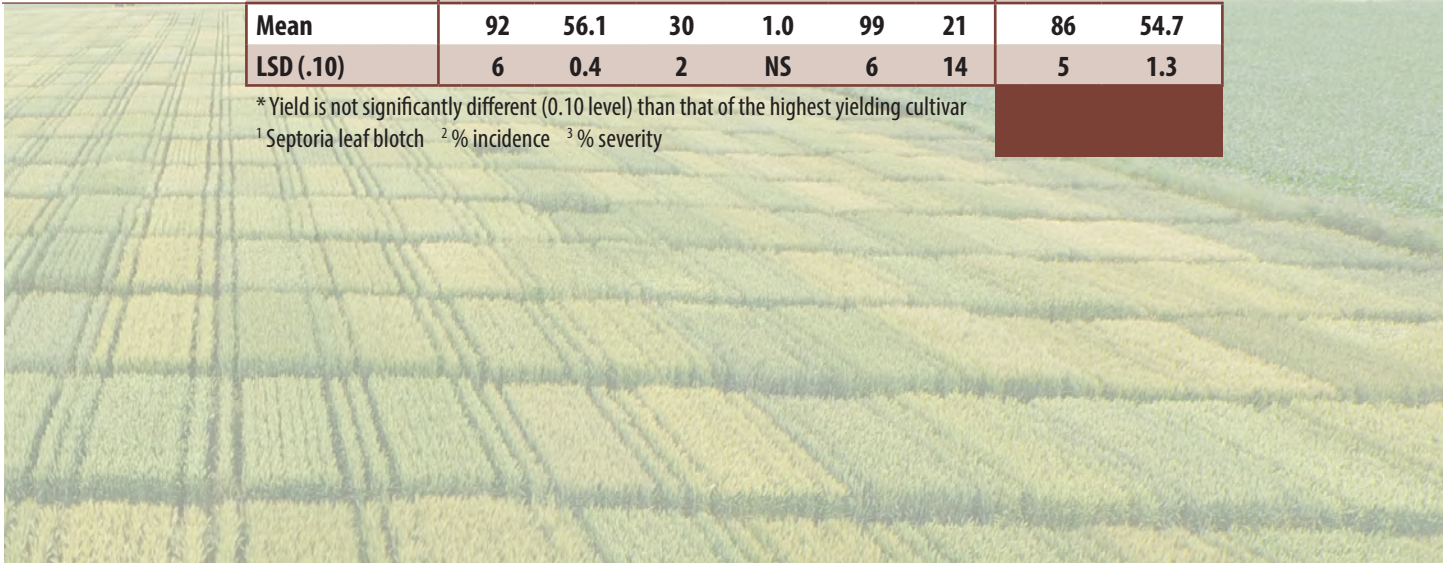


Table 5. 2020 Chilton Winter Wheat Performance Trial Results



Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ² S% ³	Yield (bu/a)	Test wt. (lb/bu)	
AgriMAXX	463	103	56.3	34	1.0	1	1	112	58.1
	485	* 107	57.0	33	1.0	1	6	118	59.9
	496	104	57.5	31	1.0	3	3	120	60.2
	498	99	54.8	36	1.0	14	14	--	--
	503	104	57.1	33	1.3	2	3	--	--
	505	96	57.3	33	1.0	7	10	--	--
	Exp 2003	104	55.7	33	1.0	5	7	--	--
AgriPro	SY 547	* 110	58.9	36	1.0	9	14	* 124	61.1
	SY 576	102	55.6	36	1.0	24	11	114	58.7
	SY Viper	* 106	58.4	34	1.5	7	17	* 129	60.7
CROPLAN by Winfield United	CP8015	101	56.8	32	1.0	7	9	--	--
	CP8022	* 106	58.0	31	1.0	3	9	--	--
	CP8081	* 111	57.7	35	1.0	1	1	--	--
	CP8800	99	56.5	34	1.0	8	9	--	--
Diener	D480W	102	57.3	33	1.8	1	6	--	--
	D491W	104	55.1	33	1.0	4	10	112	58.4
	D498W	93	55.8	31	1.5	1	6	114	58.1
	D499W	* 106	58.5	35	1.0	1	3	--	--
	D511W	* 106	57.1	31	1.5	18	13	120	59.7
	XW2013	105	56.0	33	1.0	10	11	--	--
Dyna-Gro	9002	102	56.0	34	1.0	2	2	--	--
	9070	99	56.7	34	1.8	2	3	--	--
	9151	100	57.1	33	1.0	5	7	--	--
	9172	104	55.6	33	1.0	9	10	--	--
	9182	103	57.3	32	1.0	2	2	--	--
	9862	* 108	57.2	33	1.3	5	7	120	60.7
	9941	104	55.5	33	1.0	2	6	119	58.1
	WX20737	101	58.2	32	1.0	2	5	--	--
FS Wheat	FS 601	* 106	54.7	34	1.0	3	3	116	58.4
	FS 603	93	56.1	32	1.3	7	12	110	58.4
	FS 616	* 108	58.1	36	1.0	3	6	* 126	61.9
	FS 624	91	55.2	34	1.3	3	14	122	61.1
	FS WX20A	103	57.4	33	1.5	2	5	--	--
Jung	5850	97	54.6	34	1.0	13	15	114	58.4
	5855	101	56.9	35	1.0	9	15	120	58.6
	5888	101	56.1	39	2.0	8	14	* 124	60.0
	5915	98	56.4	34	1.0	7	8	--	--
	5930	99	56.4	35	1.0	3	6	114	59.3
Kennell Seed Farms	KS 1618	102	56.0	32	3.0	4	13	* 124	58.0

