

OHIO WHEAT PERFORMANCE TEST, 2019

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The purpose of the Ohio Wheat Performance Test is to evaluate wheat varieties, blends, brands, and breeding lines for yield, grain quality, and other important performance characteristics. This information gives wheat producers comparative information for selecting the varieties best suited for their production system and market. Varieties differ in yield potential, winter hardiness, maturity, standability, disease and insect resistance, and other agronomic characteristics. Selection should be based on performance from multiple test sites and years.

EVALUATION PROCEDURES

Each entry was evaluated at five test sites using four replications per site in a randomized complete block design. Plots consisted of 7 rows, 7.5 inches apart and 25 feet long. Participating companies specified the seeding rate used for each of their varieties. Test sites were planted four to twenty-three days after the fly-free date based on soil conditions and approximately 30 pounds of nitrogen/acre was applied at planting followed by the addition of 80-100 pounds/acre in early spring. Herbicides, insecticides, and fungicides were applied as needed. The following data were collected:

Yield is reported in bushels/acre at 13.5 percent moisture.

Test Weight is reported in lb/bushel averaged across all locations.

Seed Size is thousands of harvested seeds per pound (Ex: 15.5 = 15,500 seeds/lb).

Lodging is the percent of plants that lean more than 45 degrees from vertical.

Plant Height is the distance in inches from the soil surface to the top of the heads.

Heading Date was the average calendar day of the year on which 50 percent of the heads were completely emerged. Average of Wood, Wayne, and Pickaway locations. (Example: Day 135 = May 15)

Powdery mildew (PM) Powdery mildew (caused by *Blumeria graminis* f. sp. *tritici*) was evaluated on a 0 to 10 scale at Wooster at the heading (Feekes growth stage 10.5) growth stage. Varieties were then ranked as Susceptible (S: score \geq 8), Moderately Susceptible (MS: score $>$ 5 and $<$ 8), Moderately Resistant (MR: score $>$ 3 and $<$ 5) and Resistant (R: score $<$ 3). Due to weather conditions in 2019, PM rankings are reported for 2017 and 2018.

Fusarium Head Blight (FHB) Varieties were evaluated in an inoculated disease screening nursery at Wooster. FHB was rated as the percentage of spikelets diseased per plot (disease index).

Glume Blotch (SGB) and Leaf Blotch (SLB) Varieties were evaluated for *Stagonospora* leaf and glume blotch in an inoculated, mist-irrigated disease screening nursery at Wooster. Both SLB and SGB severity were rated at about Feekes growth stage 11.3 as the average percent flag leaf and spike area diseased, respectively. Due to weather conditions in 2019, SGB and SLB ratings are reported for 2017 and 2018.

Flour Yield is the percent flour yield from milled whole grain.

Flour Softness is the percent of fine-granular milled flour. Values higher than approximately 50 indicate kernel textures that are appropriate for soft wheat. Generally, high values are more desirable.

CULTURAL PRACTICES BY TEST SITE

	TEST SITES				
	1	2	3	4	5
County	Wood	Marion	Wayne	Darke	Pickaway
Previous Crop	Soybean	Soybean	Soybean	Soybean	Soybean
Soil Type	Hoytville	Blount	Canfield	Crosby	Miamian
Tillage	Min-Till	Min-Till	Min-Till	Min-Till	Min-Till
Fly-Free Date	Sept. 23	Sept. 26	Sept. 26	Sept. 29	Oct. 1
Plant Date	Oct. 1	Oct. 12	Oct. 19	Oct. 3	Oct. 5
Soil pH	6.3	6.7	6.2	6.2	6.3
Soil P (ppm)	47	34	50	109	61
Soil K (ppm)	223	124	199	226	165
Fertilizer (N,P,K)	117-69-93	117-51-75	113-54-108	135-4-60	117-66-90
Herbicides	None	Quelex	Roundup Sharpen (Pre-Plant)	Harmony Extra SG, Maestro 2EC	Harmony Extra SG, Maestro 2EC
Fungicide	None	Prosaro	Prosaro	Caramba	Caramba
Insecticide	None	None	None	Tombstone	Tombstone
Harvest Date	July 11	July 5	July 10	July 2	June 29

Ohio Wheat Performance Test Sites for 2019



GROWING CONDITIONS

In fall 2018, wheat was planted at three out of the five locations within two weeks of the fly-free date. Due to poor soil conditions, wheat was planted in Marion and Wayne County 16 and 23 days after the fly-free date, respectively. Wheat entered dormancy in good to excellent condition. Early season wheat growth and development were slower than the previous years due to cool temperatures and above average precipitation. However, harvest conditions were favorable and harvest dates average. Results from the Marion County were not included in this report due to extreme field variability caused by high rainfall. Overall, grain test weight averaged 55.0 lb/bu (compared to an average test weight of 55.5 lb/bu in 2018). Across the Wood, Wayne, Darke, and Pickaway locations, grain yield averaged 85.9 bu/acre.

