

# Michigan State Wheat Performance Trials: 2014

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## Comments on the 2014 Wheat Growing Season

The 2014 Michigan wheat crop sustained severe damage due to ice-sheeting and cold temperatures during the winter months. Estimates of crop losses are as high as 15 percent. Despite injured crowns and late spring green-up, overall crop yields were relatively good due largely to some timely rainfall and mostly cool temperatures throughout the grain-fill period.

Leaf diseases developed relatively slowly through the early jointing stages with only modest levels of powdery mildew and Septoria leafspot. As wheat matured, leaf rust and Stagonospora leaf blotch were the most prominent diseases found on flag leaves. No cases of stripe rust and stem rust were reported. Viral diseases, including barley yellow dwarf mosaic and wheat streak mosaic, were readily found but are not thought to have had a significant impact on the crop. Fusarium head scab was evident in most fields but levels were considered relatively low.

Harvest was relatively late this year due to the season's unusually cool temperatures. To date, the harvested crop is reported to have good quality with mostly low DON levels and acceptable Falling Number scores.

## Choosing Varieties

Growers should be aware that the grain of varieties with equal yield and test weight are not necessarily of equal value when delivered for sale. DON content and shriveled grain can result in significant discounts at the point of sale. This report provides across site and single site data for test weight which gives some indication of the degree to which a variety avoided shriveled grain. It is, however, possible for two varieties to have identical and acceptable test weight but differ in degree of grain shriveling.

Although wheat producers are always interested in how varieties perform in a given year and location, performance in a single year and location should never be used in selecting a variety to plant. It is best to select a variety on the basis of data from at least three years of testing. Varieties selected with such comparisons are more likely to perform well under a wide range of conditions. In any given year or at any given site, several varieties will usually fall into the group of 'highest yielding' varieties. The composition of that group, and the identity of the absolute "winner", can and does change from location to location and year to year. This means that the single best variety cannot be determined in advance for a specific site. However, you can identify a group of varieties that is likely to contain the winners in the upcoming season. We recommend that you plant two or more varieties, and where possible, choose varieties which will flower at different times in order to reduce the risk of scab infection which is most likely to occur when rain coincides with flowering.

**Disclaimer: MSU makes no endorsement of any wheat variety or brand.**

## Experimental

The 2014 State Wheat Performance Trial entries were planted at seven sites in 6 counties: Allegan, Huron, Ingham (2), Lenawee, Sanilac, and Tuscola. Appendix A (below) presents information on each of these sites. The Sanilac and Lenawee sites were abandoned due to severe water and ice damage. Each plot contained 6 rows with 7.5" row spacing and was planted to a length of 18 feet. Plots were trimmed to a length of 12 feet long in the spring for harvesting purposes. The Allegan and Huron sites were designed as four replications, while Ingham and Tuscola were designed as three replications. All sites were designed using the nearest neighbor design (RCBD). All seed was treated, but the chemicals and rates used varied according to the preferences of the originating organization. Seeding rates per linear foot of row were standardized to the rate that would equate with a stand of 2.0 million seeds per acre in a solid stand planted in 7.5" rows. Fall fertilizer application varied with cooperator practice. Spring nitrogen was applied as urea (90 lbs/acre actual N) at green-up and Affinity BroadSpec was used for weed control at all sites.

Except for an additional three replicated trial at the Ingham site, all sites were coordinated under high management. Under high management, an additional 40 pounds of nitrogen was applied using streamer bars and 28%. Quilt was applied at Feekes 8.5 - 9 to control lower-canopy and early-season diseases. Prosaro was applied to control late season fungal diseases. The timing of the Prosaro application coincided with the average flowering date of the trial location.

All plots at a site were harvested on a single day. Yield was calculated using the entire area of the plot including the wheel tracks between plots. This approach tends to underestimate yield. For data reported on a 0-9 scale 0 is the best possible score.

### **Multi-Year Performance Summary (Tables 1 - 5)**

Tables 1 through 5 summarize performance of the trial. The full trial included 90 entries (22 of which were experimental lines) from 20 organizations, including Michigan State University, and data analyses were conducted using all of these entries. For ease of viewing, two versions of the report are available. The “commercial only” version (available online and in the “Michigan Farm News” publication) includes the data of 68 commercially available varieties from 17 organizations only. The “including experimentals” version (online only) includes all 90 commercial and experimental lines. Attached to this narrative is a list of the names and contact information for those organizations. Each line in these tables has data for a single entry. The columns contain averages for a given trait and time period. Data for all of the entries in this trial are not presented here. However, the averages and statistical parameters in this report are based on the entire set of evaluated materials. **Comparisons among entries are only valid within a column** (not across columns for a single trait). Tables 1 through 5 are sorted first by entry grain color, and then in descending order by yield for 2014. In some instances (e.g. yield), data columns to the right of the 2014 data columns are multi-year averages. Only data for entries included in all of the relevant years’ tests are found here. Not all entries have been tested in all years, so the tables have several blank cells. See the section titled ‘Experimental’ for details on how the trials were conducted and for more detail on what the data in each column represents.

At the bottom of most columns in the tables is the trial average (mean), LSD (least significant difference), and CV (coefficient of variation) for data in that column. LSD values vary among traits and data sets (combinations of sites and years). Differences between the means for two entries that are greater than the LSD for that column are very likely to reflect a genuine difference between the two varieties. If the difference between two means is smaller than the LSD for that column, one should conclude that there is **no evidence that those entries are different for that trait** in the years and sites considered. The CV is indicative of a trial’s precision. Trials with low levels of error variation have lower CV values. Traits for which scores on a 0-9 scale are employed generally have very high CV values.

Table 1 contains data for yield, test weight, and grain moisture. This data was acquired electronically on the plot combine at the time of harvest. Yield data is standardized to 13.5% moisture. The 2014 yield data contains the multi-site yield averages of only the high management sites and does not included the single site of conventionally managed yield data in Ingham County. The conventionally managed single site data can be found on table 6 under the “Ingham conventionally managed” columns. Table 1 also contains grain color, chaff color, and degree of awnedness. For degree of awnedness, “Awnless” indicates no awns or awns only present at the tip of the spike, “Awnletted” (short awns on the spike), or “Awned” (long awns on the entire spike). Lodging scores are presented on table 1 as well. Lodging is scored on 0 – 9 scale, where 0 represents all plants fully erect and 9 indicates the entire plot is lodged completely on the ground.

Table 2 contains data for pre-harvest sprout, flowering date, plant height, powdery mildew, winter injury, leaf blotch, wheat streak mosaic virus, and barley yellow dwarf virus. Pre-Harvest Sprouting is reported as extend of visual sprouting on a 0 to 9 scale with 0 being no sprouting and 9 being extensive sprouting. The flowering date indicates the average number of days past January 1st that a given entry reached the point where ½ of its heads were flowering. Plant height is reported as the distance in inches from the ground to the tip of average heads in a plot. Disease scores are recorded as “0 = no visual symptoms of disease present”. Powdery mildew scores are based on observations of the entire plant including the flag leaf. The causal organism(s) of the leaf blotching were not identified, but were likely a combination of *Septoria tritici* and *Stagonospora nodorum*. Barley yellow dwarf virus scores are from 2013 growing season.

The data on Pre-Harvest Sprouting (PHS) were generated experimentally. Spikes from two trial replicates were harvested at physiological maturity, after-ripened in the greenhouse five days, periodically misted for three days to simulate rainfall, and placed at 100% humidity for three days. Three spikes were rated for visual sprouting. PHS is reported as extent of visual sprouting on a 0 to 9 scale with 0 indicating no sprouting and 9 indicating extensive sprouting of all spikelets.

Table 3 contains data for leaf rust, stripe rust, Fusarium Head Blight (FHB, scab) and the associated mycotoxin deoxynivalenol (DON, VOM), and percent black point (tip) on the grain. Stripe rust and leaf rust scores are based primarily on infection observations on the flag leaf. Stripe rust scores are from 2013 growing season and earlier. Scab data were obtained from the Ingham misted/inoculated scab screening nursery. The Ingham scab nursery was inoculated (from lab-produced infected grain spread onto the field), and artificial misting was employed throughout the entire flowering period. Each wheat head (i.e., 'spike') is comprised of roughly 14-22 "spikelets", which bear the developing seed. Spikelets that prematurely die because of scab infection are called "scabby" spikelets. Field symptom data reported here are based on: 1) the percent of spikes showing any scabby spikelets (incidence); 2) the percent of scabby spikelets within infected spikes (severity); and 3) the percent of scabby spikelets considering all spikes (scab index). The scab index is derived from multiplying the incidence and severity, and is a measure of the extent of damage to entire plots due to scab infection. Deoxynivalenol data is from harvested grain in the inoculated, mist irrigated, scab screening nursery and is reported in parts per million (ppm). The grain was analyzed for DON at the University of Minnesota using gas chromatography mass spectrometry. DON data is from the 2013 and prior crop years. Black point is reported on a percentage basis (percent of seeds with visible black point). Black point is the discoloration of the embryo (germ) end and surrounding areas of the wheat kernel. The embryo tip shows a black to brown discoloration that may extend into the crease of the kernel. Visual observations consisted of 500 seed lots from one rep at each location observed. The data presented is the average percent of kernels discolored from the 2013 harvest season and earlier.

Table 4 through 5 contains data for milling and baking quality. Quality data are from the 2013 harvest season and prior. Data were generated by the USDA Eastern Soft Wheat Quality Laboratory in Wooster, Ohio on grain harvested from the Michigan State Variety trial each year. Flour yield is the ratio of the weight of extractable flour to the weight of milled grain, expressed as a percentage. Softness equivalent percent is the softness of the flour, with higher values indicating softer grained wheat's. The quality lab test weight is not identical to the test weight at harvest due to grain drying and grain cleaning prior to quality laboratory test weight evaluation. Solvent Retention Capacity (SRC) can be conducted on flour using several different solvents and reflects different characteristics of flour quality. Water SRC is correlated to and intended to predict Farinograph water absorption. Sucrose SRC is a measure of pentosan content, which can strongly affect water absorption in baked products. Soft wheat flour for cookies typically have a target of 95% or less when used by the US baking industry for biscuits and crackers. Sodium carbonate SRC increases as starch damage due to milling increases. Normal values for good milling soft varieties are 68% or less. Lactic acid measures gluten strength with "weak" soft varieties having values below 85% and strong gluten soft varieties having values, typically, above 105% or 110%. For cookie diameter, a larger diameter is better. Whole grain protein (%) and whole grain hardness are being reported with 0-100, and higher values indicating harder wheat.

### **Single Site Yield Performance Summary (Table 6)**

Table 6 contains yield (adjusted to 13.5% moisture), test weight, and harvest moisture data from each of the four sites harvested for yield in 2014. Each row in the table represents a single entry in the test. It is recommended that single site / single year data not be used to make variety choice decisions. Table 6 is sorted first by organization and then by variety or brand name.

Five of our experimental sites are on private farmland. We are extremely grateful to those growers for accommodating our work and all of the associated inconveniences. Funding for the high-management trial inputs was provided by the Michigan Wheat Program. Questions and comments regarding the research reported here should be directed to Eric Olson (517) 355-0271 Ext. 1142. This report, along with previous year's reports, may also be accessed through the Web at <http://www.varietytrials.msu.edu/wheat>

# 2014 Michigan State University Wheat Performance Trials

Appendix A. Trial Site Descriptions for 2014 MSU Wheat Performance Trials.

	ALLEGAN COUNTY	HURON COUNTY	CONV. MANAGED	INGHAM COUNTY HIGH MANAGEMENT	SCAB NURSERY	LENAWEE COUNTY	SANILAC COUNTY	TUSCOLA COUNTY
COOPERATOR	Harvey Jipping	Darwin Sneller	Michigan State University	Michigan State University	Michigan State University	Woods Seed Farm	Stoutenburg Farms	Stuart Bierlein
NEAREST CITY	Hamilton	Sebewaing	Mason	Mason	East Lansing	Britton	Sandusky	Richville
PLANTING DATE	Oct. 15, 2013	Oct. 12, 2013	Sept. 28, 2013	Sept. 28, 2013	Oct. 28, 2013	Oct. 11, 2013	Oct. 1, 2013	Sept. 27, 2013
HARVEST DATE	July 22, 2014	July 24, 2014	July 17, 2014	July 21, 2014	N/A	N/A	N/A	July 23, 2014
SOIL TYPE	Capac loam, 0 to 6 percent slopes	Tappan loam; 0 to 1 percent slopes	Capac loams, 0 to 3 percent slopes	Capac loams, 0 to 3 percent slopes	Capac sandy loams, 0 to 3 percent slopes and Colwood-Brookston loams, 0 to 2 percent slopes	Lenawee silty clay loam, 0 to 3 percent slopes	Parkhill loam and clay loam, 0 to 2 percent slopes	Tappan-Londo Loam, 0-2 percent slope
PRE-PLANT FERTILIZER	None	300# 6-20-30 +.1%S + .5%Zn	150# 6-24-24	150# 6-24-24	150# 6-24-24	250# 9-23-30	210# 5-17-35 + 0.4%S + 0.4%Zn	300# 13-8-24 +7% S + 0.83% Zn + 0.47% Mn + 0.13% Cu +0.13% B
COMMENTS	Additional Spring Nitrogen And Fungicides Were Applied.	Slight Spring Water/Ice Damage. Additional Spring Nitrogen And Fungicides Were Applied.	Slight Spring Water/Ice Damage.	Slight Spring Water/Ice Damage. Additional Spring Nitrogen And Fungicides Were Applied.	Inoculated / Misted Fusarium Head Blight Screening Nursery.	Abandoned Due To Severe Winter Kill	Abandoned Due To Severe Winter Kill	Spring Water/Ice Damage. Severe Wheat Streak Mosaic Virus. Additional Spring Nitrogen And Fungicides Were Applied.
AVERAGE YIELD (BUSHEL / ACRE)	91.5	86.0	71.0	84.3	N/A	N/A	N/A	92.9
AVERAGE TEST WEIGHT (LBS. / BUSHEL)	58.5	59.0	57.6	59.2	N/A	N/A	N/A	59.2
AVERAGE PERCENT GRAIN MOISTURE AT HARVEST	15.1	17.6	15.1	14.4	N/A	N/A	N/A	14.9
2014 DATA RECORDED (NUMBER OF REPS)		W_INJ (4);	FD (3); PM (3); SEPT (3); PL_HT (3); LODGE (3)	FD (3); PL_HT (3); LODGE (3)	%INC.(4); %SEV. (4); INDEX (4)			W_INJ (3); FD (3); WSMV (3)

