

# 2025 Michigan State Wheat Performance Trials

Photo: Wheat Performance Trials, Monroe County



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# 2025 Michigan State Wheat Performance Trials

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Wheat planting was generally on time for most parts of Michigan in fall of 2024. Soybeans and dry beans matured in time to allow for timely planting of winter wheat. Much of the wheat growing regions of the state were dry to very dry at planting, leading some farms to plant later than desired due to lack of soil moisture. Other farms planted into dry conditions. Where soil moisture was adequate for germination and emergence, wheat tillered out well and looked good going into dormancy. Most of the state had enough moisture by mid-October for germination and overall the crop looked good, but some fields were not tillered as much as others

Overwintering conditions were favorable in most parts of the state. There were several arctic air systems that brought very cold temperatures throughout the winter. Wheat still survived quite well mostly due to snow cover during the cold snaps. An early snow storm blanketed wheat in as much as a foot of snow while soil temperatures were still warm. This caused snow molds to grow in many fields, with some experiencing enough damage that the crop was destroyed. Spring warm up seemed slow, causing wheat growth to begin slow putting it much further behind last year in terms of growth stages. This allowed more time for tillering in the spring for those fields that delayed planted or delayed emergence due to dry soil conditions. Spring and early summer warmed slowly with below normal GDD accumulation up to about Feekes 9. Cool conditions with high humidity provided the right conditions for powdery mildew to form and thrive. Many fields were treated with T1 fungicide as a result.

Little or no stripe rust was found this year. Disease pressure was light until flowering (Feekes 10.5.1). As the grain fill period started, it became apparent that there was high yield potential. Many fields had some lodging (nitrogen application overlap areas) while others had significant lodging. A severe thunderstorm with high winds occurred about half way through the grain fill period that caused severe lodging in high yielding fields and those that did not receive an application of a PGR. Fields that were treated with PGR still experienced some lodging.

Some fields in the region saw high levels of cereal leaf beetle populations and feeding requiring control. High levels of beneficial insects were being found in fields across the region. Despite reports of armyworm larvae in some fields, populations and feeding remained low overall.

At harvest, crop quality was initially high with no reports of fusarium head blight. However, frequent rain led to some preharvest sprout issues. Crops harvested after multiple rains saw falling numbers drop below 225 in certain areas. In west-central Michigan, stinking smut (common bunt) was reported and can result in load rejection. Test weights varied, and harvest started closer to normal, rather than early like last year.

Temperatures were warmer at all locations compared to 2024. Generally, the highest temperatures occurred near the end of the grain fill period. While the high temperatures reduced yield potential, it could have been worse if the high temperatures occurred earlier in the grain fill period. Of the three locations listed, Pigeon was the driest in April, May and July. However, in June Pigeon recorded 7.1 inches of rain for the month. At Richville and Mason, rainfall was fairly well distributed over the four months.

Figure 1. Number of days above 90 F, 85 F and rainfall data from Michigan Automated Weather Station Network, MSU for three of the MSU Wheat Variety Trial Locations for the 2023, 2024 and 2025 growing seasons. 2025 data was reported through July 20, 2025.

|            | 2023   |           |       | 2024   |           |       | 2025   |           |       |
|------------|--------|-----------|-------|--------|-----------|-------|--------|-----------|-------|
|            | Pigeon | Richville | Mason | Pigeon | Richville | Mason | Pigeon | Richville | Mason |
| Above 90 F | 8      | 4         | 8     | 3      | 1         | 2     | 6      | 4         | 6     |
| Above 85 F | 16     | 15        | 21    | 10     | 9         | 14    | 16     | 15        | 20    |
| April (in) | 3.4    | 3.1       | 3.7   | 2.2    | 2.8       | 2.5   | 1.1    | 3.7       | 3.0   |
| May (in)   | 1.6    | 1.0       | 1.3   | 2.8    | 4.1       | 2.8   | 1.7    | 4.5       | 3.9   |
| June (in)  | 1.6    | 1.5       | 0.8   | 2.2    | 3.9       | 3.9   | 7.1    | 3.9       | 3.6   |
| July (in)  | 4.1    | 3.5       | 1.9   | 3.5    | 3.2       | 4.7   | 1.0    | 1.9       | 1.4   |

## Choosing Varieties

Variety selection is best made using at least three years of data. Varieties selected using data across all locations and multiple years 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 1 provides information on which varieties are top performers in each of the reported trial locations in 2023 through 2025. 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. When selecting varieties, look at disease resistance as well as yield potential.

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

## Experimental Design

The 2025 State Wheat Performance Trial entries were planted in 7 counties: Gratiot, Allegan, Ingham, Huron, Monroe, 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 16 feet. Plots were trimmed to a length of 12 feet long in the spring for harvesting purposes. Sites were designed as Alpha Lattice with three 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 1.5 million seeds per acre in a solid stand planted in 7.5" rows. Fall fertilizer application varied with cooperator practice.

All sites received split nitrogen application (90 pounds at Feekes 4-5 and 30 pounds at Feekes 6-7), sulfur was applied (24 pounds) with the first nitrogen application, two fungicide applications (T1 and T3) and herbicide application to control weeds.

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.

Data is not being reported for Gratiot, Allegan or Ingham counties, each for different reasons. Gratiot had good yields, but there was a significant yield gradient across the plot area that could not be explained. Allegan had lodging so bad that the combine had trouble picking up the wheat, so yield was left in the field. Ingham county suffered the worst case of cephalosporium stripe in history, causing plants to senesce early.

Five of our experimental sites are on private farmland. We are extremely grateful to those growers for accommodating our work and all 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 Dennis Pennington at [pennin34@msu.edu](mailto:pennin34@msu.edu) or (269) 832-0497. This report and previous reports, may also be accessed through the Web at <http://www.varietytrials.msu.edu/wheat>.

## Multi-Year Performance Summary

The full trial included 100 entries (45 of which were experimental lines) from 11 organizations, including Michigan State University, and data analyses were conducted using all of these entries. 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 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 and 2 are sorted first by grain color, and then in descending order by overall yield for 2025. Tables 3 and 4 are sorted in alphabetic order by company and entry name. In some instances (e.g. yield), data columns to the right of the 2025 data columns are multi-year averages. Only data for entries included in all 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 Design' 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 yield data. This data was acquired electronically on the plot combine at the time of harvest using a Harvest Master II from Juniper Systems. Yield data is standardized to 13.5% moisture. The 2025 yield data contains the multi-year yield averages of for entries included in all of the relevant years' tests.

**Table 2** contains test weight and percent moisture for all locations along with the overall average across locations.

**Table 3** contains data on resistance to Fusarium Head Blight (FHB, scab). Once 2025 data from the lab are back, this report will be updated. 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. 2025 grain samples will be submitted for DON analysis and will be reported later. Spikes were sampled from two replicates of the Ingham County site for **Falling Number (FN)**. Spikes were harvested at physiological maturity and dried five days and then subjected to misting in the greenhouse for 48 hours. Whole meal flour was milled from misted grain using a coffee grinder. FN was then evaluated in two technical replicates on each biological replicate.

The **heading date** indicates the average number of days past January 1st that a given entry reached the point where ½ of its heads were emerged past the auricles of the flag leaf. **Plant height** is reported as the distance in inches from the ground to the tip of average heads in a plot.

### **FHB Resistance Traits**

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

DON: Levels of mycotoxin (ppm) present in grain. DON data is from the 2024 crop year.

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

**Table 4** contains data for **milling and baking quality**. Quality data are from the 2024 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 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. 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%.