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

¹ Fusarium head blight ² % incidence ³ % severity

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Table 5. 2020 Chilton Winter Wheat Performance Trial Results

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Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ² S% ³		Yield (bu/a)	Test wt. (lb/bu)
Kratz Farms	EX KF 809	* 109	54.5	33	2.5	10	13	--	--
	KF 15241	95	56.5	34	1.8	1	1	116	59.9
	KF 15334	99	57.2	33	1.8	2	2	120	60.2
	KF 15639	* 107	57.8	36	1.0	5	5	118	61.3
	KF 667	99	56.4	31	1.0	4	9	* 123	59.2
	KF 727	103	57.3	34	1.0	12	19	120	59.1
KWS Cereals	KWS280	* 108	58.6	31	1.0	12	21	--	--
L-Brand (Ag Pro)	L-244	94	53.6	31	4.0	2	9	--	--
	L-418	94	55.4	32	2.0	7	13	117	61.5
	L-420	103	56.7	31	1.3	11	11	--	--
	L-424	100	56.6	35	1.0	5	11	109	58.9
	L-430	103	57.7	32	1.8	1	1	--	--
	L-488	98	56.4	33	1.0	7	10	108	58.9
	L-Star	99	55.4	31	3.3	4	14	* 128	58.3
	L-334	99	57.5	34	2.8	4	4	119	60.4
LCS (Albert Lea)	LCS 3334	97	57.3	33	1.3	4	5	114	59.6
Legacy	LW 1785	* 106	56.8	33	1.0	1	4	122	60.9
	LW 1911	103	57.2	32	1.0	1	1	120	60.2
	LW 2022	* 108	58.0	36	1.0	5	12	--	--
	LWX 2011	98	55.0	32	1.0	1	2	--	--
	LWX 2012	* 110	58.6	36	1.0	7	12	--	--
	LWX 2021	105	57.5	33	1.3	1	1	--	--
	LWX 2023	* 106	56.1	33	1.0	11	8	--	--
Limagrain Cereal Seeds	L11809	* 109	54.8	34	2.5	7	11	--	--
	L11919	* 108	56.7	32	2.5	3	11	--	--
	L11920	* 110	54.0	31	3.8	2	3	--	--
MCIA	Harpoon	105	56.2	34	1.0	1	1	119	58.9
MSU	MI15R0388	98	55.8	32	1.0	14	8	--	--
	MI16R0720	92	49.6	31	2.8	2	5	--	--
	MI16R0906	93	50.7	33	1.3	17	25	--	--
	MI17R0357	99	55.4	29	1.0	8	8	--	--
Pioneer	25R25	96	54.7	34	1.0	8	10	120	56.9
	25R40	105	56.7	31	1.5	10	9	121	60.4
	25R74	* 106	57.2	32	1.0	1	1	118	59.8

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

¹ Fusarium head blight ² % incidence ³ % severity

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Table 5. 2020 Chilton Winter Wheat Performance Trial Results