\*DATA: **FD** – Flowering Date (Days Past Jan. 01), **PL\_HT** - Plant Height in Inches, **SEPT** - Septoria Leaf Blotch Score (0-9), **WSMV** - Wheat Streak Mosaic Virus Score (0-9), **W\_INJ** - Winter Injury Score (1-5), **LODGE** - Lodging Score (0-9), **LRUST** - Leaf Rust Score (0-9), **SRUST** - Stripe Rust Score (0-9), **PM** - Powdery Mildew Score (0-9), **%INC** - Percent Incidence of FHB, **%SEV** - Percent of Severity of FHB, **INDEX** - Product of the Incidence X Severity / 100

\*\* SCORING INFORMATION: Score of 0 = Best Rating - Score of 9 = Poor Rating / Scores (1 - 5) 1 = No Winter Kill; 5 = Zero - Very Few Live Plants

**ORGANIZATIONS PARTICIPATING IN THE 2014  
MICHIGAN STATE UNIVERSITY WHEAT PERFORMANCE TRIALS**

AgriMAXX Wheat Company  
7167 Highbanks Road  
Mascoutah, IL 62258  
Phone: 855-629-9432

D.F. Seeds, Inc.  
P.O. Box 159  
905 S. Jackson St.  
Dansville, MI 48819  
Phone: 517-623-6161

Dyna-Gro Seed  
6221 Riverside Drive, Suite One  
Dublin, OH 43017-0477  
Phone: 614-761-4110

G.B. Seed & Service  
5453 136<sup>th</sup> Ave.  
Hamilton, MI 49419  
616-836-4185

Hyland Seeds  
5 Hyland Drive  
Blenheim, Ontario N0PIA0  
Phone: 519-676-8146

Michigan Crop Improvement Association  
P.O. Box 21008  
Lansing, MI 48909  
Phone: 517-332-3546

Rupp Seeds, Inc.  
17919 Co Rd. B  
Wauseon, OH 43567  
Phone: 419-337-1841

Sunstar Hybrids  
14993 State Road 17  
Culver, IN 46511-9642  
Phone: 574-842-2775

Virginia Tech / VCIA  
2229 Menokin Road  
Warsaw, VA 22572  
Phone: 804-333-3485

BioTown Seeds  
P.O. Box 299  
Reynolds, IN 47980  
Phone: 219-984-6038

DuPont Pioneer  
59 Greif Parkway, Suite 200  
Delaware, OH 43015  
Phone: 740-657-6156

Equity Seed  
P.O. Box 978  
Westfield, IN 46074  
Phone: 317-910-2140

Harrington Seeds, Inc.  
2586 Bradleyville Road  
Reese, MI 48757  
Phone: 989-868-4750

Irrer Seed Farm  
9621 Dexter Trail  
Fowler, MI 48835  
Phone: 989-593-3453

Ohio Seed Improvement Association  
6150 Avery Road, P.O. Box 477  
Dublin, OH 43017-0477  
Phone: 614-889-1136

Steyer Seeds  
P.O. Box 209  
Old Fort, OH 44861  
Phone: 800-231-4274

Syngenta  
2426 Webster Rd RR1  
Monroeville, IN 46773  
Phone: 260-248-1700

Wellman Seeds, Inc.  
23778 Delphos Jennings Road  
Delphos, OH 45833  
Phone: 419-695-9010

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

**Table 1 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)**

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Chaff Color	Awns	Yield: Bushels/Acre (Adjusted to 13.5% Moisture)				Test Weight: lbs/Bushel				Percent Grain Moisture at Harvest				Lodging Score (0-9) (0=None)		Organization
				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year		
				2 YR	3 YR	4 YR	2014	2 YR	3 YR	4 YR	2014	2 YR	3 YR	4 YR	2014	2 YR	2013-14	
				2013-14	2012-14	2011-14	2013-14	2012-14	2011-14	2013-14	2012-14	2011-14	2013-14	2012-14	2011-14	2013-14		
Diener 512	Red	White	Awnless	96.9	92.8	-----	-----	58.2	57.6	-----	-----	16.6	15.2	-----	-----	7.3	5.0	Bio-Town Seeds, Inc.
DF EX R C-1	Red	White	Awnless	96.5	-----	-----	-----	60.6	-----	-----	-----	15.5	-----	-----	-----	2.0	-----	D.F. Seeds, Inc.
Steyer Hunker	Red	White	Awnless	96.3	93.0	92.9	-----	58.1	57.7	57.9	-----	16.4	14.9	14.7	-----	8.0	5.4	Steyer Seeds
9223	Red	White	Awnless	96.2	93.1	93.3	-----	58.6	58.0	58.3	-----	16.4	14.9	14.5	-----	6.3	4.5	Dyna-Gro Seed
RS 9XP10	Red	White	Awned	96.1	-----	-----	-----	61.0	-----	-----	-----	15.1	-----	-----	-----	2.0	-----	Rupp Seeds, Inc.
W 206	Red	White	Awned	96.0	93.4	-----	-----	60.8	60.2	-----	-----	15.4	14.3	-----	-----	2.0	1.8	Wellman Seeds, Inc.
AgriMAXX 438	Red	White	Awnless	95.9	92.6	-----	-----	58.6	58.0	-----	-----	16.6	15.0	-----	-----	9.0	6.5	AgriMAXX Wheat Company
DF 112R	Red	White	Awned	95.7	95.3	-----	-----	58.5	57.7	-----	-----	14.7	13.7	-----	-----	3.0	3.1	D.F. Seeds, Inc.
RS 972	Red	White	Awnless	95.7	94.0	94.9	-----	57.9	57.5	58.0	-----	16.8	15.2	14.8	-----	5.7	4.4	Rupp Seeds, Inc.
W 207	Red	White	Awnless	95.4	92.7	-----	-----	58.0	57.5	-----	-----	16.7	15.3	-----	-----	5.0	3.6	Wellman Seeds, Inc.
Pioneer variety 25R40	Red	White	Awned	94.8	93.4	95.2	-----	60.5	59.4	59.8	-----	14.6	13.8	13.6	-----	1.3	1.6	DuPont Pioneer
DF 109R	Red	White	Awnless	94.6	93.3	93.4	-----	57.7	57.6	57.9	-----	16.9	15.1	14.7	-----	5.3	4.3	D.F. Seeds, Inc.
Pioneer variety 25R34	Red	White	Awned	94.4	91.5	93.2	93.5	58.4	57.7	58.1	58.3	15.5	14.4	14.2	14.2	3.3	3.8	DuPont Pioneer
DF 111R	Red	White	Awned	93.6	90.7	-----	-----	60.3	59.4	-----	-----	15.6	14.4	-----	-----	2.0	1.7	D.F. Seeds, Inc.
L-Brand 334	Red	White	Awnless	93.6	-----	-----	-----	60.7	-----	-----	-----	15.6	-----	-----	-----	3.3	-----	Irrer Seed Farm
MCIA Red Dragon	Red	White	Awnless	93.2	92.2	92.2	92.0	59.0	58.3	58.3	58.6	14.2	13.7	13.4	13.4	3.7	2.9	Michigan Crop Improvement Association
SY 483	Red	White	Awnless	93.1	89.4	-----	-----	58.8	58.1	-----	-----	16.9	15.0	-----	-----	2.0	2.5	Syngenta
DF 105R	Red	White	Awned	92.9	89.1	90.7	91.5	58.6	57.8	58.2	58.5	14.1	13.2	13.1	12.9	2.7	2.4	D.F. Seeds, Inc.
HS 284R	Red	White	Awnless	92.7	91.9	-----	-----	59.5	58.5	-----	-----	14.4	13.6	-----	-----	3.0	2.4	Harrington Seeds, Inc.
Sienna	Red	White	Awnless	92.6	91.3	-----	-----	59.0	58.3	-----	-----	15.0	14.0	-----	-----	4.3	3.0	D.F. Seeds, Inc.
Sunstar S-2000	Red	White	Awned	92.4	-----	-----	-----	59.4	-----	-----	-----	15.3	-----	-----	-----	1.3	-----	Sunstar Hybrids
AgriMAXX 413	Red	White	Awned	92.0	90.1	90.5	-----	58.6	57.8	58.3	-----	13.9	13.1	13.1	-----	2.7	2.8	AgriMAXX Wheat Company
Steyer Heilman	Red	White	Awnless	92.0	90.9	91.0	-----	59.3	58.4	58.4	-----	14.5	13.7	13.5	-----	4.7	3.7	Steyer Seeds
W 125	Red	White	Awnless	91.8	90.9	91.4	-----	59.1	58.3	58.4	-----	14.5	13.7	13.5	-----	3.3	2.7	Wellman Seeds, Inc.
W 204	Red	White	Awned	91.6	-----	-----	-----	59.3	-----	-----	-----	14.6	-----	-----	-----	1.7	-----	Wellman Seeds, Inc.
SY 474	Red	White	Awnless	91.3	-----	-----	-----	59.7	-----	-----	-----	15.9	-----	-----	-----	3.0	-----	Syngenta
GB 1202	Red	White	Awned	91.2	88.9	-----	-----	58.3	57.8	-----	-----	14.4	13.4	-----	-----	2.0	2.4	G.B. Seeds and Service
Diener 503	Red	White	Awnless	91.1	-----	-----	-----	58.7	-----	-----	-----	14.9	-----	-----	-----	4.3	-----	Bio-Town Seeds, Inc.
Sunstar S-1200	Red	White	Awned	91.1	88.0	-----	-----	59.0	57.8	-----	-----	13.9	13.6	-----	-----	2.3	3.5	Sunstar Hybrids
MCIA Whale	Red	White	Awnless	90.8	89.1	-----	-----	57.8	57.8	-----	-----	17.3	15.7	-----	-----	2.0	1.6	Michigan Crop Improvement Association
RS 907	Red	White	Awned	90.6	90.8	-----	-----	60.4	59.8	-----	-----	15.5	14.5	-----	-----	2.3	2.5	Rupp Seeds, Inc.
MCIA 7002012	Red	White	Awnless	90.2	88.0	-----	-----	59.4	58.7	-----	-----	16.6	15.1	-----	-----	3.7	3.7	Michigan Crop Improvement Association
LCS News	Red	White	Awnletted	90.1	89.4	-----	-----	59.9	59.3	-----	-----	14.6	14.0	-----	-----	6.7	5.8	Irrer Seed Farm
L-Brand 241	Red	White	Awnless	90.0	-----	-----	-----	61.2	-----	-----	-----	15.4	-----	-----	-----	4.7	-----	Irrer Seed Farm
Diener 492	Red	White	Awned	89.9	87.5	88.2	-----	58.6	58.0	58.2	-----	13.6	13.0	13.0	-----	2.0	2.3	Bio-Town Seeds, Inc.