## 2025 Michigan State University Wheat Performance Trials

Appendix A. Trial Site Descriptions for 2025 MSU Wheat Performance Trials.

|                                           | FUSARIUM HEAD<br>BLIGHT NURSERY                             | HURON<br>COUNTY                                                      | GRATIOT<br>COUNTY                                                    | Monroe<br>COUNTY                                                     | SANILAC<br>COUNTY                                                    | TUSCOLA<br>COUNTY                                                    | INGHAM<br>COUNTY                                                     | ALLEGAN<br>COUNTY                                                    |
|-------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
| COOPERATOR                                | Michigan State University                                   | Darwin Sneller                                                       | Wallace Loewen                                                       | Brad Kamprath                                                        | Dwight Bartle                                                        | Saginaw Vellay Research and Extension Center                         | Michigan State University                                            | Nick Suwyn                                                           |
| NEAREST CITY                              | Lansing                                                     | Sebewaing                                                            | Middleton                                                            | Ida                                                                  | Brown City                                                           | Richville                                                            | Meridian TWP                                                         | Caledonia                                                            |
| PLANTING DATE                             | October 11, 2024                                            | October 4, 2024                                                      | September 24, 2024                                                   | September 26, 2024                                                   | October 4, 2024                                                      | September 22, 2024                                                   | September 19, 2024                                                   | September 21, 2024                                                   |
| HARVEST DATE                              | July 19, 2024                                               | July 14, 2025                                                        | July 14, 2025                                                        | July 7, 2025                                                         | July 18, 2025                                                        | July 10, 2025                                                        | July 15, 2025                                                        | July 14, 2025                                                        |
| SOIL TYPE                                 | Capac loam, 0 to 4 percent slopes & Colwood-Brookston loams | Shebeon loam, 0 to 2 percent slopes                                  | Dixboro fine sandy loam, 0 to 3 percent slopes                       | Blount Loam, Erie-Huron Lake Plain, 0 to 2 percent slopes            | Conover Loam, 0 to 3 percent slopes                                  | Tappan-Londo loams, 0 to 3 percent slopes                            | Conover loam, 0 to 4 percent slopes                                  | Schoolcraft loam, 0 to 2 percent slopes                              |
| PRE-PLANT FERTILIZER                      | 100# 11-52-0<br>100# 0-0-60                                 | 25# 21-0-0 + 24 S, 125# 12-40-0 +10 S + 1 Zn, 100 lbs 0-0-60         | 250 #/acre 8-18-28 4.8% S                                            | 350# 3-17-24 + 2 S + 3 MN                                            | 90# 0-0-60, 30# 21-0-0 + 24S                                         | 250 # of 9-20-21 + 6.5 S + 0.26 B + 0.3 Mn + 0.45 Zn                 | 245# 10-19-18 + 7.7 S                                                | 30# 46-0-0, 50# 21-0-0 + 24 S, 125# 0-0-60                           |
| COMMENTS                                  | Inoculated / Misted Fusarium Head Blight Screening Nursery. | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied | Additional 30 lbs. Nitrogen Applied, Feekes 10.5.1 Fungicide Applied |
| AVERAGE YIELD (BUSHELS / ACRE)            | N/A                                                         | 128.6                                                                | 118.0                                                                | 101.2                                                                | 104.8                                                                | 109.1                                                                | 64.1                                                                 | 103.8                                                                |
| AVERAGE PERCENT GRAIN MOISTURE AT HARVEST | N/A                                                         | 15.0                                                                 | 15.6                                                                 | 13.7                                                                 | 16.6                                                                 | 17.4                                                                 | 12.8                                                                 | 12.8                                                                 |
| AVERAGE TEST WEIGHT (LBS. / BUSHEL)       | N/A                                                         | 60.2                                                                 | 60.4                                                                 | 56.6                                                                 | 56.2                                                                 | 54.9                                                                 | 51.8                                                                 | 60.2                                                                 |
| 2025 DATA RECORDED (NUMBER OF REPS)       | 3                                                           | 3                                                                    | 3                                                                    | 3                                                                    | 3                                                                    | 3                                                                    | 3                                                                    | 3                                                                    |
| FLOWERING FUNGICIDE APPLICATION DATE      | N/A                                                         | June 6, 2025                                                         | June 2, 2025                                                         | May 26, 2025                                                         | June 6, 2025                                                         | June 2, 2025                                                         | May 29, 2025                                                         | May 27, 2025                                                         |
| GREEN-UP FERTILIZER                       | 90lbs Nitrogen                                              | 90lbs Nitrogen<br>20lbs Sulfur                                       | 90lbs Nitrogen<br>20lbs Sulfur                                       | 90lbs Nitrogen<br>20lbs Sulfur                                       | 90lbs Nitrogen<br>20lbs Sulfur                                       | 90lbs Nitrogen<br>20lbs Sulfur                                       | 90lbs Nitrogen<br>20lbs Sulfur                                       | 90lbs Nitrogen<br>20lbs Sulfur                                       |



Table 1 : Multi-Year Performance Summary  
\*\* Tables sorted by 2025 High Management Yield, grouped by color  
\*\*\* Yield (Bu/A adjusted to 13.5% Moisture)

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| Line Name       | Company         | Seed Color | Overall (across all sites) |      |          |          | Huron |      |          |          | Monroe |      |          |          | Sanilac |      |          |          | Tuscola |      |          |          |
|-----------------|-----------------|------------|----------------------------|------|----------|----------|-------|------|----------|----------|--------|------|----------|----------|---------|------|----------|----------|---------|------|----------|----------|
|                 |                 |            | 2025                       |      | 2 Yr Avg | 3 Yr Avg | 2025  |      | 2 Yr Avg | 3 Yr Avg | 2025   |      | 2 Yr Avg | 3 Yr Avg | 2025    |      | 2 Yr Avg | 3 Yr Avg | 2025    |      | 2 Yr Avg | 3 Yr Avg |
|                 |                 |            | Bu/A                       | Rank | 24-25    | 23-25    | Bu/A  | Rank | 24-25    | 23-25    | Bu/A   | Rank | 24-25    | 23-25    | Bu/A    | Rank | 24-25    | 23-25    | Bu/A    | Rank | 24-25    | 23-25    |
|                 |                 |            |                            |      |          |          |       |      |          |          |        |      |          |          |         |      |          |          |         |      |          |          |
| FS WX25A        | FS InSPIRE      | R          | 110.2                      | 40   | --       | --       | 133.2 | 9    | --       | --       | 91.2   | 51   | --       | --       | 114.6   | 6    | --       | --       | 101.9   | 48   | --       | --       |
| Dyna-Gro 9422   | Dyna-Gro        | R          | 110.2                      | 41   | 106.8    | 109.5    | 127.1 | 42   | 121.5    | 120.7    | 99.8   | 37   | 100.4    | 106.2    | 102.6   | 42   | 104.2    | 114.8    | 111.3   | 20   | 106.3    | 108.3    |
| Synergy EXP2578 | Synergy Ag      | R          | 109.1                      | 42   | --       | --       | 127.1 | 41   | --       | --       | 98.3   | 42   | --       | --       | 103.6   | 38   | --       | --       | 107.3   | 32   | --       | --       |
| Dyna-Gro 9593   | Dyna-Gro        | R          | 109.0                      | 43   | 104.8    | --       | 127.0 | 43   | 118.8    | --       | 101.1  | 28   | 96.0     | --       | 106.0   | 31   | 107.2    | --       | 101.9   | 48   | 101.5    | --       |
| Dyna-Gro 9570   | Dyna-Gro        | R          | 108.8                      | 44   | 104.8    | --       | 127.7 | 38   | 119.3    | --       | 91.9   | 49   | 95.1     | --       | 103.5   | 39   | 100.2    | --       | 112.3   | 19   | 105.5    | --       |
| DF 112 R        | DF Seeds        | R          | 108.5                      | 45   | 104.2    | 105.0    | 128.6 | 33   | 119.1    | 117.8    | 96.5   | 45   | 94.1     | 93.1     | 104.2   | 36   | 106.6    | 113.5    | 104.7   | 39   | 101.5    | 104.7    |
| KWS625          | KWS Cereals USA | R          | 108.4                      | 46   | --       | --       | 132.1 | 15   | --       | --       | 101.1  | 29   | --       | --       | 98.0    | 47   | --       | --       | 102.6   | 46   | --       | --       |
| Blue River 801  | Albert Lea      | R          | 108.4                      | 47   | 104.8    | --       | 128.4 | 35   | --       | --       | 98.0   | 43   | --       | --       | 102.3   | 43   | --       | --       | 104.9   | 38   | --       | --       |
| 17VDH-SRW02-125 | Virginia Tech   | R          | 108.4                      | 48   | --       | --       | 120.9 | 51   | --       | --       | 94.1   | 48   | --       | --       | 114.7   | 5    | --       | --       | 103.9   | 41   | --       | --       |
| MCIA .357       | MCIA            | R          | 108.4                      | 49   | 102.8    | 104.1    | 126.3 | 44   | 115.7    | 118.2    | 95.5   | 47   | 92.4     | 95.2     | 108.0   | 26   | 107.1    | 114.1    | 103.6   | 42   | 98.5     | 101.5    |
| Synergy Wagner  | Synergy Ag      | R          | 107.6                      | 50   | --       | --       | 130.9 | 23   | --       | --       | 91.2   | 51   | --       | --       | 105.3   | 34   | --       | --       | 103.2   | 44   | --       | --       |
| Sunburst        | MCIA            | R          | 106.4                      | 51   | 99.4     | 100.6    | 121.4 | 50   | 114.6    | 113.0    | 100.2  | 34   | 90.5     | 93.1     | 106.7   | 28   | 102.9    | 111.0    | 97.4    | 51   | 98.4     | 100.6    |
| Mean            |                 |            | 110.8                      |      | 105.3    | 105.1    | 128.6 |      | 119.7    | 116.2    | 100.3  |      | 96.8     | 100.1    | 105.1   |      | 105.7    | 112.1    | 109.1   |      | 103.1    | 103.9    |
| LSD             |                 |            | 4.2                        |      | 2.2      | 2.0      | 1.6   |      | 3.2      | 4.4      | 6.4    |      | 5.7      | 5.5      | 6.8     |      | 6.8      | 5.8      | 9.0     |      | 4.4      | 3.6      |
| CV              |                 |            | 2.1                        |      | 2.6      | 2.7      | 0.8   |      | 1.5      | 1.7      | 4.0    |      | 3.7      | 3.7      | 4.0     |      | 2.4      | 2.0      | 5.1     |      | 2.6      | 2.4      |