RESULTS

Results of the 2019 wheat performance test are presented in Tables 1-3. Entries in the data tables are arranged by seed source. A least significant difference (LSD) value can be used to determine if the performance of two varieties was statistically different. The yields of two varieties are expected to be significantly different 90 percent of the time if their yields differ by more than the reported LSD value. Flour yield and softness tests were performed by USDA-ARS Soft Wheat Quality Laboratory, at OARDC in Wooster, OH, Dr. Byung-Kee Baik, Director.

Test results for the 73 winter wheat varieties evaluated in 2019 are presented in Table 1. Tables 2 and 3 contain multi-year variety performance data. Depending on variety and test site, yields varied between 68.1 and 105.3 bushels per acre and test weight ranged from 51.9 to 56.9 pounds per bushel. Yield differences between test sites were due primarily to the soil drainage, weather during the grain fill period & harvest, and disease level. Variety selection should be based on disease resistance, average yield across test sites and years (Tables 2 & 3), winter hardiness, test weight and standability.

Table 4 contains susceptibility of winter wheat varieties to various diseases in Ohio. Particular emphasis should be placed on FHB as this is important in reducing vomitoxin in grain. Table 5 contains the company contact information and seed treatments used for each variety entered in the 2019 wheat performance test.

This report can be found on the Internet at: <http://www.oardc.ohio-state.edu/wheattrials>. Any column of data can be sorted by clicking at the top of the column, which makes it easy to arrange varieties in order by any characteristic for comparison purposes.

Inclusion of varieties in the Ohio Wheat Performance Test does not constitute an endorsement of any variety by The Ohio State University, Ohio Agriculture Research and Development Center, or Ohio State University Extension.

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Table 1. Yield and Agronomic Characteristics of Wheat Varieties Tested in Ohio, 2019.