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				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year					
				2 YR	3 YR	4 YR	2014	2 YR	3 YR	4 YR	2014	2 YR	3 YR	4 YR	2014	2 YR	3 YR		4 YR	2014	2013-14
				2013-14	2012-14	2011-14	2014	2013-14	2012-14	2011-14	2014	2013-14	2012-14	2011-14	2014	2013-14	2012-14		2011-14	2014	2013-14
AgriMAXX 447	Red	White	Awnless	89.6	-----	-----	-----	57.1	-----	-----	-----	17.9	-----	-----	-----	2.0	-----	AgriMAXX Wheat Company			
L-Brand 400	Red	White	Awnletted	89.2	-----	-----	-----	59.8	-----	-----	-----	15.2	-----	-----	-----	1.3	-----	Irrer Seed Farm			
RS 967	Red	White	Awned	89.2	-----	-----	-----	60.4	-----	-----	-----	14.6	-----	-----	-----	1.7	-----	Rupp Seeds, Inc.			
MCIA Red Devil	Red	White	Awned	88.9	87.0	87.9	89.4	60.5	59.5	59.7	59.9	15.0	14.1	13.9	13.9	2.0	2.2	Michigan Crop Improvement Association			
Pioneer variety 25R39	Red	White	Awnless	88.8	85.6	87.2	88.1	58.7	58.1	58.7	59.1	16.1	14.7	14.3	14.2	7.7	5.8	DuPont Pioneer			
MCIA Blazer	Red	White	Awnletted	88.6	87.4	87.8	-----	61.1	60.6	60.8	-----	15.1	14.2	13.9	-----	3.0	3.0	Michigan Crop Improvement Association			
Guardian	Red	White	Awnless	88.0	-----	-----	-----	58.6	-----	-----	-----	17.3	-----	-----	-----	2.0	-----	Equity Seed			
AgriMAXX 427	Red	White	Awnless	87.7	87.0	-----	-----	57.4	57.0	-----	-----	16.6	15.0	-----	-----	5.0	4.6	AgriMAXX Wheat Company			
W 205	Red	White	Awnless	87.6	88.6	-----	-----	56.0	57.0	-----	-----	18.9	16.3	-----	-----	1.3	1.2	Wellman Seeds, Inc.			
W 123	Red	White	Awnless	87.4	89.3	89.7	90.7	59.5	58.7	58.7	58.8	14.8	13.8	13.6	13.4	4.0	3.6	Wellman Seeds, Inc.			
EXP 13W34	Red	White	Awnless	87.3	-----	-----	-----	54.9	-----	-----	-----	19.0	-----	-----	-----	2.0	-----	Equity Seed			
W 208	Red	White	Awnless	87.2	86.8	88.4	-----	58.3	58.2	58.5	-----	16.8	15.2	14.9	-----	2.7	3.0	Wellman Seeds, Inc.			
Steyer Pierson	Red	White	Awnless	87.1	86.0	-----	-----	58.5	58.3	-----	-----	17.6	15.5	-----	-----	3.0	3.2	Steyer Seeds			
Malabar	Red	White	Awnless	86.4	85.0	84.6	86.1	60.3	59.2	59.3	59.6	15.0	14.0	13.7	13.7	3.3	2.6	Ohio Seed Improvement Association			
Hopewell	Red	Bronze	Awnletted	86.3	85.0	85.8	86.6	59.5	58.9	59.2	59.6	14.4	13.7	13.6	13.6	2.3	2.0	Michigan Crop Improvement Association			
Red Ruby	Red	White	Awned	86.2	83.0	84.1	85.5	59.7	58.8	59.3	59.7	15.5	14.3	13.9	13.7	3.0	2.6	Michigan Crop Improvement Association			
L-Brand 314	Red	White	Awnletted	83.2	85.8	-----	-----	59.9	59.1	-----	-----	14.9	14.0	-----	-----	2.7	3.1	Irrer Seed Farm			
Sunburst	Red	White	Awnless	82.4	85.2	87.4	88.6	60.6	60.8	61.3	60.7	16.7	15.2	14.9	14.4	1.0	1.5	Michigan Crop Improvement Association			
Shirley	Red	White	Awnletted	79.4	80.6	84.7	87.1	57.7	57.2	57.6	57.8	14.9	13.9	13.8	14.1	1.7	1.5	Dyna-Gro Seed			
AC Mountain	White	White	Awnletted	90.9	88.5	88.3	88.0	59.1	57.7	57.7	57.9	14.4	13.5	13.4	13.3	7.7	5.8	Michigan Crop Improvement Association			
Ambassador	White	White	Awnletted	89.5	86.5	87.4	87.4	57.1	56.2	56.8	57.3	13.8	12.9	12.9	12.8	3.0	2.6	D.F. Seeds, Inc.			
9242W	White	White	Awnless	88.5	84.5	86.1	86.0	59.3	58.4	58.9	59.2	14.9	14.0	13.7	13.6	2.0	2.0	Dyna-Gro Seed			
Jupiter	White	Bronze	Awnletted	87.6	85.7	85.9	86.8	58.3	57.4	57.7	58.0	14.4	13.5	13.7	13.6	1.7	2.0	Michigan Crop Improvement Association			
Ava	White	White	Awnletted	86.5	84.4	83.2	83.8	58.4	58.0	57.6	57.7	16.9	15.2	15.6	15.8	2.7	3.2	Hyland Seeds			
9362W	White	White	Awnless	85.6	82.2	-----	-----	60.5	59.4	-----	-----	15.9	14.5	-----	-----	2.0	1.9	Dyna-Gro Seed			
Linebacker	White	White	Awnletted	85.5	84.8	83.2	84.4	56.9	56.8	57.0	57.4	17.1	15.1	15.1	15.3	2.3	2.6	D.F. Seeds, Inc.			
Aubrey	White	White	Awnletted	83.9	81.0	81.9	82.7	59.9	59.1	59.3	59.9	14.6	13.8	13.7	13.7	2.0	2.0	D.F. Seeds, Inc.			
DF 110W	White	White	Awned	83.7	83.9	86.1	-----	57.5	57.6	58.5	-----	16.3	14.5	14.2	-----	2.0	2.4	D.F. Seeds, Inc.			
Pioneer variety 25W31	White	White	Awned	83.1	-----	-----	-----	60.1	-----	-----	-----	16.2	-----	-----	-----	1.3	-----	DuPont Pioneer			
MCIA Venus	White	White	Awned	82.4	82.4	85.1	-----	58.4	57.6	58.1	-----	15.1	14.0	13.8	-----	2.3	2.6	Michigan Crop Improvement Association			
9491W	White	White	Awned	78.5	-----	-----	-----	58.5	-----	-----	-----	16.3	-----	-----	-----	1.3	-----	Dyna-Gro Seed			
SY 901	White	White	Awned	78.2	77.8	-----	-----	56.3	56.4	-----	-----	15.6	14.1	-----	-----	2.7	3.4	Syngenta			
MCIA E5024	White	White	Awned	76.8	-----	-----	-----	57.3	-----	-----	-----	16.2	-----	-----	-----	1.7	-----	Michigan Crop Improvement Association			
<b>MEAN (2014 90 Entries)</b>				<b>88.7</b>	<b>88.1</b>	<b>88.3</b>	<b>87.5</b>	<b>58.9</b>	<b>58.2</b>	<b>58.6</b>	<b>58.8</b>	<b>15.6</b>	<b>14.3</b>	<b>13.9</b>	<b>13.8</b>	<b>3.0</b>	<b>3.1</b>				
<b>LSD (0.05)</b>				<b>3.2</b>	<b>4.6</b>	<b>4.1</b>	<b>3.9</b>	<b>0.7</b>	<b>1.1</b>	<b>1.0</b>	<b>1.0</b>	<b>0.6</b>	<b>1.3</b>	<b>0.8</b>	<b>0.7</b>	<b>1.8</b>	<b>2.5</b>				
<b>CV (%)</b>				<b>4.8</b>	<b>2.6</b>	<b>2.9</b>	<b>3.2</b>	<b>1.6</b>	<b>0.9</b>	<b>1.0</b>	<b>1.2</b>	<b>5.0</b>	<b>4.4</b>	<b>3.5</b>	<b>3.8</b>	<b>42.9</b>	<b>41.6</b>				

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

**Table 2 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)**

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Flowering Date (Days Past Jan. 1)				Plant Height (Inches)				Powdery Mildew Score (0-9)				Visual Sprout Score (0-9) 2014	Winter Injury Score (1-5) 2014	Septoria Leaf Blotch Score (0-9) 2014	Wheat Streak Mosaic Virus Score (0-9) 2014	Barley Yellow Dwarf Score (0-9) 2013
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages								
		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR						
2014	2013-14	2012-14	2011-14	2014	2013-14	2012-14	2011-14	2014	2013-14	2012-14	2011-14							
Diener 512	Red	155.1	154.9	-----	-----	34.8	34.5	-----	-----	4.7	4.4	-----	-----	3.5	1.3	2.3	6.3	1.3
DF EX R C-1	Red	155.1	-----	-----	-----	34.5	-----	-----	-----	8.7	-----	-----	-----	3.0	1.1	3.0	3.0	-----
Steyer Hunker	Red	155.1	155.3	151.3	-----	34.8	34.9	33.8	-----	6.0	3.0	3.0	-----	4.0	1.1	3.0	6.0	2.3
9223	Red	155.2	155.0	151.2	-----	34.5	34.3	33.5	-----	4.7	3.9	4.1	-----	2.5	1.0	3.0	7.0	3.8
RS 9XP10	Red	155.0	-----	-----	-----	34.0	-----	-----	-----	4.0	-----	-----	-----	3.5	1.4	2.7	2.3	-----
W 206	Red	154.8	154.2	-----	-----	34.7	35.1	-----	-----	3.7	2.4	-----	-----	3.5	1.0	2.3	3.0	1.2
AgriMAXX 438	Red	155.1	154.7	-----	-----	35.0	35.0	-----	-----	5.0	3.5	-----	-----	0.0	1.4	2.7	6.3	3.1
DF 112R	Red	154.8	154.2	-----	-----	32.8	32.5	-----	-----	2.0	1.5	-----	-----	4.5	1.6	3.0	5.7	0.4
RS 972	Red	155.4	155.1	151.1	-----	34.5	34.3	33.2	-----	5.3	3.7	3.8	-----	2.5	1.0	3.0	6.7	1.5
W 207	Red	154.9	155.1	-----	-----	34.5	34.8	-----	-----	6.0	5.0	-----	-----	1.5	1.1	3.0	5.0	2.5
Pioneer variety 25R40	Red	155.2	155.0	150.8	-----	31.2	31.4	30.6	-----	1.0	0.5	0.4	-----	3.0	1.4	3.0	7.3	2.1
DF 109R	Red	155.3	155.2	151.4	-----	34.2	34.2	33.2	-----	5.4	3.7	3.4	-----	2.0	1.6	2.3	5.7	2.0
Pioneer variety 25R34	Red	154.3	154.2	150.0	150.9	33.5	34.4	33.3	33.5	5.7	5.4	5.3	5.0	4.0	1.1	2.7	3.0	1.3
DF 111R	Red	154.9	154.7	-----	-----	35.7	35.6	-----	-----	5.3	2.7	-----	-----	-----	1.4	2.7	2.0	1.9
L-Brand 334	Red	154.3	-----	-----	-----	34.0	-----	-----	-----	3.7	-----	-----	-----	1.5	1.4	3.3	5.3	-----
MCIA Red Dragon	Red	154.1	154.1	150.1	150.9	37.3	37.7	36.4	36.9	3.3	3.2	2.1	1.8	2.5	1.0	3.0	4.3	1.2
SY 483	Red	157.2	156.6	-----	-----	34.2	34.4	-----	-----	3.4	2.2	-----	-----	3.0	1.3	3.0	4.3	1.0
DF 105R	Red	153.6	153.3	149.3	150.4	32.5	32.5	31.2	31.5	3.3	2.2	3.3	3.1	6.0	1.0	3.3	5.0	2.9
HS 284R	Red	154.1	154.1	-----	-----	37.7	38.1	-----	-----	3.0	2.5	-----	-----	4.5	1.4	3.7	4.0	1.9
Sienna	Red	154.3	154.0	-----	-----	37.3	38.3	-----	-----	4.4	3.2	-----	-----	2.5	1.4	2.3	4.0	2.1
Sunstar S-2000	Red	153.3	-----	-----	-----	32.3	-----	-----	-----	6.3	-----	-----	-----	3.4	1.3	3.7	2.7	-----
AgriMAXX 413	Red	154.0	153.4	149.3	-----	32.3	32.2	31.5	-----	4.9	2.5	2.8	-----	-----	1.0	2.7	4.7	2.9
Steyer Heilman	Red	154.1	154.2	150.1	-----	38.7	38.9	37.3	-----	4.7	2.4	1.6	-----	2.5	1.6	2.7	4.3	1.3
W 125	Red	154.6	154.3	150.3	-----	37.7	38.0	36.6	-----	3.0	2.5	2.4	-----	1.5	1.4	3.0	4.3	2.7
W 204	Red	153.3	-----	-----	-----	33.0	-----	-----	-----	4.3	-----	-----	-----	4.5	1.3	2.3	2.7	-----
SY 474	Red	155.3	-----	-----	-----	34.7	-----	-----	-----	3.7	-----	-----	-----	2.5	1.0	2.7	3.7	-----
GB 1202	Red	153.9	153.4	-----	-----	32.7	32.2	-----	-----	5.0	2.5	-----	-----	3.0	1.1	3.0	4.3	2.0
Diener 503	Red	154.2	-----	-----	-----	37.8	-----	-----	-----	2.3	-----	-----	-----	3.0	1.3	2.7	4.7	-----
Sunstar S-1200	Red	154.0	153.8	-----	-----	32.3	33.5	-----	-----	4.4	3.7	-----	-----	5.0	1.7	4.0	5.3	1.1
MCIA Whale	Red	156.3	156.5	-----	-----	35.3	35.1	-----	-----	7.7	5.9	-----	-----	4.0	1.1	2.3	5.7	2.0
RS 907	Red	154.6	154.1	-----	-----	33.2	33.2	-----	-----	4.3	2.7	-----	-----	-----	1.4	2.7	5.3	2.0
MCIA 7002012	Red	154.6	154.3	-----	-----	32.8	34.1	-----	-----	2.5	1.3	-----	-----	3.0	1.3	3.0	1.3	0.6
LCS News	Red	152.8	152.7	-----	-----	32.3	33.1	-----	-----	3.0	1.5	-----	-----	0.0	1.1	4.7	5.7	2.0
L-Brand 241	Red	153.0	-----	-----	-----	34.8	-----	-----	-----	7.8	-----	-----	-----	4.0	1.0	4.3	3.0	-----
Diener 492	Red	153.7	153.5	149.7	-----	32.5	32.8	31.5	-----	3.0	2.0	2.3	-----	3.4	1.0	3.0	4.3	3.4



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Multi-year data are the most informative.