continued from previous page



Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ²	FHB ¹ S% ³	Yield (bu/a)	Test wt. (lb/bu)
PiP	703	* 106	54.9	33	2.5	5	19	--	--
	704	* 107	57.2	32	2.3	1	3	--	--
	705	98	56.7	33	1.3	2	6	--	--
	706	101	55.9	33	2.3	4	9	121	61.1
	714	101	56.1	35	1.3	9	9	122	60.9
	715	* 107	57.3	36	1.0	11	11	* 125	60.6
	721	90	53.6	35	1.8	8	12	122	59.1
	735	100	54.4	33	1.0	3	8	118	58.5
	736	95	55.9	35	1.0	5	7	119	60.2
	745	92	55.6	31	1.8	5	7	118	58.8
	750	* 106	58.3	36	1.3	2	4	* 125	61.1
	754	* 106	57.1	30	1.3	7	10	* 125	60.3
	762	* 106	57.5	34	1.0	7	6	* 123	61.6
	787	97	53.5	32	1.5	3	8	--	--
	788	103	57.2	32	1.0	11	13	--	--
	789	102	54.2	34	1.3	3	3	--	--
790	102	55.6	33	1.0	11	13	--	--	
791	104	58.4	33	1.3	1	5	--	--	
Pro Seed Genetics	PRO 410	92	55.0	33	2.3	6	13	111	60.6
	PRO 470A	* 109	56.9	31	1.8	11	15	--	--
	PRO Ex 450	105	58.7	31	1.5	4	7	* 125	61.0
Public	Kaskaskia	92	57.1	37	2.0	9	11	108	59.3
	Sunburst	101	59.6	32	1.0	13	14	117	62.5
U of IL (Albert Lea)	Erisman	98	59.6	32	2.3	1	5	--	--
Van Treeck's	Alpha	104	56.9	31	1.3	10	14	* 123	60.6
	Gold Reserve	100	55.4	33	2.0	1	6	113	59.0
	XL 007	96	55.7	34	1.0	3	3	--	--
Viking	Volla SRW	95	53.7	33	1.3	2	7	--	--
Mean		102	56.4	33	1.4	6	8	118	59.5
LSD (.10)		5	0.7	1	0.6	5	7	6	1.0