Brand	Variety	Seed	Wood	Wayne	Darke	Pickaway	Avg.	Test Wt.	Seeds/lb.	Lodging	Height	Heading	Flour	Softness
		FT/Row	bu/ac	bu/ac	bu/ac	bu/ac	bu/ac	lb/bu	(1000)	%	in.	Date	%	%
AGI	114	25	88.3	91.9	82.2	93.8	89.1	55.9	13.6	0	34	143	71.2	55.6
AGI	113B	25	80.9	85.4	77.5	90.4	83.6	55.0	14.7	0	34	140	70.4	68.5
AGI	217B	25	87.6	88.8	85.1	105.3	91.7*	54.9	13.2	0	35	142	71.8	65.4
AGI	Bolt	28	78.7	81.8	85.4	96.2	85.5	56.2	17.3	0	34	143	64.6	63.0
AgriMAXX	444	27	78.2	86.5	73.4	92.5	82.7	53.7	13.1	0	35	143	70.9	65.4
AgriMAXX	454	27	85.7	91.6	84.4	100.0	90.4*	54.5	13.4	0	34	142	72.3	66.7
AgriMAXX	463	27	76.0	82.6	91.2	85.4	83.8	54.4	12.9	0	32	142	67.4	60.5
AgriMAXX	473	27	78.2	83.5	74.6	90.7	81.8	54.4	13.0	0	35	143	70.3	62.1
AgriMAXX	485	27	85.0	92.8	82.9	94.0	88.7	55.6	13.2	0	34	143	71.5	55.5
AgriMAXX	486	27	86.8	80.0	81.8	94.1	85.7	55.0	12.5	0	34	144	71.7	57.8
AgriMAXX	495	27	77.3	78.1	78.2	88.3	80.5	56.1	13.6	0	34	143	71.6	67.6
AgriMAXX	1902	27	84.4	87.3	85.1	103.4	90.1*	55.1	13.6	0	33	141	68.8	61.6
AgriPro	SY 100	25	87.1	93.8	82.1	97.1	90.0*	51.9	14.0	0	33	144	70.9	64.6
AgriPro	SY 547	25	83.2	92.2	82.9	98.8	89.3	55.5	12.4	0	35	141	67.8	59.4
AgriPro	SY 576	25	84.3	90.7	79.9	98.7	88.4	54.4	12.1	0	35	145	68.9	62.8
AgriPro	SY Viper	25	79.5	91.2	75.8	90.4	84.2	55.0	11.7	0	36	140	68.5	65.6
Albert Lea	LCS 3334	25	85.7	84.6	85.5	92.3	87.0	56.1	13.7	0	35	142	69.0	63.5
Albert Lea	Viking 191	25	78.4	86.9	79.6	94.9	85.0	53.3	12.9	0	33	142	70.7	61.6
Albert Lea	Viking 207	25	80.9	94.7	85.4	87.9	87.2	53.0	13.5	0	30	143	68.5	67.2
Certified	Kokosing	25	68.9	87.3	81.0	95.9	83.3	54.6	11.6	0	38	141	72.7	63.2
Certified	Starburst	25	74.1	85.4	75.6	93.4	82.1	55.8	15.4	0	31	143	66.4	54.7
Certified	Sunburst	25	73.3	82.1	69.9	81.8	76.8	55.6	14.1	0	31	142	65.4	63.8
CROPLAN	8550	25	82.8	85.6	79.4	92.9	85.2	54.4	12.6	0	36	144	70.1	62.2
CROPLAN	8800	25	81.2	86.5	81.5	92.8	85.5	54.2	14.1	0	35	142	70.6	63.2
CROPLAN	9415	25	82.9	85.6	81.6	92.4	85.6	54.3	13.9	0	34	142	71.0	66.9
CROPLAN	9606	25	81.1	90.0	80.6	85.8	84.4	53.5	13.6	0	34	141	71.6	65.1
Dyna-Gro	9522	27	83.9	90.0	80.8	96.3	87.8	54.8	12.8	0	35	143	71.4	65.4
Dyna-Gro	9692	27	86.6	86.2	86.7	103.1	90.7*	54.9	12.5	0	34	142	71.6	67.8
Dyna-Gro	9701	27	77.3	88.3	70.8	94.4	82.7	54.6	11.8	0	35	143	69.3	54.3
Dyna-Gro	9862	27	86.6	92.4	79.6	92.7	87.8	55.8	13.5	0	33	143	71.8	55.2
Dyna-Gro	9932	27	79.9	87.9	79.3	86.5	83.4	56.6	13.0	0	34	142	71.7	67.0
Dyna-Gro	9941	27	87.7	89.4	82.7	86.6	86.6	54.3	13.1	0	33	141	68.6	58.4
Dyna-Gro	WX18416	27	78.6	87.1	88.2	96.5	87.6	54.9	12.2	0	35	142	70.5	65.6
Dyna-Gro	WX19711	27	83.3	86.7	83.3	99.7	88.3	55.9	12.3	0	32	142	68.0	60.2
Dyna-Gro	WX19713	27	78.7	86.3	82.7	101.3	87.3	56.8	11.4	0	33	143	66.6	64.1
Dyna-Gro	WX19714	27	88.2	90.6	86.2	97.0	90.5*	54.2	12.7	0	33	141	69.0	55.3
Ebberts	903	28	86.6	93.3	90.5	95.3	91.4*	55.8	14.2	0	33	143	71.8	55.2
Ebberts	957	28	72.3	79.5	79.7	88.9	80.1	56.5	13.6	0	31	140	68.9	60.4
Ebberts	988	28	79.3	87.2	85.0	91.0	85.6	56.9	14.1	0	35	141	69.6	65.0
FS Wheat	FS 601	25	84.7	89.4	80.2	97.2	87.9	54.2	13.2	0	33	141	69.3	58.8
FS Wheat	FS 603	25	78.2	83.4	84.4	82.0	82.0	53.9	13.2	0	32	140	70.9	62.0
FS Wheat	FS 622	25	72.7	81.8	69.8	88.0	78.1	56.5	12.4	0	34	141	71.3	63.9
FS Wheat	FS 624	25	81.3	83.8	79.0	87.8	83.0	55.2	12.2	0	36	143	70.1	65.4
KWS	KWS 19X04	25	75.3	92.1	78.5	87.1	83.3	53.7	13.6	0	30	142	67.4	59.2
KWS	KWS 19X09	25	80.1	96.5	83.6	99.0	89.8*	53.9	13.9	0	35	140	70.7	70.1
Limagrain LCS	L11434	25	80.6	76.9	80.7	92.3	82.6	55.8	14.1	0	35	138	67.8	66.3
Limagrain LCS	L11548	25	74.8	86.3	68.1	92.0	80.3	53.5	12.3	0	35	143	72.5	64.6
Limagrain LCS	L11713	25	72.8	82.6	77.7	90.2	80.8	56.5	12.9	0	33	141	69.3	66.9
Limagrain LCS	L11719	25	77.8	86.7	81.8	85.6	83.0	54.6	12.0	0	31	141	69.0	65.7
Local	LW2867	24	85.0	88.5	82.8	91.1	86.9	56.2	14.0	0	33	143	72.4	54.3
Local	LW2937	24	85.7	83.5	82.1	93.8	86.3	54.3	12.1	0	33	141	67.9	50.1
Local	LW2958	24	80.6	84.0	87.1	90.0	85.4	56.6	14.1	0	35	141	70.0	68.9
Rupp	RS 902	24	85.3	89.8	82.7	98.9	89.2	54.7	12.2	0	34	142	72.5	70.1
Rupp	RS 961	24	86.5	91.0	75.1	93.5	86.5	55.9	13.8	0	34	143	72.5	53.4
Rupp	RS 968	24	85.1	90.4	80.3	97.4	88.3	55.4	13.0	0	35	143	72.5	57.2
Seed Consultants	SC 13S19™	23	75.3	82.5	80.3	90.2	82.1	56.9	13.1	0	35	142	69.4	68.3
Seed Consultants	SC 13S26™	23	86.0	90.7	91.2	103.1	92.8**	55.2	12.8	0	35	142	72.6	67.9
Seed Consultants	SC 13S37™	21	84.1	81.1	75.9	88.7	82.5	55.2	13.7	0	33	144	72.4	54.8

