

2015 Michigan State Wheat Performance Trials

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Weather played a significant role in the outcomes of 2015 wheat production in Michigan. Late-harvested soybeans and frequent rainfall delayed planting across much of the state. However, the cool and extended growing season provided optimal growing conditions, especially during grain fill. Although some areas experienced drier than normal conditions, an abundance of moisture was present throughout the season, particularly in southern and central Michigan. Ideal conditions allowed for most acres to be harvested during the week of July 20th. A shorter harvest window has led to sound grain and generally high falling numbers. In contrast to other states in the eastern soft wheat region, Michigan has experienced average to significantly higher test weights and yield.

Multiple diseases impacted Michigan wheat in 2015. Leaf blotch diseases caused by *Septoria* and *Stagonospora* pathogens were widespread across the state. Early in the season, powdery mildew was identified in many fields but in most cases did not develop to yield-limiting levels. Many southern Michigan fields showed symptoms of Soilborne Mosaic Virus. Both stripe rust and leaf rust pathogens were active across the state after flowering. High moisture and humidity favored the development of Fusarium head blight in most areas. Although, severe Fhb infections did occur in some areas, levels of DON reflected in tested grain was lower than anticipated given the disease-promoting conditions.

Choosing Varieties

Variety selection is best made using at least three years of data. Varieties selected using data across all locations will likely perform well under a wide range of conditions. Although, performance of a given variety will vary based on testing location. In selecting varieties for a specific location, it is important to identify varieties that perform well near the location where the variety will be grown. Table 4 provides information on which varieties are top performers in each of the five trial locations in 2012 through 2015. Selection and planting of two or more varieties is recommended. As an example, planting varieties that differ in flowering date can allow for staggering of management applications, specifically, fungicides to control Fusarium head blight.

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

Experimental

The 2015 State Wheat Performance Trial entries were planted at seven sites in 6 counties: Huron, Ingham (3), Lenawee, Sanilac, and Tuscola. Appendix A (below) presents information on each of these sites. 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. Sites were designed as Alpha Lattice with four replications. 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 cooperators 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.

All sites were coordinated under high management with the exception of an additional conventionally managed trial at Ingham county. Under high management, an additional 30 pounds of nitrogen was applied using streamer bars and 28% N. 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 within a location were harvested on a single day. Yield was calculated using the entire area of the plot including the wheel tracks between plots leading to an underestimation of yield. For data reported on a 0-9 scale 0 is the best possible score.

Four 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 at ecolson@msu.edu or (517) 353-0142. This report and previous reports, may also be accessed through the Web at <http://www.varietrials.msu.edu/wheat>.

Multi-Year Performance Summary

Tables 1 through 7 summarize performance of the trial. The full trial included 96 entries (32 of which were experimental lines) from 15 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 64 commercially available varieties from 13 organizations only. The “including experimentals” version (online only) includes all commercial and experimental lines. Attached to this narrative is a list of the names and contact information for those organizations. Each row 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.** Tables 1, 2, 3, 7 and 8 are sorted first by entry grain color, and then in descending order by yield for 2015. In some instances (e.g. yield), data columns to the right of the 2015 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.

Table 1 contains data for yield, and test weight. This data was acquired electronically on the plot combine at the time of harvest. Yield data is standardized to 13.5% moisture. The 2015 yield data contains the multi-site yield averages of only the high management sites and does not include the single site of conventionally managed yield data in Ingham County. The conventionally managed single site data can be found on table 5 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).

Table 1 also contains data on resistance to Fusarium Head Blight (FHB, scab) and the associated mycotoxin, deoxynivalenol (DON, VOM). Scab data were obtained from heavy disease pressure in an inoculated scab screening nursery. FHB infected grain is spread to provide inoculum and artificial misting provides disease-promoting conditions throughout the entire flowering period.

FHB Resistance Traits

Severity: The average percent of infected spikelets in each head.

Incidence: The percent of all spikes in a plot showing infection.

FHB index: The overall infection considering severity and incidence.

DON: Levels of mycotoxin (ppm) present in grain. DON data is from the 2014 and prior crop years.

Levels of DON Levels of DON mycotoxin and severity are the most reliable traits to be used in selecting FHB-resistant varieties.

Table 2 contains data for flowering date, plant height, grain moisture at harvest, lodging, pre-harvest sprouting, and winter injury.

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. 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. Winter injury scores are from the 2014 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

for 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 powdery mildew, leaf blotch, cephalosporium stripe, wheat streak mosaic virus, barley yellow dwarf virus, leaf rust, stripe rust, and percent black point (tip) on the grain.

Disease scores are recorded as “0 = no visual symptoms of disease present” and “9 = severe visual symptoms of the disease”. 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*. Cephalosporium stripe is caused by *Cephalosporium gramineum* and causes distinct yellow stripes that may contain thin, brown streaks on leaf blades, sheaths and stems. Cephalosporium scores are based on observations of the entire plant including the flag leaf. Wheat streak mosaic virus and barley yellow dwarf virus were not observed in the 2015 growing season and reported scores are from the 2014 and 2013 growing seasons respectively. 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. 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 2014 harvest season and earlier.

Single Site Yield Performance Summary

Table 4 contains 2015 yield (adjusted to 13.5% moisture), as well as multi-year means, for entries in each of the five sites harvested for yield in 2015. Data on performance across multiple years is provided where available. Each row in the table represents a single entry in the test. It is recommended that multiple years of data in each location be used in variety selection decisions. Table 4 is sorted first by organization and then by variety.

High Management vs. Conventional Management Performance

Table 5 provides a comparison of variety performance under intensive management and conventional management practices. Data on yield, test weight, grain moisture at harvest and lodging are provided from conventional management and high management trials at Ingham County. The Conventional vs. High Management Differences portion of the table provides the difference between high management and conventional management.

Milling and Baking Quality

Tables 6 & 7 contains data for milling and baking quality. Quality data are from the 2014 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. Percent protein in flour is adjusted at 14% moisture. Softness equivalent percent is the softness of the flour, with higher values indicating softer grained wheat. 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. 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%.

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Appendix A. Trial Site Descriptions for 2015 MSU Wheat Performance Trials.

	HURON COUNTY	INGHAM COUNTY			LENAWEE COUNTY	SANILAC COUNTY	TUSCOLA COUNTY
COOPERATOR	Darwin Sneller	Michigan State University			Woods Seed Farm	JGDM Farms	Stuart Bierlein
	HIGH MANAGEMENT	CONV. MANAGEMENT	HIGH MANAGEMENT	SCAB NURSERY	HIGH MANAGEMENT	HIGH MANAGEMENT	HIGH MANAGEMENT
NEAREST CITY	Sebewaing	Mason	Mason	Lansing	Britton	Deckerville	Richville
PLANTING DATE	Oct. 26, 2014	Sept. 26, 2014	Sept. 26, 2014	Oct. 17, 2014	Oct. 25, 2014	Oct. 8, 2014	Sept. 29, 2014
HARVEST DATE	July 23, 2015	July 22, 2015	July 22, 2015	N/A	July 20, 2015	July 24, 2015	July 21, 2015
SOIL TYPE	Kilmanagh loam, 0 to 1 percent slopes	Capac loam, 0 to 3 percent slopes	Capac loam, 0 to 3 percent slopes	Capac loam, 0 to 3 percent slopes and Colwood-Brookston loam, 0 to 2 percent slopes	Lenawee silty clay loam, 0 to 3 percent slopes	Parkhill loam, 0 to 1 percent slopes	Tappan-Londo loam, 0-2 percent slopes
PRE-PLANT FERTILIZER	250# 7-24-24 + S + B	150# 6-24-24	150# 6-24-24	50# 46-0-0	300# 9-23-30	225# 9-16-24 + 8.8%S	300# 13-8-24 +7% S + 0.83% Zn + 0.47% Mn + 0.13% Cu +0.13% B
COMMENTS		Slight Spring Water Damage. Heavy Cepholspore Stripe and Leaf Blotch Pressure. Moderate FHB. Light Leaf Rust Pressure.	Slight Spring Water Damage. Heavy Cepholspore Stripe and Leaf Blotch Pressure. Moderate FHB. Light Leaf Rust Pressure.	Inoculated / Misted Fusarium Head Blight Screening Nursery.	Moderate FHB. Moderate Lodging.	Slight Spring Water Damage.	
AVERAGE YIELD (BUSHEL / ACRE)	101.5	69.5	83.8	N / A	82.3	112.4	107.6
AVERAGE TEST WEIGHT (LBS. / BUSHEL)	59.4	54.8	56.4	N / A	56.1	58.9	60.0
AVERAGE PERCENT GRAIN MOISTURE AT HARVEST	15.8	13.6	12.9	N / A	16.4	16.2	13.8
2015 DATA RECORDED (NUMBER OF REPS)	LODGE (4)	FD (4); CEPH (4); LEAF_B (4); PM (4); L_RUST (3); LODGE (4)	FD (4); CEPH (4); LEAF_B (4); LODGE (4)	%INC.(4); %SEV. (4); INDEX (4)	PL_HT (4);		FD (4); PL_HT (4)

*DATA: **FD** – Flowering Date (Days Past Jan. 01), **PL_HT** - Plant Height in Inches, **LEAF_B** - Leaf Blotch Score (0-9), **CEPH** - Cephalosporium Stripe Score (0-9), **LODGE** - Lodging Score (0-9), **LRUST** - Leaf 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