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

¹ Fusarium head blight ² % incidence ³ % severity

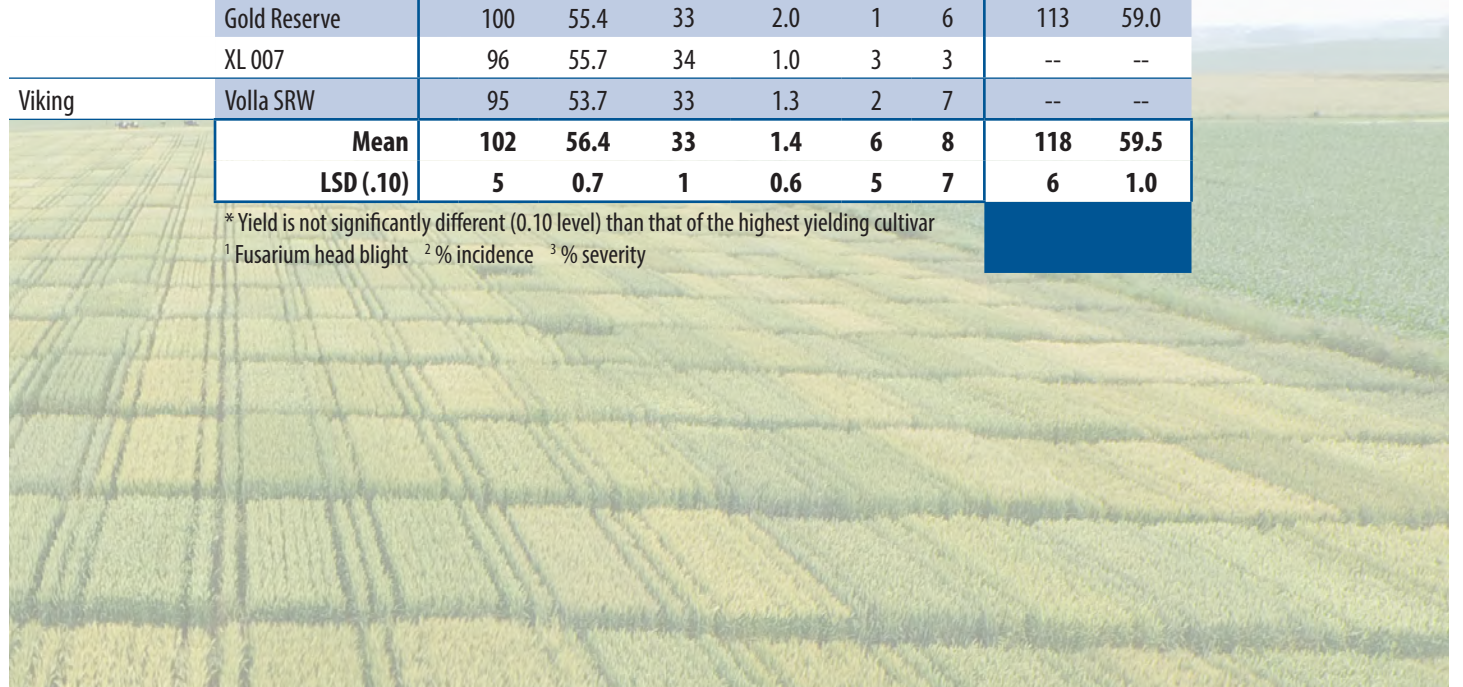



Table 6. 2020 Fond du Lac Winter Wheat Performance Trial Results




Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ²	S% ³	Yield (bu/a)	Test wt. (lb/bu)
AgriMAXX	463	93	58.3	30	1.0	1	9	89	56.6
	485	92	58.1	30	1.0	5	13	91	57.2
	496	88	57.3	28	1.0	4	9	88	56.2
	498	99	56.9	33	1.0	7	9	--	--
	503	97	58.7	31	1.0	5	3	--	--
	505	* 100	59.8	30	1.0	8	13	--	--
	Exp 2003	93	57.0	30	1.0	7	9	--	--
AgriPro	SY 547	96	60.0	34	1.0	6	16	93	57.2
	SY 576	96	59.8	32	1.0	4	9	82	55.8
	SY Viper	* 104	60.2	31	1.0	9	11	* 96	57.3
CROPLAN by Winfield United	CP8015	92	59.2	28	1.0	3	11	--	--
	CP8022	88	57.5	29	1.0	7	15	--	--
	CP8081	* 100	59.2	31	1.0	8	10	--	--
	CP8800	98	57.7	32	1.0	4	9	--	--
Diener	D480W	97	58.9	31	1.0	2	8	--	--
	D491W	* 102	57.7	30	1.0	5	12	* 95	56.1
	D498W	97	59.0	29	1.0	6	14	92	57.8
	D499W	94	59.4	32	1.0	7	13	--	--
	D511W	98	58.7	28	1.0	20	18	92	56.3
	XW2013	* 102	58.8	30	1.0	6	10	--	--
Dyna-Gro	9002	* 100	58.2	32	1.0	4	16	--	--
	9070	96	58.7	30	1.0	4	6	--	--
	9151	94	59.5	31	1.0	8	11	--	--
	9172	97	57.4	30	1.0	3	6	--	--
	9182	* 103	59.1	32	1.0	1	9	--	--
	9862	95	59.1	31	1.0	2	9	92	57.2
	9941	96	57.3	30	1.0	2	6	90	55.6
	WX20737	98	60.7	30	1.0	1	1	--	--
FSWheat	FS 601	92	56.5	30	1.0	3	3	92	54.9
	FS 603	96	58.9	29	1.0	3	5	* 95	57.8
	FS 616	93	58.6	31	1.0	5	9	* 94	58.1
	FS 624	* 102	59.6	33	1.0	15	15	* 95	58.1
	FS WX20A	* 101	58.4	31	1.0	1	1	--	--
Jung	5850	82	56.1	31	1.0	13	21	86	56.7
	5855	92	57.6	32	1.0	6	13	87	56.6
	5888	97	58.0	36	1.0	13	19	91	56.9
	5915	87	59.8	30	1.0	2	2	--	--
	5930	99	59.0	34	1.0	3	9	84	58.6
Kennell Seed Farms	KS 1618	* 100	58.9	29	1.0	14	13	* 97	56.3

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

¹ Fusarium head blight ² % incidence ³ % severity

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Table 6. 2020 Fond du Lac Winter Wheat Performance Trial Results*continued from previous page*


Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ² S% ³	Yield (bu/a)	Test wt. (lb/bu)	
Kratz Farms	EX KF 809	* 100	58.5	31	1.0	6	12	--	--
	KF 15241	99	59.6	31	1.0	4	10	* 98	58.6
	KF 15334	95	59.7	33	1.0	8	11	93	57.7
	KF 15639	* 100	60.6	35	1.0	14	15	* 94	58.0
	KF 667	* 101	59.1	30	1.0	10	16	93	57.0
	KF 727	97	58.8	31	1.0	16	21	* 94	57.1
KWS Cereals	KWS280	96	59.8	27	1.0	15	11	--	--
L-Brand (Ag Pro)	L-244	* 100	58.5	29	1.0	11	25	--	--
	L-418	98	58.2	31	1.0	11	23	90	58.7
	L-420	* 100	58.7	28	1.0	18	13	--	--
	L-424	91	58.5	32	1.0	3	13	86	56.3
	L-430	91	59.2	29	1.0	9	14	--	--
	L-488	91	58.9	30	1.0	14	15	88	58.2
	L-Star	* 102	58.6	30	1.0	11	16	* 99	56.2
L-Brand (Welter)	L-334	93	59.3	32	1.0	4	7	88	58.0
LCS (Albert Lea)	LCS 3334	93	58.8	31	1.0	3	8	88	58.0
Legacy	LW 1785	91	58.1	30	1.0	6	10	90	57.3
	LW 1911	91	58.2	28	1.0	2	6	* 97	56.8
	LW 2022	97	60.0	32	1.0	4	9	--	--
	LWX 2011	99	58.7	27	1.0	3	9	--	--
	LWX 2012	* 100	58.4	32	1.0	12	20	--	--
	LWX 2021	* 103	59.3	31	1.0	2	6	--	--
	LWX 2023	97	59.1	31	1.0	9	9	--	--
Limagrain Cereal Seeds	L11809	97	57.6	30	1.0	14	20	--	--
	L11919	* 103	59.1	27	1.0	7	6	--	--
	L11920	* 102	57.9	28	1.0	14	16	--	--
MCIA	Harpoon	92	58.3	30	1.0	1	1	93	55.7
MSU	MI15R0388	94	57.7	31	1.0	24	18	--	--
	MI16R0720	* 100	54.9	28	1.0	13	24	--	--
	MI16R0906	96	55.9	29	1.0	13	30	--	--
	MI17R0357	95	58.3	28	1.0	10	13	--	--
Pioneer	25R25	* 100	56.2	31	1.0	4	5	* 94	56.6
	25R40	* 105	58.4	28	1.0	18	14	93	56.4
	25R74	96	57.7	29	1.0	4	3	* 96	57.0