Table 2 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

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Name	Grain Color	Flowering Date (Days Past Jan. 1)				Plant Height (Inches)				Powdery Mildew Score (0-9)				Visual Sprout Score (0-9) 2014	Winter Injury Score (1-5) 2014	Septoria Leaf Blotch Score (0-9) 2014	Wheat Streak Mosaic Virus Score (0-9) 2014	Barley Yellow Dwarf Score (0-9) 2013
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages								
		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR						
2014	2013-14	2012-14	2011-14	2014	2013-14	2012-14	2011-14	2014	2013-14	2012-14	2011-14	2014	2013					
AgriMAXX 447	Red	156.2	-----	-----	-----	35.2	-----	-----	-----	6.3	-----	-----	-----	3.0	1.0	2.7	6.7	-----
L-Brand 400	Red	154.4	-----	-----	-----	33.5	-----	-----	-----	5.7	-----	-----	-----	2.0	1.4	3.3	6.7	-----
RS 967	Red	153.9	-----	-----	-----	33.7	-----	-----	-----	4.3	-----	-----	-----	1.5	1.3	2.7	4.7	-----
MCIA Red Devil	Red	154.3	154.6	150.5	151.4	33.7	34.0	32.8	33.5	1.5	0.8	0.9	0.9	2.0	1.0	3.0	1.3	1.8
Pioneer variety 25R39	Red	155.8	156.3	152.0	152.7	34.5	34.5	33.1	33.4	7.0	6.0	5.1	4.4	4.0	1.3	4.3	2.7	1.1
MCIA Blazer	Red	153.4	153.3	149.1	-----	33.5	33.5	32.8	-----	2.3	1.2	1.2	-----	1.5	1.1	2.0	4.7	2.0
Guardian	Red	154.9	-----	-----	-----	32.2	-----	-----	-----	3.3	-----	-----	-----	5.0	1.3	2.3	2.0	-----
AgriMAXX 427	Red	153.9	153.7	-----	-----	32.7	33.4	-----	-----	3.9	2.0	-----	-----	3.5	1.3	2.7	7.7	1.6
W 205	Red	156.8	157.2	-----	-----	34.2	34.3	-----	-----	6.0	4.0	-----	-----	4.0	1.9	2.3	5.0	1.0
W 123	Red	154.2	153.8	149.6	150.5	37.7	38.5	36.9	35.9	6.0	4.5	4.0	3.0	3.0	1.9	2.7	4.0	1.9
EXP 13W34	Red	156.3	-----	-----	-----	35.2	-----	-----	-----	4.9	-----	-----	-----	2.0	2.0	2.3	6.7	-----
W 208	Red	154.9	154.6	150.8	-----	33.0	34.1	34.0	-----	3.0	2.0	1.4	-----	2.0	1.4	3.0	3.0	1.2
Steyer Pierson	Red	154.9	154.4	-----	-----	32.7	34.2	-----	-----	3.3	1.7	-----	-----	4.9	1.1	2.3	2.7	3.2
Malabar	Red	154.7	154.3	151.2	151.8	37.8	37.5	35.9	36.3	3.3	3.2	2.5	1.9	1.5	1.3	4.0	4.7	1.1
Hopewell	Red	155.3	155.0	151.3	152.2	35.7	35.8	34.7	34.8	3.7	2.4	1.7	1.6	2.0	1.1	3.0	4.7	3.5
Red Ruby	Red	155.7	155.5	151.3	152.1	34.2	33.9	33.0	33.4	3.7	1.9	1.8	1.5	3.9	1.6	3.3	4.3	0.9
L-Brand 314	Red	153.2	153.0	-----	-----	36.3	36.1	-----	-----	5.3	4.2	-----	-----	2.5	1.1	3.0	5.7	1.1
Sunburst	Red	155.7	155.9	151.6	152.0	29.7	30.7	29.6	30.7	1.7	0.9	0.6	0.9	1.5	1.4	2.7	5.0	2.5
Shirley	Red	155.6	156.0	151.6	152.4	30.2	30.4	29.6	30.1	1.0	0.5	0.3	0.3	2.0	2.0	1.7	3.7	1.2
AC Mountain	White	156.2	156.0	152.5	153.1	37.3	38.1	36.9	36.8	3.3	2.2	1.4	1.9	7.5	1.0	2.7	5.0	3.1
Ambassador	White	155.0	154.9	150.4	151.3	34.0	34.2	33.2	33.6	2.7	1.4	0.9	0.8	6.4	1.1	3.7	6.7	2.1
9242W	White	154.4	154.9	150.8	151.6	33.5	33.9	32.8	33.5	4.3	2.2	1.6	1.7	6.0	1.3	3.0	6.7	2.7
Jupiter	White	156.2	156.1	152.4	153.2	32.2	32.7	31.9	32.2	5.3	4.2	2.8	2.7	-----	1.6	2.7	3.0	0.8
Ava	White	156.6	157.3	153.6	154.2	37.5	37.3	36.4	36.8	3.7	3.4	2.2	2.1	8.5	1.1	3.0	3.0	2.5
9362W	White	155.2	155.4	-----	-----	32.5	32.8	-----	-----	4.7	3.9	-----	-----	7.5	1.4	2.0	4.7	1.7
Linebacker	White	157.0	157.0	153.1	153.8	34.2	35.6	34.7	35.1	5.3	4.2	3.0	3.3	-----	1.4	2.3	7.3	0.0
Aubrey	White	154.0	153.9	149.9	150.8	33.0	34.1	33.5	34.1	2.0	1.0	0.7	1.1	6.4	1.0	3.3	4.0	2.7
DF 110W	White	155.9	155.6	151.4	-----	30.3	31.6	30.7	-----	2.0	1.5	1.3	-----	7.0	1.3	3.3	1.3	1.2
Pioneer variety 25W31	White	155.6	-----	-----	-----	32.3	-----	-----	-----	1.7	-----	-----	-----	6.0	1.3	2.7	7.3	-----
MCIA Venus	White	154.6	154.2	149.7	-----	34.3	34.7	33.8	-----	2.3	1.2	1.0	-----	3.9	3.1	3.7	7.3	0.0
9491W	White	155.7	-----	-----	-----	31.0	-----	-----	-----	1.7	-----	-----	-----	7.0	1.1	3.7	3.0	-----
SY 901	White	155.9	156.2	-----	-----	31.5	32.5	-----	-----	4.9	2.5	-----	-----	4.5	2.1	4.0	1.3	2.1
MCIA E5024	White	157.2	-----	-----	-----	30.7	-----	-----	-----	1.7	-----	-----	-----	-----	1.9	2.7	3.3	-----
<b>MEAN (2014 90 Entries)</b>		<b>155.0</b>	<b>154.8</b>	<b>150.9</b>	<b>151.9</b>	<b>33.8</b>	<b>34.3</b>	<b>33.5</b>	<b>33.9</b>	<b>4.1</b>	<b>2.8</b>	<b>2.2</b>	<b>2.1</b>	<b>3.7</b>	<b>1.4</b>	<b>2.9</b>	<b>4.6</b>	<b>1.9</b>
<b>LSD (0.05)</b>		<b>0.5</b>	<b>0.9</b>	<b>1.0</b>	<b>0.9</b>	<b>0.9</b>	<b>1.4</b>	<b>1.3</b>	<b>1.4</b>	<b>1.6</b>	<b>2.1</b>	<b>2.0</b>	<b>1.7</b>	<b>2.4</b>	<b>0.5</b>	<b>1.1</b>	<b>1.3</b>	<b>1.1</b>
<b>CV (%)</b>		<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>2.8</b>	<b>2.1</b>	<b>2.3</b>	<b>3.0</b>	<b>29.7</b>	<b>38.1</b>	<b>55.3</b>	<b>57.9</b>	<b>0.5</b>	<b>44.8</b>	<b>27.0</b>	<b>20.4</b>	<b>33.8</b>

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Table 3 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Leaf Rust Score (0-9)				Stripe Rust Score (0-9)			FHB (Scab) : Field Observation						DON (ppm) in grain				Black Point (tip)		
		Multi-Year Averages				Multi-Year Averages			Incidence (% of spikes)		Severity (% within spikes)		Index (% overall infection)		Multi-Year Averages				Percent Multi-Year Averages		
		2 YR	3 YR	4 YR		2 YR	3 YR		2 YR	2 YR	2 YR	2 YR	2 YR	2 YR	3 YR	4 YR		2 YR	3 YR		
		2014	2013-14	2012-14	2011-14	2013	2012-13	2011-13	2014	2013-14	2014	2013-14	2014	2013-14	2013	2012-13	2011-13	2010-13	2013	2012-13	2011-13
Diener 512	Red	5.3	2.8	-----	-----	0.0	-----	-----	72.5	41.6	31.5	28.9	24.2	12.1	14.6	-----	-----	-----	20.7	-----	-----
DF EX R C-1	Red	1.7	-----	-----	-----	-----	-----	-----	72.5	-----	46.1	-----	34.5	-----	-----	-----	-----	-----	-----	-----	-----
Steyer Hunker	Red	5.0	2.6	1.9	-----	0.5	1.1	-----	65.0	46.4	36.4	36.9	23.8	17.9	17.6	8.9	-----	-----	34.3	18.7	-----
9223	Red	4.3	2.8	2.5	-----	0.3	1.6	-----	85.0	55.9	19.2	32.6	16.1	14.5	15.9	8.1	-----	-----	26.7	15.8	-----
RS 9XP10	Red	0.0	-----	-----	-----	-----	-----	-----	87.5	-----	29.5	-----	26.6	-----	-----	-----	-----	-----	-----	-----	-----
W 206	Red	0.0	0.0	-----	-----	3.2	-----	-----	67.5	41.7	22.3	25.9	17.3	12.0	10.0	-----	-----	-----	24.8	-----	-----
AgriMAXX 438	Red	3.0	2.2	-----	-----	1.2	-----	-----	80.0	67.2	39.7	43.5	31.2	28.7	12.1	-----	-----	-----	15.7	-----	-----
DF 112R	Red	5.7	4.0	-----	-----	0.3	-----	-----	65.0	60.1	35.7	39.1	24.0	22.8	18.8	-----	-----	-----	15.1	-----	-----
RS 972	Red	5.0	3.1	3.0	-----	1.6	0.0	-----	72.5	50.2	37.9	35.3	29.9	18.9	14.2	7.3	-----	-----	24.8	13.6	-----
W 207	Red	3.3	1.9	-----	-----	1.0	-----	-----	70.0	54.5	37.4	38.4	27.3	20.7	13.0	-----	-----	-----	40.7	-----	-----
Pioneer variety 25R40	Red	2.7	1.4	1.4	-----	0.0	0.4	-----	77.5	64.7	24.3	38.8	20.5	22.4	16.4	8.4	-----	-----	11.6	8.7	-----
DF 109R	Red	4.0	2.1	2.0	-----	0.0	0.2	-----	65.0	52.8	24.8	32.4	15.8	17.0	17.0	8.6	-----	-----	25.4	15.5	-----
Pioneer variety 25R34	Red	2.7	1.4	1.2	1.4	0.2	1.7	0.6	58.8	47.8	17.9	29.6	10.8	15.2	12.3	6.2	4.3	-----	7.1	4.0	4.7
DF 111R	Red	2.7	1.6	-----	-----	4.8	-----	-----	85.0	43.6	24.2	21.1	20.8	10.4	15.5	-----	-----	-----	46.7	-----	-----
L-Brand 334	Red	2.0	-----	-----	-----	-----	-----	-----	46.3	-----	19.1	-----	9.0	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Red Dragon	Red	3.7	2.3	2.4	2.4	3.2	2.6	2.1	75.0	44.3	41.0	43.7	31.0	19.9	10.8	5.5	3.9	5.7	20.1	11.7	10.5
SY 483	Red	2.7	1.6	-----	-----	0.0	-----	-----	90.0	56.7	42.0	37.8	38.2	23.9	21.1	-----	-----	-----	20.6	-----	-----
DF 105R	Red	2.3	1.9	1.7	1.5	0.6	1.0	0.4	77.5	56.2	29.9	26.0	23.3	16.2	17.5	8.8	6.2	-----	9.2	6.2	11.7
HS 284R	Red	3.3	2.9	-----	-----	2.5	-----	-----	72.5	41.3	27.5	31.9	19.8	12.3	12.1	-----	-----	-----	16.9	-----	-----
Sienna	Red	4.0	2.5	-----	-----	2.4	-----	-----	67.5	40.2	45.2	50.7	30.8	20.6	13.1	-----	-----	-----	13.5	-----	-----
Sunstar S-2000	Red	0.7	-----	-----	-----	-----	-----	-----	92.5	-----	21.0	-----	19.2	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 413	Red	3.7	2.8	2.2	-----	0.0	0.0	-----	67.5	56.3	16.9	31.9	11.3	17.8	16.7	8.4	-----	-----	7.0	5.3	-----
Steyer Heilman	Red	2.7	1.8	2.5	-----	3.2	4.0	-----	60.0	34.1	46.4	39.2	27.9	15.2	12.6	6.4	-----	-----	15.2	9.2	-----
W 125	Red	3.7	2.2	2.2	-----	2.2	2.7	-----	77.5	47.7	34.8	37.1	27.0	17.8	11.2	5.8	-----	-----	22.0	12.2	-----
W 204	Red	0.7	-----	-----	-----	-----	-----	-----	75.0	-----	30.8	-----	23.6	-----	-----	-----	-----	-----	-----	-----	-----
SY 474	Red	2.3	-----	-----	-----	-----	-----	-----	75.0	-----	21.1	-----	16.6	-----	-----	-----	-----	-----	-----	-----	-----
GB 1202	Red	2.3	2.1	-----	-----	0.0	-----	-----	77.5	53.8	32.1	38.6	25.3	19.0	12.3	-----	-----	-----	22.2	-----	-----
Diener 503	Red	3.7	-----	-----	-----	-----	-----	-----	51.3	-----	50.5	-----	28.8	-----	-----	-----	-----	-----	-----	-----	-----
Sunstar S-1200	Red	2.7	1.8	-----	-----	0.7	-----	-----	65.0	54.6	28.7	27.3	17.7	15.9	12.6	-----	-----	-----	35.8	-----	-----
MCIA Whale	Red	1.0	0.5	-----	-----	0.0	-----	-----	65.6	51.3	34.0	36.2	23.8	20.7	20.2	-----	-----	-----	39.7	-----	-----
RS 907	Red	1.3	1.0	-----	-----	1.3	-----	-----	65.0	52.5	17.5	25.3	11.0	13.3	7.9	-----	-----	-----	33.9	-----	-----
MCIA 7002012	Red	0.3	0.6	-----	-----	4.4	-----	-----	72.5	36.3	19.0	22.1	14.1	7.1	9.0	-----	-----	-----	31.1	-----	-----
LCS News	Red	4.0	2.2	-----	-----	1.4	-----	-----	67.5	48.8	46.3	45.3	32.0	23.2	10.9	-----	-----	-----	21.9	-----	-----
L-Brand 241	Red	2.0	-----	-----	-----	-----	-----	-----	60.0	-----	16.1	-----	10.9	-----	-----	-----	-----	-----	-----	-----	-----
Diener 492	Red	3.3	1.9	1.6	-----	0.0	0.4	-----	77.5	57.6	18.6	27.8	13.6	11.5	14.6	7.4	-----	-----	12.6	7.7	-----