2015 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 2015 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) Multi-Year Averages				Test Weight: lbs/Bushel Multi-Year Averages				Incidence (% of spikes)			FHB (Scab) : Field Observation Severity (% within spikes)			Index (% overall infection)			DON (ppm) in grain Multi-Year Averages				Organization		
				2 YR	3 YR	4 YR	2015	2014-15	2013-15	2012-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2014	2013-14		2012-14	2011-14
				2015	2014-15	2013-15	2012-15	2015	2014-15	2013-15	2012-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2014		2013-14	2012-14
AgriMAXX 447	Red	White	Awnless	100.8	95.2	-----	-----	57.0	57.1	-----	-----	88.8	84.4	-----	27.9	42.1	-----	24.9	35.1	-----	8.4	-----	-----	-----	AgriMAXX Wheat Company		
W 206	Red	White	Awned	99.6	97.8	95.4	-----	58.8	59.8	59.7	-----	77.5	72.5	53.6	20.9	21.6	24.2	16.1	16.7	13.3	3.6	6.8	-----	-----	Wellman Seeds, Inc.		
DF 112R	Red	White	Awned	99.3	97.5	96.6	-----	57.1	57.8	57.5	-----	85.0	75.0	68.4	20.2	28.0	32.8	17.2	20.6	20.9	5.6	12.2	-----	-----	D.F. Seeds, Inc.		
MCIA Whale	Red	White	Awnless	99.2	95.0	92.5	-----	57.3	57.6	57.6	-----	90.0	77.8	64.2	41.7	37.9	38.0	38.6	31.2	26.6	16.3	18.3	-----	-----	Michigan Crop Improvement Association		
Sunburst	Red	White	Awnless	99.1	90.8	89.8	90.3	60.5	60.6	60.7	61.1	97.5	90.0	77.9	27.8	25.6	29.9	27.2	24.0	23.2	7.0	10.4	7.0	5.6	Michigan Crop Improvement Association		
Diener 491W	Red	White	Awned	98.2	96.3	-----	-----	59.0	59.5	-----	-----	87.5	81.3	-----	18.5	23.9	-----	16.3	19.4	-----	5.7	-----	-----	-----	Bio Town Seeds		
AgriMAXX 444	Red	White	Awned	98.1	-----	-----	-----	57.7	-----	-----	-----	82.5	-----	-----	21.6	-----	-----	17.8	-----	-----	-----	-----	-----	-----	AgriMAXX Wheat Company		
SY 483	Red	White	Awnless	98.0	95.6	92.3	-----	57.2	58.0	57.8	-----	92.5	91.3	68.6	40.4	41.2	38.6	37.0	37.6	28.2	9.4	15.2	-----	-----	Sygenta Cereals / AgriPro		
MCIA Red Dragon	Red	White	Awnless	97.4	95.3	93.9	93.5	58.7	58.9	58.4	58.4	87.5	81.3	58.7	27.0	34.0	38.1	23.8	27.4	21.2	4.0	7.4	5.0	3.9	Michigan Crop Improvement Association		
L-214	Red	White	Awnletted	97.2	-----	-----	-----	59.2	-----	-----	-----	83.8	-----	-----	23.6	-----	-----	20.6	-----	-----	-----	-----	-----	-----	Irrer Seed Farm		
Steyer Morrin	Red	White	Awnletted	97.1	-----	-----	-----	56.5	-----	-----	-----	93.8	-----	-----	35.1	-----	-----	33.2	-----	-----	-----	-----	-----	-----	Steyer Seeds		
AgriMAXX 413	Red	White	Awned	97.0	94.5	92.4	92.2	58.5	58.6	58.0	58.4	86.3	76.9	66.3	20.8	18.9	28.2	18.1	14.7	17.9	5.7	11.2	7.5	-----	AgriMAXX Wheat Company		
9552	Red	White	Awned	96.8	-----	-----	-----	58.3	-----	-----	-----	82.5	-----	-----	18.7	-----	-----	15.4	-----	-----	-----	-----	-----	-----	Dyna-Gro Seed		
AgriMAXX 446	Red	White	Awned	96.5	-----	-----	-----	57.8	-----	-----	-----	86.3	-----	-----	27.1	-----	-----	23.4	-----	-----	-----	-----	-----	-----	AgriMAXX Wheat Company		
AgriMAXX 438	Red	White	Awnless	96.2	96.1	93.8	-----	57.2	57.9	57.7	-----	92.5	86.3	75.6	28.8	34.3	38.6	27.1	29.2	28.2	7.7	9.9	-----	-----	AgriMAXX Wheat Company		
L-377	Red	White	Awnletted	96.1	-----	-----	-----	58.5	-----	-----	-----	95.0	-----	-----	31.5	-----	-----	30.2	-----	-----	-----	-----	-----	-----	Irrer Seed Farm		
Pioneer Brand 25R40	Red	White	Awned	95.9	95.4	94.2	95.4	58.4	59.5	59.1	59.5	88.8	83.2	72.7	25.1	24.7	34.2	22.2	21.4	22.3	7.7	12.0	8.2	-----	DuPont Pioneer		
Steyer STex141	Red	White	Awned	95.7	-----	-----	-----	58.7	-----	-----	-----	83.8	-----	-----	16.3	-----	-----	14.0	-----	-----	-----	-----	-----	-----	Steyer Seeds		
MCIA Blazer	Red	White	Awnletted	95.6	92.1	90.1	89.8	60.0	60.6	60.4	60.6	76.3	75.7	67.5	16.0	29.0	31.4	12.2	22.5	21.8	7.2	10.2	6.8	-----	Michigan Crop Improvement Association		
SY 474	Red	White	Awnless	95.3	93.3	-----	-----	59.4	59.6	-----	-----	90.0	82.5	-----	44.1	32.6	-----	40.0	28.3	-----	13.1	-----	-----	-----	Sygenta Cereals / AgriPro		
DF 111R	Red	White	Awned	95.3	94.5	92.2	-----	58.9	59.6	59.2	-----	86.3	85.7	57.8	19.0	21.6	20.4	16.5	18.7	12.4	6.9	11.2	-----	-----	D.F. Seeds, Inc.		
RS 972	Red	White	Awnless	95.2	95.5	94.4	95.0	57.3	57.6	57.4	57.8	78.8	75.7	59.7	25.1	31.5	31.9	20.0	25.0	19.3	5.1	9.6	6.5	-----	Rupp Seeds, Inc		
RS 910	Red	White	Awned	94.3	-----	-----	-----	58.2	-----	-----	-----	88.8	-----	-----	21.7	-----	-----	19.3	-----	-----	-----	-----	-----	-----	Rupp Seeds, Inc		
Pioneer Brand 25R50	Red	White	Awnless	94.0	-----	-----	-----	57.0	-----	-----	-----	80.0	-----	-----	21.6	-----	-----	17.8	-----	-----	-----	-----	-----	-----	DuPont Pioneer		
9522	Red	White	Awned	94.0	-----	-----	-----	56.9	-----	-----	-----	78.8	-----	-----	16.8	-----	-----	13.4	-----	-----	-----	-----	-----	-----	Dyna-Gro Seed		
L-241	Red	White	Awnless	94.0	92.0	-----	-----	59.9	60.6	-----	-----	65.0	62.5	-----	19.7	17.9	-----	12.7	11.8	-----	1.7	-----	-----	-----	Irrer Seed Farm		
RS 9XP011	Red	White	Awned	93.9	-----	-----	-----	58.4	-----	-----	-----	96.3	-----	-----	16.0	-----	-----	15.3	-----	-----	-----	-----	-----	-----	Rupp Seeds, Inc		
SY 007	Red	White	Awned	93.8	-----	-----	-----	58.1	-----	-----	-----	81.3	-----	-----	29.1	-----	-----	22.3	-----	-----	-----	-----	-----	-----	Sygenta Cereals / AgriPro		
9223	Red	White	Awnless	93.8	95.0	93.3	93.5	56.0	57.3	57.3	57.7	81.3	83.2	64.3	26.2	22.7	30.5	20.7	18.4	16.5	5.2	10.5	7.1	-----	Dyna-Gro Seed		
Diener 512	Red	White	Awnless	93.8	95.4	93.1	-----	56.0	57.1	57.1	-----	82.5	77.5	55.2	27.0	29.3	28.2	22.3	23.3	15.5	7.0	10.8	-----	-----	Bio Town Seeds		
Pioneer Brand 25R25	Red	White	Awned	93.5	-----	-----	-----	56.4	-----	-----	-----	83.8	-----	-----	13.9	-----	-----	12.0	-----	-----	-----	-----	-----	-----	DuPont Pioneer		
L-334	Red	White	Awnless	93.3	93.5	-----	-----	58.0	59.4	-----	-----	70.0	58.2	-----	16.2	17.7	-----	11.5	10.3	-----	3.1	-----	-----	-----	Irrer Seed Farm		
DF 109R	Red	White	Awnless	92.7	93.7	93.1	93.3	55.5	56.6	56.9	57.3	77.5	71.3	61.0	29.8	27.3	31.5	22.7	19.3	18.9	4.3	10.7	7.2	-----	D.F. Seeds, Inc.		

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				2 YR	3 YR	4 YR	2015	2014-15	2013-15	2012-15	2 YR	3 YR	4 YR	2015	2014-15	2013-15	2 YR	3 YR	2 YR	3 YR	2014	2013-14	2012-14	2011-14	
				2015	2014-15	2013-15	2012-15	2015	2014-15	2013-15	2012-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2015	2014-15	2013-15	2014	2013-14	2012-14	2011-14	
DF 105R	Red	White	Awned	92.6	92.8	90.3	91.2	57.0	57.8	57.5	57.9	97.5	87.5	69.9	20.1	25.0	24.0	19.7	21.5	17.3	5.2	11.4	7.6	6.0	D.F. Seeds, Inc.
Sienna	Red	White	Awnless	92.5	92.6	91.7	----	56.7	57.9	57.7	----	86.3	76.9	55.6	26.1	35.7	42.5	22.3	26.6	21.1	7.0	10.0	----	----	D.F. Seeds, Inc.
MCIA Red Devil	Red	White	Awned	92.4	90.7	88.8	89.0	59.4	60.0	59.4	59.7	85.0	88.8	64.7	30.3	30.4	30.6	26.1	27.0	20.7	8.3	12.2	8.2	6.3	Michigan Crop Improvement Association
HS 284R	Red	White	Awnless	92.3	92.5	92.0	----	57.8	58.7	58.3	----	76.3	74.4	52.9	33.4	30.5	32.4	25.5	22.7	16.7	6.6	9.3	----	----	Harrington Seeds, Inc.
MCIA Rocket	Red	White	Awnless	92.2	----	----	----	56.5	----	----	----	91.3	----	----	32.5	----	----	30.1	----	----	----	----	----	----	Michigan Crop Improvement Association
RS 907	Red	White	Awned	91.9	91.3	91.1	----	58.3	59.4	59.3	----	88.8	76.9	64.6	16.1	16.8	22.2	14.5	12.8	13.7	3.4	5.7	----	----	Rupp Seeds, Inc
L-232	Red	White	Awnletted	91.8	----	----	----	60.5	----	----	----	83.8	----	----	21.5	----	----	18.3	----	----	----	----	----	----	Irrer Seed Farm
SY 547	Red	White	Awnletted	91.3	----	----	----	58.0	----	----	----	82.5	----	----	32.8	----	----	27.6	----	----	----	----	----	----	Sygenta Cereals / AgriPro
LCS News	Red	White	Awnletted	91.1	90.6	90.0	----	58.0	59.0	58.9	----	92.5	80.0	63.4	31.2	38.8	40.6	29.1	30.6	25.1	6.5	8.7	----	----	Irrer Seed Farm
L-264	Red	White	Awnletted	90.9	----	----	----	58.1	----	----	----	80.0	----	----	22.7	----	----	18.4	----	----	----	----	----	----	Irrer Seed Farm
Hopewell	Red	Bronze	Awnletted	89.8	88.1	86.6	86.8	57.3	58.4	58.4	58.8	90.0	81.3	63.5	39.2	40.7	40.8	34.6	33.2	25.7	6.5	13.0	8.8	6.9	Michigan Crop Improvement Association
DF 113R	Red	White	Awnless	89.0	92.8	----	----	59.0	59.8	----	----	93.8	83.2	----	34.3	40.2	----	31.6	33.1	----	5.6	----	----	----	D.F. Seeds, Inc.
MCIA Flame	Red	White	Awnletted	88.7	----	----	----	58.4	----	----	----	87.5	----	----	22.8	----	----	20.4	----	----	----	----	----	----	Michigan Crop Improvement Association
Shirley	Red	White	Awnletted	88.0	83.7	83.1	85.6	54.7	56.2	56.3	56.9	96.3	83.2	70.6	40.3	36.6	38.6	39.1	31.6	27.6	10.0	15.3	10.3	8.2	Dyna-Gro Seed
L-347	Red	White	Awnletted	87.3	----	----	----	60.2	----	----	----	80.0	----	----	15.8	----	----	12.7	----	----	----	----	----	----	Irrer Seed Farm
Red Ruby	Red	White	Awned	86.5	86.4	84.2	84.7	57.7	58.7	58.4	58.9	98.8	94.4	78.6	32.9	36.3	41.1	32.6	34.4	30.9	9.8	16.5	11.0	8.5	Michigan Crop Improvement Association
9242W	White	White	Awnless	98.6	93.6	89.2	89.2	58.0	58.7	58.2	58.7	92.5	85.0	56.7	21.9	27.0	22.6	20.7	22.5	15.0	9.0	9.9	6.7	5.1	Dyna-Gro Seed
Jupiter	White	Bronze	Awnletted	97.0	92.3	89.5	88.7	57.0	57.7	57.3	57.5	97.5	81.3	66.3	33.5	34.5	34.7	32.7	27.8	21.9	7.2	9.3	6.5	5.4	Michigan Crop Improvement Association
Ambassador	White	White	Awnletted	95.1	92.3	89.4	89.3	55.3	56.2	55.9	56.5	96.3	94.4	75.1	50.4	54.7	56.7	48.2	51.6	42.3	13.8	24.0	16.3	12.8	D.F. Seeds, Inc.
DF EX W B-1	White	White	Awnletted	93.0	----	----	----	56.8	----	----	----	83.8	----	----	47.4	----	----	39.5	----	----	----	----	----	----	D.F. Seeds, Inc.
Aubrey	White	White	Awnletted	93.0	88.5	85.0	84.7	59.5	59.7	59.2	59.4	78.8	73.2	58.5	26.3	31.1	36.8	21.0	22.5	18.9	8.2	11.1	7.4	5.9	D.F. Seeds, Inc.
MSU E6012	White	White	Awned	91.9	88.2	86.8	86.4	57.0	57.8	57.7	58.4	86.3	84.4	63.5	40.4	38.9	38.5	35.1	33.0	24.1	9.0	9.4	6.3	5.0	Michigan Crop Improvement Association
AC Mountain	White	White	Awnletted	91.5	91.2	89.5	89.1	56.3	57.7	57.2	57.3	96.3	90.7	67.1	48.9	48.4	46.8	47.1	43.3	32.3	13.1	14.0	9.5	7.6	Michigan Crop Improvement Association
DF 110W	White	White	Awned	90.7	87.2	86.2	87.3	56.3	56.9	57.1	58.0	91.3	86.9	65.4	22.2	25.5	25.4	20.1	21.7	16.0	10.8	19.8	13.3	----	D.F. Seeds, Inc.
Pioneer Brand 25W31	White	White	Awned	90.0	86.6	----	----	57.9	59.0	----	----	90.0	81.3	----	15.7	14.9	----	14.1	12.1	----	5.1	----	----	----	DuPont Pioneer
9491W	White	White	Awned	90.0	84.3	----	----	56.1	57.3	----	----	96.3	93.2	----	25.1	28.6	----	24.1	27.3	----	15.6	----	----	----	Dyna-Gro Seed
Ava	White	White	Awnletted	88.7	87.6	85.8	84.6	56.5	57.5	57.5	57.3	88.8	84.4	56.3	27.5	35.2	26.8	24.7	29.4	19.6	4.7	6.0	4.0	3.2	Hyland Seeds
9362W	White	White	Awnless	88.5	87.1	84.3	----	58.0	59.3	58.9	----	86.3	80.7	56.3	30.8	27.7	24.2	26.4	22.8	15.7	6.4	9.6	----	----	Dyna-Gro Seed
MSU 5024	White	White	Awned	86.3	81.6	----	----	56.0	56.7	----	----	92.5	91.3	----	26.4	30.3	----	24.5	27.4	----	10.8	----	----	----	Michigan Crop Improvement Association
MEAN (2015 96 Entries)				92.9	91.2	90.1	89.3	57.6	58.3	58.1	58.3	87.1	81.9	64.2	27.1	31.3	33.6	23.9	26.1	21.5	7.7	11.6	8.3	6.4	
LSD (0.05)				4.1	6.5	4.4	4.0	1.3	1.2	0.9	1.0	11.7	11.9	17.9	9.0	14.4	12.7	9.0	12.1	11.4	4.6	6.5	5.7	4.8	
CV (%)				7.8	3.5	3.0	3.2	4.0	1.0	0.9	1.2	11.5	7.2	17.2	28.5	22.8	23.3	32.3	23.0	32.4	50.9	27.6	41.7	52.2	