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

¹ Fusarium head blight ² % incidence ³ % severity*continued on next page*

Table 6. 2020 Fond du Lac Winter Wheat Performance Trial Results

continued from previous page



Brand (Entrant)	Entry	2020 means						2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ²	S% ³	Yield (bu/a)	Test wt. (lb/bu)
PiP	703	* 102	57.2	31	1.0	16	13	--	--
	704	* 101	58.7	28	1.0	5	8	--	--
	705	99	58.7	29	1.0	1	7	--	--
	706	97	58.1	30	1.0	7	9	93	56.9
	714	98	58.9	32	1.0	3	10	* 94	56.6
	715	* 103	58.3	34	1.0	3	6	91	56.9
	721	* 104	57.9	34	1.0	9	14	* 97	56.6
	735	99	57.9	30	1.0	3	8	* 96	55.7
	736	* 101	58.8	31	1.0	7	7	92	58.0
	745	96	59.3	30	1.0	2	4	93	57.1
	750	92	59.1	32	1.0	7	15	* 99	57.6
	754	97	58.4	28	1.0	23	18	89	56.0
	762	* 100	59.0	30	1.0	5	7	90	57.8
	787	* 105	58.3	30	1.0	5	7	--	--
	788	93	58.4	29	1.0	7	8	--	--
789	* 102	58.1	31	1.0	5	8	--	--	
790	* 103	58.5	30	1.0	4	9	--	--	
791	* 102	60.5	29	1.0	1	3	--	--	
Pro Seed Genetics	PRO 410	88	58.5	31	1.0	6	19	90	57.7
	PRO 470A	* 104	58.2	29	1.0	13	18	--	--
	PRO Ex 450	91	59.9	28	1.0	12	12	85	57.3
Public	Kaskaskia	89	59.9	34	1.0	34	19	85	58.5
	Sunburst	92	60.3	29	1.0	2	10	88	59.5
U of IL (Albert Lea)	Erismen	91	59.4	30	1.0	2	7	--	--
Van Treec's	Alpha	94	58.2	28	1.0	14	11	92	55.9
	Gold Reserve	94	59.2	30	1.0	8	16	* 94	57.9
	XL 007	99	58.1	32	1.0	9	15	--	--
Viking	Volla SRW	96	56.9	30	1.0	7	7	--	--
Mean		97	58.6	30	1.0	7	11	91	56.9
LSD (.10)		5	1.0	1	NS	7	8	6	1.0

