

# Wheat Update 2014

## ARKANSAS WHEAT PERFORMANCE TRIALS AND VARIETY SELECTION

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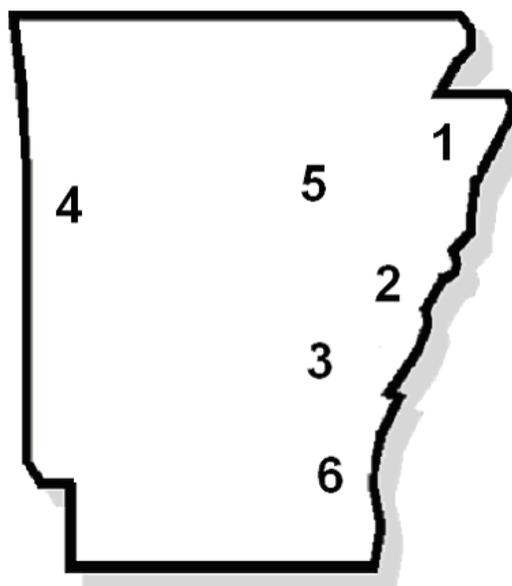
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Wheat performance trials were conducted during the 2013-2014 growing season by the Arkansas Wheat Variety Testing Program under the direction of Dr. Esten Mason to provide information about yield potential, agronomic characteristics, and disease reaction of commercially available varieties of wheat. Variety selection is important for successful wheat production. This publication is a summary of the Arkansas Wheat Variety Testing Program results and is designed to help producers select adapted, high-yielding, and disease-resistant varieties.



**FIGURE 1. LOCATIONS OF ARKANSAS WHEAT PERFORMANCE TESTS, 2013-14**

- 1 – Northeast Research and Extension Center, Keiser – Sharkey Silty Clay
- 2 – Lon Mann Cotton Research Station, Marianna – Loring Silt Loam
- 3 – Rice Research and Extension Center, Stuttgart – Crowley Silt Loam
- 4 – Vegetable Substation, Kibler – Roxanna Silt Loam
- 5 – Newport Station – Beulah Fine Sandy Loam
- 6 – Southeast Branch Station, Rohwer – Herbert Silt Loam

### Methods

Wheat varieties and experimental lines were entered by seed companies and public institutions and evaluated for an unbiased comparison of their performance. In general, recommended cultural practices for wheat production in Arkansas were used. All locations were planted between October 10<sup>th</sup> and November 13<sup>th</sup> into conventionally tilled seedbeds using small plot planters.

Each trial consisted of 96 varieties and experimental lines replicated four times in a randomized complete block design. A seeding rate of 105 lb/A was used for all varieties at each location, with the exception Keiser which was 82 lb/A. Recommended weed control practices were used as needed. Plots were harvested with a small plot combine to determine yields, which were adjusted to 13 percent moisture.

For further details concerning methods, consult the *Small-Grain Cultivar Performance Tests 2013-14*, Arkansas Agricultural Experiment Station, located at [www.arkansasvarietytesting.com](http://www.arkansasvarietytesting.com).

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Wheat yields from the 2013-14 growing season are reported in Table 1 and two-year average yields are reported in Table 2. Three-year average yields, when available are reported in Table 3. Disease reactions of many commercially available varieties are listed in Table 4. Some varieties have not been tested in Arkansas long enough to obtain reliable ratings for each disease. Agronomic data such as test weight, plant height, lodging, heading date, and relative maturity for selected varieties tested in 2013-2014 are found in Table 5.

## Variety Selection

Variety selection is an important management decision in wheat production. The variety selected influences other management input that may be necessary during the season. Wheat yields are influenced by the adaptation of the variety and how well that variety is managed to maximize its yield potential. Yield potential, maturity, test weight, and disease reaction are important factors in selecting a variety. No variety is superior to all other varieties under all circumstances. Thus, growing two or more varieties with differing maturity is recommended. Growing two or more varieties not only spreads the risks from adverse environmental factors but also can spread management operations such as harvesting.

The performance of a variety differs according to test location and year. While the yield data from all locations may be helpful, the data from locations closest to your farm may be the most meaningful. Since some varieties are more adapted to certain soil types, studying the yields at the location with a soil type similar to yours is suggested. Each year, the relative performance of varieties at a location changes depending on the weather and disease conditions during the year. Since the goal of variety selection is to pick the variety that performs well the next year, a yield averaged across years more likely predicts future performance than the yield from a single season. Therefore, looking at two and three-year average yields rather than yield from any particular season is important. (See Tables 2 and 3).