Table 1. Yield and Agronomic Characteristics of Wheat Varieties Tested in Ohio, 2019. (continued)

Brand	Variety	Seed	Wood	Wayne	Darke	Pickaway	Avg.	Test Wt.	Seeds/lb.	Lodging	Height	Heading	Flour	Softness
		FT/Row	bu/ac	bu/ac	bu/ac	bu/ac	bu/ac	lb/bu	(1000)	%	in.	Date	%	%
Shur Grow	SG-1537S	28	75.0	82.0	81.0	85.0	80.8	54.1	13.3	0	32	142	67.4	61.5
Shur Grow	SG-1544	28	81.0	91.2	81.6	91.3	86.3	54.5	12.6	0	39	140	70.1	65.5
Shur Grow	SG-1546S	28	83.4	92.0	85.5	98.1	89.8*	55.0	12.8	0	34	142	72.4	70.0
Shur Grow	SG-1547S	28	83.2	89.7	80.5	94.8	87.1	55.7	13.3	0	33	143	70.9	56.8
Strike Genetics	803	24	75.4	86.4	80.0	96.5	84.6	54.3	12.9	0	34	143	71.3	65.6
Strike Genetics	813	24	86.5	85.6	81.6	92.2	86.5	55.5	13.5	0	34	141	68.0	67.3
Wellman	W 302	25	80.2	89.1	79.5	93.1	85.5	54.8	14.3	0	34	140	70.9	67.7
Wellman	W 304	25	86.8	91.3	80.7	100.8	89.9*	54.7	12.8	0	34	142	72.5	69.0
Wellman	W 305	25	85.5	90.5	83.0	93.3	88.1	55.5	14.1	0	34	143	72.6	50.5
Wellman	W 312	25	87.3	88.9	79.2	95.9	87.8	53.8	13.1	0	34	141	69.3	57.7
Wellman	W 314	25	83.4	87.4	79.1	92.3	85.6	56.7	14.0	0	35	141	69.4	69.0
Wellman	W 316	25	84.3	83.9	84.3	98.8	87.8	55.4	12.4	0	35	144	73.0	49.5
Yerks	Y2313	24	78.9	94.9	82.2	92.9	87.2	53.4	13.4	0	38	142	70.9	65.5
Yerks	Y925	24	86.7	92.6	87.0	100.2	91.6*	54.9	12.4	0	35	142	72.2	68.8
Yerks	Y933	24	82.2	88.6	77.1	95.5	85.9	54.7	11.8	0	34	143	71.5	67.6
	High	28	88.3	94.9	91.2	105.3	92.8	56.9	17.3	0	39	145	73.0	70.1
	Average	26	81.6	87.3	81.1	93.5	85.9	55.0	13.2	0	34	142	70.3	62.5
	Low	21	68.9	76.9	68.1	81.8	76.8	51.9	11.4	0	30	138	64.6	49.5
	LSD (P=0.1)		4.1	4.7	6.5	6.0	3.2	0.7			0.8	0.6		
	CV		4.4	4.7	6.9	5.5	9.7	4.0			7.7	5.6		

** Highest Yielding Variety

* Not statistically different from the highest yielding variety.

Table 2. Yield and Agronomic Characteristics of Wheat Varieties Tested in Ohio, 2018 and 2019.