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 3 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Leaf Rust Score (0-9)				Stripe Rust Score (0-9)			FHB (Scab) : Field Observation						DON (ppm) in grain				Black Point (tip)		
		Multi-Year Averages				Multi-Year Averages			Incidence (% of spikes)		Severity (% within spikes)		Index (% overall infection)		Multi-Year Averages				Percent Multi-Year Averages		
		2 YR	3 YR	4 YR	2013-14	2 YR	3 YR	2012-13	2 YR	2 YR	2 YR	2 YR	2 YR	2 YR	2 YR	3 YR	4 YR	2013	2 YR	3 YR	
		2014	2013-14	2012-14	2011-14	2013	2012-13	2011-13	2014	2013-14	2014	2013-14	2014	2013-14	2013	2012-13	2011-13	2010-13	2013	2012-13	2011-13
AgriMAXX 447	Red	1.0	----	----	----	----	----	----	80.0	----	56.3	----	45.2	----	----	----	----	----	----	----	----
L-Brand 400	Red	2.0	----	----	----	----	----	----	70.0	----	23.1	----	15.1	----	----	----	----	----	----	----	----
RS 967	Red	1.0	----	----	----	----	----	----	82.5	----	24.4	----	19.8	----	----	----	----	----	----	----	----
MCIA Red Devil	Red	0.7	0.4	0.5	0.6	1.0	1.1	1.7	92.5	54.5	30.4	30.7	27.8	18.0	16.1	8.1	5.6	7.1	29.0	16.3	21.1
Pioneer variety 25R39	Red	2.0	1.5	1.4	1.6	0.0	1.3	0.5	87.5	55.2	35.3	37.8	29.8	20.8	10.9	5.6	3.9	5.5	4.0	3.0	3.7
MCIA Blazer	Red	2.3	1.3	1.1	----	0.8	2.9	----	75.0	63.2	42.0	39.2	32.8	26.6	13.2	6.7	----	----	24.9	13.9	----
Guardian	Red	0.3	----	----	----	----	----	----	82.5	----	21.0	----	17.9	----	----	----	----	----	----	----	----
AgriMAXX 427	Red	3.7	2.5	----	----	1.2	----	----	72.5	55.1	19.3	33.7	14.5	17.4	15.7	----	----	----	27.2	----	----
W 205	Red	1.3	0.9	----	----	0.8	----	----	90.0	62.8	49.7	37.8	44.6	27.7	17.1	----	----	----	30.8	----	----
W 123	Red	2.7	1.8	1.8	2.5	3.8	3.6	2.5	57.5	34.8	25.7	43.0	15.1	11.7	12.7	6.6	4.6	6.2	25.2	15.3	17.8
EXP 13W34	Red	1.3	----	----	----	----	----	----	90.0	----	49.7	----	44.9	----	----	----	----	----	----	----	----
W 208	Red	1.3	0.7	0.8	----	5.3	6.9	----	57.5	28.8	16.3	23.8	10.9	5.6	14.0	7.1	----	----	27.1	15.9	----
Steyer Pierson	Red	1.0	0.5	----	----	6.5	----	----	70.0	39.1	14.6	17.6	10.4	6.5	8.7	----	----	----	20.2	----	----
Malabar	Red	8.0	4.8	4.2	4.8	6.7	5.8	4.3	87.5	53.9	28.1	21.4	25.9	13.9	15.5	7.9	5.4	6.1	22.9	12.6	10.1
Hopewell	Red	4.3	2.5	2.9	3.0	3.0	3.4	2.3	72.5	50.3	42.1	41.7	31.7	21.2	19.4	10.0	7.1	9.9	10.8	7.0	6.4
Red Ruby	Red	4.3	2.3	2.8	2.9	6.0	4.5	5.4	90.0	68.5	39.7	45.2	36.2	30.0	23.1	11.7	8.1	9.4	14.3	10.9	10.2
L-Brand 314	Red	3.3	2.0	----	----	2.8	----	----	90.0	54.0	41.6	43.4	37.1	21.6	12.5	----	----	----	38.0	----	----
Sunburst	Red	1.3	1.5	1.4	2.2	0.0	2.5	0.2	82.5	68.2	23.3	31.0	20.7	21.2	13.8	7.1	5.2	5.9	12.7	8.5	10.0
Shirley	Red	0.0	0.2	1.0	1.0	4.1	2.8	4.4	70.0	57.8	32.9	37.7	24.0	21.9	20.7	10.5	7.6	----	37.8	26.5	30.1
AC Mountain	White	3.3	1.9	1.8	2.2	5.8	3.9	5.2	85.0	52.5	47.9	45.8	39.5	24.9	14.9	7.7	5.7	8.7	11.9	8.8	15.7
Ambassador	White	4.0	2.3	2.1	2.2	5.4	4.0	4.2	92.5	64.5	58.9	59.9	54.9	39.3	34.3	17.5	12.5	14.5	8.6	5.9	6.6
9242W	White	3.3	2.4	2.2	2.0	4.4	3.0	4.0	77.5	38.8	32.1	23.0	24.3	12.2	10.9	5.5	3.8	----	12.3	7.1	20.8
Jupiter	White	5.7	2.9	2.6	2.6	2.2	3.2	2.2	65.0	50.7	35.5	35.3	22.9	16.5	11.5	6.2	4.8	6.8	9.9	7.0	7.1
Ava	White	2.7	1.7	1.5	1.6	4.1	1.8	2.0	80.0	40.0	42.8	26.5	34.1	17.1	7.2	3.7	2.7	3.5	28.3	16.0	26.3
9362W	White	2.3	1.4	----	----	0.6	----	----	75.0	41.3	24.5	20.9	19.2	10.3	12.8	----	----	----	15.6	----	----
Linebacker	White	4.7	2.6	3.0	3.2	4.9	4.4	3.7	82.5	53.6	37.0	37.1	32.0	22.2	15.0	7.6	5.4	6.9	16.2	10.2	10.6
Aubrey	White	1.3	0.8	1.6	1.8	5.6	3.4	3.9	67.5	48.3	35.8	42.0	24.0	17.8	14.0	7.1	5.1	7.6	10.7	6.1	13.6
DF 110W	White	6.0	3.2	3.6	----	0.6	2.3	----	82.5	52.5	28.7	27.1	23.3	14.0	28.8	14.5	----	----	10.5	7.1	----
Pioneer variety 25W31	White	0.7	----	----	----	----	----	----	72.5	----	14.1	----	10.0	----	----	----	----	----	----	----	----
MCIA Venus	White	2.7	1.5	1.3	----	0.1	0.5	----	82.5	65.2	35.7	41.4	29.4	25.0	22.1	11.2	----	----	8.3	4.7	----
9491W	White	0.7	----	----	----	----	----	----	90.0	----	32.1	----	30.5	----	----	----	----	----	----	----	----
SY 901	White	3.3	2.3	----	----	0.0	----	----	92.5	67.2	42.9	37.9	39.1	27.2	31.7	----	----	----	8.2	----	----
MCIA E5024	White	1.3	----	----	----	----	----	----	90.0	----	34.1	----	30.3	----	----	----	----	----	----	----	----
<b>MEAN (2014 90 Entries)</b>		<b>2.4</b>	<b>1.8</b>	<b>2.0</b>	<b>2.2</b>	<b>2.1</b>	<b>2.7</b>	<b>2.6</b>	<b>75.3</b>	<b>51.5</b>	<b>31.8</b>	<b>34.9</b>	<b>24.8</b>	<b>18.5</b>	<b>15.2</b>	<b>8.0</b>	<b>5.6</b>	<b>7.3</b>	<b>21.2</b>	<b>10.6</b>	<b>12.8</b>
<b>LSD (0.05)</b>		<b>1.1</b>	<b>2.2</b>	<b>1.7</b>	<b>1.5</b>	<b>2.5</b>	<b>1.5</b>	<b>2.4</b>	<b>18.6</b>	<b>26.2</b>	<b>14.6</b>	<b>20.6</b>	<b>14.2</b>	<b>17.3</b>	<b>----</b>	<b>7.7</b>	<b>5.6</b>	<b>4.7</b>	<b>----</b>	<b>11.8</b>	<b>13.7</b>
<b>CV (%)</b>		<b>33.3</b>	<b>61.9</b>	<b>50.8</b>	<b>47.1</b>	<b>86.3</b>	<b>26.5</b>	<b>54.4</b>	<b>21.1</b>	<b>25.4</b>	<b>39.2</b>	<b>29.4</b>	<b>49.1</b>	<b>46.6</b>	<b>----</b>	<b>47.5</b>	<b>61.2</b>	<b>45.6</b>	<b>----</b>	<b>54.3</b>	<b>64.9</b>

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 4 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Milling and Baking Properties (2013 Crop and Earlier)																			
		Percent Flour Yield				Percent Protein In Flour (at 14%)				Softness Equivalent Percent				Cookie Diameter (cm)				Whole Grain Protein (at 12%)			
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages			
		2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	
Diener 512	Red	71.4	-----	-----	-----	7.0	-----	-----	-----	65.4	-----	-----	-----	19.3	-----	-----	-----	9.1	-----	-----	-----
DF EX R C-1	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Steyer Hunker	Red	71.3	71.7	-----	-----	6.4	6.2	-----	-----	65.5	65.4	-----	-----	19.5	19.5	-----	-----	8.9	8.1	-----	-----
9223	Red	71.0	71.7	-----	-----	6.8	6.5	-----	-----	63.7	65.0	-----	-----	19.4	19.4	-----	-----	9.2	8.4	-----	-----
RS 9XP10	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
W 206	Red	70.2	-----	-----	-----	6.7	-----	-----	-----	59.9	-----	-----	-----	18.0	-----	-----	-----	9.3	-----	-----	-----
AgriMAXX 438	Red	71.4	-----	-----	-----	8.3	-----	-----	-----	63.9	-----	-----	-----	18.5	-----	-----	-----	9.5	-----	-----	-----
DF 112R	Red	72.2	-----	-----	-----	6.9	-----	-----	-----	62.1	-----	-----	-----	18.9	-----	-----	-----	9.2	-----	-----	-----
RS 972	Red	71.6	72.0	-----	-----	7.1	6.6	-----	-----	64.2	64.9	-----	-----	19.7	19.6	-----	-----	9.3	8.2	-----	-----
W 207	Red	71.6	-----	-----	-----	6.4	-----	-----	-----	65.0	-----	-----	-----	19.5	-----	-----	-----	8.5	-----	-----	-----
Pioneer variety 25R40	Red	69.7	69.5	-----	-----	7.0	6.6	-----	-----	62.6	62.2	-----	-----	18.5	18.6	-----	-----	9.6	8.7	-----	-----
DF 109R	Red	71.5	71.8	-----	-----	6.5	6.5	-----	-----	65.3	65.5	-----	-----	19.0	19.0	-----	-----	8.9	8.4	-----	-----
Pioneer variety 25R34	Red	70.6	70.6	70.9	-----	7.3	6.6	6.6	-----	62.6	63.2	63.3	-----	19.1	19.3	19.5	-----	9.8	8.5	8.3	-----
DF 111R	Red	70.4	-----	-----	-----	6.7	-----	-----	-----	57.5	-----	-----	-----	17.7	-----	-----	-----	9.1	-----	-----	-----
L-Brand 334	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MClA Red Dragon	Red	70.7	71.1	71.1	71.1	7.0	6.6	6.5	6.5	61.7	62.9	63.2	63.2	19.0	18.6	18.9	18.9	9.5	8.7	8.5	8.4
SY 483	Red	70.1	-----	-----	-----	6.7	-----	-----	-----	62.5	-----	-----	-----	18.1	-----	-----	-----	9.1	-----	-----	-----
DF 105R	Red	71.0	71.1	71.5	-----	7.2	6.8	6.7	-----	58.6	59.1	59.7	-----	19.1	19.1	19.4	-----	9.5	8.7	8.4	-----
HS 284R	Red	70.6	-----	-----	-----	7.2	-----	-----	-----	61.8	-----	-----	-----	18.3	-----	-----	-----	9.7	-----	-----	-----
Sienna	Red	71.0	-----	-----	-----	7.2	-----	-----	-----	61.5	-----	-----	-----	18.5	-----	-----	-----	9.8	-----	-----	-----
Sunstar S-2000	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 413	Red	71.3	71.5	-----	-----	7.4	7.1	-----	-----	57.0	57.8	-----	-----	19.2	19.3	-----	-----	9.4	8.9	-----	-----
Steyer Heilman	Red	71.0	70.9	-----	-----	7.0	6.7	-----	-----	62.3	63.0	-----	-----	18.5	18.7	-----	-----	9.5	8.7	-----	-----
W 125	Red	70.9	71.2	-----	-----	6.7	6.6	-----	-----	62.8	63.6	-----	-----	18.3	18.7	-----	-----	9.1	8.5	-----	-----
W 204	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 474	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
GB 1202	Red	70.7	-----	-----	-----	6.9	-----	-----	-----	57.7	-----	-----	-----	18.0	-----	-----	-----	9.1	-----	-----	-----
Diener 503	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sunstar S-1200	Red	69.3	-----	-----	-----	6.3	-----	-----	-----	65.1	-----	-----	-----	19.6	-----	-----	-----	8.9	-----	-----	-----
MClA Whale	Red	69.1	-----	-----	-----	6.9	-----	-----	-----	60.3	-----	-----	-----	17.8	-----	-----	-----	9.2	-----	-----	-----
RS 907	Red	69.4	-----	-----	-----	6.6	-----	-----	-----	59.9	-----	-----	-----	18.4	-----	-----	-----	8.9	-----	-----	-----
MClA 7002012	Red	70.1	-----	-----	-----	7.7	-----	-----	-----	61.2	-----	-----	-----	18.7	-----	-----	-----	10.1	-----	-----	-----
LCS News	Red	71.7	-----	-----	-----	6.8	-----	-----	-----	63.4	-----	-----	-----	18.0	-----	-----	-----	9.1	-----	-----	-----
L-Brand 241	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Diener 492	Red	70.8	71.0	-----	-----	7.5	7.0	-----	-----	57.2	59.0	-----	-----	18.9	19.2	-----	-----	9.5	8.8	-----	-----

