

## News Column

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August 23, 2019

### **Make an informed decision when selecting the best wheat variety**

In recent years, wheat producers are faced with an increasing number of varieties from which to choose. One of the reasons behind having so many available varieties is that many public and private institutions are breeding wheat varieties in the Great Plains: Colorado State University, Kansas State University, Oklahoma State University, Texas A&M University, University of Nebraska, AgriPro/Syngenta, Limagrain, and WestBred/Monsanto. Additionally, several companies license varieties from existing breeding programs, such as AGSECO, Dyna-Gro, AgriMaxx among others.

Producers can use different tools and publications to study each variety's strengths and weaknesses, selecting varieties that best match their needs.

#### **Making a better decision: Steps to select a wheat variety**

The following information provides a step-by-step guideline, as well as relevant resources, to help producers make a better decision when selecting one or a few varieties to plant in their operation.

- 1. Select several varieties that are adapted to your region of the state.**

Regardless whether you intend to plant one variety or several on your farm, it is important to start out with a list of several good candidate varieties. The final product of interest is grain yield and therefore, it is crucial to select varieties that have shown consistent performance and excellent yield record in the region. Varieties that worked well for you and your neighbors in the past should be considered, but also make sure and check yield results from nearby K-State (and other universities') variety performance tests and demonstration plots. It is important to take into consideration the conditions experienced during the year in question. For instance, results from central Kansas during 2019 season were extremely variable due to excessive rainfall at several locations. Thus, when looking at these results it is very important that results from more than a single year, and possibly more than a single nearby location, are taken into consideration.

A few good resources to consult are:

- a. [K-State variety performance test](#): Start searching by year, narrow down your search by region and finally by site. Choose the site(s) nearest to you and look for varieties that are consistently toward the top. Repeat the procedure for different years to check the consistency of the variety performance. Go to our web site [www.cottonwood.ksu.edu](http://www.cottonwood.ksu.edu) to access the K-State wheat variety performance test results.

- b. [Colorado Wheat Variety Database](#): This database encompasses replicated trial results from Colorado, Kansas, Oklahoma, and several other public state trials, so producers throughout the Plains can benefit. It is an excellent, easy-to-use resource that allows you to dig into data from single location, multiple locations, multiple years, and also allows for head-to-head variety comparisons. We suggest that users start by looking at “Single Location Trial Data”, selecting the location nearest to you, and repeating this step for several years of data for that location. Check for varieties that tend to be consistently toward the top. Afterwards, look at “Multiple Location Trial Data,” which will allow you to look at yields spanning a wider geographical region instead of a single location for one, two, three, or four years combined. Depending on region and number of years selected, you might be looking at more than 15 replicated trials combined. Thus, if a given variety remains a top yielding variety across all these replicated trials, it is a pretty good argument that you should at least look at that variety’s characteristics and consider it in your farming operation. Finally, after selecting a few potential candidates based on their performance, we suggest that users click on “Head-to-head comparisons”, so they can test whether those candidates performed statistically different over a wide range of environments. That web address is [www.ramwheatdb.com/](http://www.ramwheatdb.com/)

### **Additional Resources**

A few great resources to help you walk through each variety’s characteristics as far as maturity, disease ratings, drought, straw strength, winterhardiness, and other agronomic characteristics are:

- a. [K-State Wheat Variety Disease and Insect Ratings 2019](#): This comprehensive guide to wheat varieties will allow you to compare different varieties in their agronomic and disease resistance characteristics in detail. Many varieties are individually described, others are shown in a table format which allows for easy and fast comparison. It is available on our web site [www.cottonwood.ksu.edu](http://www.cottonwood.ksu.edu)
- b. [Wheat Varieties for Kansas and the Great Plains by Layton Ehmke](#): This private-sector book is also an excellent, comprehensive source of information regarding different varieties and their characteristics. It provides detailed ranking of varieties by traits of interest, making it easy to use. It also has a good summary of several variety performance tests in the Great Plains. While not available online, producers can purchase it at <https://thewheatfarmer.com/>

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