Brand	Variety	YIELD					CHARACTERISTICS			
		Wood	Wayne	Darke	Pick	Avg.	Test Wt.	Lodg.	Ht.	Head Date
		bu/ac	bu/ac	bu/ac	bu/ac	bu/ac	lb/bu	%	in.	
AGI	114	92.1	87.5	81.3	90.0	87.7	55.8	2	33	144
AGI	113B	89.5	85.4	81.4	89.0	86.3	54.3	8	34	140
AGI	217B	95.2	93.2	84.6	99.6	93.1	55.5	0	35	143
AGI	Bolt	86.0	77.4	84.7	91.0	84.8	56.1	5	33	143
AgriMAXX	454	92.4	95.7	82.5	95.2	91.5	55.5	0	34	143
AgriMAXX	463	83.6	81.2	84.0	87.0	83.9	54.4	1	32	142
AgriMAXX	473	83.2	81.3	75.0	88.4	82.0	55.0	1	35	144
AgriMAXX	485	89.4	89.7	80.6	89.8	87.4	55.8	2	33	144
AgriMAXX	486	90.6	81.7	81.5	92.2	86.5	55.4	4	34	144
AgriPro	SY 100	92.1	91.1	81.5	91.2	89.0	52.2	7	33	144
AgriPro	SY 547	89.5	91.7	83.1	94.1	89.6	56.0	0	35	141
Certified	Kokosing	76.7	88.6	79.3	89.8	83.6	55.0	1	37	140
Certified	Starburst	85.9	88.3	76.3	93.2	85.9	56.4	1	31	143
Certified	Sunburst	85.2	84.1	73.6	82.6	81.4	56.6	0	31	143
CROPLAN	8550	88.8	83.2	75.7	88.6	84.0	55.1	0	35	144
CROPLAN	9415	87.1	83.1	79.4	90.1	84.9	55.1	1	32	143
CROPLAN	9606	88.2	87.4	83.2	82.6	85.3	54.1	5	34	142
Dyna-Gro	9522	90.3	90.2	80.5	93.6	88.6	55.5	0	34	144
Dyna-Gro	9692	92.6	91.8	85.6	97.2	91.8	55.6	2	35	143
Dyna-Gro	9701	88.8	87.8	76.2	87.8	85.1	55.2	2	35	143
Dyna-Gro	9862	90.3	89.3	80.4	90.2	87.5	56.0	3	33	144
Dyna-Gro	9941	94.6	88.8	82.7	87.0	88.3	54.2	4	33	142
Ebberts	903	91.8	91.0	85.8	91.6	90.0	56.0	4	33	144
Limagrain LCS	L11719	87.1	83.7	78.6	87.2	84.2	55.3	0	31	142
Rupp	RS 902	92.5	92.9	83.1	93.7	90.5	55.3	1	34	143
Rupp	RS 961	89.0	89.0	77.8	87.3	85.7	56.0	3	33	144
Rupp	RS 968	91.5	91.7	80.3	92.4	89.0	55.5	1	35	144
Seed Consultants	SC 13S26™	93.2	95.0	86.8	97.6	93.1	55.7	0	35	143
Seed Consultants	SC 13S37™	89.1	82.6	78.8	86.2	84.2	55.5	4	33	144
Shur Grow	SG-1537S	83.6	83.6	78.9	84.8	82.7	54.2	1	32	142
Shur Grow	SG-1544	88.7	92.1	80.7	89.8	87.8	54.9	2	39	141
Shur Grow	SG-1546S	90.6	95.0	85.9	94.7	91.5	55.6	0	34	143
Shur Grow	SG-1547S	88.5	88.1	81.3	91.6	87.4	55.9	4	33	144
Strike Genetics	803	85.6	87.2	81.0	91.2	86.2	54.9	4	34	144
Wellman	W 302	86.7	90.1	82.0	90.7	87.4	54.6	5	34	141
Wellman	W 304	91.9	93.8	82.8	96.5	91.3	55.6	0	34	143
Wellman	W 305	92.7	88.0	83.8	88.4	88.2	55.9	3	33	144
Wellman	W 312	94.1	85.5	79.7	92.4	87.9	53.8	5	33	141
Wellman	W 316	88.4	88.4	83.3	95.0	88.7	55.5	1	34	144
Yerks	Y2313	87.8	94.1	83.6	91.3	89.2	54.2	1	37	143
Yerks	Y925	90.4	94.4	85.2	95.3	91.3	55.5	0	35	143
Yerks	Y933	88.7	86.2	78.5	89.6	85.7	55.2	3	34	143
	High	95.2	95.7	86.8	99.6	93.1	56.6	8	39	144
	Average	89.1	88.3	81.2	90.9	87.4	55.2	2	34	143
	Low	76.7	77.4	73.6	82.6	81.4	52.2	0	31	140

Table 3. Yield and Agronomic Characteristics of Wheat Varieties Tested in Ohio, 2017–2019.