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

¹ Fusarium head blight ² % incidence ³ % severity

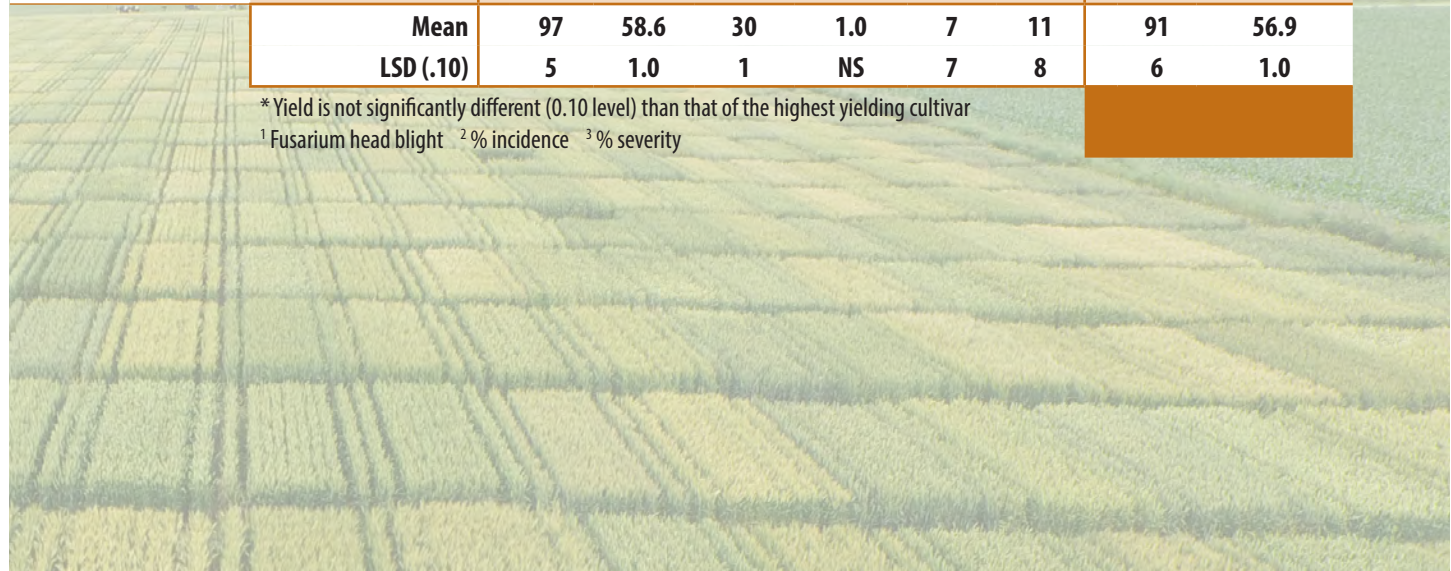


Table 7. 2020 Sharon Winter Wheat Performance Trial Results



Brand (Entrant)	Entry	2020 means								2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ³ S% ⁴	SLB ² I% ³ S% ⁴	Yield (bu/a)	Test wt. (lb/bu)		
AgriMAXX	463	92	56.6	31	1.0	1 3	98 9	58	54.8		
	485	90	56.0	29	1.0	4 11	100 12	60	57.8		
	496	86	56.4	29	1.0	7 9	100 25	57	55.6		
	498	92	54.6	34	1.0	20 28	88 7	--	--		
	503	94	56.5	30	1.0	5 3	98 14	--	--		
	505	89	57.4	30	1.0	3 8	100 16	--	--		
	Exp 2003	88	55.5	30	1.0	9 8	100 19	--	--		
AgriPro	SY 547	90	57.0	32	1.0	16 18	93 12	60	56.8		
	SY 576	90	55.9	32	1.0	21 11	90 14	61	55.7		
	SY Viper	* 99	57.3	30	1.0	8 13	100 24	62	56.0		
CROPLAN by Winfield United	CP8015	89	56.3	28	1.0	9 11	95 8	--	--		
	CP8022	84	56.2	29	1.0	6 4	98 13	--	--		
	CP8081	* 96	57.3	31	1.0	3 14	96 17	--	--		
	CP8800	82	53.8	30	1.0	28 18	96 8	--	--		
Diener	D480W	* 97	56.8	30	1.0	4 3	98 12	--	--		
	D491W	* 100	56.2	31	1.0	4 9	100 13	* 63	54.3		
	D498W	92	58.7	30	1.0	6 6	91 8	* 64	57.4		
	D499W	91	57.7	31	1.0	6 12	100 14	--	--		
	D511W	* 96	56.4	28	1.0	25 14	100 18	* 65	55.0		
	XW2013	91	56.2	30	1.0	11 6	84 13	--	--		
Dyna-Gro	9002	94	56.0	32	1.0	8 8	98 15	--	--		
	9070	92	56.6	30	1.0	5 7	100 18	--	--		
	9151	89	57.1	29	1.0	6 9	95 15	--	--		
	9172	* 97	56.6	30	1.0	8 9	85 8	--	--		
	9182	92	56.8	30	1.0	1 1	99 13	--	--		
	9862	90	55.1	31	1.0	8 15	90 9	* 66	56.9		
	9941	90	54.9	30	1.0	2 2	93 14	61	55.7		
	WX20737	95	58.7	30	1.0	1 6	100 18	--	--		
FSWheat	FS 601	89	55.2	31	1.0	5 6	98 18	57	54.3		
	FS 603	91	58.4	29	1.0	10 13	95 8	55	57.7		
	FS 616	90	57.9	30	1.0	3 8	98 16	60	57.5		
	FS 624	93	55.9	32	1.0	18 15	100 20	59	56.3		
	FS WX20A	95	56.6	30	1.0	1 1	100 16	--	--		
	Jung	5850	78	54.8	31	1.0	18 15	90 15	58	53.5	
5855	88	55.8	32	1.0	12 18	91 11	59	55.4			
5888	89	55.9	35	1.0	2 6	100 39	* 63	54.7			
5915	87	57.0	31	1.0	11 10	100 11	--	--			
5930	84	57.4	33	1.0	11 10	94 6	59	56.6			
Kennell Seed Farms	KS 1618	90	56.3	30	1.0	7 12	100 28	* 64	54.4		