## Variety Adaptation

Adaptation is a combination of all of the attributes of a variety grown in a particular environment. The long-term average yield at a site is a good indication of its adaptation in that area. When studying yield data to determine if a variety is adapted, take into account whether your location is farther north or south than the test site.

## Maturity

**Variety maturity is a very important factor to consider when selecting varieties. Producers should select several different varieties with differing maturity to reduce risks for a late spring freeze.**

Early maturing varieties typically should not be planted early in the planting season. These varieties do not have much of a vernalization requirement and can begin jointing very early in the spring, which increases the likelihood of freeze injury from a late spring freeze. Late maturity varieties require a greater vernalization period and generally do not begin to joint as quickly as early maturing varieties. An ideal planting order by maturity would be to plant late maturity varieties first, medium maturity varieties second and early maturing varieties last. Planting varieties with differing maturity may help spread out harvest operations so that wheat can be harvested when ready.

## Test Weight

Test weight of a variety is an important consideration. Many producers experienced low test weight wheat in 2014 as a result of delayed harvest due to rainfall after maturity. Harvesting wheat timely is important for high test weight wheat. Some varieties have characteristically higher test weights than others. Thus, when environmental conditions cause poor test weights, varieties with high test weight potential usually have heavier test weights than other varieties.

## Insect Resistance

**Hessian fly** has been a problem in scattered fields in central and northeast Arkansas in previous years. There are several biotypes of Hessian fly, but the predominant biotype of the Hessian fly present in Arkansas is Biotype 'L'. **Delayed planting** is a recommended practice for avoiding Hessian fly problems. Contact your county Extension office for further management information regarding Hessian fly management.

## Lodging Resistance

Lodging resistance is important to prevent yield losses and to allow for efficient harvest. Three factors are important in lodging – plant height, straw strength, and level of fertility. Typically, shorter varieties are more resistant to lodging, but strength of the straw allows many taller varieties to stand well. Lodging tends to be more severe at high nitrogen levels. Varieties with low lodging scores and high yields are preferred. Lodging ratings are shown in Table 5.