Brand	Variety	YIELD					CHARACTERISTICS			
		Wood bu/ac	Wayn bu/ac	Dark bu/ac	Pick bu/ac	Avg. bu/ac	Test Wt. lb/bu	Lodg. %	Ht. in.	Head Date
AGI	217B	101.3	101.2	89.2	98.9	97.7	55.7	0	36	140
AGI	Bolt	92.6	88.0	86.3	89.9	89.2	56.2	3	35	141
AgriMAXX	454	100.0	102.6	86.6	96.6	96.5	55.8	0	35	140
AgriMAXX	463	90.7	89.4	83.3	89.0	88.1	54.7	0	34	140
AgriMAXX	485	97.2	97.8	83.2	93.3	92.9	56.1	1	34	141
AgriMAXX	486	96.2	93.7	81.5	95.5	91.7	55.5	3	36	141
AgriPro	SY 100	100.3	100.3	86.2	92.7	94.9	52.9	5	34	141
AgriPro	SY 547	95.6	98.6	83.3	94.2	92.9	55.9	0	37	139
Certified	Kokosing	86.0	96.3	83.1	88.4	88.4	55.3	1	38	138
Certified	Starburst	93.2	95.2	77.3	94.4	90.0	56.7	0	32	141
Certified	Sunburst	92.0	93.0	76.0	87.3	87.1	56.9	0	33	141
CROPLAN	9415	95.4	95.8	82.1	88.0	90.3	55.5	1	34	140
CROPLAN	9606	98.1	97.6	85.5	87.0	92.1	54.5	4	35	140
Dyna-Gro	9522	98.9	98.3	82.2	93.0	93.1	55.7	0	35	141
Dyna-Gro	9692	99.7	101.1	89.8	96.3	96.8	55.8	1	36	140
Dyna-Gro	9701	96.2	96.6	79.5	90.0	90.6	55.6	1	36	141
Dyna-Gro	9862	98.4	95.8	84.0	93.5	92.9	56.2	2	34	141
Ebberts	903	97.9	97.8	85.4	92.6	93.4	56.2	3	34	141
Rupp	RS 902	99.5	99.8	87.1	95.5	95.5	55.6	0	35	140

Brand	Variety	YIELD					CHARACTERISTICS			
		Wood bu/ac	Wayn bu/ac	Dark bu/ac	Pick bu/ac	Avg. bu/ac	Test Wt. lb/bu	Lodg. %	Ht. in.	Head Date
Rupp	RS 961	96.4	96.6	82.8	90.5	91.6	56.2	2	34	141
Seed Consultants	SC 13S26™	98.8	101.0	88.9	98.1	96.7	55.9	0	35	140
Seed Consultants	SC 13S37™	96.0	93.3	82.3	90.1	90.4	55.8	3	34	142
Shur Grow	SG-1537S	89.7	91.9	79.1	87.6	87.1	54.5	1	34	140
Shur Grow	SG-1544	96.3	97.7	82.2	91.4	91.9	54.9	1	40	138
Shur Grow	SG-1546S	97.5	104.1	88.4	94.4	96.1	55.7	0	35	140
Shur Grow	SG-1547S	95.7	97.8	85.7	94.4	93.4	56.1	3	34	141
Strike Genetics	803	95.3	96.4	83.6	92.7	92.0	55.5	2	35	141
Wellman	W 302	96.1	98.4	84.8	94.0	93.3	55.3	4	36	138
Wellman	W 304	99.5	101.0	88.7	96.6	96.4	55.9	0	35	140
Wellman	W 305	98.3	96.6	85.1	89.5	92.4	56.0	2	34	141
Wellman	W 312	101.8	96.4	83.2	94.7	94.0	54.3	3	34	139
Wellman	W 316	93.1	97.9	84.0	98.0	93.2	55.5	0	36	141
Yerks	Y2313	96.5	102.4	84.3	93.1	94.1	54.8	1	37	140
Yerks	Y925	97.9	102.6	89.3	96.2	96.5	55.8	0	36	140
	High	101.8	104.1	89.8	98.9	97.7	56.9	5	40	142
	Average	96.4	97.5	84.2	92.9	92.7	55.6	1	35	140
	Low	86.0	88.0	76.0	87.0	87.1	52.9	0	32	138

Table 4. Reaction of Winter Wheat Varieties to Various Diseases in Ohio.

Brand	Variety	PM	PM	SLB	SGB	FHB
		2018	2017	2018	2018	2019
AGI	114	S	.	MS	S	MR
AGI	113B	.	.	.	.	MS
AGI	217B	S	S	MS	R	MR
AGI	Bolt	MS	MR	S	R	MR
AgriMAXX	444	.	.	.	.	MR
AgriMAXX	454	S	S	MR	R	MR
AgriMAXX	463	S	MS	R	MS	.
AgriMAXX	473	S	.	S	S	MS
AgriMAXX	485	S	S	MS	S	MR
AgriMAXX	486	S	MS	S	MR	MR
AgriMAXX	495	.	.	.	.	MR
AgriMAXX	1902	.	.	.	.	.
AgriPro	SY 100	MS	MR	MR	MR	MS
AgriPro	SY 547	MS	R	R	R	MR
AgriPro	SY 576	.	.	.	.	MR
AgriPro	SY Viper	.	.	.	.	S
Albert Lea	LCS 3334	.	.	.	.	MR
Albert Lea	Viking 191	.	.	.	.	S
Albert Lea	Viking 207	.	.	.	.	S
Certified	Kokosing	R	MR	R	S	MR
Certified	Starburst	MR	R	R	MS	MR
Certified	Sunburst	MR	R	R	R	MR
CROPLAN	8550	S	.	MS	S	MS
CROPLAN	8800	.	.	.	.	MR
CROPLAN	9415	S	MS	S	MR	S
CROPLAN	9606	S	MS	S	MS	MS
Dyna-Gro	9522	S	MS	MR	R	MR
Dyna-Gro	9692	S	S	S	R	MR
Dyna-Gro	9701	.	.	MS	MS	MS
Dyna-Gro	9862	.	.	MR	MS	MR
Dyna-Gro	9932	.	.	.	.	MR