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

¹ Fusarium head blight ² Septoria leaf blotch ³ % incidence ⁴ % severity

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Table 7. 2020 Sharon Winter Wheat Performance Trial Results

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Brand (Entrant)	Entry	2020 means								2019 means	
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹ I% ³ S% ⁴	SLB ² I% ³ S% ⁴	Yield (bu/a)	Test wt. (lb/bu)		
Kratz Farms	EX KF 809	93	54.7	29	1.0	16 11	100 25	--	--		
	KF 15241	92	59.3	32	1.0	4 5	100 15	* 68	57.5		
	KF 15334	85	57.3	32	1.0	5 15	100 24	* 63	56.6		
	KF 15639	93	58.2	34	1.0	18 18	98 14	* 63	56.9		
	KF 667	* 98	56.7	29	1.0	11 13	100 29	* 68	55.9		
	KF 727	93	56.4	31	1.0	8 8	100 14	* 64	55.7		
KWS Cereals	KWS280	90	56.4	29	1.0	30 19	100 19	--	--		
L-Brand (Ag Pro)	L-244	91	56.5	28	1.0	6 7	100 30	--	--		
	L-418	90	56.0	29	1.0	9 20	100 25	58	58.3		
	L-420	93	55.9	27	1.0	24 12	100 20	--	--		
	L-424	93	55.1	33	1.0	9 10	95 9	55	54.5		
	L-430	92	58.3	30	1.0	13 11	100 33	--	--		
	L-488	86	57.1	31	1.0	9 8	100 21	57	56.2		
	L-Star	92	56.6	30	1.0	9 12	100 34	62	54.0		
L-Brand (Welter)	L-334	84	57.8	30	1.0	7 14	100 14	61	56.7		
LCS (Albert Lea)	LCS 3334	88	58.5	32	1.0	8 16	100 20	54	55.4		
Legacy	LW 1785	84	56.2	30	1.0	2 2	90 11	59	56.5		
	LW 1911	86	55.8	30	1.0	5 7	100 19	* 63	55.7		
	LW 2022	90	57.8	31	1.0	1 1	100 23	--	--		
	LWX 2011	* 97	55.4	29	1.0	6 6	98 12	--	--		
	LWX 2012	* 96	57.0	31	1.0	10 16	100 24	--	--		
	LWX 2021	92	56.5	31	1.0	3 9	95 15	--	--		
	LWX 2023	* 96	56.8	30	1.0	7 8	68 6	--	--		
Limagrain Cereal Seeds	L11809	93	54.9	30	1.0	12 16	100 25	--	--		
	L11919	* 101	58.0	28	1.0	4 4	100 21	--	--		
	L11920	* 101	56.8	27	1.0	4 4	100 27	--	--		
MCIA	Harpoon	87	56.3	31	1.0	2 3	90 15	58	54.9		
MSU	MI15R0388	86	54.4	33	1.0	21 18	100 29	--	--		
	MI16R0720	93	52.7	28	1.0	2 7	100 21	--	--		
	MI16R0906	80	52.8	28	1.0	38 26	100 29	--	--		
	MI17R0357	90	55.9	28	1.0	18 11	98 13	--	--		
Pioneer	25R25	87	54.8	31	1.0	14 14	93 11	* 66	55.1		
	25R40	* 97	56.3	29	1.0	31 15	100 15	* 63	55.5		
	25R74	* 96	56.5	29	1.0	2 6	100 17	* 66	56.0		

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

¹ Fusarium head blight ² Septoria leaf blotch ³ % incidence ⁴ % severity

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Table 7. 2020 Sharon Winter Wheat Performance Trial Results