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

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Table 2 : Multi-Year Performance Summary (Note: Tables sorted by 2015 Yield, red wheats grouped before white)

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Name	Grain Color	Flowering Date (Days Past Jan. 1)				Plant Height (Inches)				Percent Grain Moisture at Harvest				Lodging Score (0-9) (0=none)			Visual Sprout Score (0-9)		Winter Injury Score (1-5) 2014
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages			Multi-Year		
		2 YR	3 YR	4 YR	2012-15	2 YR	3 YR	4 YR	2012-15	2 YR	3 YR	4 YR	2012-15	2 YR	3 YR	2014-15	2 YR	2014-15	
AgriMAXX 447	Red	151.7	154.0	-----	-----	32.2	33.7	-----	-----	16.0	17.0	-----	-----	2.9	2.5	-----	2.5	2.8	1.0
W 206	Red	149.2	152.0	152.5	-----	32.3	33.5	34.1	-----	14.7	15.1	14.4	-----	2.7	2.4	2.1	2.5	3.0	1.0
DF 112R	Red	149.0	151.9	152.4	-----	29.8	31.3	31.6	-----	14.1	14.4	13.8	-----	3.7	3.4	3.3	6.0	5.3	1.6
MCIA Whale	Red	151.2	153.8	154.7	-----	32.6	34.0	34.3	-----	15.6	16.5	15.7	-----	2.9	2.5	2.0	1.0	2.5	1.1
Sunburst	Red	150.4	153.1	154.1	151.3	28.6	29.2	30.0	29.3	16.0	16.4	15.4	15.2	1.8	1.4	1.6	0.0	0.8	1.4
Diener 491W	Red	148.7	151.3	-----	-----	30.3	31.6	-----	-----	14.2	14.6	-----	-----	2.0	1.5	-----	6.0	5.0	1.1
AgriMAXX 444	Red	149.9	-----	-----	-----	31.7	-----	-----	-----	15.0	-----	-----	-----	3.1	-----	-----	3.0	-----	-----
SY 483	Red	151.0	154.1	154.7	-----	32.5	33.4	33.8	-----	15.3	16.1	15.1	-----	4.9	3.5	3.3	0.0	1.5	1.3
MCIA Red Dragon	Red	149.2	151.7	152.4	149.9	34.6	36.0	36.7	36.0	13.8	14.0	13.7	13.5	5.4	4.6	3.7	1.5	2.0	1.0
L-214	Red	148.3	-----	-----	-----	30.2	-----	-----	-----	14.2	-----	-----	-----	5.1	-----	-----	1.5	-----	-----
Steyer Morrin	Red	151.7	-----	-----	-----	31.9	-----	-----	-----	16.1	-----	-----	-----	2.4	-----	-----	1.0	-----	-----
AgriMAXX 413	Red	148.8	151.4	151.9	149.2	29.8	31.1	31.4	31.1	13.8	13.9	13.3	13.3	3.1	2.9	2.9	0.5	-----	1.0
9552	Red	149.8	-----	-----	-----	30.4	-----	-----	-----	14.4	-----	-----	-----	2.3	-----	-----	1.0	-----	-----
AgriMAXX 446	Red	149.9	-----	-----	-----	29.8	-----	-----	-----	14.4	-----	-----	-----	2.7	-----	-----	0.5	-----	-----
AgriMAXX 438	Red	149.4	152.3	152.9	-----	33.3	34.2	34.4	-----	15.9	16.3	15.3	-----	5.5	7.3	6.1	1.0	0.5	1.4
L-377	Red	148.5	-----	-----	-----	30.7	-----	-----	-----	14.3	-----	-----	-----	3.6	-----	-----	1.5	-----	-----
Pioneer Brand 25R40	Red	149.4	152.3	153.1	150.5	28.6	29.9	30.4	30.1	14.3	14.5	13.9	13.8	2.9	2.1	2.0	4.0	3.5	1.4
Steyer STex141	Red	149.0	-----	-----	-----	32.0	-----	-----	-----	15.4	-----	-----	-----	3.7	-----	-----	2.5	-----	-----
MCIA Blazer	Red	148.0	150.7	151.5	148.8	30.6	32.1	32.5	32.3	14.3	14.7	14.2	14.0	4.9	4.0	3.6	1.0	1.3	1.1
SY 474	Red	150.3	152.8	-----	-----	34.5	34.6	-----	-----	14.7	15.3	-----	-----	5.1	4.1	-----	0.5	1.5	1.0
DF 111R	Red	149.4	152.2	152.9	-----	33.0	34.4	34.7	-----	14.6	15.1	14.5	-----	2.9	2.5	2.1	4.5	-----	1.4
RS 972	Red	149.6	152.5	153.2	150.7	32.8	33.7	33.8	33.1	16.1	16.5	15.5	15.1	6.0	5.9	4.9	1.5	2.0	1.0
RS 910	Red	149.3	-----	-----	-----	32.3	-----	-----	-----	14.7	-----	-----	-----	3.5	-----	-----	2.5	-----	-----
Pioneer Brand 25R50	Red	150.3	-----	-----	-----	29.5	-----	-----	-----	13.9	-----	-----	-----	2.1	-----	-----	1.0	-----	-----
9522	Red	150.4	-----	-----	-----	31.6	-----	-----	-----	15.1	-----	-----	-----	3.2	-----	-----	2.0	-----	-----
L-241	Red	148.7	150.9	-----	-----	32.0	33.4	-----	-----	14.4	14.9	-----	-----	6.9	5.8	-----	0.0	2.0	1.0
RS 9XP011	Red	149.2	-----	-----	-----	32.2	-----	-----	-----	15.1	-----	-----	-----	3.9	-----	-----	3.0	-----	-----
SY 007	Red	148.7	-----	-----	-----	30.5	-----	-----	-----	14.1	-----	-----	-----	3.9	-----	-----	2.5	-----	-----
9223	Red	149.6	152.4	153.2	150.8	33.1	33.8	33.9	33.4	16.4	16.4	15.4	15.0	5.8	6.1	4.9	1.5	2.0	1.0
Diener 512	Red	149.7	152.4	153.2	-----	32.7	33.8	33.9	-----	16.3	16.5	15.6	-----	5.6	6.5	5.2	2.0	2.8	1.3
Pioneer Brand 25R25	Red	149.9	-----	-----	-----	31.2	-----	-----	-----	15.9	-----	-----	-----	3.6	-----	-----	2.0	-----	-----
L-334	Red	149.3	151.8	-----	-----	32.7	33.4	-----	-----	15.2	15.4	-----	-----	7.4	5.4	-----	3.0	2.3	1.4
DF 109R	Red	149.3	152.3	153.2	150.9	33.5	33.9	33.9	33.3	15.6	16.3	15.2	14.9	6.3	5.8	4.9	1.0	1.5	1.6

2015 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 2015 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)				Percent Grain Moisture at Harvest				Lodging Score (0-9) (0=none)			Visual Sprout Score (0-9)		Winter Injury Score (1-5) 2014
		Multi-Year Averages				Multi-Year Averages				Multi-Year Averages				Multi-Year Averages			Multi-Year		
		2 YR	3 YR	4 YR	2015	2014-15	2013-15	2012-15	2015	2014-15	2013-15	2012-15	2 YR	3 YR	4 YR	2015	2014-15	2013-15	
DF 105R	Red	148.7	151.2	151.8	149.1	29.3	30.9	31.4	30.7	14.1	14.1	13.5	13.4	3.1	2.9	2.6	5.0	5.5	1.0
Sienna	Red	149.2	151.8	152.4	----	35.0	36.2	37.2	----	14.0	14.5	14.0	----	5.4	4.9	3.8	1.0	1.8	1.4
MCIA Red Devil	Red	149.5	151.9	152.9	150.3	32.9	33.3	33.6	32.8	14.2	14.6	14.1	14.0	4.5	3.3	2.9	0.5	1.3	1.0
HS 284R	Red	149.4	151.8	152.5	----	34.3	36.0	36.8	----	14.1	14.3	13.7	----	5.7	4.4	3.5	0.5	2.5	1.4
MCIA Rocket	Red	148.9	----	----	----	31.2	----	----	----	13.5	----	----	----	4.8	----	----	1.5	----	----
RS 907	Red	148.9	151.8	152.4	----	30.6	31.9	32.3	----	14.6	15.1	14.5	----	3.8	3.1	2.9	2.0	----	1.4
L-232	Red	147.8	----	----	----	30.4	----	----	----	14.5	----	----	----	5.5	----	----	1.0	----	----
SY 547	Red	149.4	----	----	----	31.8	----	----	----	15.3	----	----	----	3.8	----	----	2.0	----	----
LCS News	Red	147.8	150.3	151.1	----	30.4	31.4	32.2	----	14.6	14.6	14.2	----	6.0	6.4	5.8	0.5	0.3	1.1
L-264	Red	147.7	----	----	----	30.3	----	----	----	13.9	----	----	----	4.5	----	----	4.5	----	----
Hopewell	Red	149.8	152.6	153.3	150.9	34.2	35.0	35.3	34.6	14.0	14.2	13.8	13.7	4.8	3.6	2.9	0.0	1.0	1.1
DF 113R	Red	149.7	152.4	----	----	31.9	33.2	----	----	15.6	15.6	----	----	3.3	2.7	----	1.0	2.0	1.1
MCIA Flame	Red	150.3	----	----	----	31.2	----	----	----	14.8	----	----	----	3.4	----	----	----	----	----
Shirley	Red	150.2	152.9	154.0	151.3	29.7	30.0	30.1	29.6	14.2	14.6	14.0	13.9	2.3	2.0	1.7	2.0	2.0	2.0
L-347	Red	148.0	----	----	----	32.4	----	----	----	14.8	----	----	----	6.8	----	----	0.0	----	----
Red Ruby	Red	149.7	152.7	153.5	150.9	31.4	32.8	33.1	32.6	14.5	15.0	14.3	14.0	2.9	3.0	2.7	4.0	4.0	1.6
9242W	White	150.1	152.3	153.3	150.7	30.8	32.2	32.8	32.3	14.1	14.5	14.0	13.8	2.8	2.4	2.3	3.5	4.8	1.3
Jupiter	White	151.7	154.0	154.6	152.3	28.9	30.6	31.4	31.2	14.0	14.2	13.6	13.8	2.8	2.3	2.3	6.0	----	1.6
Ambassador	White	149.4	152.2	153.0	150.2	31.3	32.7	33.2	32.7	12.7	13.3	12.8	12.9	3.8	3.4	3.0	2.9	4.7	1.1
DF EX W B-1	White	149.4	----	----	----	32.6	----	----	----	13.7	----	----	----	5.0	----	----	3.1	----	----
Aubrey	White	149.3	151.7	152.4	149.7	30.4	31.7	32.8	32.7	14.0	14.3	13.9	13.8	4.3	3.2	2.7	6.0	6.2	1.0
MSU E6012	White	150.5	153.3	153.6	150.9	31.0	31.2	31.9	31.8	13.5	13.9	13.4	13.3	4.4	3.1	3.1	3.5	4.2	2.0
AC Mountain	White	150.3	153.3	154.1	152.0	38.0	37.7	38.1	37.2	13.3	13.9	13.4	13.4	6.8	7.3	6.1	2.9	5.2	1.0
DF 110W	White	150.2	153.1	153.8	151.1	29.0	29.7	30.7	30.3	15.3	15.8	14.8	14.5	3.3	2.7	2.7	6.9	7.0	1.3
Pioneer Brand 25W31	White	151.7	153.7	----	----	31.2	31.8	----	----	15.7	16.0	----	----	1.8	1.6	----	2.5	4.3	1.3
9491W	White	149.9	152.8	----	----	29.3	30.2	----	----	15.2	15.8	----	----	1.9	1.6	----	5.5	6.3	1.1
Ava	White	152.6	154.6	155.7	153.4	37.2	37.4	37.3	36.6	16.6	16.8	15.6	15.8	6.3	4.5	4.2	7.0	7.8	1.1
9362W	White	150.5	152.9	153.8	----	31.0	31.8	32.2	----	14.7	15.3	14.6	----	2.9	2.5	2.2	3.0	5.3	1.4
MSU 5024	White	151.9	154.6	----	----	29.6	30.2	----	----	15.0	15.6	----	----	2.5	2.1	----	0.5	----	1.9
MEAN (2015 96 Entries)		149.7	152.5	153.1	150.6	31.7	32.7	33.3	32.6	14.8	15.2	14.3	14.0	4.1	3.7	3.3	1.7	3.2	1.4
LSD (0.05)		0.4	0.8	0.7	0.7	0.8	2.1	1.2	1.1	0.4	0.8	0.8	0.7	1.1	2.4	1.6	2.3	2.7	0.5
CV (%)		0.3	0.3	0.3	0.3	2.4	3.2	2.3	2.4	4.8	2.6	3.2	3.4	33.9	33.0	29.1	79.5	42.3	44.8