Brand	Variety	PM	PM	SLB	SGB	FHB
		2018	2017	2018	2018	2019
Dyna-Gro	9941	S	.	MR	S	MR
Dyna-Gro	WX18416	.	.	.	.	MR
Dyna-Gro	WX19711	.	.	.	.	MR
Dyna-Gro	WX19713	.	.	.	.	MR
Dyna-Gro	WX19714	.	.	.	.	MR
Ebberts	903	S	MS	R	S	MR
Ebberts	957	.	.	.	.	MR
Ebberts	988	.	.	.	.	MR
FS Wheat	FS 601	.	.	.	.	MR
FS Wheat	FS 603	.	.	.	.	MR
FS Wheat	FS 622	.	.	.	.	MR
FS Wheat	FS 624	.	.	.	.	S
KWS	KWS 19X04	.	.	.	.	MR
KWS	KWS 19X09	.	.	.	.	MR
Limagrain LCS	L11434	.	.	.	.	MR
Limagrain LCS	L11548	.	.	.	.	MS
Limagrain LCS	L11713	.	.	.	.	MR
Limagrain LCS	L11719	MS	.	S	MS	S
Local	LW2867	.	.	.	.	MR
Local	LW2937	.	.	.	.	MR
Local	LW2958	.	.	.	.	S
Rupp	RS 902	S	S	MS	R	MR
Rupp	RS 961	S	MS	MR	MR	MR
Rupp	RS 968	S	.	MS	MS	S
Seed Consultants	SC 13S19™	.	.	.	.	MR
Seed Consultants	SC 13S26™	S	S	MS	R	MR
Seed Consultants	SC 13S37™	.	.	MS	S	MR
Shur Grow	SG-1537S	.	.	R	S	MR
Shur Grow	SG-1544	.	.	MS	R	MS

Table 4. Reaction of Winter Wheat Varieties to Various Diseases in Ohio. (continued)

Brand	Variety	PM	PM	SLB	SGB	FHB
		2018	2017	2018	2018	2019
Shur Grow	SG-1546S	S	S	S	R	MR
Shur Grow	SG-1547S	S	MS	MR	MS	MR
Strike Genetics	803	S	MS	R	R	MS
Strike Genetics	813	.	.	.	.	S
Wellman	W 302	S	MS	MS	MS	MS
Wellman	W 304	S	S	MS	R	MR
Wellman	W 305	S	MS	MS	MS	MR
Wellman	W 312	S	MS	MR	MS	MS
Wellman	W 314	.	.	.	.	MR
Wellman	W 316	.	.	.	.	MS
Yerks	Y2313	S	MS	MS	MR	MR
Yerks	Y925	S	S	MS	R	MR
Yerks	Y933	S	.	MS	R	MS

Powdery mildew (caused by *Blumeria graminis* f. sp. *tritici*) was evaluated on a 0 to 10 scale at Wooster at the heading (Feekes growth stage 10.5) growth stage. Varieties were then ranked as Susceptible (S: score ≥ 8), Moderately Susceptible (MS: score > 5 and < 8), Moderately Resistant (MR: score > 3 and < 5) and Resistant (R: score < 3).

Varieties were evaluated for *Stagonospora* leaf blotch (SLB) and glume blotch (SGB) in an inoculated, mist-irrigated disease screening nursery at Wooster. Both SLB and SGB severity were rated at about Feekes growth stage 11.3 as the average percent flag leaf and spike area diseased, respectively.