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Table 2. Multi-Location Performance Summary for Test Weight and Percent Moisture.

| Line              | Company                | Seed Treatment               | Seed Color | Overall |      | Huron   |      | Monroe  |      | Sanilac |      | Tuscola |      |
|-------------------|------------------------|------------------------------|------------|---------|------|---------|------|---------|------|---------|------|---------|------|
|                   |                        |                              |            | % Moist | TW   | % Moist | TW   | % Moist | TW   | % Moist | TW   | % Moist | TW   |
| AgriMAXX 505      | AgriMAXX Wheat Company | PRIME ST                     | Red        | 15.1    | 58.4 | 15.1    | 62.3 | 13.6    | 57.7 | 15.1    | 56.7 | 16.6    | 56.8 |
| AgriMAXX 545      | AgriMAXX Wheat Company | PRIME ST                     | Red        | 15.0    | 57.4 | 14.3    | 60.1 | 13.8    | 56.8 | 16.5    | 56.4 | 15.4    | 56.4 |
| AgriMAXX 556      | AgriMAXX Wheat Company | PRIME ST                     | Red        | 16.6    | 56.7 | 16.9    | 59.5 | 13.9    | 56.4 | 17.5    | 55.8 | 17.9    | 54.8 |
| AgriMAXX Bad Axe  | AgriMAXX Wheat Company | PRIME ST                     | White      | 16.1    | 57.4 | 15.3    | 60.6 | 14.0    | 58.0 | 15.9    | 56.5 | 19.0    | 54.5 |
| AgriMAXX Mackinaw | AgriMAXX Wheat Company | PRIME ST                     | White      | 15.2    | 56.8 | 13.7    | 59.5 | 13.9    | 57.1 | 15.6    | 55.5 | 17.7    | 55.2 |
| Blue River 801    | Albert Lea             | CruiserMaxx Vibrance Cereals | Red        | 15.7    | 58.0 | 15.1    | 60.8 | 13.9    | 57.3 | 16.8    | 57.6 | 16.9    | 56.5 |
| DF 112 R          | DF Seeds               | DFender                      | Red        | 15.1    | 55.9 | 14.4    | 59.6 | 13.6    | 55.5 | 15.5    | 55.5 | 17.1    | 52.9 |
| DF 121 R          | DF Seeds               | DFender                      | Red        | 15.9    | 57.1 | 15.2    | 60.5 | 13.6    | 58.7 | 15.6    | 54.7 | 19.2    | 54.6 |
| DF 131 R          | DF Seeds               | DFender                      | Red        | 16.0    | 57.4 | 14.8    | 60.2 | 13.9    | 57.8 | 17.2    | 56.1 | 18.1    | 55.4 |
| DF 144 R          | DF Seeds               | DFender                      | Red        | 15.7    | 57.0 | 14.4    | 60.0 | 13.8    | 56.6 | 17.1    | 56.3 | 17.4    | 55.0 |
| DF 175 R          | DF Seeds               | DFender                      | Red        | 15.3    | 56.3 | 14.2    | 59.6 | 13.2    | 54.8 | 16.3    | 56.9 | 17.7    | 54.0 |
| DF 195 R          | DF Seeds               | DFender                      | Red        | 15.9    | 55.8 | 14.8    | 59.7 | 14.0    | 54.6 | 16.4    | 55.4 | 18.3    | 53.6 |
| DF 225 W          | DF Seeds               | DFender                      | White      | 15.7    | 55.0 | 14.6    | 59.3 | 14.1    | 52.6 | 16.7    | 54.1 | 17.4    | 54.0 |
| DF 271 W          | DF Seeds               | DFender                      | White      | 15.4    | 56.6 | 13.7    | 59.3 | 14.1    | 56.4 | 15.3    | 55.7 | 18.4    | 54.9 |
| DF 284 W          | DF Seeds               | DFender                      | White      | 16.0    | 55.4 | 16.0    | 59.1 | 14.0    | 53.2 | 16.2    | 55.0 | 17.7    | 54.4 |
| Dyna-Gro 9172     | Dyna-Gro               | Foothold Virock              | Red        | 16.0    | 57.2 | 16.1    | 59.6 | 13.9    | 57.8 | 16.0    | 56.9 | 17.9    | 54.5 |
| Dyna-Gro 9231     | Dyna-Gro               | Foothold Virock              | Red        | 15.4    | 58.1 | 15.2    | 61.2 | 13.8    | 58.3 | 16.0    | 56.3 | 16.8    | 56.8 |
| Dyna-Gro 9290     | Dyna-Gro               | Foothold Virock              | Red        | 15.5    | 57.6 | 15.3    | 60.8 | 13.7    | 56.0 | 16.6    | 57.4 | 16.2    | 56.1 |
| Dyna-Gro 9422     | Dyna-Gro               | Foothold Virock              | Red        | 15.5    | 57.6 | 14.3    | 60.5 | 13.7    | 57.6 | 17.3    | 56.2 | 16.9    | 56.3 |
| Dyna-Gro 9533     | Dyna-Gro               | Foothold Virock              | Red        | 15.5    | 56.1 | 14.2    | 59.5 | 13.8    | 54.0 | 16.0    | 56.4 | 18.1    | 54.4 |
| Dyna-Gro 9570     | Dyna-Gro               | Foothold Virock              | Red        | 15.4    | 56.7 | 14.1    | 59.2 | 13.8    | 55.9 | 16.2    | 56.1 | 17.3    | 55.5 |
| Dyna-Gro 9593     | Dyna-Gro               | Foothold Virock              | Red        | 15.8    | 57.8 | 15.3    | 60.7 | 14.0    | 58.4 | 17.5    | 56.4 | 16.5    | 55.7 |
| Dyna-Gro 9313W    | Dyna-Gro               | Foothold Virock              | White      | 15.8    | 55.8 | 14.7    | 59.3 | 13.5    | 56.2 | 16.9    | 54.5 | 18.1    | 53.2 |
| Dyna-Gro 9242W    | Dyna-Gro               | Foothold Virock              | White      | 15.4    | 57.2 | 14.6    | 60.9 | 13.7    | 55.5 | 16.0    | 56.9 | 17.0    | 55.4 |
| Dyna-Gro 9641W    | Dyna-Gro               | Foothold Virock              | White      | 18.7    | 56.3 | 20.4    | 58.9 | 14.0    | 58.2 | 20.0    | 55.0 | 20.5    | 53.3 |
| Dyna-Gro 9663W    | Dyna-Gro               | Foothold Virock              | White      | 15.2    | 56.7 | 13.9    | 60.6 | 13.4    | 56.3 | 16.0    | 56.0 | 17.6    | 54.1 |
| Dyna-Gro 9612     | Dyna-Gro               | Foothold Virock              | Red        | 15.2    | 57.3 | 14.8    | 60.2 | 13.7    | 56.9 | 15.5    | 56.2 | 16.8    | 55.9 |
| Dyna-Gro 9632     | Dyna-Gro               | Foothold Virock              | Red        | 15.3    | 56.9 | 14.7    | 60.6 | 13.8    | 57.6 | 16.1    | 55.9 | 16.6    | 53.6 |
| FS 600            | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 15.4    | 59.0 | 14.7    | 62.7 | 13.4    | 58.7 | 16.3    | 58.1 | 17.3    | 56.5 |
| FS 606            | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 15.2    | 58.9 | 15.0    | 62.2 | 13.9    | 57.9 | 15.8    | 58.3 | 16.1    | 57.1 |
| FS 617            | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 15.9    | 57.8 | 14.9    | 60.5 | 13.9    | 57.9 | 17.7    | 56.8 | 17.2    | 55.9 |
| FS 743            | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 15.8    | 58.0 | 15.7    | 60.8 | 13.8    | 58.2 | 16.1    | 57.0 | 17.6    | 55.9 |
| FS 745            | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 15.8    | 57.7 | 14.8    | 60.4 | 13.9    | 57.8 | 17.5    | 56.4 | 17.0    | 56.1 |
| FS 749            | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 15.8    | 57.3 | 15.7    | 60.4 | 13.5    | 57.5 | 16.7    | 57.1 | 17.4    | 54.1 |
| FS WX25A          | FS InSPIRE             | Vibrance Extreme & Senator   | Red        | 16.4    | 57.3 | 16.1    | 61.4 | 13.9    | 56.8 | 17.2    | 55.7 | 18.4    | 55.1 |
| ISF 780           | Irrer Seed Farm        | ISF Shield                   | Red        | 15.3    | 56.2 | 13.9    | 59.8 | 13.8    | 55.9 | 16.0    | 55.3 | 17.6    | 54.0 |
| ISF 2411          | Irrer Seed Farm        | ISF Shield                   | Red        | 15.9    | 58.8 | 15.4    | 61.5 | 13.8    | 58.9 | 16.9    | 57.4 | 17.4    | 57.4 |
| ISF 790           | Irrer Seed Farm        | ISF Shield                   | Red        | 15.6    | 56.8 | 15.3    | 60.1 | 13.9    | 56.3 | 16.1    | 55.2 | 17.0    | 55.7 |
| ISF 1115          | Irrer Seed Farm        | ISF Shield                   | White      | 15.7    | 56.6 | 13.6    | 59.7 | 14.1    | 56.7 | 16.0    | 56.3 | 19.2    | 53.8 |
| KWS579            | KWS Cereals USA        | Vibrance/Crusier 5FS         | Red        | 15.6    | 56.4 | 14.5    | 59.5 | 13.5    | 55.4 | 16.2    | 56.8 | 18.0    | 53.8 |
| KWS591            | KWS Cereals USA        | Vibrance/Crusier 5FS         | Red        | 15.1    | 57.1 | 14.3    | 60.5 | 13.5    | 55.7 | 16.7    | 56.6 | 15.8    | 55.6 |