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 4 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Milling and Baking Properties (2013 Crop and Earlier)																			
		Percent Flour Yield				Percent Protein In Flour (at 14%)				Softness Equivalent Percent				Cookie Diameter (cm)				Whole Grain Protein (at 12%)			
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages			
		2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	
AgriMAXX 447	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
L-Brand 400	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
RS 967	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
MCIA Red Devil	Red	68.8	68.5	68.7	68.8	7.4	6.8	6.6	6.6	59.9	61.3	62.5	62.0	18.8	18.8	19.0	19.0	9.8	8.7	8.4	8.3
Pioneer variety 25R39	Red	69.8	69.7	69.8	69.7	6.7	6.3	6.3	6.3	59.1	59.7	59.4	59.4	18.0	18.2	18.5	18.6	9.1	8.3	8.3	8.2
MCIA Blazer	Red	67.7	67.8	-----	-----	7.2	7.1	-----	-----	50.2	49.2	-----	-----	17.1	17.3	-----	-----	9.9	9.5	-----	-----
Guardian	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 427	Red	69.6	-----	-----	-----	6.8	-----	-----	-----	63.9	-----	-----	-----	19.2	-----	-----	-----	9.3	-----	-----	-----
W 205	Red	69.5	-----	-----	-----	6.9	-----	-----	-----	59.6	-----	-----	-----	18.3	-----	-----	-----	9.5	-----	-----	-----
W 123	Red	70.8	71.2	71.5	71.5	6.9	6.5	6.5	6.4	61.8	63.2	63.9	64.2	18.0	18.3	18.8	18.9	9.4	8.6	8.5	8.3
EXP 13W34	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
W 208	Red	70.0	69.5	-----	-----	7.5	7.0	-----	-----	61.8	62.0	-----	-----	18.7	18.9	-----	-----	10.0	8.9	-----	-----
Steyer Pierson	Red	70.2	-----	-----	-----	7.5	-----	-----	-----	62.3	-----	-----	-----	18.8	-----	-----	-----	9.9	-----	-----	-----
Malabar	Red	69.6	70.0	69.8	69.8	7.2	6.7	6.5	6.5	58.0	59.2	59.4	59.6	18.5	18.7	18.9	19.0	9.9	8.9	8.6	8.6
Hopewell	Red	68.3	68.4	68.5	68.4	7.3	6.9	6.9	6.9	61.4	61.6	61.3	61.8	18.5	18.6	19.0	19.1	10.2	9.3	9.1	9.1
Red Ruby	Red	69.8	70.0	70.0	70.0	7.3	6.8	6.8	6.8	63.3	63.8	63.4	63.2	18.6	18.8	19.0	19.1	9.9	9.0	8.9	8.8
L-Brand 314	Red	71.4	-----	-----	-----	7.6	-----	-----	-----	61.2	-----	-----	-----	18.6	-----	-----	-----	9.7	-----	-----	-----
Sunburst	Red	65.7	65.5	67.7	67.1	7.5	7.1	6.9	6.8	52.6	51.8	56.3	56.2	17.6	17.5	18.1	18.2	9.7	9.1	8.8	8.7
Shirley	Red	70.0	70.1	70.1	-----	7.2	6.9	6.8	-----	57.3	57.1	57.2	-----	18.9	19.1	19.3	-----	9.8	9.3	9.0	-----
AC Mountain	White	71.7	71.2	71.3	71.3	6.8	6.4	6.4	6.4	62.0	62.7	62.1	62.0	19.1	19.1	19.2	19.3	9.0	8.3	8.3	8.2
Ambassador	White	71.9	72.4	72.6	72.4	7.0	6.5	6.4	6.4	61.5	62.3	62.3	62.5	19.1	19.3	19.5	19.5	9.5	8.7	8.5	8.4
9242W	White	69.2	69.3	69.6	-----	7.4	6.7	6.6	-----	59.7	61.6	61.8	-----	18.9	19.2	19.4	-----	10.0	8.9	8.7	-----
Jupiter	White	71.1	71.3	71.5	71.6	6.8	6.1	6.0	5.9	62.5	63.1	63.2	63.1	18.8	19.0	19.2	19.3	9.1	8.0	7.8	7.8
Ava	White	70.0	69.8	69.9	70.0	7.4	6.7	6.5	6.5	62.4	64.2	64.1	63.8	18.6	18.9	19.2	19.3	9.5	8.5	8.3	8.3
9362W	White	69.7	-----	-----	-----	7.8	-----	-----	-----	56.5	-----	-----	-----	18.8	-----	-----	-----	10.7	-----	-----	-----
Linebacker	White	70.6	70.2	70.5	70.5	7.3	7.0	6.9	6.8	59.6	60.8	60.9	60.7	19.1	19.2	19.4	19.4	9.7	9.1	8.8	8.7
Aubrey	White	69.9	70.1	70.4	70.7	7.6	7.1	7.1	7.0	62.1	62.5	61.2	61.9	18.7	18.4	18.5	18.6	10.1	9.3	9.3	9.1
DF 110W	White	72.3	71.8	-----	-----	7.3	7.1	-----	-----	57.9	58.4	-----	-----	18.7	18.8	-----	-----	9.9	9.5	-----	-----
Pioneer variety 25W31	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Venus	White	72.2	71.8	-----	-----	6.8	6.5	-----	-----	58.5	59.0	-----	-----	18.6	18.4	-----	-----	9.1	8.4	-----	-----
9491W	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 901	White	69.9	-----	-----	-----	6.9	-----	-----	-----	63.0	-----	-----	-----	18.9	-----	-----	-----	9.2	-----	-----	-----
MCIA E5024	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>MEAN (2014 90 Entries)</b>		<b>70.3</b>	<b>70.4</b>	<b>70.4</b>	<b>70.3</b>	<b>7.1</b>	<b>6.7</b>	<b>6.6</b>	<b>6.6</b>	<b>60.9</b>	<b>61.1</b>	<b>61.5</b>	<b>61.8</b>	<b>18.6</b>	<b>18.8</b>	<b>19.1</b>	<b>19.0</b>	<b>9.4</b>	<b>8.8</b>	<b>8.6</b>	<b>8.5</b>
<b>LSD (0.05)</b>		-----	<b>0.9</b>	<b>1.5</b>	<b>1.3</b>	-----	<b>0.5</b>	<b>0.4</b>	<b>0.3</b>	-----	<b>2.0</b>	<b>3.5</b>	<b>2.9</b>	-----	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	-----	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>
<b>CV (%)</b>		-----	<b>0.6</b>	<b>1.2</b>	<b>1.3</b>	-----	<b>3.7</b>	<b>3.2</b>	<b>2.7</b>	-----	<b>1.6</b>	<b>3.4</b>	<b>3.3</b>	-----	<b>1.3</b>	<b>1.6</b>	<b>1.6</b>	-----	<b>3.6</b>	<b>3.0</b>	<b>2.6</b>

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 5 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Milling and Baking Properties (2013 Crop and Earlier)																			
		Water SRC (%)				Sodium Carbonate SRC (%)				Sucrose SRC (%)				As Is Lactic Acid SRC (%)				Whole Grain Hardness (0-100)			
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages			
		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR		2 YR	3 YR	4 YR	
2013	2012-13	2011-13	2010-13	2013	2012-13	2011-13	2010-13	2013	2012-13	2011-13	2010-13	2013	2012-13	2011-13	2010-13	2013	2012-13	2011-13	2010-13		
Diener 512	Red	49.9	-----	-----	-----	64.0	-----	-----	-----	79.0	-----	-----	-----	96.8	-----	-----	-----	15.6	-----	-----	-----
DF EX R C-1	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Steyer Hunker	Red	50.1	51.0	-----	-----	63.5	64.5	-----	-----	77.8	79.1	-----	-----	94.1	95.0	-----	-----	11.0	9.1	-----	-----
9223	Red	50.5	51.2	-----	-----	64.5	65.0	-----	-----	78.1	79.5	-----	-----	93.5	96.4	-----	-----	15.7	11.8	-----	-----
RS 9XP10	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
W 206	Red	54.0	-----	-----	-----	67.9	-----	-----	-----	85.0	-----	-----	-----	85.6	-----	-----	-----	21.1	-----	-----	-----
AgriMAXX 438	Red	49.7	-----	-----	-----	64.2	-----	-----	-----	78.9	-----	-----	-----	95.2	-----	-----	-----	16.4	-----	-----	-----
DF 112R	Red	53.2	-----	-----	-----	69.0	-----	-----	-----	85.0	-----	-----	-----	104.8	-----	-----	-----	16.8	-----	-----	-----
RS 972	Red	50.6	50.9	-----	-----	64.4	64.1	-----	-----	81.1	80.1	-----	-----	97.6	97.7	-----	-----	11.9	9.7	-----	-----
W 207	Red	50.7	-----	-----	-----	63.5	-----	-----	-----	80.6	-----	-----	-----	92.3	-----	-----	-----	8.2	-----	-----	-----
Pioneer variety 25R40	Red	52.6	53.5	-----	-----	68.1	68.5	-----	-----	84.1	85.6	-----	-----	93.0	97.8	-----	-----	16.2	14.3	-----	-----
DF 109R	Red	50.8	51.0	-----	-----	64.3	64.7	-----	-----	77.2	78.0	-----	-----	94.6	97.3	-----	-----	13.5	11.5	-----	-----
Pioneer variety 25R34	Red	50.1	50.7	51.3	-----	63.6	64.2	64.3	-----	80.1	82.1	80.8	-----	97.0	95.2	94.1	-----	18.2	13.1	10.8	-----
DF 111R	Red	57.8	-----	-----	-----	72.7	-----	-----	-----	88.5	-----	-----	-----	79.6	-----	-----	-----	24.5	-----	-----	-----
L-Brand 334	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MClA Red Dragon	Red	50.5	51.1	52.6	52.6	64.2	65.3	65.8	66.0	84.1	85.3	84.2	83.9	84.1	93.4	92.3	90.2	7.3	5.6	5.1	7.1
SY 483	Red	52.7	-----	-----	-----	68.5	-----	-----	-----	84.6	-----	-----	-----	89.6	-----	-----	-----	20.2	-----	-----	-----
DF 105R	Red	50.9	51.3	51.8	-----	65.1	65.8	66.2	-----	78.5	79.0	80.0	-----	77.8	82.3	80.6	-----	24.2	22.9	21.1	-----
HS 284R	Red	50.4	-----	-----	-----	63.6	-----	-----	-----	84.7	-----	-----	-----	84.2	-----	-----	-----	14.0	-----	-----	-----
Sienna	Red	50.9	-----	-----	-----	64.7	-----	-----	-----	83.7	-----	-----	-----	86.0	-----	-----	-----	11.4	-----	-----	-----
Sunstar S-2000	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 413	Red	50.7	51.3	-----	-----	65.0	65.3	-----	-----	80.5	80.4	-----	-----	78.3	81.8	-----	-----	25.7	23.2	-----	-----
Steyer Heilman	Red	50.7	51.2	-----	-----	63.8	64.7	-----	-----	83.5	84.6	-----	-----	86.4	94.0	-----	-----	8.7	6.9	-----	-----
W 125	Red	51.7	52.0	-----	-----	64.7	65.6	-----	-----	84.1	85.1	-----	-----	86.3	96.8	-----	-----	6.7	6.0	-----	-----
W 204	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 474	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
GB 1202	Red	51.2	-----	-----	-----	65.8	-----	-----	-----	80.9	-----	-----	-----	76.4	-----	-----	-----	23.7	-----	-----	-----
Diener 503	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sunstar S-1200	Red	52.3	-----	-----	-----	65.8	-----	-----	-----	80.9	-----	-----	-----	76.0	-----	-----	-----	17.1	-----	-----	-----
MClA Whale	Red	53.2	-----	-----	-----	68.5	-----	-----	-----	86.9	-----	-----	-----	94.4	-----	-----	-----	18.9	-----	-----	-----
RS 907	Red	54.2	-----	-----	-----	67.1	-----	-----	-----	85.3	-----	-----	-----	94.2	-----	-----	-----	19.4	-----	-----	-----
MClA 7002012	Red	50.4	-----	-----	-----	63.7	-----	-----	-----	85.8	-----	-----	-----	88.6	-----	-----	-----	16.4	-----	-----	-----
LCS News	Red	53.0	-----	-----	-----	67.7	-----	-----	-----	83.8	-----	-----	-----	100.2	-----	-----	-----	16.2	-----	-----	-----
L-Brand 241	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Diener 492	Red	50.7	51.1	-----	-----	65.0	65.7	-----	-----	80.3	80.4	-----	-----	77.7	82.0	-----	-----	25.5	23.1	-----	-----