For additional disease information and wheat varieties, please visit our web site: oardc.ohio-state.edu/ohiofieldcropdisease

Table 5. Ohio Wheat Performance Test, 2019—Seed Source & Seed Treatment. (continued)

Dyna-Gro	Dyna-Gro Seed 8947 County Rd. 84 Findlay, OH 45840 419-859-2131 www.dyna-groseed.com	9522 9692 9701 9862 9932 9941 WX18416 WX19711 WX19713 WX19714	Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock Awaken ST / Foothold Virock
Ebberts	Ebberts Field Seeds Inc. 6840 North State Route 48 Covington, OH 45318 973-473-2521 www.ebbertsseeds.com	903 957 988	Vibrance Extreme Vibrance Extreme Vibrance Extreme
FS Wheat	GROWMARK, Inc. 1701 Towanda Avenue Bloomington, IL 61701 309-557-6000 www.fsseeds.com	FS 601 FS 603 FS 622 FS 624	CruiserMaxx / Vibrance CruiserMaxx / Vibrance CruiserMaxx / Vibrance CruiserMaxx / Vibrance
KWS	KWS Cereals 4101 Colleen Dr. Champaign, IL 61822 217-800-1008 www.kws.com	KWS 19X04 KWS 19X09	CruiserMaxx / Vibrance CruiserMaxx / Vibrance
Limagrain LCS	Limagrain Cereal Seeds 257 E. Hail Street Bushnell, IL 61422 309-569-0008 www.LimagrainCerealSeeds.com	L11434 L11548 L11713 L11719	CruiserMaxx / Vibrance CruiserMaxx / Vibrance CruiserMaxx / Vibrance CruiserMaxx / Vibrance
Local	Local Seed Company, LLC 802 Rozelle Street Memphis, TN 38104 901-260-6000 www.localseed.com	LW2867 LW2937 LW2958	CruiserMaxx / Vibrance CruiserMaxx / Vibrance CruiserMaxx / Vibrance
Rupp	Rupp Seeds, Inc. 17919 County Rd. B Wauseon, OH 43567 419-337-1841 www.ruppseeds.com	RS 902 RS 961 RS 968	Rancona / SabrEx Rancona / SabrEx Rancona / SabrEx
Seed Consultants	Seed Consultants, Inc. 648 Miami Trace Rd. SW Washington Courthouse, OH 43160 800-708-2676 www.seedconsultants.com	SC 13S19™ SC 13S26™ SC 13S37™	Dividend Extreme / Vibrance Dividend Extreme / Vibrance Dividend Extreme / Vibrance
Shur Grow	Heritage Cooperative, Inc. 11177 Township Rd. 133 West Mansfield, OH 43358 800-321-7333 www.heritagecooperative.com	SG-1537S SG-1544 SG-1546S SG-1547S	Warden Cereals II Warden Cereals II Warden Cereals II Warden Cereals II
Strike Genetics	Burtch Seed Co., Inc. 4742 Tama Rd. Celina, OH 45822 419-363-3713 www.burtchseed.com	803 813	Vibrance Extreme Vibrance Extreme
Wellman	Wellman Seeds, Inc. 23778 Delphos Jennings Rd. Delphos, OH 45833 800-717-7333 www.wellmanseeds.com	W 302 W 304 W 305 W 312 W 314 W 316	Encase Encase Encase Encase Encase Encase
Yerks	Yerks Seed, Inc. 20202 Notestine Rd. Woodburn, IN 46797 260-657-5127	Y 2313 Y 925 Y 933	CeresUS IM CeresUS IM CeresUS IM

Table 5. Ohio Wheat Performance Test, 2019—Seed Source & Seed Treatment.

Brand	Producer	Variety	Seed Treatment
AGI	Advanced Genetics, Inc. 11491 Foundation Rd., Box 6 Croton, OH 43013 740-893-2501 www.advancedgeneticsinc.com	114 113B 217B Bolt	CeresUS IM CruiserMaxx / Vibrance CeresUS IM Release LC / Takeoff
AgriMAXX	AgriMAXX Wheat Company 7167 Highbanks Rd. Mascoutah, IL 62258 855-629-9432 www.agrimaxxwheat.com	444 454 463 473 485 486 495 1902	Prime ST Prime ST Prime ST Prime ST Prime ST Prime ST Prime ST Prime ST
AgriPro	Burtch Seed Co., Inc. 4742 Tama Rd. Celina, OH 45822 419-363-3713 www.burtchseed.com	SY 100 SY 547 SY 576 SY Viper	Vibrance Extreme CruiserMaxx / Vibrance CeresUS IM Vibrance Extreme
Albert Lea	Albert Lea Seed P.O. Box 127 1414 W. Main Street Albert Lea, MN 56007 800-352-5247 www.alseed.com	LCS 3334 Viking 191 Viking 207	CeresUS IM CruiserMaxx / Vibrance CruiserMaxx / Vibrance
Certified	Ohio Seed Improvement Assn. 6150 Avery Rd., Box 477 Dublin, OH 43017 614-889-1136 www.ohseed.org	Kokosing Starburst Sunburst	CeresUS Trio CeresUS IM CeresUS IM
CROPLAN	Winfield United 1080 County Road F West, MS 5850 Shoreview, MN 55126 631-375-6620 www.winfieldunited.com	8550 8800 9415 9606	Resonate 480 ST / Warden Cereals II Resonate 480 ST / Warden Cereals II Resonate 480 ST / Warden Cereals II Resonate 480 ST / Warden Cereals II