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Table 2. Multi-Location Performance Summary for Test Weight and Percent Moisture.

| Line                 | Company         | Seed Treatment                      | Seed Color | Overall |      | Huron   |      | Monroe  |      | Sanilac |      | Tuscola |      |
|----------------------|-----------------|-------------------------------------|------------|---------|------|---------|------|---------|------|---------|------|---------|------|
|                      |                 |                                     |            | % Moist | TW   | % Moist | TW   | % Moist | TW   | % Moist | TW   | % Moist | TW   |
| KWS604               | KWS Cereals USA | Vibrance/Crusier 5FS                | Red        | 15.7    | 56.7 | 15.0    | 60.4 | 12.8    | 54.7 | 16.8    | 56.9 | 18.1    | 54.6 |
| KWS623               | KWS Cereals USA | Vibrance/Crusier 5FS                | Red        | 15.6    | 56.8 | 14.3    | 59.9 | 14.3    | 56.1 | 16.2    | 56.2 | 17.4    | 54.9 |
| KWS625               | KWS Cereals USA | Vibrance/Crusier 5FS                | Red        | 15.8    | 57.0 | 14.5    | 60.9 | 14.0    | 56.3 | 16.7    | 56.8 | 18.1    | 54.2 |
| KWS630               | KWS Cereals USA | Vibrance/Crusier 5FS                | White      | 16.0    | 56.3 | 15.3    | 59.3 | 14.4    | 55.4 | 16.2    | 56.2 | 18.1    | 54.4 |
| KWS631               | KWS Cereals USA | Vibrance/Crusier 5FS                | White      | 14.8    | 56.8 | 13.9    | 59.9 | 13.8    | 55.8 | 15.9    | 56.7 | 15.8    | 54.8 |
| KWS632               | KWS Cereals USA | Vibrance/Crusier 5FS                | White      | 16.4    | 56.1 | 15.9    | 59.7 | 14.3    | 56.1 | 16.9    | 54.8 | 18.6    | 53.8 |
| KWS635               | KWS Cereals USA | Vibrance/Crusier 5FS                | White      | 15.1    | 56.2 | 13.8    | 59.3 | 13.8    | 55.1 | 16.5    | 54.9 | 16.5    | 55.3 |
| Jupiter              | MCIA            | Vibrance Extreme                    | White      | 15.5    | 56.7 | 14.8    | 60.1 | 13.6    | 55.9 | 17.0    | 56.1 | 16.7    | 54.6 |
| MCIA .357            | MCIA            | Vibrance Extreme                    | Red        | 15.3    | 56.6 | 14.5    | 60.1 | 13.9    | 55.6 | 15.3    | 56.8 | 17.6    | 53.9 |
| MCIA Redfin          | MCIA            | Vibrance Extreme                    | Red        | 16.5    | 56.7 | 16.7    | 59.4 | 13.9    | 56.1 | 17.0    | 56.1 | 18.5    | 55.0 |
| MCIA Thunder         | MCIA            | Vibrance Extreme                    | Red        | 15.7    | 55.9 | 14.4    | 60.0 | 13.5    | 55.8 | 16.3    | 54.1 | 18.6    | 53.8 |
| MCIA Barracuda       | MCIA            | Vibrance Extreme                    | Red        | 16.1    | 56.6 | 14.7    | 59.4 | 13.7    | 56.1 | 17.7    | 56.3 | 18.3    | 54.8 |
| MCIA Flipper         | MCIA            | Vibrance Extreme                    | Red        | 15.9    | 56.9 | 14.9    | 60.1 | 14.0    | 56.0 | 16.2    | 57.0 | 18.3    | 54.5 |
| MCIA Jonah           | MCIA            | Vibrance Extreme                    | Red        | 15.9    | 56.4 | 15.2    | 59.8 | 14.3    | 56.2 | 17.1    | 55.9 | 17.1    | 53.5 |
| MCIA Marlin          | MCIA            | Vibrance Extreme                    | Red        | 16.6    | 55.8 | 16.3    | 59.7 | 14.0    | 55.4 | 17.4    | 53.9 | 18.6    | 54.2 |
| MCIA Wharf           | MCIA            | Vibrance Extreme                    | Red        | 14.5    | 55.1 | 13.8    | 58.8 | 13.4    | 54.2 | 14.8    | 54.7 | 16.0    | 52.8 |
| MCIA White Lightning | MCIA            | Vibrance Extreme                    | White      | 15.6    | 56.5 | 14.8    | 59.7 | 14.1    | 56.1 | 16.3    | 56.0 | 17.3    | 54.2 |
| Sunburst             | MCIA            | Vibrance Extreme                    | Red        | 16.4    | 57.8 | 16.5    | 62.0 | 13.7    | 57.5 | 17.6    | 57.0 | 17.8    | 54.7 |
| Whitetail            | MCIA            | Vibrance Extreme                    | White      | 15.6    | 56.0 | 13.8    | 59.5 | 13.7    | 55.0 | 16.1    | 56.2 | 18.7    | 53.1 |
| MI20R0210            | MSU             | CruiserMaxx Vibrance Cereals        | Red        | 15.5    | 56.0 | 14.7    | 59.7 | 13.4    | 54.1 | 17.1    | 56.1 | 16.9    | 54.1 |
| MI22R057             | MSU             | CruiserMaxx Vibrance Cereals        | Red        | 15.7    | 56.6 | 14.2    | 59.8 | 13.9    | 55.2 | 15.9    | 56.6 | 19.0    | 54.7 |
| MI22W213             | MSU             | CruiserMaxx Vibrance Cereals        | White      | 15.2    | 56.2 | 14.0    | 58.2 | 13.8    | 56.8 | 15.8    | 55.6 | 17.2    | 54.3 |
| MI609W               | MSU             | CruiserMaxx Vibrance Cereals        | White      | 16.2    | 57.0 | 14.8    | 60.3 | 14.0    | 56.8 | 17.0    | 56.2 | 18.8    | 54.5 |
| Synergy Kessler      | Synergy Ag      | Ceres US IMTBZ                      | Red        | 15.3    | 57.2 | 14.1    | 60.3 | 13.8    | 56.3 | 16.8    | 56.6 | 16.4    | 55.5 |
| Synergy EXP2578      | Synergy Ag      | Cruiser Maxx Vibrance. Cruiser 5 FS | Red        | 15.1    | 56.9 | 14.1    | 60.3 | 13.7    | 55.4 | 16.5    | 56.8 | 16.3    | 55.0 |
| Synergy Frantz       | Synergy Ag      | Ceres US IMTBZ                      | Red        | 15.7    | 57.2 | 14.7    | 60.5 | 13.9    | 57.1 | 16.8    | 56.0 | 17.5    | 55.2 |
| Synergy Wagner       | Synergy Ag      | Cruiser Maxx Vibrance. Cruiser 5 FS | Red        | 15.0    | 56.0 | 14.3    | 59.5 | 14.2    | 54.3 | 15.4    | 55.9 | 16.2    | 54.3 |
| 17VDH-SRW02-125      | Virginia Tech   | No seed treatment                   | Red        | 15.0    | 58.3 | 14.5    | 61.7 | 13.6    | 57.3 | 15.8    | 58.2 | 15.9    | 56.1 |
| VA20FHB-18           | Virginia Tech   | No seed treatment                   | Red        | 15.0    | 58.5 | 14.9    | 61.2 | 13.3    | 58.3 | 14.9    | 57.9 | 16.6    | 56.8 |
| Mean                 |                 |                                     |            | 15.7    | 56.9 | 15.0    | 60.2 | 13.8    | 56.3 | 16.6    | 56.2 | 17.4    | 54.9 |
| LSD                  |                 |                                     |            | 0.6     | 0.6  | 1.6     | 0.2  | 0.6     | 1.2  | 1.4     | 0.6  | 2.5     | 1.9  |
| CV                   |                 |                                     |            | 3.7     | 0.7  | 6.6     | 0.2  | 2.6     | 1.3  | 5.1     | 0.7  | 8.8     | 2.1  |