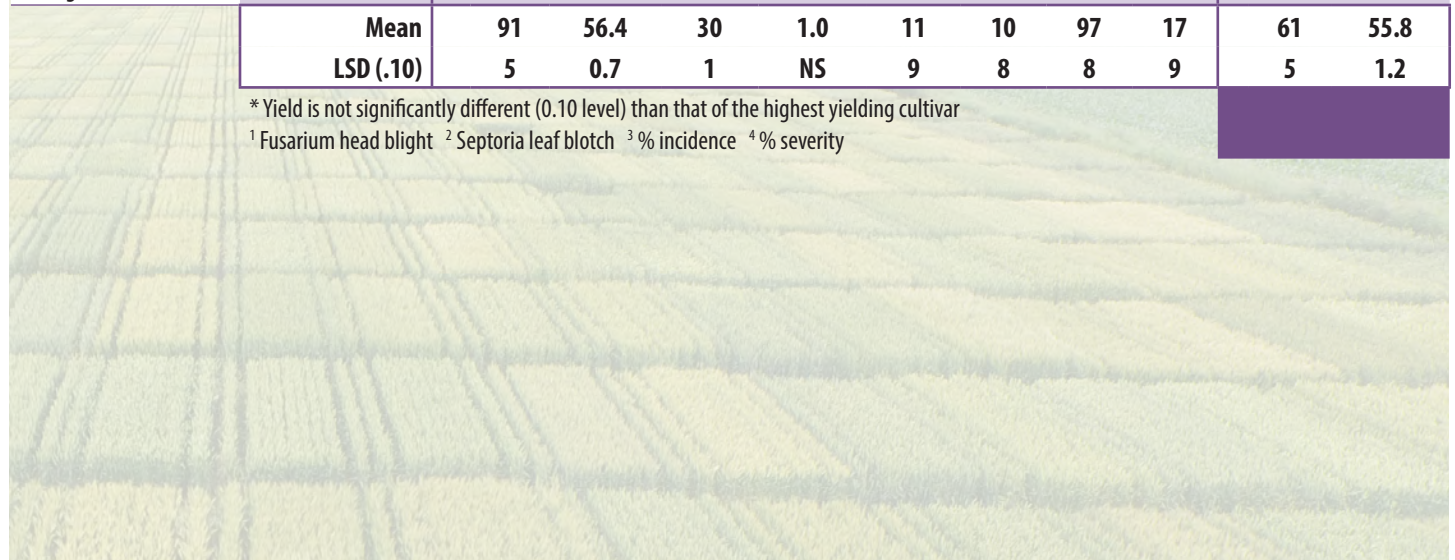
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Brand (Entrant)	Entry	2020 means								2019 means		
		Yield (bu/a)	Test wt. (lb/bu)	Height (in.)	Lodging (1-5)	FHB ¹		SLB ²		Yield (bu/a)	Test wt. (lb/bu)	
						I% ³	S% ⁴	I% ³	S% ⁴			
PiP	703	90	54.7	30	1.0	16	16	100	12	--	--	
	704	* 98	57.6	28	1.0	2	4	98	14	--	--	
	705	94	56.8	31	1.0	4	3	98	16	--	--	
	706	91	55.4	30	1.0	7	10	100	23	* 63	56.9	
	714	91	55.6	31	1.0	13	8	100	10	62	56.6	
	715	93	56.3	35	1.0	11	13	100	15	* 63	57.0	
	721	92	55.0	33	1.0	29	21	98	11	62	53.9	
	735	* 96	55.8	30	1.0	1	1	100	12	61	54.3	
	736	93	56.1	32	1.0	13	10	81	7	* 66	57.8	
	745	95	58.5	31	1.0	3	6	89	9	62	57.6	
	750	86	57.5	30	1.0	3	6	100	18	62	57.9	
	754	* 98	56.5	28	1.0	17	11	100	23	* 63	55.0	
	762	92	56.7	31	1.0	7	7	100	16	* 63	57.2	
	787	91	53.8	29	1.0	12	7	100	20	--	--	
	788	89	56.2	29	1.0	38	14	100	11	--	--	
	789	* 97	55.9	31	1.0	10	6	100	10	--	--	
	790	91	56.5	31	1.0	9	9	83	6	--	--	
791	93	58.6	29	1.0	6	8	100	21	--	--		
Pro Seed Genetics	PRO 410	79	53.9	31	1.0	24	24	100	24	60	56.7	
	PRO 470A	93	55.5	28	1.0	28	16	100	19	--	--	
	PRO Ex 450	93	58.5	28	1.0	6	8	100	14	* 67	58.0	
Public	Kaskaskia	83	57.6	35	1.0	20	13	100	40	56	57.6	
	Sunburst	76	56.4	28	1.0	9	13	100	41	58	57.5	
U of IL (Albert Lea)	Erisman	85	58.8	28	1.0	1	11	100	26	--	--	
Van Treeck's	Alpha	* 96	55.5	29	1.0	43	18	98	11	61	55.8	
	Gold Reserve	93	57.8	30	1.0	2	3	100	16	* 67	57.1	
	XL 007	87	55.4	32	1.0	18	11	94	11	--	--	
Viking	Volta SRW	87	55.4	31	1.0	21	13	95	10	--	--	
		Mean	91	56.4	30	1.0	11	10	97	17	61	55.8
		LSD (.10)	5	0.7	1	NS	9	8	8	9	5	1.2

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

¹ Fusarium head blight ² Septoria leaf blotch ³ % incidence ⁴ % severity



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Wisconsin Winter Wheat Performance Trials (A3868)

07/2020