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Table 3 : Multi-Year Performance Summary (Note: Tables sorted by 2015 Yield, red wheats grouped before white)

Name	Grain Color	Powdery Mildew Score (0-9)				Leaf Blotch Score (0-9)		Cephalo-sporium Stripe Score (0-9)	Wheat Streak Mosaic Virus Score (0-9)	Barley Yellow Dwarf Score (0-9)	Leaf Rust Score (0-9)				Stripe Rust Score (0-9)			Black Point (tip) Percent			
		Multi-Year Averages				Multi-Year					Multi-Year Averages				Multi-Year Averages			Multi-Year Averages			
		2015	2 YR 2014-15	3 YR 2013-15	4 YR 2012-15	2015	2014-15	2015	2014	2013	2015	2014-15	2013-15	2012-15	2013	2 YR 2012-13	3 YR 2011-13	2014	2 YR 2013-14	3 YR 2012-14	4 YR 2011-14
AgriMAXX 447	Red	5.3	5.8	-----	-----	6.2	4.5	1.7	6.7	-----	1.1	1.1	-----	-----	-----	-----	-----	30.7	-----	-----	-----
W 206	Red	0.4	2.1	1.7	-----	4.5	3.4	4.7	3.0	1.2	0.0	0.0	0.0	-----	3.2	-----	-----	42.8	33.8	-----	-----
DF 112R	Red	1.4	1.7	1.5	-----	5.4	4.2	5.1	5.7	0.4	8.0	6.9	5.3	-----	0.3	-----	-----	31.6	23.4	-----	-----
MCIA Whale	Red	5.4	6.6	5.7	-----	4.6	3.5	3.5	5.7	2.0	0.0	0.5	0.3	-----	0.0	-----	-----	28.6	34.2	-----	-----
Sunburst	Red	1.3	1.5	1.0	0.8	7.0	4.9	1.9	5.0	2.5	2.1	1.7	1.7	1.6	0.0	0.4	0.2	30.9	21.8	15.9	15.3
Diener 491W	Red	0.9	2.9	-----	-----	5.1	4.4	4.4	2.7	-----	0.9	0.6	-----	-----	-----	-----	-----	49.5	-----	-----	-----
AgriMAXX 444	Red	1.4	-----	-----	-----	5.3	-----	4.0	-----	-----	2.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 483	Red	1.2	2.3	1.9	-----	6.0	4.5	2.6	4.3	1.0	6.5	4.6	3.2	-----	0.0	-----	-----	54.2	37.4	-----	-----
MCIA Red Dragon	Red	1.6	2.5	2.6	2.0	5.1	4.1	4.5	4.3	1.2	5.0	4.4	3.2	3.1	3.2	3.1	2.1	16.4	18.3	13.2	12.0
L-214	Red	1.1	-----	-----	-----	4.1	-----	2.5	-----	-----	2.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Steyer Morrin	Red	3.8	-----	-----	-----	5.9	-----	2.6	-----	-----	0.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 413	Red	1.6	3.3	2.2	2.5	4.8	3.8	4.1	4.7	2.9	1.3	2.5	2.3	2.0	0.0	0.0	-----	38.7	22.9	16.4	-----
9552	Red	2.2	-----	-----	-----	5.4	-----	5.4	-----	-----	3.4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 446	Red	3.2	-----	-----	-----	6.4	-----	4.9	-----	-----	2.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 438	Red	3.2	4.1	3.4	-----	5.4	4.1	4.3	6.3	3.1	4.8	3.9	3.0	-----	1.2	-----	-----	49.8	32.8	-----	-----
L-377	Red	0.0	-----	-----	-----	6.3	-----	4.5	-----	-----	4.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pioneer Brand 25R40	Red	0.0	0.5	0.3	0.3	5.7	4.4	5.4	7.3	2.1	3.4	3.1	2.1	1.9	0.0	0.2	-----	24.5	18.1	13.9	-----
Steyer STex141	Red	6.5	-----	-----	-----	4.6	-----	4.3	-----	-----	6.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Blazer	Red	0.0	1.2	0.8	0.9	3.8	2.9	2.2	4.7	2.0	4.9	3.6	2.5	2.1	0.8	1.9	-----	10.9	17.9	12.9	-----
SY 474	Red	1.1	2.4	-----	-----	6.0	4.4	5.0	3.7	-----	3.7	3.0	-----	-----	-----	-----	-----	44.8	-----	-----	-----
DF 111R	Red	1.5	3.4	2.3	-----	5.0	3.9	4.5	2.0	1.9	5.0	3.9	2.7	-----	4.8	-----	-----	52.9	49.8	-----	-----
RS 972	Red	3.2	4.3	3.5	3.7	5.8	4.4	4.0	6.7	1.5	6.2	5.6	4.1	3.8	1.6	0.8	-----	45.5	35.2	24.2	-----
RS 910	Red	0.0	-----	-----	-----	4.8	-----	2.6	-----	-----	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pioneer Brand 25R50	Red	0.0	-----	-----	-----	4.9	-----	3.4	-----	-----	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9522	Red	1.9	-----	-----	-----	5.2	-----	4.4	-----	-----	4.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-241	Red	3.5	5.7	-----	-----	4.2	4.3	1.6	3.0	-----	2.5	2.3	-----	-----	-----	-----	-----	8.0	-----	-----	-----
RS 9XP011	Red	2.9	-----	-----	-----	3.7	-----	4.1	-----	-----	5.9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 007	Red	0.1	-----	-----	-----	7.4	-----	4.8	-----	-----	0.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9223	Red	3.2	4.0	3.6	3.9	5.7	4.4	4.2	7.0	3.8	6.1	5.2	3.9	3.4	0.3	1.0	-----	53.5	40.1	28.3	-----
Diener 512	Red	3.2	4.0	4.0	-----	6.2	4.3	4.1	6.3	1.3	5.4	5.4	3.6	-----	0.0	-----	-----	56.2	38.5	-----	-----
Pioneer Brand 25R25	Red	2.1	-----	-----	-----	4.8	-----	4.6	-----	-----	4.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-334	Red	0.5	2.1	-----	-----	5.5	4.4	4.7	5.3	-----	2.3	2.2	-----	-----	-----	-----	-----	6.4	-----	-----	-----
DF 109R	Red	2.8	4.1	3.4	3.3	5.1	3.7	4.5	5.7	2.0	5.7	4.9	3.3	2.9	0.0	0.1	-----	51.8	38.6	27.6	-----

2015 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 2015 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Powdery Mildew Score (0-9)				Leaf Blotch Score (0-9)		Cephalo- sporium Stripe Score (0-9)	Wheat Streak Mosaic Virus Score (0-9)	Barley Yellow Dwarf Score (0-9)	Leaf Rust Score (0-9)				Stripe Rust Score (0-9)			Black Point (tip) Percent				
		Multi-Year Averages				Multi-Year					Multi-Year Averages				Multi-Year Averages			Multi-Year Averages				
		2 YR	3 YR	4 YR	2015	2014-15	2015				2014-15	2 YR	3 YR	4 YR	2015	2014-15	2013-15	2012-15	2 YR	3 YR	2013	2012-13
DF 105R	Red	0.1	1.7	1.5	2.5	4.5	3.9	2.9	5.0	2.9	3.7	3.0	2.5	2.2	0.6	0.7	0.4	29.1	19.2	13.8	16.1	
Sienna	Red	1.2	2.8	2.5	----	4.7	3.5	5.6	4.0	2.1	5.9	5.0	3.6	----	2.4	----	----	25.8	19.7	----	----	
MCIA Red Devil	Red	0.2	0.9	0.6	0.7	5.3	4.2	3.8	1.3	1.8	2.9	1.8	1.2	1.1	1.0	1.6	1.7	30.4	29.7	21.0	23.4	
HS 284R	Red	0.8	1.9	1.9	----	4.1	3.9	4.9	4.0	1.9	5.9	4.6	3.9	----	2.5	----	----	27.6	22.3	----	----	
MCIA Rocket	Red	2.5	----	----	----	6.4	----	6.6	----	----	1.3	----	----	----	----	----	----	----	----	----	----	
RS 907	Red	0.4	2.4	1.9	----	5.3	4.0	3.7	5.3	2.0	0.3	0.8	0.7	----	1.3	----	----	45.5	39.7	----	----	
L-232	Red	0.0	----	----	----	3.7	----	3.7	----	----	0.9	----	----	----	----	----	----	----	----	----	----	
SY 547	Red	0.0	----	----	----	4.7	----	3.1	----	----	1.6	----	----	----	----	----	----	----	----	----	----	
LCS News	Red	0.0	1.5	1.0	----	6.9	5.8	4.6	5.7	2.0	3.2	3.6	2.5	----	1.4	----	----	20.7	21.3	----	----	
L-264	Red	0.6	----	----	----	5.6	----	3.3	----	----	0.0	----	----	----	----	----	----	----	----	----	----	
Hopewell	Red	0.0	1.9	1.6	1.3	6.6	4.8	4.1	4.7	3.5	4.9	4.6	3.3	3.4	3.0	3.5	2.3	5.0	7.9	6.3	6.1	
DF 113R	Red	3.2	6.0	----	----	5.1	4.1	5.1	3.0	----	3.8	2.8	----	----	----	----	----	29.7	----	----	----	
MCIA Flame	Red	1.0	----	----	----	6.5	----	6.1	----	----	2.2	----	----	----	----	----	----	----	----	----	----	
Shirley	Red	0.4	0.7	0.5	0.4	6.3	4.0	6.1	3.7	1.2	1.6	0.8	0.6	1.1	4.1	5.4	4.4	40.8	39.3	31.2	32.8	
L-347	Red	3.7	----	----	----	3.6	----	2.0	----	----	0.5	----	----	----	----	----	----	----	----	----	----	
Red Ruby	Red	0.0	1.9	1.2	1.4	7.8	5.6	7.4	4.3	0.9	4.1	4.2	2.9	3.1	6.0	6.8	5.4	31.7	23.0	17.8	15.6	
9242W	White	1.3	2.8	1.9	1.6	4.9	4.0	1.9	6.7	2.7	4.8	4.1	3.2	2.8	4.4	5.0	4.0	19.4	15.9	11.2	20.5	
Jupiter	White	0.5	2.9	2.9	2.2	5.3	4.0	4.5	3.0	0.8	5.1	5.4	3.6	3.3	2.2	3.4	2.2	5.8	7.9	6.6	6.8	
Ambassador	White	0.0	1.4	0.9	0.7	7.2	5.5	5.6	6.7	2.1	5.9	5.0	3.5	3.1	5.4	6.4	4.2	9.9	9.3	7.2	7.5	
DF EX W B-1	White	0.5	----	----	----	5.6	----	5.4	----	----	3.6	----	----	----	----	----	----	----	----	----	----	
Aubrey	White	0.0	1.0	0.7	0.5	4.8	4.1	3.0	4.0	2.7	2.5	1.9	1.3	1.8	5.6	5.8	3.9	18.1	14.4	10.1	14.7	
MSU E6012	White	0.8	2.4	1.6	1.8	6.5	4.1	4.2	3.7	0.2	8.9	6.6	4.9	4.8	0.0	0.2	0.1	18.1	13.6	9.6	8.4	
AC Mountain	White	1.9	2.6	2.1	1.6	5.7	4.2	2.0	5.0	3.1	4.4	3.9	2.7	2.4	5.8	6.1	5.2	21.1	16.5	12.9	17.1	
DF 110W	White	0.0	1.0	1.0	1.0	4.1	3.7	4.1	1.3	1.2	7.0	6.5	4.5	4.4	0.6	1.5	----	23.1	16.8	12.4	----	
Pioneer Brand 25W31	White	0.0	0.9	----	----	5.0	3.9	2.9	7.3	----	0.0	0.4	----	----	----	----	----	43.2	----	----	----	
9491W	White	0.5	1.1	----	----	5.8	4.8	5.0	3.0	----	0.5	0.6	----	----	----	----	----	35.4	----	----	----	
Ava	White	0.9	2.3	2.5	1.9	4.6	3.8	3.1	3.0	2.5	5.8	4.3	3.0	2.6	4.1	3.1	2.0	28.1	28.2	20.0	26.8	
9362W	White	2.0	3.4	3.2	----	4.1	3.1	3.0	4.7	1.7	3.9	3.1	2.2	----	0.6	----	----	26.1	20.9	----	----	
MSU 5024	White	0.2	1.0	----	----	6.2	4.5	4.7	3.3	----	0.2	0.8	----	----	----	----	----	16.1	----	----	----	
MEAN (2015 96 Entries)		1.5	2.5	2.1	1.6	5.3	4.1	4.2	4.6	1.9	3.0	3.0	2.6	2.7	1.9	2.6	2.7	28.6	24.3	15.5	15.9	
LSD (0.05)		1.6	2.0	1.5	1.4	1.1	1.5	1.6	1.3	1.1	1.6	1.9	2.0	1.6	3.0	1.7	2.2	23.1	18.8	12.9	11.7	
CV (%)		90.2	39.0	45.5	62.9	18.6	17.7	32.5	20.4	33.8	39.0	31.4	48.6	41.4	94.0	31.3	47.6	40.2	38.2	50.5	51.6	

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 4 : Single Site: Multi-Year Yield Performance Summary (Note: Tables sorted alphabetically by organization/entry name)

MSU makes no endorsement of any variety or brand.