# 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 5 : Multi-Year Performance Summary (Note: Tables sorted by 2014 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Milling and Baking Properties (2013 Crop and Earlier)																			
		Water SRC (%)				Sodium Carbonate SRC (%)				Sucrose SRC (%)				As Is Lactic Acid SRC (%)				Whole Grain Hardness (0-100)			
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages							
		2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013	2 YR	3 YR	4 YR	2013
AgriMAXX 447	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-Brand 400	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
RS 967	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Red Devil	Red	53.3	54.0	54.6	54.8	67.0	68.2	68.0	67.8	86.7	87.3	85.6	85.4	87.6	89.7	88.6	87.2	26.4	22.0	19.0	19.3
Pioneer variety 25R39	Red	54.0	55.4	56.1	56.1	70.1	71.0	70.7	70.2	85.7	86.8	86.1	85.0	84.9	85.5	85.4	83.0	21.0	15.7	14.0	14.1
MCIA Blazer	Red	54.7	56.2	-----	-----	66.7	68.8	-----	-----	91.1	93.2	-----	-----	101.4	104.1	-----	-----	17.7	17.7	-----	-----
Guardian	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 427	Red	51.5	-----	-----	-----	66.5	-----	-----	-----	80.8	-----	-----	-----	79.0	-----	-----	-----	20.6	-----	-----	-----
W 205	Red	53.5	-----	-----	-----	67.7	-----	-----	-----	84.9	-----	-----	-----	95.7	-----	-----	-----	19.3	-----	-----	-----
W 123	Red	51.9	52.4	52.4	53.1	64.7	66.1	66.1	66.0	85.7	86.4	84.9	83.2	82.7	91.0	93.5	94.5	9.8	7.5	9.4	12.4
EXP 13W34	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
W 208	Red	50.5	52.3	-----	-----	63.0	63.9	-----	-----	85.6	84.8	-----	-----	88.5	85.4	-----	-----	13.6	10.5	-----	-----
Steyer Pierson	Red	50.7	-----	-----	-----	63.3	-----	-----	-----	83.6	-----	-----	-----	89.6	-----	-----	-----	16.8	-----	-----	-----
Malabar	Red	53.5	54.3	54.8	54.7	67.6	68.2	68.3	67.9	84.7	84.8	83.9	83.9	94.1	93.5	92.7	92.1	13.9	12.3	11.2	12.1
Hopewell	Red	52.0	53.1	53.7	53.7	68.6	68.9	69.0	68.7	85.7	84.8	84.0	83.9	96.4	99.4	99.8	99.0	23.4	20.2	18.5	19.3
Red Ruby	Red	51.6	52.5	53.2	53.4	68.8	68.3	68.0	67.6	83.6	83.9	83.7	83.4	97.9	96.0	97.0	95.3	12.9	10.4	9.3	11.3
L-Brand 314	Red	51.1	-----	-----	-----	65.9	-----	-----	-----	80.9	-----	-----	-----	84.3	-----	-----	-----	18.2	-----	-----	-----
Sunburst	Red	56.6	58.0	56.2	56.9	73.3	75.2	71.9	72.4	93.0	94.6	90.4	90.4	90.3	94.2	95.4	92.5	35.0	32.9	26.3	27.0
Shirley	Red	53.5	54.2	54.9	-----	68.5	69.1	69.6	-----	86.4	86.6	86.4	-----	80.4	78.7	78.6	-----	24.2	21.9	19.9	-----
AC Mountain	White	50.8	50.9	51.1	51.2	63.8	63.6	64.0	63.6	77.1	78.1	78.7	78.3	76.0	79.0	78.9	76.8	9.6	9.4	7.8	8.3
Ambassador	White	49.8	50.7	51.1	51.2	63.3	64.0	64.7	64.5	77.6	77.7	78.6	78.5	79.1	81.2	80.4	78.4	5.6	2.8	0.5	2.2
9242W	White	52.4	53.9	53.9	-----	65.4	66.6	66.6	-----	82.0	81.6	82.0	-----	91.9	87.7	87.2	-----	14.4	9.1	6.8	-----
Jupiter	White	52.5	53.7	54.5	54.6	67.6	68.2	68.1	67.6	82.3	81.7	81.3	80.7	88.6	85.7	85.9	84.0	14.8	12.5	11.5	12.6
Ava	White	49.6	50.5	51.2	51.6	63.5	64.1	64.3	64.2	79.4	79.8	80.4	80.1	71.5	74.8	75.3	72.7	12.1	6.2	4.3	6.7
9362W	White	52.6	-----	-----	-----	67.0	-----	-----	-----	85.6	-----	-----	-----	89.8	-----	-----	-----	15.2	-----	-----	-----
Linebacker	White	50.0	50.4	50.8	50.8	62.8	63.2	63.8	63.5	79.0	78.4	79.2	79.0	78.7	81.9	82.3	79.9	16.6	13.2	11.9	14.1
Aubrey	White	50.9	52.1	52.4	52.5	66.0	66.9	67.8	67.6	83.8	83.5	84.8	84.7	96.1	94.6	94.9	93.9	13.2	10.8	10.4	10.8
DF 110W	White	52.0	52.5	-----	-----	64.6	65.5	-----	-----	80.8	81.7	-----	-----	79.8	80.0	-----	-----	18.3	17.1	-----	-----
Pioneer variety 25W31	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Venus	White	52.3	53.9	-----	-----	66.7	68.3	-----	-----	82.7	84.2	-----	-----	78.1	80.3	-----	-----	15.5	15.0	-----	-----
9491W	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 901	White	52.1	-----	-----	-----	67.2	-----	-----	-----	82.4	-----	-----	-----	84.5	-----	-----	-----	17.2	-----	-----	-----
MCIA E5024	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>MEAN (2014 90 Entries)</b>		<b>51.9</b>	<b>52.5</b>	<b>53.1</b>	<b>53.3</b>	<b>66.1</b>	<b>66.5</b>	<b>67.0</b>	<b>66.8</b>	<b>83.2</b>	<b>83.3</b>	<b>83.0</b>	<b>82.8</b>	<b>88.6</b>	<b>90.4</b>	<b>88.3</b>	<b>87.5</b>	<b>16.7</b>	<b>14.0</b>	<b>12.2</b>	<b>12.9</b>
<b>LSD (0.05)</b>		-----	<b>1.3</b>	<b>1.9</b>	<b>1.6</b>	-----	<b>1.7</b>	<b>2.7</b>	<b>2.2</b>	-----	<b>2.4</b>	<b>3.9</b>	<b>3.2</b>	-----	<b>10.0</b>	<b>6.6</b>	<b>5.2</b>	-----	<b>4.2</b>	<b>5.3</b>	<b>4.7</b>
<b>CV (%)</b>		-----	<b>1.2</b>	<b>2.2</b>	<b>2.2</b>	-----	<b>1.3</b>	<b>2.4</b>	<b>2.3</b>	-----	<b>1.4</b>	<b>2.8</b>	<b>2.7</b>	-----	<b>5.5</b>	<b>4.5</b>	<b>4.2</b>	-----	<b>14.9</b>	<b>26.0</b>	<b>25.5</b>

## 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 6 : Single Site: Yield, Test Weight and Moisture Performance Summary (Note: Tables sorted alphabetically by organization)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	ALLEGAN High Management			HURON High Management				INGHAM Conventional Management				INGHAM High Management				TUSCOLA High Management				Organization
		Yield bu/acre	Test Weight	Moist.	Yield bu/acre	Test Weight	Moist.	Winter Kill Score(1-5)	Yield bu/acre	Test Weight	Moist.	Lodging Score	Yield bu/acre	Test Weight	Moist.	Lodging Score	Yield bu/acre	Test Weight	Moist.	Winter Kill Score(1-5)	
AgriMAXX 413	Red	90.5	58.3	13.4	85.0	59.5	14.5	1.1	75.8	55.8	13.8	2.0	96.2	59.1	13.8	2.7	99.1	57.4	13.9	1.0	AgriMAXX Wheat Company
AgriMAXX 427	Red	88.8	56.9	15.7	86.8	57.9	20.1	1.1	72.6	54.7	15.0	4.7	82.0	55.7	15.1	5.0	93.2	58.9	14.6	1.5	AgriMAXX Wheat Company
AgriMAXX 438	Red	101.8	57.9	16.3	95.0	58.7	19.6	1.0	77.4	56.9	15.5	6.0	86.5	59.0	14.6	9.0	98.7	58.8	15.1	1.3	AgriMAXX Wheat Company
AgriMAXX 447	Red	83.8	56.3	17.7	83.4	55.1	22.0	0.9	80.4	59.0	16.7	1.7	102.9	60.1	15.0	2.0	92.2	57.8	15.7	1.3	AgriMAXX Wheat Company
Diener 492	Red	89.8	58.0	13.1	87.1	59.6	14.3	1.2	75.2	57.5	13.8	2.3	84.4	59.0	13.6	2.0	99.2	57.8	13.5	1.4	Bio-Town Seeds, Inc.
Diener 503	Red	96.4	59.4	14.1	85.8	58.8	16.7	1.2	76.8	57.6	14.7	2.3	87.1	58.0	13.9	4.3	95.2	58.2	14.5	1.3	Bio-Town Seeds, Inc.
Diener 512	Red	96.6	57.9	16.0	95.1	57.8	20.1	1.0	71.1	55.0	14.7	3.7	95.2	58.5	14.7	7.3	101.5	58.9	14.8	1.1	Bio-Town Seeds, Inc.
Ambassador	White	91.3	56.1	13.4	90.1	57.4	14.6	1.4	71.3	57.2	14.1	3.0	84.8	57.6	13.6	3.0	90.9	57.3	13.3	0.9	D.F. Seeds, Inc.
Aubrey	White	89.2	60.2	14.0	83.6	59.8	14.9	1.1	69.4	60.1	15.4	1.7	70.7	59.7	15.1	2.0	90.5	59.9	14.6	1.3	D.F. Seeds, Inc.
DF 105R	Red	95.6	58.2	13.9	88.2	59.1	14.9	0.9	73.7	57.8	14.0	2.3	91.2	58.8	13.8	2.7	97.4	58.2	13.4	1.1	D.F. Seeds, Inc.
DF 109R	Red	96.2	57.7	15.6	92.9	57.3	20.7	1.9	69.3	54.6	15.2	4.3	89.3	57.8	15.0	5.3	99.8	58.2	15.3	1.2	D.F. Seeds, Inc.
DF 110W	White	80.2	57.4	16.0	83.0	56.7	18.9	1.3	55.8	54.0	14.3	2.0	74.7	57.8	14.0	2.0	98.5	58.3	15.4	1.6	D.F. Seeds, Inc.
DF 111R	Red	97.8	59.1	15.3	85.2	61.5	17.3	1.2	79.5	58.4	16.6	3.0	91.4	60.2	14.9	2.0	101.3	60.2	14.5	1.1	D.F. Seeds, Inc.
DF 112R	Red	106.2	58.8	14.8	85.3	58.7	15.1	1.6	67.0	54.3	13.8	1.7	93.3	58.7	14.2	3.0	98.0	57.6	14.5	1.7	D.F. Seeds, Inc.
DF EX R C-1	Red	102.6	60.1	15.1	93.0	60.8	16.6	1.1	66.4	57.1	15.3	2.3	89.6	61.2	15.3	2.0	99.7	60.4	14.6	1.1	D.F. Seeds, Inc.
Linebacker	White	90.8	57.6	15.7	83.4	55.9	19.7	1.4	60.7	57.3	15.1	1.7	78.5	58.8	14.7	2.3	88.0	55.4	18.0	1.8	D.F. Seeds, Inc.
Sienna	Red	98.9	58.5	14.3	85.0	59.7	16.6	1.3	72.9	58.2	14.7	2.3	93.4	58.7	14.0	4.3	93.5	58.8	14.8	1.7	D.F. Seeds, Inc.
Pioneer variety 25R34	Red	94.0	57.6	15.7	94.3	59.5	16.3	1.2	77.3	58.5	16.4	3.0	88.4	58.0	15.2	3.3	101.2	58.2	14.4	0.7	DuPont Pioneer
Pioneer variety 25R39	Red	98.8	58.2	15.1	86.3	58.3	19.4	1.6	63.4	56.0	14.8	4.3	71.4	59.6	14.5	7.7	96.1	58.9	14.7	1.4	DuPont Pioneer
Pioneer variety 25R40	Red	96.3	59.8	14.3	94.6	61.9	15.0	1.0	78.8	57.8	14.6	2.3	93.7	59.5	14.4	1.3	94.1	60.4	14.7	1.9	DuPont Pioneer
Pioneer variety 25W31	White	91.2	60.0	15.5	86.9	60.3	18.8	1.3	62.3	58.7	14.8	1.3	74.0	60.0	14.0	1.3	76.5	59.9	15.8	1.2	DuPont Pioneer
9223	Red	96.4	57.4	16.2	98.5	58.5	19.5	1.0	71.6	54.6	14.4	3.3	87.7	58.6	14.9	6.3	101.2	60.2	14.0	0.5	Dyna-Gro Seed
9242W	White	91.0	58.4	14.1	90.5	60.8	16.0	1.1	68.8	57.5	15.6	2.0	81.2	58.5	14.4	2.0	89.8	59.4	14.8	2.0	Dyna-Gro Seed
9362W	White	88.0	59.6	14.3	84.2	61.2	19.6	1.3	65.6	57.4	14.7	2.3	72.1	59.5	14.2	2.0	97.6	61.8	14.7	0.8	Dyna-Gro Seed
9491W	White	79.0	58.6	15.8	75.6	57.4	18.3	1.2	71.6	56.5	15.6	1.3	82.3	60.2	14.7	1.3	77.8	58.1	15.8	1.4	Dyna-Gro Seed
Shirley	Red	87.3	57.3	14.2	75.0	57.8	16.4	1.8	71.5	57.9	15.7	2.0	77.2	56.7	14.2	1.7	76.9	59.0	14.4	2.9	Dyna-Gro Seed
EXP 13W34	Red	82.9	56.0	17.8	87.7	49.3	25.2	2.0	74.6	56.9	15.0	2.0	89.6	58.7	14.6	2.0	90.3	57.0	16.7	1.8	Equity Seed
Guardian	Red	88.6	58.6	16.8	81.1	57.6	21.3	1.6	69.8	56.9	15.6	1.7	82.1	58.7	14.7	2.0	102.1	59.9	15.0	1.4	Equity Seed
GB 1202	Red	93.3	58.4	14.5	86.6	59.1	15.2	1.6	73.1	58.1	13.8	2.7	89.2	58.4	13.8	2.0	96.6	57.2	13.7	1.0	G.B. Seeds and Service
HS 284R	Red	93.9	59.1	14.4	90.3	60.9	14.8	1.0	75.3	56.6	14.4	2.3	90.7	58.4	14.1	3.0	96.2	59.3	14.1	1.4	Harrington Seeds, Inc.
Ava	White	90.4	58.0	16.4	83.0	57.1	20.2	1.0	61.9	58.1	16.1	2.7	78.7	59.9	14.9	2.7	93.6	59.2	15.2	1.2	Hyland Seeds
L-Brand 241	Red	96.3	61.3	15.3	88.5	61.9	16.3	1.2	70.9	58.4	15.7	4.3	78.0	59.5	15.0	4.7	95.8	61.8	14.7	0.9	Irrer Seed Farm
L-Brand 314	Red	88.7	59.4	14.3	81.6	60.2	15.6	1.2	71.9	59.2	15.3	3.3	80.8	60.3	14.5	2.7	80.3	59.9	15.0	1.5	Irrer Seed Farm
L-Brand 334	Red	103.9	61.0	15.8	92.6	61.1	16.2	1.4	53.8	55.4	14.9	5.7	78.3	60.4	14.9	3.3	96.3	60.1	15.2	1.5	Irrer Seed Farm
L-Brand 400	Red	94.0	60.0	15.3	82.4	59.4	16.1	1.2	69.4	58.4	14.3	2.0	88.9	61.4	14.4	1.3	92.1	58.4	14.5	0.9	Irrer Seed Farm
LCS News	Red	103.4	60.1	14.4	84.3	61.1	15.1	1.0	64.8	58.0	14.6	5.3	78.3	59.4	14.5	6.7	91.9	58.7	14.4	1.2	Irrer Seed Farm