**Table 1. Summary of Arkansas Wheat Performance Trials at Six Locations in 2013-2014.**

|                           | Keiser                                 | Kibler | Marianna | Newport | Rohwer | Stuttgart | Delta Avg.* |
|---------------------------|--|--------|----------|---------|--------|-----------|-------------|
| <b>Variety/Brand Name</b> | -----Standard Input Yield (bu/a) ----- |        |          |         |        |           |             |
| AgriMAXX 413              | 65.7                                   | 92.9   | 95.0     | 81.7    | 97.5   | 77.9      | 84.3        |
| AgriMAXX 415              | 73.8                                   | 87.5   | 96.0     | 80.5    | 95.1   | 75.8      | 84.2        |
| AgriMAXX 447              | 55.4                                   | 92.4   | 102.0    | 89.5    | 91.0   | 89.1      | 85.4        |
| AGS 2035                  | 48.8                                   | 99.6   | 96.0     | 83.7    | 91.3   | 43.8      | 72.7        |
| AGS 2038                  | 46.7                                   | 84.6   | 93.0     | 58.5    | 93.9   | 56.2      | 69.7        |
| AGS 2040                  | 44.6                                   | 84.4   | 87.0     | 76.2    | 91.4   | 49.0      | 69.6        |
| AGS 2056                  | 56.7                                   | 101.6  | 98.0     | 92.5    | 96.3   | 80.2      | 84.7        |
| AGS 2057                  | 66.5                                   | 92.0   | 104.0    | 91.7    | 91.2   | 82.2      | 87.1        |
| Armor Havoc               | 57.8                                   | 95.9   | 99.0     | 85.7    | 98.4   | 76.9      | 83.6        |
| Armor Octane              | 66.8                                   | 96.4   | 97.0     | 84.9    | 93.3   | 94.1      | 87.2        |
| Armor Vandal              | 70.2                                   | 90.8   | 103.0    | 90.2    | 99.1   | 76.0      | 87.7        |
| Delta Grow 2100           | 54.1                                   | 89.3   | 83.0     | 65.3    | 93.8   | 67.2      | 72.7        |
| Delta Grow 3200           | 63.7                                   | 91.0   | 101.0    | 95.6    | 96.2   | 62.7      | 83.8        |
| Delta Grow 7100           | 62.1                                   | 90.4   | 92.0     | 75.1    | 92.5   | 65.0      | 77.3        |
| Delta Grow 7200           | 76.4                                   | 92.6   | 104.0    | 80.8    | 96.7   | 74.6      | 86.5        |
| Delta Grow 7500           | 65.9                                   | 93.1   | 95.0     | 78.1    | 96.2   | 77.0      | 82.4        |
| Delta Grow 9700           | 71.6                                   | 100.6  | 102.0    | 81.6    | 94.1   | 74.4      | 84.7        |
| Dixie Bell 412            | 60.8                                   | 83.6   | 83.0     | 70.5    | 93.0   | 62.7      | 74.0        |
| Dixie Bell 620            | 66.6                                   | 96.5   | 100.0    | 94.4    | 95.2   | 77.8      | 86.8        |
| Dixie Bell 7880           | 57.2                                   | 89.2   | 98.0     | 86.1    | 96.4   | 80.6      | 83.7        |
| Dixie Bell 8980           | 53.6                                   | 89.4   | 97.0     | 73.9    | 96.6   | 72.9      | 78.8        |
| Dixie Xtreme              | 64.5                                   | 99.1   | 97.0     | 91.9    | 95.3   | 80.4      | 85.8        |
| Dixie Glory               | 39.0                                   | 86.7   | 88.0     | 82.0    | 91.6   | 69.7      | 74.1        |
| Dixie McAlister           | 71.1                                   | 98.4   | 99.0     | 82.1    | 96.0   | 80.1      | 85.7        |
| Dyna-Gro 9012             | 69.6                                   | 94.3   | 101.0    | 84.0    | 89.1   | 77.4      | 84.2        |
| Dyna-Gro 9171             | 76.0                                   | 96.5   | 99.0     | 84.0    | 98.1   | 85.6      | 88.5        |
| Dyna-Gro 9223             | 70.8                                   | 100.6  | 100.0    | 95.8    | 96.5   | 76.5      | 87.9        |
| Dyna-Gro 9373             | 68.4                                   | 95.5   | 92.0     | 78.1    | 88.6   | 79.3      | 81.3        |
| Dyna-Gro Yorktown         | 53.9                                   | 92.5   | 91.0     | 87.1    | 94.7   | 51.0      | 75.5        |
| Jamestown                 | 60.5                                   | 80.4   | 83.0     | 61.4    | 95.3   | 49.5      | 69.9        |
| LCS L-Brand343            | 47.2                                   | 91.7   | 81.0     | 72.7    | 88.4   | 45.3      | 66.9        |
| LCS L-Brand448            | 52.3                                   | 90.6   | 91.0     | 78.1    | 94.8   | 71.6      | 77.6        |
| Pembroke 2008             | 54.2                                   | 88.5   | 89.0     | 77.5    | 92.2   | 70.3      | 76.6        |
| Pioneer 26R20             | 68.0                                   | 85.3   | 91.0     | 65.2    | 96.1   | 80.3      | 80.1        |
| Pioneer 26R10             | 65.6                                   | 95.8   | 95.0     | 83.9    | 94.4   | 81.6      | 84.1        |
| Pioneer 26R41             | 65.5                                   | 102.3  | 99.0     | 93.5    | 101.0  | 79.8      | 87.8        |
| Pioneer 26R53             | 62.4                                   | 90.4   | 95.0     | 89.9    | 98.7   | 73.5      | 83.9        |
| Pioneer 26R87             | 48.1                                   | 92.8   | 95.0     | 82.4    | 93.9   | 50.7      | 74.0        |
| Progeny 117               | 58.0                                   | 89.7   | 86.0     | 63.6    | 92.6   | 65.0      | 73.0        |
| Progeny 125               | 55.8                                   | 97.8   | 93.0     | 88.1    | 96.4   | 66.8      | 80.0        |
| Progeny 185               | 60.0                                   | 90.7   | 93.0     | 77.7    | 94.0   | 75.3      | 80.0        |
| Progeny 357               | 75.7                                   | 82.8   | 87.0     | 63.4    | 94.5   | 79.3      | 80.0        |
| Progeny 870               | 74.2                                   | 95.4   | 105.0    | 82.4    | 98.6   | 83.7      | 88.8        |
| Syngenta Oakes            | 66.8                                   | 82.3   | 90.0     | 77.1    | 93.7   | 68.4      | 79.2        |
| Syngenta SY Cypress       | 58.1                                   | 91.2   | 91.0     | 69.5    | 92.1   | 54.8      | 73.1        |