Grain	HURON Yield: Bushels/Acre (Adjusted to 13.5% Moisture)								INGHAM Yield: Bushels/Acre (Adjusted to 13.5% Moisture)				LENAWEE Yield: Bushels/Acre (Adjusted to 13.5% Moisture)				SANILAC Yield: Bushels/Acre (Adjusted to 13.5% Moisture)				TUSCOLA Yield: Bushels/Acre (Adjusted to 13.5% Moisture)															
	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																	
L-264	Red	105.2	27	-----	-----	-----		73.7	55	-----	-----	-----		89.6	9	-----	-----		111.0	40	-----	-----		99.1	60	-----	-----	-----								
L-334	Red	96.0	49	94.3	24	-----	-----	81.0	44	79.7	34	-----	-----	87.1	17	-----	-----		117.3	14	-----	-----		113.7	7	105.0	5	-----	-----							
L-347	Red	91.0	56	-----	-----	-----		81.0	43	-----	-----	-----		80.9	39	-----	-----		106.0	54	-----	-----		103.0	50	-----	-----	-----								
L-377	Red	104.4	29	-----	-----	-----		96.9	8	-----	-----	-----		87.9	14	-----	-----		113.2	31	-----	-----		108.2	35	-----	-----	-----								
LCS News	Red	103.2	33	93.7	27	97.9	20	-----	72.2	56	75.2	38	72.8	31	-----	89.2	11	87.2	9	-----	115.7	17	101.9	10	-----	110.2	21	101.0	26	106.8	14	-----				
AC Mountain	White	110.0	12	99.4	9	100.6	8	96.3	6	69.4	61	77.5	37	76.8	26	78.9	76.1	55	79.7	28	80.4	18	113.9	26	102.1	9	98.5	6	113.5	8	103.5	14	105.5	20	103.2	13
Hopewell	Red	103.7	31	94.0	26	94.9	27	91.7	17	86.9	24	86.3	19	82.7	14	83.9	83.4	34	79.8	26	80.7	17	107.9	51	95.7	28	92.8	14	96.8	62	92.0	39	98.9	32	98.3	20
Jupiter	White	116.3	3	99.5	7	96.8	23	92.1	15	86.0	28	85.7	22	82.2	16	81.7	82.4	36	82.3	17	82.9	15	115.7	18	97.6	21	92.3	17	112.3	13	102.5	16	108.8	7	106.5	7
MCIA Blazer	Red	108.5	15	99.5	8	98.9	16	93.5	12	83.8	34	83.2	29	79.3	22	80.9	86.6	20	84.0	13	85.9	9	107.9	50	97.5	23	94.6	11	102.6	56	96.8	34	99.7	30	100.6	15
MCIA Flame	Red	108.7	14	-----	-----	-----		71.6	58	-----	-----	-----		81.9	38	-----	-----		103.0	58	-----	-----		100.3	58	-----	-----	-----								
MCIA Red Devil	Red	95.5	51	90.9	36	94.3	30	91.5	18	84.9	30	85.9	21	78.9	24	79.4	82.5	35	82.0	19	86.6	7	108.5	47	98.4	19	92.3	16	107.6	37	100.7	27	101.5	27	102.3	14
MCIA Red Dragon	Red	93.4	53	92.2	32	98.5	18	93.8	10	94.9	10	91.7	7	84.0	10	84.9	91.2	2	90.8	1	90.8	2	111.7	38	103.1	5	98.7	5	112.8	10	104.3	12	110.7	3	109.8	3
MCIA Rocket	Red	96.4	48	-----	-----	-----		66.5	62	-----	-----	-----		90.8	6	-----	-----		126.1	1	-----	-----		108.2	34	-----	-----	-----								
MCIA Whale	Red	108.4	17	99.1	10	100.7	7	-----	83.8	33	92.1	6	85.9	6	-----	88.4	13	90.0	2	-----	120.4	9	101.7	11	-----	112.6	11	101.9	20	108.8	8	-----				
MSU 5024	White	102.4	35	89.2	37	-----	82.2	22	83.5	35	74.5	40	-----	69.2	69.1	61	-----	77.4	21	102.0	61	-----	90.8	19	102.9	53	95.0	37	-----	93.6	22					
MSU E6012	White	98.9	43	86.8	39	89.7	32	87.0	21	74.7	54	81.2	30	79.7	21	79.4	84.9	30	80.0	24	81.7	16	108.8	46	93.1	31	88.9	21	108.6	30	96.8	33	101.0	28	99.9	18
Red Ruby	Red	101.4	39	94.9	22	94.9	26	91.7	16	79.5	47	80.2	32	76.5	27	78.4	79.4	46	81.1	22	84.4	13	103.4	57	88.6	33	86.9	22	102.7	55	95.4	36	99.6	31	98.4	19
Sunburst	Red	102.3	36	91.3	34	95.6	25	93.6	11	92.4	12	87.2	15	83.9	11	85.2	91.0	4	86.4	11	88.9	3	113.5	28	99.3	17	93.3	12	109.5	28	95.6	35	103.7	23	103.8	12
RS 907	Red	106.0	25	96.9	15	101.7	5	-----	79.5	46	87.2	16	82.1	17	-----	86.0	23	88.2	8	-----	106.6	53	96.1	26	-----	108.3	33	94.1	38	100.8	29	-----				
RS 910	Red	110.3	11	-----	-----	-----		92.1	13	-----	-----	-----		78.0	51	-----	-----		102.4	59	-----	-----		109.2	29	-----	-----	-----								
RS 972	Red	92.1	55	94.2	25	100.2	11	96.4	5	89.9	18	87.3	14	85.7	7	87.5	79.3	47	82.1	18	87.2	4	112.7	32	97.6	22	95.4	10	117.2	4	107.8	3	109.7	5	110.8	2
RS 9XP011	Red	89.6	59	-----	-----	-----		90.1	17	-----	-----	-----		82.0	37	-----	-----		110.4	41	-----	-----		112.4	12	-----	-----	-----								
Steyer Morrin	Red	107.8	21	-----	-----	-----		93.7	11	-----	-----	-----		85.2	29	-----	-----		114.0	25	-----	-----		109.5	27	-----	-----	-----								
Steyer STex141	Red	90.4	57	-----	-----	-----		105.2	1	-----	-----	-----		75.8	56	-----	-----		109.6	44	-----	-----		115.6	6	-----	-----	-----								
SY 007	Red	106.7	23	-----	-----	-----		76.6	51	-----	-----	-----		86.9	19	-----	-----		115.5	20	-----	-----		105.7	44	-----	-----	-----								
SY 474	Red	108.3	18	98.2	14	-----	-----	84.5	32	84.2	26	-----	-----	88.7	12	-----	-----		118.7	10	-----	-----		101.9	57	99.4	29	-----	-----							
SY 483	Red	115.0	5	102.0	3	101.3	6	-----	83.0	37	86.5	17	82.2	15	-----	85.4	26	86.6	10	-----	121.0	8	100.8	14	-----	108.3	32	102.2	17	106.4	18	-----				
SY 547	Red	101.2	40	-----	-----	-----		86.9	23	-----	-----	-----		78.9	49	-----	-----		102.2	60	-----	-----		104.3	48	-----	-----	-----								
W 206	Red	112.0	8	102.3	2	103.8	3	-----	102.3	3	99.6	1	92.2	1	-----	84.1	33	85.1	12	-----	114.3	24	101.2	13	-----	105.7	45	102.1	19	108.0	10	-----				
MEAN (2015 96 Entries)		101.5	94.6	97.7	92.9			83.8	83.6	80.5	80.7			82.3	83.1	84.2		112.4	99.3	94.4		107.6	100.5	105.5	103.4											
LSD (0.05)		7.8	4.4	3.3	2.7			12.4	7.9	5.3	4.3			6.2	3.8	3.3		7.7	4.7	3.8		5.8	4.0	3.1	2.7											
CV (%)		6.6	5.5	5.1	4.9			12.7	10.5	9.2	8.8			6.4	5.6	5.2		5.9	5.4	5.6		4.7	4.4	4.2	4.2											

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Multi-year data are the most informative.

Table 5 : Single Site: Ingham County, High Management vs Conventional Performance Summary (Note: Tables sorted alphabetically by organization/entry name)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	INGHAM Conventional					INGHAM High Management					Conventional vs. High Management Differences							
		Yield bu/acre	Rank	Test Weight	Grain Moisture	Lodge Score (0-9)	Yield bu/acre	Rank	Test Weight	Grain Moisture	Lodge Score (0-9)	Yield bu/acre	Rank	Test Weight	Rank	Grain Moisture	Rank	Lodge Score (0-9)	Rank
AgriMAXX 413	Red	78.2	11	57.0	12.7	3.3	91.7	15	56.4	12.4	3.5	+ 13.5	35	- 0.6	51	- 0.3	58	+ 0.2	18
AgriMAXX 438	Red	73.7	22	53.7	14.1	4.3	88.3	20	57.3	13.5	5.5	+ 14.6	32	+ 3.6	17	- 0.6	31	+ 1.2	32
AgriMAXX 444	Red	71.7	29	53.8	13.5	2.8	87.5	21	56.4	13.0	4.5	+ 15.8	25	+ 2.6	22	- 0.5	40	+ 1.7	47
AgriMAXX 446	Red	66.3	46	51.3	13.6	2.5	100.2	5	58.0	12.8	4.5	+ 33.9	2	+ 6.7	1	- 0.8	15	+ 2.0	54
AgriMAXX 447	Red	79.9	6	55.7	13.7	2.8	96.1	9	56.1	13.3	4.0	+ 16.2	23	+ 0.4	39	- 0.4	49	+ 1.2	35
Diener 491W	Red	75.9	13	56.4	13.4	2.0	97.4	7	55.8	12.9	3.0	+ 21.5	11	- 0.6	50	- 0.5	43	+ 1.0	30
Diener 512	Red	69.3	37	51.2	14.6	3.8	86.2	27	56.3	13.4	6.3	+ 16.9	20	+ 5.1	6	- 1.3	1	+ 2.5	56
Ambassador	White	68.0	41	53.5	12.7	3.5	76.6	52	51.9	11.8	5.5	+ 8.6	45	- 1.6	56	- 0.9	14	+ 2.0	53
Aubrey	White	64.7	54	57.8	14.0	4.8	70.8	60	56.2	13.0	3.8	+ 6.1	53	- 1.6	58	- 1.0	9	- 1.0	2
DF 105R	Red	71.1	32	53.8	12.9	3.8	78.4	49	55.7	12.3	3.5	+ 7.3	50	+ 1.9	28	- 0.6	33	- 0.3	6
DF 109R	Red	66.4	45	51.6	13.9	4.5	82.0	38	54.2	13.3	6.0	+ 15.6	27	+ 2.6	23	- 0.6	32	+ 1.5	41
DF 110W	White	65.4	50	53.9	12.9	2.8	81.2	42	55.3	12.0	4.8	+ 15.8	26	+ 1.4	30	- 0.9	11	+ 2.0	50
DF 111R	Red	73.5	23	56.2	13.2	2.5	81.5	40	57.2	12.8	4.3	+ 8.0	47	+ 1	32	- 0.4	47	+ 1.8	49
DF 112R	Red	69.4	36	51.7	13.2	4.0	83.1	36	56.0	12.7	5.5	+ 13.7	34	+ 4.3	11	- 0.5	38	+ 1.5	42
DF 113R	Red	73.8	20	57.6	14.3	3.0	79.4	48	58.1	13.7	5.5	+ 5.6	55	+ 0.5	38	- 0.6	35	+ 2.5	57
DF EX W B-1	White	60.6	57	54.2	13.3	3.5	72.0	57	54.3	12.3	6.5	+ 11.4	40	+ 0.1	43	- 1.0	7	+ 3.0	60
Sienna	Red	66.0	47	52.3	13.3	4.5	87.3	22	55.9	12.7	6.0	+ 21.3	13	+ 3.6	16	- 0.6	30	+ 1.5	40
Pioneer Brand 25R25	Red	72.2	27	57.1	13.4	2.0	81.6	39	53.0	13.0	3.5	+ 9.4	44	- 4.1	61	- 0.4	53	+ 1.5	44
Pioneer Brand 25R40	Red	73.2	26	54.9	13.5	2.5	92.1	14	59.8	12.8	4.3	+ 18.9	15	+ 4.9	7	- 0.7	24	+ 1.8	48
Pioneer Brand 25R50	Red	74.1	18	53.3	13.5	3.0	91.4	16	56.0	12.7	2.3	+ 17.3	18	+ 2.7	21	- 0.8	18	- 0.7	4
Pioneer Brand 25W31	White	67.4	42	56.6	13.5	2.0	75.5	53	55.0	12.7	2.5	+ 8.1	46	- 1.6	57	- 0.8	21	+ 0.5	20
9223	Red	78.7	10	55.8	13.8	3.5	84.7	31	54.5	13.5	6.3	+ 6.0	54	- 1.3	55	- 0.3	59	+ 2.8	59
9522	Red	69.1	39	53.7	13.7	2.3	81.5	41	51.8	12.9	3.8	+ 12.4	38	- 1.9	59	- 0.8	22	+ 1.5	39
9552	Red	69.5	35	54.2	13.3	2.5	101.6	4	58.7	13.0	3.0	+ 32.1	3	+ 4.5	9	- 0.3	55	+ 0.5	23
9242W	White	80.5	4	55.6	13.5	2.5	97.6	6	56.4	13.1	3.0	+ 17.1	19	+ 0.8	34	- 0.4	48	+ 0.5	22
9362W	White	68.5	40	54.8	13.4	3.3	86.8	25	56.9	13.0	3.0	+ 18.3	17	+ 2.1	26	- 0.4	46	- 0.3	7
9491W	White	73.5	24	54.6	13.2	1.8	85.7	29	54.0	12.4	2.8	+ 12.2	39	- 0.6	52	- 0.8	20	+ 1.0	28
Shirley	Red	43.9	62	48.4	11.5	1.8	71.1	59	53.7	12.3	3.3	+ 27.2	6	+ 5.3	5	- 0.8	17	+ 1.5	38
HS 284R	Red	71.6	30	57.3	13.5	5.3	86.7	26	54.7	12.8	5.5	+ 15.1	28	- 2.6	60	- 0.7	29	+ 0.2	17
Ava	White	73.3	25	56.9	13.9	5.5	81.0	43	55.7	12.9	5.5	+ 7.7	49	- 1.2	54	- 1.0	8	+ 0.0	12
L-214	Red	69.8	33	54.5	14.0	5.3	104.9	2	60.3	13.3	3.8	+ 35.1	1	+ 5.8	4	- 0.7	23	- 1.5	1
L-232	Red	64.9	53	57.0	13.7	6.3	78.0	50	60.3	13.2	6.8	+ 13.1	36	+ 3.3	20	- 0.5	39	+ 0.5	21
L-241	Red	74.0	19	56.1	14.2	7.3	88.6	19	60.2	13.2	8.3	+ 14.6	31	+ 4.1	13	- 1.0	5	+ 1.0	26