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Table 3. Disease, falling number, lodging, plant height, heading, canopy architecture, and physiological maturity data.

| Line              | Company                | Seed Color | Awn     | Fusarium Head Blight<br>Severity % DON ppm<br>2025 2024 |     | Falling<br>Number<br>2025 | Powdery Mildew Rating<br>0-9 scale<br>Allegan | Stripe Rust Rating<br>0-9 scale<br>Greenhouse | Lodging<br>%<br>Allegan | Plant<br>Height<br>(inches) | Heading<br>Date<br>Days past Jan. 1 | Physiological<br>Maturity<br>Days past Jan. 1 | Canopy<br>Architecture<br>Tuscola |
|-------------------|------------------------|------------|---------|---------------------------------------------------------|-----|---------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|-----------------------------|-------------------------------------|-----------------------------------------------|-----------------------------------|
| AgriMAXX 505      | AgriMAXX Wheat Company | Red        | Awned   | 37                                                      | 1.1 | 240                       | 5.3                                           | 0.8                                           | 5.0                     | 37                          | 141                                 | 178                                           | lateral                           |
| AgriMAXX 545      | AgriMAXX Wheat Company | Red        | Awned   | 38                                                      | 2.7 | 189                       | 5.0                                           | 8.8                                           | 6.7                     | 35                          | 143                                 | 181                                           | intermediate                      |
| AgriMAXX 556      | AgriMAXX Wheat Company | Red        | Awned   | 28                                                      | --  | 285                       | 1.7                                           | 2.1                                           | 63.3                    | 36                          | 143                                 | 180                                           | intermediate                      |
| AgriMAXX Bad Axe  | AgriMAXX Wheat Company | White      | Awnless | 38                                                      | --  | 92                        | 7.0                                           | 1.3                                           | 3.3                     | 34                          | 144                                 | 181                                           | upright                           |
| AgriMAXX Mackinaw | AgriMAXX Wheat Company | White      | Awnless | 52                                                      | 3.7 | 114                       | 7.7                                           | 4.8                                           | 28.3                    | 35                          | 141                                 | 180                                           | intermediate                      |
| Blue River 801    | Albert Lea             | Red        | Awned   | 43                                                      | 1.2 | 277                       | 3.3                                           | 1.6                                           | 30.0                    | 37                          | 140                                 | 178                                           | intermediate                      |
| DF 112 R          | DF Seeds               | Red        | Awned   | 35                                                      | 2   | 199                       | 7.7                                           | 0.6                                           | 11.7                    | 36                          | 140                                 | 178                                           | lateral                           |
| DF 121 R          | DF Seeds               | Red        | Awned   | 42                                                      | 1.6 | 250                       | 0.3                                           | 0.4                                           | 48.3                    | 34                          | 145                                 | 178                                           | lateral                           |
| DF 131 R          | DF Seeds               | Red        | Awned   | 48                                                      | 3.1 | 198                       | 4.3                                           | 1.2                                           | 8.3                     | 35                          | 141                                 | 178                                           | lateral                           |
| DF 144 R          | DF Seeds               | Red        | Awned   | 32                                                      | 1.7 | 149                       | 7.0                                           | 9.0                                           | 1.7                     | 35                          | 143                                 | 181                                           | intermediate                      |
| DF 175 R          | DF Seeds               | Red        | Awnless | 47                                                      | --  | 251                       | 0.7                                           | 7.8                                           | 73.3                    | 37                          | 141                                 | 179                                           | intermediate                      |
| DF 195 R          | DF Seeds               | Red        | Awnless | 38                                                      | --  | 272                       | 7.0                                           | 1.6                                           | 25.0                    | 36                          | 142                                 | 180                                           | lateral                           |
| DF 225 W          | DF Seeds               | White      | Awnless | 28                                                      | --  | 138                       | 6.3                                           | 4.8                                           | 86.7                    | 36                          | 145                                 | 182                                           | upright                           |
| DF 271 W          | DF Seeds               | White      | Awnless | 42                                                      | 3.1 | 108                       | 7.3                                           | 7.1                                           | 5.0                     | 35                          | 142                                 | 181                                           | intermediate                      |
| DF 284 W          | DF Seeds               | White      | Awnless | 33                                                      | 3.7 | 116                       | 7.0                                           | 0.5                                           | 0.0                     | 34                          | 145                                 | 181                                           | intermediate                      |
| Dyna-Gro 9172     | Dyna-Gro               | Red        | Awned   | 42                                                      | 1.7 | 242                       | 2.3                                           | 1.1                                           | 1.7                     | 36                          | 141                                 | 177                                           | lateral                           |
| Dyna-Gro 9231     | Dyna-Gro               | Red        | Awned   | 43                                                      | --  | 262                       | 1.3                                           | 2.1                                           | 43.3                    | 37                          | 140                                 | 177                                           | lateral                           |
| Dyna-Gro 9290     | Dyna-Gro               | Red        | Awned   | 42                                                      | --  | 219                       | 4.7                                           | 0.7                                           | 3.3                     | 37                          | 141                                 | 177                                           | lateral                           |
| Dyna-Gro 9422     | Dyna-Gro               | Red        | Awned   | 37                                                      | 0.7 | 236                       | 1.7                                           | 8.3                                           | 33.3                    | 37                          | 143                                 | 179                                           | intermediate                      |
| Dyna-Gro 9533     | Dyna-Gro               | Red        | Awnless | 16                                                      | 1   | 262                       | 3.0                                           | 4.4                                           | 28.3                    | 31                          | 141                                 | 181                                           | lateral                           |
| Dyna-Gro 9570     | Dyna-Gro               | Red        | Awned   | 42                                                      | 0.6 | 163                       | 5.7                                           | 0.7                                           | 3.3                     | 37                          | 140                                 | 180                                           | lateral                           |
| Dyna-Gro 9593     | Dyna-Gro               | Red        | Awned   | 30                                                      | 1.9 | 118                       | 6.0                                           | 0.6                                           | 0.0                     | 34                          | 140                                 | 180                                           | lateral                           |
| Dyna-Gro 9313W    | Dyna-Gro               | White      | Awned   | 28                                                      | 4.2 | 117                       | 0.0                                           | 0.3                                           | 71.7                    | 37                          | 145                                 | 178                                           | intermediate                      |
| Dyna-Gro 9242W    | Dyna-Gro               | White      | Awnless | 21                                                      | 1.7 | 98                        | 6.3                                           | --                                            | 0.0                     | 36                          | 146                                 | 180                                           | lateral                           |
| Dyna-Gro 9641W    | Dyna-Gro               | White      | Awned   | 53                                                      | --  | 62                        | 3.3                                           | 8.3                                           | 16.7                    | 36                          | 140                                 | 177                                           | lateral                           |
| Dyna-Gro 9663W    | Dyna-Gro               | White      | Awned   | 53                                                      | --  | 116                       | 1.7                                           | 0.7                                           | 1.7                     | 34                          | 140                                 | 181                                           | intermediate                      |
| Dyna-Gro 9612     | Dyna-Gro               | Red        | Awned   | 26                                                      | --  | 259                       | 1.7                                           | 0.3                                           | 1.9                     | 33                          | 140                                 | 180                                           | upright                           |
