

Selecting Wheat Varieties Is Important Decision For Kentucky Producers

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Selection of wheat varieties is one of the most critical management decisions Kentucky wheat producers will make this fall. Yield potential is essential, but growers need to pay attention to other factors like disease resistance, adaptation to Kentucky's extreme year to year climatic variation, and the need to vary harvest maturity so that every variety is not ready to combine at once. Wheat growers can minimize their risks by planting several varieties with good yield potential & test weight that complement one another for disease resistance, maturity, and susceptibility to spring freeze damage. To minimize the potential for spring freeze damage, the first variety planted in the fall should be the one that breaks dormancy last in the spring, and the variety that breaks dormancy earliest should be the last to be planted.

The UK wheat variety performance data is available online in mid-July at <http://www.uky.edu/Ag/wheatvarietytest/>. How should a grower use UK's variety performance data in choosing wheat varieties? While the decision will never be simple, it can be made easier by following several principles which we often cite in these newsletter articles, at meetings and field days.

Multi-year / Multi-location Data

Many growers ask about the variety that looked best in this year's test. However, it is more useful to know which varieties have performed well under different conditions. When comparing yields from the variety performance report, it is important to note that the yield of a variety is relative and should only be compared with yields of other varieties in the same test or within the same year across locations. The overall state summary provides performance data across test locations/years. It provides the best estimate of varietal performance, particularly the 2 and 3 year averages. When selecting varieties, growers should utilize data from the overall state summary, as well as their regional test and determine which varieties performed well both in their regional test, as well as across all test locations/years. After identifying a group of varieties with high yield potential, varietal selection can be based on secondary characteristics such as head scab resistance, test weight, maturity, height, or straw yield potential.

To emphasize the importance of Kentucky's year to year environmental variability, the grower should recall the following: 2008 – timely planting conditions, wet cool spring, little disease pressure, cool temperatures during grain fill, favorable harvest weather and excellent

yields; 2007 – wet fall delayed planting, record high temperatures in March followed by record lows in April resulted in severe freeze damage, hot dry weather during grain fill; 2006 – drought-like conditions throughout planting period affected emergence, hard freeze in late February caused some lodging due to freeze-weakened stems, ideal conditions during grain fill, record yields. Wheat varieties that performed well under these conditions are more likely to perform well again. For growers who want to try a new variety, do not use a variety that has not been evaluated. If a variety has been tested for one year only, use the overall state summary table; we do not recommend using single year data from a single (regional) test. Depending on a grower's location, additional variety performance data may be available from other (bordering) state variety testing programs. The UK Small Grain Variety Testing Program website has links to other state variety testing programs at <http://www.uky.edu/Ag/wheatvarietytest/>.

Sources of Information

In addition to the UK Variety Performance Report, growers should investigate other sources of information. It is very difficult to adequately sample all of the micro-environments in our state in the variety testing program. If your neighbor, who has similar soil types and a similar management style has had good success in growing a certain variety, you may want to try it on a small part of your acreage. Seed companies, consultants and agribusiness dealers have trials around the state; see if you can get a copy of their data. It may be useful to access data from other state variety testing programs to determine how widely adapted a variety is. The ultimate decision is yours, and you must evaluate the information, testing conditions, and the source of the data.

Economic Analysis

Farmers are always interested in high yields, but the highest yielding variety may not always be the most profitable. One needs to consider other economic factors such as disease susceptibility (may require fungicides), lodging (costs more to harvest), late maturity (delays soybean planting), potential straw yield as a secondary commodity and lo test weight (discounts at the elevator). All of these factors require study to determine the most profitable varieties for your operation. The search for maximum productivity and profitability begins with variety selection.

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