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 5 : Single Site: Ingham County, High Management vs Conventional Performance Summary (Note: Tables sorted alphabetically by organization/entry name)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	INGHAM Conventional					INGHAM High Management					Conventional vs. High Management Differences							
		Yield bu/acre	Rank	Test Weight	Grain Moisture	Lodge Score (0-9)	Yield bu/acre	Rank	Test Weight	Grain Moisture	Lodge Score (0-9)	Yield bu/acre	Rank	Test Weight	Rank	Grain Moisture	Rank	Lodge Score (0-9)	Rank
L-264	Red	67.0	43	55.3	13.4	4.3	73.7	55	54.5	13.0	5.3	+ 6.7	52	- 0.8	53	- 0.4	52	+ 1.0	31
L-334	Red	64.7	55	56.1	13.8	7.5	81.0	44	56.2	13.4	7.5	+ 16.3	22	+ 0.1	42	- 0.4	50	+ 0.0	15
L-347	Red	61.8	56	55.0	14.0	6.8	81.0	45	59.2	13.6	8.0	+ 19.2	14	+ 4.2	12	- 0.4	45	+ 1.2	34
L-377	Red	65.8	48	53.8	13.6	4.5	96.9	8	58.6	13.3	4.4	+ 31.1	4	+ 4.8	8	- 0.3	54	- 0.1	10
LCS News	Red	56.1	60	53.3	13.4	6.3	72.2	56	54.0	13.2	6.3	+ 16.1	24	+ 0.7	35	- 0.2	61	+ 0.0	16
AC Mountain	White	65.8	49	53.3	13.1	5.8	69.4	61	53.6	12.2	7.8	+ 3.6	58	+ 0.3	41	- 0.9	13	+ 2.0	52
Hopewell	Red	60.3	58	52.0	13.5	6.0	86.9	24	58.4	12.7	6.3	+ 26.6	8	+ 6.4	3	- 0.8	16	+ 0.3	19
Jupiter	White	69.3	38	54.0	13.0	2.5	86.0	28	56.2	12.5	4.0	+ 16.7	21	+ 2.2	25	- 0.5	41	+ 1.5	43
MCIA Blazer	Red	84.2	2	61.2	14.2	5.3	83.8	33	60.8	13.1	5.3	- 0.4	61	- 0.4	47	- 1.1	4	+ 0.0	11
MCIA Flame	Red	66.5	44	53.0	13.6	2.8	71.6	58	56.4	12.9	4.5	+ 5.1	57	+ 3.4	19	- 0.7	25	+ 1.7	45
MCIA Red Devil	Red	75.3	14	58.0	13.6	3.3	84.9	30	58.5	12.7	5.3	+ 9.6	43	+ 0.5	37	- 0.9	12	+ 2.0	51
MCIA Red Dragon	Red	80.2	5	59.6	13.4	4.3	94.9	10	59.1	12.7	5.3	+ 14.7	29	- 0.5	48	- 0.7	28	+ 1.0	29
MCIA Rocket	Red	65.3	51	52.2	13.2	3.8	66.5	62	53.7	12.2	5.3	+ 1.2	60	+ 1.5	29	- 1.0	6	+ 1.5	37
MCIA Whale	Red	81.4	3	54.3	14.0	3.3	83.8	34	58.0	13.1	4.0	+ 2.4	59	+ 3.7	15	- 0.9	10	+ 0.7	24
MSU 5024	White	58.0	59	50.9	12.7	1.8	83.5	35	57.4	12.3	3.0	+ 25.5	9	+ 6.5	2	- 0.4	44	+ 1.2	33
MSU E6012	White	75.2	15	57.0	12.9	4.8	74.7	54	50.4	12.3	4.8	- 0.5	62	- 6.6	62	- 0.6	36	+ 0.0	14
Red Ruby	Red	52.6	61	53.1	12.8	4.0	79.5	47	56.9	12.8	3.3	+ 26.9	7	+ 3.8	14	- 0.0	62	- 0.7	5
Sunburst	Red	85.6	1	61.4	14.3	1.5	92.4	12	61.1	13.2	3.0	+ 6.8	51	- 0.3	46	- 1.1	3	+ 1.5	36
RS 907	Red	65.1	52	55.6	13.6	2.5	79.5	46	56.2	13.0	5.5	+ 14.4	33	+ 0.6	36	- 0.6	34	+ 3.0	62
RS 910	Red	73.8	21	54.6	13.4	3.0	92.1	13	58.0	13.2	5.3	+ 18.3	16	+ 3.4	18	- 0.2	60	+ 2.3	55
RS 972	Red	79.8	7	55.5	14.0	4.0	89.9	18	55.9	13.3	7.0	+ 10.1	42	+ 0.4	40	- 0.7	27	+ 3.0	61
RS 9XP011	Red	79.1	9	55.3	13.7	2.3	90.1	17	54.8	13.4	5.0	+ 11.0	41	- 0.5	49	- 0.3	57	+ 2.7	58
Steyer Morrin	Red	72.2	28	55.8	13.6	2.8	93.7	11	55.7	13.2	2.5	+ 21.5	12	- 0.1	44	- 0.4	51	- 0.3	8
Steyer STex141	Red	77.7	12	55.8	13.8	2.3	105.2	1	60.2	13.3	4.0	+ 27.5	5	+ 4.4	10	- 0.5	37	+ 1.7	46
SY 007	Red	71.4	31	54.2	14.2	5.0	76.6	51	56.5	12.9	4.3	+ 5.2	56	+ 2.3	24	- 1.3	2	- 0.7	3
SY 474	Red	69.8	34	55.9	14.2	4.0	84.5	32	57.8	13.4	5.0	+ 14.7	30	+ 1.9	27	- 0.8	19	+ 1.0	27
SY 483	Red	75.1	16	55.7	13.2	5.5	83.0	37	56.8	12.7	5.3	+ 7.9	48	+ 1.1	31	- 0.5	42	- 0.2	9
SY 547	Red	74.2	17	57.3	13.8	3.3	86.9	23	57.0	13.5	4.1	+ 12.7	37	- 0.3	45	- 0.3	56	+ 0.8	25
W 206	Red	79.2	8	56.5	13.7	3.3	102.3	3	57.3	13.0	3.3	+ 23.1	10	+ 0.8	33	- 0.7	26	+ 0.0	13
MEAN (2015 96 Entries)		69.5		54.8	13.6	3.8	83.8		56.4	12.9	4.8	+ 14.6		+ 1.7		- 0.6		+ 1.0	
LSD (0.05)		8.9		3.2	0.4	1.7	12.4		3.2	0.3	1.7	-----		-----		-----		-----	
CV (%)		11.0		5.0	2.3	37.9	12.7		4.9	1.9	30.8	-----		-----		-----		-----	

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

Multi-year data are the most informative.

Table 6 : Multi-Year Performance Summary (Note: Tables sorted by 2015 Yield, red wheats grouped before white)

MSU makes no endorsement of any variety or brand.

Name	Grain Color	Percent Flour Yield Multi-Year Averages				Percent Protein In Flour (at 14%) Multi-Year Averages				Milling and Baking Properties (2014 Crop and Earlier) Softness Equivalent Percent Multi-Year Averages				Cookie Diameter (cm) Multi-Year Averages				Whole Grain Protein (at 12%) 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	
		2014	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	2012-14	2011-14
AgriMAXX 447	Red	68.6	-----	-----	-----	8.6	-----	-----	-----	54.9	-----	-----	-----	18.2	-----	-----	-----	11.8	-----	-----	-----
W 206	Red	69.2	69.7	-----	-----	8.8	7.7	-----	-----	55.5	57.7	-----	-----	18.3	18.2	-----	-----	10.9	10.1	-----	-----
DF 112R	Red	70.9	71.6	-----	-----	8.4	7.6	-----	-----	57.5	59.8	-----	-----	18.5	18.7	-----	-----	10.5	9.8	-----	-----
MCIA Whale	Red	68.8	68.9	-----	-----	8.1	7.5	-----	-----	55.9	58.1	-----	-----	17.7	17.8	-----	-----	10.8	10.0	-----	-----
Sunburst	Red	64.8	65.3	65.3	67.0	8.7	8.1	7.6	7.3	51.2	51.9	51.6	55.0	17.5	17.6	17.5	18.0	11.3	10.5	9.8	9.4
Diener 491W	Red	66.7	-----	-----	-----	8.4	-----	-----	-----	59.3	-----	-----	-----	18.1	-----	-----	-----	10.7	-----	-----	-----
AgriMAXX 444	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 483	Red	68.4	69.3	-----	-----	8.0	7.4	-----	-----	58.0	60.2	-----	-----	18.1	18.1	-----	-----	10.4	9.8	-----	-----
MCIA Red Dragon	Red	70.3	70.5	70.8	70.9	8.7	7.8	7.3	7.0	58.8	60.3	61.6	62.1	18.4	18.7	18.6	18.8	11.1	10.3	9.5	9.1
L-214	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Steyer Morrin	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 413	Red	68.9	70.1	70.6	-----	8.8	8.1	7.6	-----	55.9	56.5	57.2	-----	19.0	19.1	19.2	-----	11.1	10.2	9.6	-----
9552	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 446	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 438	Red	69.9	70.7	-----	-----	8.4	8.4	-----	-----	60.0	62.0	-----	-----	18.2	18.3	-----	-----	10.6	10.0	-----	-----
L-377	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pioneer Brand 25R40	Red	68.3	69.0	69.1	-----	8.2	7.6	7.1	-----	59.2	60.9	61.2	-----	18.1	18.3	18.4	-----	10.8	10.2	9.4	-----
Steyer STex141	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Blazer	Red	67.5	67.6	67.7	-----	8.9	8.0	7.7	-----	47.8	49.0	48.7	-----	17.7	17.4	17.4	-----	11.3	10.6	10.1	-----
SY 474	Red	68.5	-----	-----	-----	9.1	-----	-----	-----	53.1	-----	-----	-----	18.1	-----	-----	-----	12.0	-----	-----	-----
DF 111R	Red	68.3	69.3	-----	-----	8.0	7.4	-----	-----	55.2	56.3	-----	-----	17.6	17.7	-----	-----	10.5	9.8	-----	-----
RS 972	Red	70.0	70.8	71.3	-----	7.7	7.4	7.0	-----	60.5	62.3	63.4	-----	19.5	19.6	19.5	-----	10.0	9.6	8.8	-----
RS 910	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pioneer Brand 25R50	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9522	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-241	Red	68.5	-----	-----	-----	8.5	-----	-----	-----	56.6	-----	-----	-----	18.5	-----	-----	-----	10.5	-----	-----	-----
RS 9XP011	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 007	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9223	Red	70.3	70.7	71.3	-----	8.2	7.5	7.0	-----	60.3	62.0	63.5	-----	19.4	19.4	19.4	-----	10.5	9.8	9.1	-----
Diener 512	Red	70.5	70.9	-----	-----	8.8	7.9	-----	-----	58.8	62.1	-----	-----	19.0	19.1	-----	-----	10.9	10.0	-----	-----
Pioneer Brand 25R25	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-334	Red	69.8	-----	-----	-----	8.4	-----	-----	-----	54.5	-----	-----	-----	18.0	-----	-----	-----	10.8	-----	-----	-----
DF 109R	Red	70.3	70.9	71.3	-----	8.3	7.4	7.1	-----	60.3	62.8	63.8	-----	19.0	19.0	19.0	-----	10.3	9.6	9.1	-----