| Dyna-Gro 9632     | Dyna-Gro               | Red        | Awned   | 35                                                      | --  | 179                       | 7.7                                           | 1.6                                           | 13.3                    | 35                          | 140                                 | 181                                           | lateral                           |
| FS 600            | FS InSPIRE             | Red        | Awned   | 41                                                      | 0.8 | 264                       | 6.3                                           | 3.6                                           | 15.0                    | 36                          | 141                                 | 177                                           | lateral                           |
| FS 606            | FS InSPIRE             | Red        | Awnless | 32                                                      | 0.2 | 235                       | 8.0                                           | 2.6                                           | 18.3                    | 37                          | 139                                 | 177                                           | intermediate                      |
| FS 617            | FS InSPIRE             | Red        | Awned   | 25                                                      | --  | 276                       | 1.3                                           | 0.8                                           | 18.3                    | 35                          | 144                                 | 179                                           | lateral                           |
| FS 743            | FS InSPIRE             | Red        | Awned   | 53                                                      | --  | 234                       | 3.3                                           | 1.5                                           | 60.0                    | 37                          | 139                                 | 177                                           | lateral                           |
| FS 745            | FS InSPIRE             | Red        | Awned   | 33                                                      | 2.3 | 240                       | 4.7                                           | 2.1                                           | 15.0                    | 36                          | 140                                 | 178                                           | lateral                           |
| FS 749            | FS InSPIRE             | Red        | Awned   | 8                                                       | --  | 209                       | 8.7                                           | 1.6                                           | 21.7                    | 35                          | 145                                 | 180                                           | intermediate                      |
| FS WX25A          | FS InSPIRE             | Red        | Awnless | 32                                                      | --  | --                        | 7.0                                           | 1.1                                           | 0.0                     | --                          | --                                  | --                                            | lateral                           |
| ISF 780           | Irrer Seed Farm        | Red        | Awned   | 43                                                      | --  | 229                       | 6.0                                           | 0.9                                           | 80.0                    | 34                          | 139                                 | 180                                           | intermediate                      |
| ISF 2411          | Irrer Seed Farm        | Red        | Awnless | 57                                                      | --  | 262                       | 0.7                                           | 1.8                                           | 71.7                    | 35                          | 137                                 | 176                                           | lateral                           |
| ISF 790           | Irrer Seed Farm        | Red        | Awnless | 52                                                      | --  | 255                       | 4.7                                           | 0.8                                           | 83.3                    | 36                          | 138                                 | 177                                           | lateral                           |
| ISF 1115          | Irrer Seed Farm        | White      | Awnless | 43                                                      | --  | 119                       | 5.3                                           | 4.0                                           | 0.0                     | 35                          | 142                                 | 181                                           | lateral                           |
| KWS579            | KWS Cereals USA        | Red        | Awned   | 25                                                      | --  | 221                       | 7.7                                           | 0.1                                           | 18.3                    | 34                          | 140                                 | 181                                           | intermediate                      |
| KWS591            | KWS Cereals USA        | Red        | Awned   | 30                                                      | --  | 265                       | 0.7                                           | 1.0                                           | 46.7                    | 37                          | 140                                 | 179                                           | lateral                           |
| KWS604            | KWS Cereals USA        | Red        | Awned   | 28                                                      | --  | 278                       | 7.7                                           | 0.6                                           | 0.0                     | 33                          | 143                                 | 181                                           | lateral                           |
| KWS623            | KWS Cereals USA        | Red        | Awnless | 42                                                      | --  | 168                       | 1.3                                           | 1.0                                           | 78.3                    | 37                          | 140                                 | 180                                           | intermediate                      |
| KWS625            | KWS Cereals USA        | Red        | Awnless | 23                                                      | --  | 254                       | 2.0                                           | 0.7                                           | 66.7                    | 35                          | 141                                 | 177                                           | upright                           |
| KWS630            | KWS Cereals USA        | White      | Awnless | 45                                                      | --  | 158                       | 5.3                                           | 3.5                                           | 38.3                    | 36                          | 143                                 | 181                                           | upright                           |
| KWS631            | KWS Cereals USA        | White      | Awned   | 37                                                      | --  | 128                       | 6.3                                           | 4.0                                           | 26.7                    | 35                          | 144                                 | 180                                           | intermediate                      |
| KWS632            | KWS Cereals USA        | White      | Awnless | 17                                                      | --  | 118                       | 8.3                                           | 8.9                                           | 0.0                     | 32                          | 145                                 | 181                                           | intermediate                      |
| KWS635            | KWS Cereals USA        | White      | Awned   | 43                                                      | --  | 113                       | 8.3                                           | 1.6                                           | 0.0                     | 36                          | 138                                 | 180                                           | intermediate                      |
| Jupiter           | MCIA                   | White      | Awnless | 72                                                      | 11  | 116                       | 5.0                                           | 3.4                                           | 50.0                    | 35                          | 146                                 | 181                                           | lateral                           |
| MCIA .357         | MCIA                   | Red        | Awnless | 45                                                      | 1.7 | 228                       | 0.0                                           | 4.8                                           | 25.0                    | 31                          | 138                                 | 179                                           | upright                           |
| MCIA Redfin       | MCIA                   | Red        | Awned   | 50                                                      | --  | 200                       | 5.0                                           | 1.0                                           | 0.0                     | 36                          | 141                                 | 181                                           | lateral                           |
| MCIA Thunder      | MCIA                   | Red        | Awnless | 38                                                      | --  | 258                       | 7.0                                           | 7.8                                           | 23.3                    | 37                          | 141                                 | 181                                           | lateral                           |
| MCIA Barracuda    | MCIA                   | Red        | Awned   | 33                                                      | 0.5 | 204                       | 4.7                                           | 1.0                                           | 6.7                     | 35                          | 143                                 | 181                                           | intermediate                      |
| MCIA Flipper      | MCIA                   | Red        | Awnless | 68                                                      | 2   | 221                       | 1.7                                           | 0.4                                           | 50.0                    | 36                          | 141                                 | 177                                           | lateral                           |
| MCIA Jonah        | MCIA                   | Red        | Awnless | 53                                                      | 1.6 | 287                       | 7.3                                           | 1.3                                           | 25.0                    | 37                          | 143                                 | 180                                           | lateral                           |
| MCIA Marlin       | MCIA                   | Red        | Awnless | 65                                                      | 2   | 212                       | 3.7                                           | 0.8                                           | 98.3                    | 35                          | 138                                 | 176                                           | lateral                           |