## 2014 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 6 : Single Site: Yield, Test Weight and Moisture Performance Summary (Note: Tables sorted alphabetically by organization)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	ALLEGAN High Management			HURON High Management				INGHAM Conventional Management				INGHAM High Management				TUSCOLA High Management				Organization
		Yield bu/acre	Test Weight	Moist.	Yield bu/acre	Test Weight	Moist.	Winter Kill Score(1-5)	Yield bu/acre	Test Weight	Moist.	Lodging Score	Yield bu/acre	Test Weight	Moist.	Lodging Score	Yield bu/acre	Test Weight	Moist.	Winter Kill Score(1-5)	
AC Mountain	White	94.8	57.9	14.8	88.8	60.1	14.9	1.0	68.2	58.0	14.4	2.3	85.6	59.5	13.7	7.7	93.6	59.1	13.8	1.0	Michigan Crop Improvement Association
Hopewell	Red	88.1	58.7	13.7	84.2	60.6	15.1	1.1	71.8	58.3	14.2	5.7	85.6	58.8	14.4	2.3	87.3	60.0	14.4	1.1	Michigan Crop Improvement Association
Jupiter	White	90.3	57.9	13.9	82.7	58.7	15.2	1.4	66.8	55.9	14.1	3.3	85.4	59.2	14.1	1.7	92.7	57.5	14.5	2.1	Michigan Crop Improvement Association
MCIA 7002012	Red	91.5	58.7	16.6	81.2	58.7	19.5	1.0	71.3	58.4	15.5	2.0	86.6	59.5	15.1	3.7	104.2	61.0	14.4	1.7	Michigan Crop Improvement Association
MCIA Blazer	Red	89.5	60.5	15.2	90.6	62.2	15.9	0.9	71.7	60.6	14.9	3.3	82.5	60.8	14.5	3.0	91.0	60.9	14.5	1.1	Michigan Crop Improvement Association
MCIA E5024	White	78.3	58.1	14.7	75.9	55.3	20.7	1.5	66.2	55.6	14.8	1.3	65.6	56.9	13.8	1.7	87.1	59.2	14.8	2.0	Michigan Crop Improvement Association
MCIA Red Devil	Red	89.2	59.1	14.8	86.2	61.6	16.2	1.4	78.9	60.1	15.2	1.7	87.0	60.6	14.0	2.0	93.8	60.7	14.5	0.7	Michigan Crop Improvement Association
MCIA Red Dragon	Red	96.9	58.2	13.6	91.0	60.1	15.0	1.1	72.0	56.6	14.4	3.0	88.5	58.2	14.2	3.7	95.8	59.5	14.0	1.1	Michigan Crop Improvement Association
MCIA Whale	Red	84.2	55.8	17.7	89.8	57.9	19.6	0.8	80.9	58.9	16.8	2.3	100.3	60.6	14.9	2.0	91.3	57.4	16.0	1.1	Michigan Crop Improvement Association
Red Ruby	Red	86.4	58.3	15.1	88.4	60.5	17.5	0.9	66.8	57.3	14.4	2.7	80.8	60.3	14.1	3.0	88.2	59.8	14.7	2.1	Michigan Crop Improvement Association
Sunburst	Red	85.5	60.8	15.9	80.3	60.3	19.6	1.5	68.9	60.2	16.8	1.3	81.9	61.7	15.3	1.0	81.6	59.6	15.5	1.3	Michigan Crop Improvement Association
MCIA Venus	White	81.5	58.0	14.1	77.7	59.1	17.2	2.7	59.3	56.5	14.0	3.0	85.4	57.9	13.9	2.3	86.8	58.4	14.6	3.6	Michigan Crop Improvement Association
Malabar	Red	90.3	59.5	14.5	80.1	61.6	16.1	0.5	65.9	58.6	14.9	4.7	80.7	59.2	14.7	3.3	95.2	60.8	14.6	1.0	Ohio Seed Improvement Association
RS 907	Red	98.1	60.9	14.5	87.9	60.8	16.7	1.1	79.8	60.6	16.4	3.0	95.0	60.5	14.7	2.3	79.8	59.3	16.0	2.1	Rupp Seeds, Inc.
RS 967	Red	90.7	59.7	14.0	83.4	60.5	15.8	1.5	83.2	59.1	14.8	3.0	95.5	61.4	14.3	1.7	88.5	60.2	14.3	1.3	Rupp Seeds, Inc.
RS 972	Red	101.2	57.7	17.3	96.3	57.7	19.5	0.9	70.7	54.8	14.8	5.0	84.7	57.6	14.5	5.7	98.4	58.9	15.0	1.2	Rupp Seeds, Inc.
RS 9XP10	Red	95.5	61.2	14.6	91.2	61.1	16.5	1.1	81.4	59.1	15.3	2.0	103.4	61.4	14.4	2.0	96.3	60.1	14.8	2.0	Rupp Seeds, Inc.
Steyer Heilman	Red	98.7	59.0	14.0	84.9	59.7	15.7	1.7	81.5	57.8	14.5	3.7	89.6	58.8	14.1	4.7	95.1	59.8	14.0	1.2	Steyer Seeds
Steyer Hunker	Red	98.0	57.3	16.1	95.0	57.3	18.8	1.5	80.1	57.0	15.1	4.7	93.9	59.6	14.8	8.0	98.3	58.5	15.3	1.6	Steyer Seeds
Steyer Pierson	Red	90.3	58.6	16.6	79.0	56.6	22.6	1.2	74.5	57.7	15.8	2.7	80.5	59.0	14.8	3.0	100.4	60.2	15.1	1.2	Steyer Seeds
Sunstar S-1200	Red	92.0	58.4	13.6	86.9	60.4	14.6	1.3	74.9	57.8	14.1	2.7	90.2	58.9	13.7	2.3	96.2	58.2	13.7	2.2	Sunstar Hybrids
Sunstar S-2000	Red	93.4	58.9	14.5	85.0	59.9	17.1	1.5	82.1	58.9	14.7	2.0	95.4	60.2	14.4	1.3	97.8	58.5	14.8	1.8	Sunstar Hybrids
SY 474	Red	96.0	59.4	15.0	88.0	59.8	17.9	1.2	71.1	58.0	16.1	2.0	83.8	60.0	14.6	3.0	96.9	59.6	15.5	1.0	Syngenta
SY 483	Red	97.4	58.5	15.7	88.9	58.2	21.0	1.2	73.4	57.7	15.4	2.3	90.0	60.1	14.7	2.0	96.1	58.9	15.2	1.0	Syngenta
SY 901	White	73.1	56.0	14.1	80.6	54.6	19.1	2.4	54.9	54.4	13.7	2.0	68.3	57.3	13.5	2.7	91.6	57.9	14.8	1.8	Syngenta
W 123	Red	89.9	59.0	14.3	87.1	60.0	15.6	1.7	71.3	58.1	14.4	3.7	84.9	59.0	14.2	4.0	87.0	59.9	14.8	2.0	Wellman Seeds, Inc.
W 125	Red	94.8	58.6	14.2	90.3	59.1	15.7	1.6	71.6	56.2	14.3	3.7	82.6	58.5	14.1	3.3	99.1	60.3	13.8	1.1	Wellman Seeds, Inc.
W 204	Red	86.9	58.5	14.1	88.8	60.1	15.5	1.6	80.7	57.9	15.0	1.7	91.0	59.2	14.0	1.7	102.1	59.5	14.5	1.3	Wellman Seeds, Inc.
W 205	Red	83.3	55.4	18.4	83.8	51.8	24.4	1.9	75.6	57.3	16.4	1.7	93.7	59.5	15.0	1.3	92.3	59.1	16.0	1.7	Wellman Seeds, Inc.
W 206	Red	96.7	60.2	14.9	92.7	61.2	17.5	0.7	78.8	58.5	15.4	2.3	97.0	61.6	14.3	2.0	98.5	60.3	14.4	1.3	Wellman Seeds, Inc.
W 207	Red	99.8	57.6	16.7	94.5	57.4	19.4	1.6	75.1	55.9	14.8	1.7	83.2	57.6	14.5	5.0	103.0	59.5	15.1	1.0	Wellman Seeds, Inc.
W 208	Red	87.2	58.2	16.3	83.5	56.6	20.2	1.4	66.9	56.6	15.3	3.3	80.6	58.4	14.6	2.7	98.5	60.6	15.2	1.4	Wellman Seeds, Inc.
	<b>MEAN</b>	<b>91.5</b>	<b>58.5</b>	<b>15.1</b>	<b>86.0</b>	<b>59.0</b>	<b>17.6</b>	<b>1.3</b>	<b>71.0</b>	<b>57.6</b>	<b>15.1</b>	<b>2.7</b>	<b>84.3</b>	<b>59.2</b>	<b>14.4</b>	<b>3.0</b>	<b>92.9</b>	<b>59.2</b>	<b>14.9</b>	<b>1.5</b>	
	<b>LSD (0.05)</b>	<b>5.2</b>	<b>0.8</b>	<b>0.8</b>	<b>4.0</b>	<b>1.6</b>	<b>1.3</b>	<b>0.5</b>	<b>5.7</b>	<b>1.3</b>	<b>0.5</b>	<b>1.5</b>	<b>7.4</b>	<b>0.9</b>	<b>0.3</b>	<b>1.8</b>	<b>5.0</b>	<b>1.1</b>	<b>0.8</b>	<b>0.8</b>	
	<b>CV (%)</b>	<b>4.9</b>	<b>1.1</b>	<b>4.5</b>	<b>3.9</b>	<b>2.3</b>	<b>6.6</b>	<b>33.6</b>	<b>5.9</b>	<b>1.7</b>	<b>2.5</b>	<b>41.2</b>	<b>6.5</b>	<b>1.2</b>	<b>1.7</b>	<b>42.9</b>	<b>4.0</b>	<b>1.4</b>	<b>4.2</b>	<b>41.2</b>	