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

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Table 6 : Multi-Year Performance Summary (Note: Tables sorted by 2015 Yield, red wheats grouped before white)

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Name	Grain Color	Percent Flour Yield Multi-Year Averages				Percent Protein In Flour (at 14%) Multi-Year Averages				Milling and Baking Properties (2014 Crop and Earlier) Softness Equivalent Percent Multi-Year Averages				Cookie Diameter (cm) Multi-Year Averages				Whole Grain Protein (at 12%) Multi-Year Averages			
		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	2 YR	3 YR	4 YR	
		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	2012-14	2011-14	
DF 105R	Red	69.9	70.4	70.7	71.1	9.0	8.1	7.6	7.2	56.0	57.3	58.1	58.7	18.7	18.9	19.0	19.2	11.3	10.4	9.6	9.1
Sienna	Red	70.2	70.6	-----	-----	8.7	7.9	-----	-----	58.7	60.1	-----	-----	18.7	18.6	-----	-----	11.3	10.6	-----	-----
MCIA Red Devil	Red	67.6	68.2	68.2	68.4	8.5	7.9	7.4	7.1	55.8	57.9	59.5	60.8	18.3	18.5	18.6	18.8	10.7	10.2	9.4	8.9
HS 284R	Red	70.5	70.6	-----	-----	8.7	7.9	-----	-----	58.1	59.9	-----	-----	18.4	18.3	-----	-----	10.9	10.3	-----	-----
MCIA Rocket	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
RS 907	Red	68.2	68.8	-----	-----	8.7	7.7	-----	-----	54.4	57.1	-----	-----	18.0	18.2	-----	-----	11.1	10.0	-----	-----
L-232	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 547	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
LCS News	Red	70.0	70.8	-----	-----	8.3	7.5	-----	-----	58.7	61.0	-----	-----	18.1	18.0	-----	-----	10.9	10.0	-----	-----
L-264	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hopewell	Red	67.4	67.8	68.1	68.2	8.7	8.0	7.5	7.3	58.8	60.1	60.7	60.7	18.3	18.4	18.5	18.8	11.4	10.8	10.0	9.7
DF 113R	Red	69.8	-----	-----	-----	7.9	-----	-----	-----	56.5	-----	-----	-----	18.5	-----	-----	-----	9.9	-----	-----	-----
MCIA Flame	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shirley	Red	69.9	70.0	70.0	70.1	8.7	8.0	7.5	7.3	53.3	55.3	55.9	56.3	18.2	18.6	18.8	19.1	11.3	10.6	9.9	9.6
L-347	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Red Ruby	Red	68.8	69.3	69.6	69.7	8.9	8.1	7.5	7.3	58.2	60.8	61.9	62.1	18.2	18.4	18.6	18.8	11.3	10.6	9.8	9.5
9242W	White	68.5	68.8	69.1	69.3	8.4	7.9	7.3	7.0	56.8	58.2	60.0	60.6	18.8	18.9	19.1	19.3	10.5	10.2	9.4	9.1
Jupiter	White	70.2	70.6	71.0	71.2	8.5	7.7	6.9	6.6	56.7	59.6	60.9	61.6	18.0	18.4	18.7	18.9	11.1	10.1	9.1	8.6
Ambassador	White	71.5	71.7	72.1	72.4	8.9	7.9	7.3	7.0	54.7	58.1	59.8	60.4	18.5	18.8	19.1	19.2	11.0	10.3	9.4	9.1
DF EX W B-1	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Aubrey	White	68.5	69.2	69.5	69.9	9.2	8.4	7.8	7.6	59.2	60.6	61.4	60.7	17.7	18.2	18.2	18.3	11.5	10.8	10.1	9.8
MSU E6012	White	70.5	70.9	71.2	71.4	8.5	7.7	7.3	7.1	57.1	60.6	61.6	61.9	18.7	18.6	18.8	19.0	11.0	10.2	9.4	9.2
AC Mountain	White	70.3	71.0	70.9	71.0	8.1	7.5	7.0	6.9	57.1	59.6	60.8	60.8	19.0	19.1	19.1	19.2	11.0	10.0	9.2	8.9
DF 110W	White	71.7	72.0	71.8	-----	9.3	8.3	7.9	-----	55.0	56.5	57.3	-----	18.4	18.6	18.6	-----	11.4	10.7	10.1	-----
Pioneer Brand 25W31	White	67.1	-----	-----	-----	9.2	-----	-----	-----	54.3	-----	-----	-----	18.2	-----	-----	-----	11.5	-----	-----	-----
9491W	White	70.0	-----	-----	-----	9.1	-----	-----	-----	54.7	-----	-----	-----	18.4	-----	-----	-----	11.6	-----	-----	-----
Ava	White	70.0	70.0	69.9	70.0	8.6	8.0	7.3	7.0	57.6	60.0	62.0	62.5	18.8	18.7	18.9	19.1	10.9	10.2	9.3	8.9
9362W	White	68.6	69.2	-----	-----	8.4	8.1	-----	-----	53.5	55.0	-----	-----	18.4	18.6	-----	-----	11.0	10.8	-----	-----
MSU 5024	White	69.4	-----	-----	-----	9.0	-----	-----	-----	53.5	-----	-----	-----	17.9	-----	-----	-----	11.8	-----	-----	-----
MEAN (2015 96 Entries)		69.0	69.9	70.1	70.1	8.7	7.8	7.3	7.1	56.4	58.7	59.5	60.4	18.2	18.5	18.7	18.9	11.1	10.2	9.5	9.2
LSD (0.05)		-----	1.0	0.8	1.2	-----	0.6	0.4	0.3	-----	2.1	2.1	3.0	-----	0.5	0.4	0.4	-----	0.6	0.5	0.4
CV (%)		-----	0.7	0.7	1.2	-----	3.8	3.4	3.2	-----	1.7	2.2	3.5	-----	1.3	1.4	1.5	-----	2.7	3.1	2.9

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

Table 7 : Multi-Year Performance Summary (Note: Tables sorted by 2015 Yield, red wheats grouped before white)

Name	Grain Color	Water SRC (%)				Sodium Carbonate SRC (%)				Milling and Baking Properties (2014 Crop and Earlier)				As Is Lactic Acid SRC (%)				Whole Grain Hardness (0-100)			
		Multi-Year Averages				Multi-Year Averages				Sucrose SRC (%)				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	
		2014	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	2012-14	2011-14
AgriMAXX 447	Red	54.2	-----	-----	-----	72.0	-----	-----	-----	87.8	-----	-----	-----	103.7	-----	-----	-----	29.8	-----	-----	-----
W 206	Red	58.7	56.4	-----	-----	72.8	70.3	-----	-----	92.4	88.7	-----	-----	107.0	96.3	-----	-----	34.0	27.6	-----	-----
DF 112R	Red	57.3	55.3	-----	-----	76.8	72.9	-----	-----	91.6	88.3	-----	-----	130.9	117.9	-----	-----	18.0	17.4	-----	-----
MCIA Whale	Red	56.4	54.8	-----	-----	75.8	72.1	-----	-----	87.6	87.3	-----	-----	106.1	100.2	-----	-----	27.3	23.1	-----	-----
Sunburst	Red	61.9	59.3	59.3	57.6	79.4	76.4	76.6	73.8	100.6	96.8	96.6	93.0	106.7	98.5	98.3	98.2	46.0	40.5	37.3	31.3
Diener 491W	Red	56.0	-----	-----	-----	74.9	-----	-----	-----	97.8	-----	-----	-----	102.9	-----	-----	-----	36.0	-----	-----	-----
AgriMAXX 444	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 483	Red	58.7	55.7	-----	-----	76.4	72.5	-----	-----	89.5	87.0	-----	-----	99.9	94.7	-----	-----	23.7	22.0	-----	-----
MCIA Red Dragon	Red	55.5	53.0	52.5	53.3	70.8	67.5	67.1	67.0	89.0	86.6	86.5	85.4	108.5	96.3	98.4	96.4	10.0	8.7	7.1	6.3
L-214	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Steyer Morrin	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 413	Red	53.4	52.1	52.0	-----	70.8	67.9	67.1	-----	85.9	83.2	82.2	-----	95.9	87.1	86.5	-----	33.8	29.8	26.8	-----
9552	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 446	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
AgriMAXX 438	Red	51.9	50.8	-----	-----	67.7	66.0	-----	-----	83.2	81.0	-----	-----	113.6	104.4	-----	-----	30.6	23.5	-----	-----
L-377	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pioneer Brand 25R40	Red	57.5	55.1	54.8	-----	75.6	71.9	70.9	-----	92.4	88.2	87.8	-----	118.0	105.5	104.5	-----	17.7	16.9	15.4	-----
Steyer STex141	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MCIA Blazer	Red	57.4	56.1	56.6	-----	73.6	70.1	70.4	-----	99.8	95.4	95.4	-----	117.8	109.6	108.7	-----	32.6	25.2	22.7	-----
SY 474	Red	56.2	-----	-----	-----	72.2	-----	-----	-----	96.5	-----	-----	-----	121.1	-----	-----	-----	25.6	-----	-----	-----
DF 111R	Red	59.9	58.8	-----	-----	75.8	74.3	-----	-----	91.8	90.2	-----	-----	95.2	87.4	-----	-----	34.5	29.5	-----	-----
RS 972	Red	50.6	50.6	50.8	-----	66.4	65.4	64.9	-----	84.4	82.8	81.6	-----	107.2	102.4	100.9	-----	23.6	17.7	14.3	-----
RS 910	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pioneer Brand 25R50	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9522	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-241	Red	57.2	-----	-----	-----	78.1	-----	-----	-----	103.2	-----	-----	-----	125.8	-----	-----	-----	26.4	-----	-----	-----
RS 9XP011	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 007	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
9223	Red	52.0	51.2	51.5	-----	69.6	67.0	66.5	-----	82.6	80.3	80.5	-----	108.0	100.8	100.3	-----	25.0	20.3	16.2	-----
Diener 512	Red	51.8	50.8	-----	-----	68.5	66.2	-----	-----	84.2	81.6	-----	-----	108.7	102.8	-----	-----	30.2	22.9	-----	-----
Pioneer Brand 25R25	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
L-334	Red	55.7	-----	-----	-----	74.4	-----	-----	-----	91.7	-----	-----	-----	123.8	-----	-----	-----	28.4	-----	-----	-----
DF 109R	Red	52.8	51.8	51.6	-----	69.9	67.1	66.4	-----	86.2	81.7	80.7	-----	114.5	104.6	103.0	-----	26.7	20.1	16.6	-----

2015 Michigan State University Wheat Performance Trials (Commercially Available Only)

Table 7 : Multi-Year Performance Summary (Note: Tables sorted by 2015 Yield, red wheats grouped before white)