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Table 3. Disease, falling number, lodging, plant height, heading, canopy architecture, and physiological maturity data.

| Line                 | Company       | Seed Color | Awn     | Fusarium Head Blight<br>Severity %      DON ppm |      | Falling<br>Number<br>2025 | Powdery Mildew Rating<br>0-9 scale<br>Allegan | Stripe Rust Rating<br>0-9 scale<br>Greenhouse | Lodging<br>%<br>Allegan | Plant<br>Height<br>(inches) | Heading<br>Date<br>Days past Jan. 1 | Physiological<br>Maturity<br>Days past Jan. 1 | Canopy<br>Architecture<br>Tuscola |
|----------------------|---------------|------------|---------|-------------------------------------------------|------|---------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|-----------------------------|-------------------------------------|-----------------------------------------------|-----------------------------------|
| MCIA Wharf           | MCIA          | Red        | Awnless | 52                                              | 1.8  | 249                       | 7.7                                           | 2.8                                           | 60.0                    | 32                          | 143                                 | 181                                           | upright                           |
| MCIA White Lightning | MCIA          | White      | Awnless | 27                                              | 2.9  | 116                       | 6.3                                           | 0.5                                           | 11.7                    | 33                          | 145                                 | 181                                           | upright                           |
| Sunburst             | MCIA          | Red        | Awnless | 38                                              | 2.2  | 195                       | 5.3                                           | 1.6                                           | 31.7                    | 34                          | 141                                 | 179                                           | upright                           |
| Whitetail            | MCIA          | White      | Awnless | 55                                              | 6.5  | 90                        | 4.0                                           | 2.1                                           | 30.0                    | 37                          | 144                                 | 178                                           | lateral                           |
| MI20R0210            | MSU           | Red        | Awned   | 57                                              | --   | 229                       | 6.3                                           | 1.0                                           | 0.0                     | 33                          | 142                                 | 179                                           | lateral                           |
| MI22R057             | MSU           | Red        | Awnless | 50                                              | --   | 236                       | 1.7                                           | 6.1                                           | 65.0                    | 34                          | 139                                 | 181                                           | lateral                           |
| MI22W213             | MSU           | White      | Awnless | 40                                              | --   | 62                        | 0.0                                           | 0.6                                           | 45.0                    | 34                          | 141                                 | 179                                           | intermediate                      |
| MI609W               | MSU           | White      | Awnless | 65                                              | --   | 62                        | 3.9                                           | 3.1                                           | 0.0                     | 34                          | 140                                 | 180                                           | lateral                           |
| Synergy Kessler      | Synergy Ag    | Red        | Awned   | 22                                              | --   | 141                       | 5.7                                           | 8.5                                           | 16.7                    | 34                          | 143                                 | 181                                           | upright                           |
| Synergy EXP2578      | Synergy Ag    | Red        | Awnless | 35                                              | --   | 299                       | 7.7                                           | 0.5                                           | 0.0                     | 34                          | 143                                 | 180                                           | intermediate                      |
| Synergy Frantz       | Synergy Ag    | Red        | Awned   | 37                                              | --   | 271                       | 2.0                                           | 9.0                                           | 28.3                    | 37                          | 144                                 | 179                                           | intermediate                      |
| Synergy Wagner       | Synergy Ag    | Red        | Awnless | 32                                              | --   | 207                       | 3.0                                           | 7.1                                           | 1.7                     | 32                          | 141                                 | 181                                           | intermediate                      |
| 17VDH-SRW02-125      | Virginia Tech | Red        | Awned   | 42                                              | --   | 294                       | 0.0                                           | 7.9                                           | 73.3                    | 35                          | 146                                 | 178                                           | upright                           |
| VA20FHB-18           | Virginia Tech | Red        | Awned   | 42                                              | --   | 243                       | 2.0                                           | 0.6                                           | 45.0                    | 38                          | 139                                 | 178                                           | lateral                           |
| Mean                 |               |            |         | 39.4                                            | 2.1  |                           | 4.5                                           |                                               | 28.0                    | 35.2                        | 142.0                               | 179.0                                         |                                   |
| LSD                  |               |            |         | 20.6                                            | 2    |                           | 2.7                                           |                                               | 38.4                    | 1.5                         | 2.0                                 | 2.0                                           |                                   |
| CV                   |               |            |         | 32.4                                            | 47.8 |                           | 37.3                                          |                                               | 85.2                    | 2.6                         | 0.7                                 | 0.4                                           |                                   |

## 2024 Michigan State University Wheat Performance Trials

Table 4. Milling and baking quality.

