Setting The Bar for Next Harvest Through Variety Selection

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There are several factors that should be considered when selecting varieties of wheat to plant on your farm. You should consider options that help to spread risk and look at data from multiple sources and multiple years. Review the data in the MSU Wheat Performance Report at (http://www.varietytrials.msu.edu/wheat).

Evaluate yield data for test plot locations closed to where you will plant. Varieties perform differently across the state. Plant more than one variety; selecting early and late maturities will spread the risk from weather- and disease-related issues.

1. **Yield.** Yield is the number-one trait to consider when selecting varieties for 2023. This is where you set the bar. After this, weather, planting date, disease, etc., will lower the bar for you. Set your bar as high as you can and eliminate as many things that can lower the bar as you can.

2. **Fusarium Head Blight resistance.** FHB is the largest profit-robbing disease in Michigan wheat. Available varieties have a wide range of susceptibility to FHB. If you don't want to use fungicides, make sure you select the most FHB-resistant varieties you can find. Remember, there are susceptible varieties that yield very well with fungicide application. So carefully select varieties with FHB traits that are consistent with your management goals.

3. **Standability.** This becomes particularly important at harvest. Lodged wheat reduces yield and increases harvesting fatigue. If you apply manure and/or higher rates of nitrogen, consider selecting shorter varieties. In extreme cases, plant growth regulators can be used to shorten internode length and strengthen straw stems.

4. **Seed size/weight.** These seed properties can affect emergence. Select seed that has a minimum of 57 test weight to make sure the quality of the seed will allow it to germinate and emerge as quickly and evenly as possible. Uneven stands lead to uneven yields and difficulties timing fungicide application at flowering for head scab.

5. **Disease resistance.** As with FHB above, resistance to other diseases is important to consider because pathogens lower the bar for yield potential. While most diseases can be managed with seed treatments and fungicides, the cost may be higher. Powdery mildew, Septoria and the rusts are the most common diseases in MI wheat fields.

6. **Early vs. late wheat varieties.** Selecting varieties that flower early and late will spread out both your harvest window and your risk for diseases and weather-related damage.

7. **Response to management.** Another important area to consider: Not all varieties respond equally to the same management strategies. Table 4 in the MSU Wheat Performance Report shows how the varieties respond at two locations to and addition 30 lbs. of nitrogen plus two fungicide applications (high management). If you are more conservative in management, select varieties based on performance in the conventional trials.

If you plant bin-run seed, you are encouraged to get it cleaned and treated prior to planting. Also, consider purchasing 1/3 of your seed as certified to rotate through your farm so that you are never planting seed more than two years from certified. The **best option** is to plant certified seed every year.