Name	Grain Color	Water SRC (%)				Sodium Carbonate SRC (%)				Milling and Baking Properties (2014 Crop and Earlier)				As Is Lactic Acid SRC (%)				Whole Grain Hardness (0-100)				
		Multi-Year Averages				Multi-Year Averages				Sucrose SRC (%)				Multi-Year Averages				Multi-Year Averages				
		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	2 YR	3 YR	4 YR	2014	2 YR
DF 105R	Red	53.8	52.3	52.2	52.3	69.6	67.3	67.1	67.1	84.4	81.4	80.8	81.1	94.3	86.1	86.3	84.1	31.2	27.7	25.7	23.6	
Sienna	Red	54.7	52.8	-----	-----	71.2	68.0	-----	-----	89.7	86.7	-----	-----	105.1	95.6	-----	-----	14.0	12.7	-----	-----	
MCIA Red Devil	Red	57.2	55.3	55.1	55.3	75.1	71.1	70.5	69.8	92.7	89.7	89.1	87.3	103.8	95.7	94.4	92.4	36.4	31.4	26.8	23.3	
HS 284R	Red	56.5	53.5	-----	-----	73.6	68.6	-----	-----	88.2	86.5	-----	-----	104.3	94.3	-----	-----	9.9	12.0	-----	-----	
MCIA Rocket	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
RS 907	Red	57.3	55.8	-----	-----	74.0	70.6	-----	-----	92.0	88.6	-----	-----	118.4	106.3	-----	-----	31.7	25.6	-----	-----	
L-232	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SY 547	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
LCS News	Red	55.5	54.2	-----	-----	73.4	70.5	-----	-----	88.1	86.0	-----	-----	115.4	107.8	-----	-----	24.4	20.3	-----	-----	
L-264	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hopewell	Red	57.1	54.5	54.4	54.5	76.6	72.6	71.5	70.9	92.3	89.0	87.3	86.1	109.7	103.1	102.8	102.3	21.7	22.5	20.7	19.3	
DF 113R	Red	59.0	-----	-----	-----	76.4	-----	-----	-----	88.3	-----	-----	-----	114.3	-----	-----	-----	31.9	-----	-----	-----	
MCIA Flame	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shirley	Red	56.7	55.1	55.0	55.4	73.1	70.8	70.4	70.4	84.3	85.4	85.8	85.9	88.2	84.3	81.9	81.0	21.1	22.7	21.6	20.2	
L-347	Red	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Red Ruby	Red	55.3	53.5	53.4	53.7	74.0	71.4	70.2	69.5	91.1	87.3	86.3	85.5	116.5	107.2	102.8	101.8	21.8	17.4	14.2	12.4	
9242W	White	55.7	54.0	54.5	54.4	73.0	69.2	68.7	68.2	85.0	83.5	82.7	82.7	110.8	101.4	95.4	93.1	25.9	20.2	14.7	11.6	
Jupiter	White	55.0	53.7	54.1	54.6	73.5	70.6	70.0	69.5	88.0	85.2	83.8	83.0	103.4	96.0	91.6	90.3	27.2	21.0	17.4	15.4	
Ambassador	White	53.0	51.4	51.5	51.6	70.5	66.9	66.1	66.1	84.1	80.8	79.8	79.9	96.4	87.8	86.3	84.4	18.8	12.2	8.1	5.0	
DF EX W B-1	White	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Aubrey	White	53.4	52.2	52.5	52.7	73.7	69.9	69.1	69.3	92.4	88.1	86.4	86.7	113.2	104.6	100.8	99.5	24.4	18.8	15.3	13.9	
MSU E6012	White	56.4	53.6	53.3	53.3	69.9	67.4	67.1	66.5	85.9	83.4	83.2	82.4	107.4	100.3	98.5	97.3	19.1	17.8	16.5	15.9	
AC Mountain	White	52.1	51.4	51.3	51.3	70.9	67.4	66.1	65.7	83.5	80.3	79.9	79.9	88.1	82.0	82.0	81.2	23.7	16.7	14.2	11.7	
DF 110W	White	53.5	52.8	52.9	-----	70.3	67.4	67.1	-----	84.4	82.6	82.6	-----	94.3	87.1	84.7	-----	30.5	24.4	21.5	-----	
Pioneer Brand 25W31	White	54.3	-----	-----	-----	72.5	-----	-----	-----	88.6	-----	-----	-----	94.4	-----	-----	-----	33.9	-----	-----	-----	
9491W	White	57.5	-----	-----	-----	73.5	-----	-----	-----	87.5	-----	-----	-----	101.2	-----	-----	-----	24.3	-----	-----	-----	
Ava	White	52.1	50.8	51.1	51.5	69.7	66.6	65.9	65.6	85.5	82.5	81.7	81.7	80.2	75.8	76.6	76.5	24.8	18.4	12.4	9.4	
9362W	White	58.5	55.5	-----	-----	70.1	68.6	-----	-----	85.8	85.7	-----	-----	95.5	92.6	-----	-----	20.5	17.8	-----	-----	
MSU 5024	White	58.6	-----	-----	-----	73.4	-----	-----	-----	89.8	-----	-----	-----	99.5	-----	-----	-----	33.5	-----	-----	-----	
MEAN (2015 96 Entries)		56.0	53.8	53.5	53.7	73.0	69.4	68.6	68.5	89.0	85.9	84.7	84.1	104.8	96.6	93.4	90.5	26.8	21.1	18.2	15.4	
LSD (0.05)		-----	2.4	1.6	1.8	-----	2.4	1.6	2.3	-----	3.6	2.7	3.5	-----	12.6	6.5	5.6	-----	7.8	5.8	5.9	
CV (%)		-----	2.2	1.8	2.3	-----	1.7	1.4	2.3	-----	2.1	1.9	3.0	-----	6.4	4.2	4.3	-----	18.3	19.3	26.9	

**ORGANIZATIONS PARTICIPATING IN THE 2015
MICHIGAN STATE UNIVERSITY WHEAT PERFORMANCE TRIALS**

AgriMAXX Wheat Company

AgriMAXX 413
AgriMAXX 438
AgriMAXX 444
AgriMAXX 446
AgriMAXX 447

Harrington Seeds, Inc.

HS 284R

Hyland Seeds

Ava

Michigan Crop

Improvement Association

AC Mountain
Hopewell
Jupiter
MCIA Blazer
MCIA Flame
MCIA Red Devil
MCIA Red Dragon
MCIA Rocket
MCIA Whale
MSU 5024
MSU E6012
Red Ruby
Sunburst

BioTown Seeds

Diener 491W
Diener 512

Irrer Seed Farm

L-214
L-232
L-241
L-264
L-334
L-347
L-377
LCS News

Crop Production Services

9223
9522
9552
9242W
9362W
9491W
Shirley

Rupp Seeds, Inc.

RS 907
RS 910
RS 972
RS 9XP011

Wellman Seeds, Inc.

W 206

D.F. Seeds, Inc.

Ambassador
Aubrey
DF 105R
DF 109R
DF 110W
DF 111R
DF 112R
DF 113R
DF EX W B-1
Sienna

Steyer Seeds

Steyer Morrin
Steyer STex141

Syngenta Cereals

SY 007
SY 474
SY 483
SY 547

DuPont Pioneer

Pioneer Brand 25R25
Pioneer Brand 25R40
Pioneer Brand 25R50
Pioneer Brand 25W31

**ORGANIZATIONS PARTICIPATING IN THE 2015
MICHIGAN STATE UNIVERSITY WHEAT PERFORMANCE TRIALS**

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

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

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

Michigan Crop Improvement
Association
2905 Jolly Road
Okemos, MI 48864
Phone: 517-332-3546

Crop Production Services
4648 S. Garfield Rd.
Auburn, MI 48611
989-751-1324

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

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

Steyer Seeds
P.O. Box 209
Old Fort, OH 44861
Phone: 419-355-6708

DuPont Pioneer
59 Greif Parkway, Suite 200
Delaware, OH 43015
Phone: 740-657-6132

AgriPro/Syngenta Cereals
806 - N. 2nd Street
Berthoud, CO 80513
Phone: 970-214-4075

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

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

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

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

MICHIGAN STATE UNIVERSITY

WHEAT BREEDING AND GENETICS

Department of Plant Soil And Microbial Sciences
1066 Bogue Street Room A382
East Lansing, Michigan 48824-1325

Dr. Eric Olson, Wheat Breeder
(517) 353-0142
Email: eolson@msu.edu

Attached is an entry form for the 2015-16 Michigan State University Wheat Performance Trials. Participation of all wheat seed marketing companies is encouraged in order to provide Michigan farmers a representation of all available varieties. If you would like to enter, please complete and e-mail the entry form by **Friday, August 28, 2015**. **Entry forms will only be accepted by e-mail to Lee Siler at siler@msu.edu.**

Twenty-one pounds (21 lb.) of treated seed is required. **The entry fee is \$750 per variety entered.** Seed must be delivered on or before **Tuesday, September 1, 2015** to guarantee entry, as time is needed to package and prepare the seed for a timely planting. **A 10% handling fee, of \$75, will be added to any entries included in the trial for which seed is received after September 1. An additional 10% will be added for each week past September 1.**

Trial Design: Five trial sites will be planted in *Huron, Ingham, Lenawee, Sanilac, and Tuscola* counties. Each entry will be planted in three replications at each location. Intensive high management practices will be applied at trial locations including a split application of nitrogen and two fungicide applications. Additional conventionally managed sites will be planted at Ingham and Tuscola counties. Plots will be planted using a precision research plot planter. Six rows will be spaced at 7.5 inches. Plots will be planted on eighteen-foot centers at a within-plot seeding rate of 2.0 million seeds per acre, and will be trimmed to a harvest length of twelve feet. Harvest will be done mechanically using a plot combine, which includes a Harvest Master Grain Gauge for recording plot weight, test weight, and harvest moisture.

Data: From all five trial locations, data will be provided on *yield, test weight, and harvest moisture*. From selected locations, data will be provided on *plant height, lodging and flowering date*. Fungal disease data will be collected at the Ingham county conventionally managed site. Viral and Bacterial disease data will be collected where available. Two-year, three-year, and four-year average of yield and test weight will be reported for previous entries. Data on Fusarium Head Blight resistance will be provided from an inoculated and misted nursery with heavy disease pressure. FHB data will include Incidence, Severity, FHB Index and DON (vomitoxin) levels. Data on milling and baking properties will also be provided. Final results are published as soon as possible after harvest. Michigan Farm Bureau will publish the report in "Michigan Farm News". Data will be available in .pdf and .xlsx formats at <http://www.varietytrials.msu.edu/wheat> and <http://www.miwheat.org/>.

ENTRY:	PAYMENT:	SEED SHIPMENT:	CONTACT:
Email entry form to Lee Siler: siler@msu.edu	Michigan State University Attn: Lee Siler Dept. of PSMS 1066 Bogue Street East Lansing, MI 48824	Crop Science Field Lab Attn: Lee Siler 4450 Beaumont Road Lansing, MI 48910 Note: Seed must be received by September 1 to avoid a 10% per week handling fee.	Questions can be directed to Dr. Eric Olson: eolson@msu.edu 517-353-0142

2015-16 MICHIGAN STATE UNIVERSITY STATE WHEAT PERFORMANCE TRIAL : ENTRY FORM

***PLEASE NOTE:** This entry form will only be accepted by email to siler@msu.edu. Faxed and postal service entry forms will not be accepted.
 You will receive a confirmation email that it was received as verification.

Contact Information:

Your Name: _____
 Company Name: _____
 Address: _____

 Phone: _____
 Fax: _____
 E-mail: _____

Invoice Information: (Where to Send Invoice)

Name: _____
 Company Name: _____
 Address: _____

 Phone: _____
 Fax: _____
 E-mail: _____

NOTE

This form must be returned by
Friday Aug 28 to guarantee space in
 the trial. If you need to make decisions
 later than this please contact Dr. Eric
 Olson at eolson@msu.edu or (517)
 353-0142.

Full Company Name (For display on the report):

(Please Be Exact. This is What Will Be Displayed on the Report): _____

Acceptable abbreviation for company name (For display on the report): _____

VARIETIES OR LINES SUBMITTED FOR TESTING: (CIRCLE WHERE APPROPRIATE)

VARIETY NAME <small>(Please Be Exact-For Display in Tables)</small>	OTHER NAMES	GRAIN COLOR		Commercially Avail. Fall 2015?		SEED TREATMENT <small>(NOT OPTIONAL - MUST BE DISCLOSED FULLY)</small>	INCLUDE RESULTS IN PUBLISHED REPORTS?	
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO
		RED	WHITE	YES	NO		YES	NO

Fees are \$750 per entry. Return this form by fax or e-mail by Friday Aug. 28 to guarantee space in the trial.

Five yield trial sites and one scab inoculated nursery will be targeted for the 2014-15 planting season.

9.5 kgs (21 lbs.) of **TREATED** seed of each entry delivered by **TUESDAY SEPT. 1, 2015.** (After September 1 will incur a 10% per week handling fee.)

Make checks **PAYABLE TO: MICHIGAN STATE UNIVERSITY**

MAIL PAYMENTS :

Michigan State University
 Attn: Lee Siler
 Dept. of PSMS
 1066 Bogue Street; 286 PSSB
 East Lansing, MI 48824-1325

ENTRY FORMS ACCEPTED BY E-MAIL ONLY

ON OR BEFORE AUGUST 28
siler@msu.edu

MAIL SEED TO:

Crop Science Field Lab
 Attn: Lee Siler
 4450 Beaumont Road
 Lansing, MI 48910

***If you have any questions please contact Dr. Eric Olson at eolson@msu.edu or 517-353-0142**

**Note: Seed must be received by
 September 1 to guarantee entry and
 avoid a 10% per week handling fee.**