\*\* From 2024 harvest season - will be updated when 2025 data is received

| Line                 | Company                | Seed Color | NIR Kernel Protein (at 12%) | SKCS Kernel Hardness | Adjusted Flour Yield (%) | Softness Equivalent (%) | Flour Protein (at 14%) | Lactic Acid SRC (%) | Sodium Carbonate SRC (%) | Cookie Diameter (cm) |
|----------------------|------------------------|------------|-----------------------------|----------------------|--------------------------|-------------------------|------------------------|---------------------|--------------------------|----------------------|
| AgriMAXX 505         | AgriMAXX Wheat Company | Red        | 10.2                        | 9.5                  | 65.9                     | 57.8                    | 8.4                    | 137.9               | 78.0                     | 17.7                 |
| AgriMAXX 545         | AgriMAXX Wheat Company | Red        | 9.7                         | 1.0                  | 68.1                     | 61.7                    | 7.5                    | 113.3               | 72.2                     | 18.7                 |
| AgriMAXX 556         | AgriMAXX Wheat Company | Red        | 10.2                        | 12.2                 | 68.1                     | 56.7                    | 8.5                    | 98.0                | 69.8                     | 19.0                 |
| AgriMAXX Bad Axe     | AgriMAXX Wheat Company | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| AgriMAXX Mackinaw    | AgriMAXX Wheat Company | White      | 10.4                        | 3.0                  | 68.3                     | 58.5                    | 8.3                    | 113.8               | 68.5                     | 18.4                 |
| Blue River 801       | Albert Lea             | Red        | 10.2                        | 10.2                 | 66.9                     | 58.1                    | 8.1                    | 120.1               | 74.2                     | 18.2                 |
| DF 112 R             | DF Seeds               | Red        | 9.8                         | 2.0                  | 70.5                     | 57.9                    | 8.1                    | 126.8               | 72.7                     | 18.7                 |
| DF 121 R             | DF Seeds               | Red        | 9.8                         | 13.7                 | 67.3                     | 59.2                    | 7.8                    | 105.4               | 68.4                     | 19.2                 |
| DF 131 R             | DF Seeds               | Red        | 10.3                        | 14.3                 | 68.0                     | 57.3                    | 8.2                    | 110.9               | 71.3                     | 18.7                 |
| DF 144 R             | DF Seeds               | Red        | 9.7                         | 2.4                  | 67.7                     | 60.5                    | 7.4                    | 112.3               | 71.6                     | 19.2                 |
| DF 175 R             | DF Seeds               | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| DF 195 R             | DF Seeds               | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| DF 225 W             | DF Seeds               | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| DF 271 W             | DF Seeds               | White      | 9.8                         | 3.2                  | 68.1                     | 59.1                    | 7.9                    | 111.2               | 70.3                     | 18.5                 |
| DF 284 W             | DF Seeds               | White      | 9.0                         | 1.8                  | 69.8                     | 64.0                    | 7.1                    | 98.9                | 70.3                     | 19.7                 |
| Dyna-Gro 9172        | Dyna-Gro               | Red        | 9.8                         | 9.4                  | 68.6                     | 61.3                    | 7.8                    | 111.2               | 72.3                     | 19.1                 |
| Dyna-Gro 9231        | Dyna-Gro               | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Dyna-Gro 9290        | Dyna-Gro               | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Dyna-Gro 9422        | Dyna-Gro               | Red        | 10.2                        | 12.3                 | 68.5                     | 59.5                    | 8.2                    | 99.8                | 70.8                     | 18.7                 |
| Dyna-Gro 9533        | Dyna-Gro               | Red        | 9.9                         | 8.4                  | 65.6                     | 57.9                    | 7.9                    | 123.2               | 72.4                     | 18.9                 |
| Dyna-Gro 9570        | Dyna-Gro               | Red        | 9.6                         | 5.8                  | 67.7                     | 59.5                    | 7.6                    | 92.2                | 70.8                     | 19.8                 |
| Dyna-Gro 9593        | Dyna-Gro               | Red        | 10.4                        | 16.6                 | 67.5                     | 56.3                    | 8.1                    | 87.4                | 69.9                     | 18.9                 |
| Dyna-Gro 9313W       | Dyna-Gro               | White      | 11.3                        | 12.5                 | 68.7                     | 53.7                    | 9.3                    | 87.4                | 71.3                     | 18.2                 |
| Dyna-Gro 9242W       | Dyna-Gro               | White      | 10.2                        | 16.2                 | 67.0                     | 55.9                    | 8.4                    | 99.9                | 71.4                     | 18.8                 |
| Dyna-Gro 9641W       | Dyna-Gro               | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Dyna-Gro 9663W       | Dyna-Gro               | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Dyna-Gro 9612        | Dyna-Gro               | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Dyna-Gro 9632        | Dyna-Gro               | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| FS 600               | FS InSPIRE             | Red        | 11.3                        | 12.3                 | 64.3                     | 54.8                    | 9.0                    | 120.9               | 78.8                     | 19.6                 |
| FS 606               | FS InSPIRE             | Red        | 9.9                         | 1.7                  | 67.5                     | 58.2                    | 8.0                    | 120.7               | 71.6                     | 17.9                 |
| FS 617               | FS InSPIRE             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| FS 743               | FS InSPIRE             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| FS 745               | FS InSPIRE             | Red        | 9.8                         | 9.9                  | 68.1                     | 58.8                    | 7.9                    | 105.9               | 70.6                     | 19.0                 |
| FS 749               | FS InSPIRE             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| FS WX25A             | FS InSPIRE             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| ISF 780              | Irrer Seed Farm        | Red        | 9.3                         | 7.1                  | 66.3                     | 62.3                    | 7.2                    | 113.0               | 71.3                     | 18.5                 |
| ISF 2411             | Irrer Seed Farm        | Red        | 9.9                         | 12.4                 | 66.6                     | 55.5                    | 7.8                    | 116.8               | 77.1                     | 17.9                 |
| ISF 790              | Irrer Seed Farm        | Red        | 9.8                         | 7.2                  | 69.7                     | 57.7                    | 7.7                    | 111.1               | 71.3                     | 18.8                 |
| ISF 1115             | Irrer Seed Farm        | White      | 10.5                        | 14.7                 | 66.8                     | 55.0                    | 8.5                    | 94.7                | 72.0                     | 18.2                 |
| KWS579               | KWS Cereals USA        | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS591               | KWS Cereals USA        | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS604               | KWS Cereals USA        | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS623               | KWS Cereals USA        | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS625               | KWS Cereals USA        | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS630               | KWS Cereals USA        | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS631               | KWS Cereals USA        | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS632               | KWS Cereals USA        | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| KWS635               | KWS Cereals USA        | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Jupiter              | MCIA                   | White      | 10.3                        | 15.5                 | 68.6                     | 55.0                    | 8.3                    | 101.3               | 71.7                     | 18.9                 |
| MCIA .357            | MCIA                   | Red        | 10.7                        | 15.4                 | 68.2                     | 54.0                    | 8.2                    | 91.3                | 67.9                     | 18.9                 |
| MCIA Redfin          | MCIA                   | Red        | 10.0                        | 45.9                 | 71.2                     | 44.5                    | 8.7                    | 73.1                | 83.7                     | 16.4                 |
| MCIA Thunder         | MCIA                   | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| MCIA Barracuda       | MCIA                   | Red        | 10.2                        | 14.6                 | 70.0                     | 54.6                    | 8.6                    | 96.1                | 65.6                     | 19.1                 |
| MCIA Flipper         | MCIA                   | Red        | 9.8                         | 6.9                  | 70.1                     | 59.5                    | 7.6                    | 93.5                | 70.3                     | 18.9                 |
| MCIA Jonah           | MCIA                   | Red        | 9.8                         | 3.9                  | 69.7                     | 60.6                    | 7.8                    | 112.2               | 69.5                     | 19.4                 |
| MCIA Marlin          | MCIA                   | Red        | 9.4                         | 8.7                  | 69.9                     | 57.3                    | 7.5                    | 105.2               | 70.3                     | 19.2                 |
| MCIA Wharf           | MCIA                   | Red        | 10.9                        | -0.5                 | 66.1                     | 54.2                    | 8.3                    | 101.2               | 68.8                     | 19.3                 |
| MCIA White Lightning | MCIA                   | White      | 10.0                        | 13.6                 | 68.4                     | 58.2                    | 8.0                    | 81.1                | 73.3                     | 19.3                 |
| Sunburst             | MCIA                   | Red        | 10.8                        | 34.2                 | 63.0                     | 51.6                    | 9.4                    | 113.9               | 79.8                     | 17.1                 |
| Whitetail            | MCIA                   | White      | 10.4                        | 6.7                  | 67.8                     | 57.0                    | 8.4                    | 106.4               | 70.8                     | 18.9                 |
| MI20R0210            | MSU                    | Red        | 10.2                        | 7.1                  | 69.0                     | 56.7                    | 7.9                    | 85.0                | 71.2                     | 18.6                 |
| MI22R057             | MSU                    | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| MI22W213             | MSU                    | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| MI609W               | MSU                    | White      | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Synergy Kessler      | Synergy Ag             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Synergy EXP2578      | Synergy Ag             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Synergy Frantz       | Synergy Ag             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| Synergy Wagner       | Synergy Ag             | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| 17VDH-SRW02-125      | Virginia Tech          | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |
| VA20FHB-18           | Virginia Tech          | Red        | --                          | --                   | --                       | --                      | --                     | --                  | --                       | --                   |

## **Organizations Participating in the 2025 Michigan State University Wheat Performance Trials**

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Phone: 855-629-9432

Albert Lea Seed  
1414 W. Main  
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Albert Lea, MN 56007  
Phone: 800-352-5247

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

Dyna-Gro Seed  
4648 S Garfield Rd  
Auburn, MI 48611  
Phone: 989-662-0000

GROWMARK, Inc  
1701 Towanda Ave  
Bloomington, IL 61701  
Phone: 815-383-4395

Irrer Seed Farm  
9621 Dexter Trail  
Fowler, MI 48835  
Phone: 517-719-5710

KWS Cereals  
4101 Colleen Drive  
Champaign, IL 61822  
Phone: 330-439-3341

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Association  
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Okemos, MI 48864  
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Synergy Ag  
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