**Table 1. Continued. Summary of Arkansas Wheat Performance Trials at Six Locations in 2013-2014.**

|   | Keiser                                | Kibler | Marianna | Newport | Rohwer | Stuttgart | Delta Avg.* |
|---|---------------------------------------|--------|----------|---------|--------|-----------|-------------|
| <b>Variety/Brand Name</b>                               | -----Standard Input Yield (bu/a)----- |        |          |         |        |           |             |
| Syngenta SY Harrison                                    | 66.6                                  | 102.5  | 101.0    | 83.6    | 95.7   | 79.3      | 85.2        |
| Terral LA 754   | 48.7                                  | 88.6   | 93.0     | 84.9    | 89.6   | 54.1      | 74.1        |
| Terral LA 841   | 46.6                                  | 82.4   | 82.0     | 66.9    | 90.9   | 56.5      | 68.6        |
| Terral TV 8525  | 75.0                                  | 94.5   | 94.0     | 73.0    | 94.9   | 79.7      | 83.3        |
| Terral TV 8535  | 67.3                                  | 95.0   | 102.0    | 79.3    | 97.8   | 84.8      | 86.2        |
| Terral TV 8848  | 71.6                                  | 94.4   | 105.0    | 77.8    | 97.6   | 92.1      | 88.8        |
| Terral TV 8861  | 60.8                                  | 94.7   | 101.0    | 95.5    | 96.8   | 76.3      | 86.1        |
| USG 3013  | 77.9                                  | 95.8   | 98.0     | 88.2    | 95.6   | 83.1      | 88.6        |
| USG 3024  | 57.4                                  | 81.9   | 88.0     | 64.2    | 91.3   | 50.8      | 70.3        |
| USG 3201  | 73.9                                  | 91.9   | 91.0     | 80.3    | 98.8   | 86.1      | 86.0        |
| USG 3251  | 60.5                                  | 93.9   | 95.0     | 76.6    | 91.8   | 85.8      | 81.9        |
| USG 3404  | 61.4                                  | 96.7   | 103.0    | 92.8    | 98.1   | 88.1      | 88.7        |
| USG 3438  | 69.9                                  | 96.4   | 104.0    | 80.4    | 97.1   | 80.4      | 86.4        |
| USG 3523  | 73.2                                  | 91.6   | 90.0     | 84.0    | 94.6   | 80.9      | 84.5        |
| USG 3833  | 57.3                                  | 98.2   | 103.0    | 80.5    | 93.1   | 87.9      | 84.4        |
| USG 3993  | 54.1                                  | 86.5   | 95.0     | 72.2    | 90.6   | 87.0      | 79.8        |
| -----Experimental Lines Not Commercially Available----- |                                       |        |          |         |        |           |             |
| AgriMAXX Exp 1444                                       | 76.3                                  | 104.8  | 104.0    | 90.8    | 97.5   | 90.1      | 91.7        |
| AgriMAXX Exp 1465                                       | 65.6                                  | 96.2   | 100.0    | 81.5    | 93.3   | 86.2      | 85.3        |
| ARGA04510-11LE24  | 64.5                                  | 89.4   | 97.0     | 66.5    | 95.7   | 77.2      | 80.2        |
| AR04008-5   | 58.8                                  | 86.3   | 95.0     | 69.0    | 94.3   | 73.6      | 78.1        |
| Armor ARX1313   | 55.1                                  | 102.2  | 103.0    | 86.3    | 95.3   | 75.3      | 83.0        |
| Armor ARX1325   | 73.7                                  | 98.9   | 95.0     | 83.8    | 95.8   | 88.1      | 87.3        |
| Armor ARX1327   | 69.1                                  | 97.0   | 96.0     | 89.7    | 96.3   | 84.7      | 87.2        |
| Armor ARX1329   | 66.4                                  | 95.5   | 93.0     | 74.8    | 94.9   | 80.0      | 81.8        |
| Armor ARX1332   | 61.3                                  | 93.8   | 95.0     | 84.4    | 98.1   | 68.6      | 81.5        |
| Armor ARX1336   | 68.5                                  | 98.8   | 99.0     | 86.3    | 91.8   | 63.8      | 81.9        |
| Armor ARX1339   | 77.9                                  | 97.8   | 103.0    | 79.7    | 96.6   | 60.7      | 83.6        |
| AR00343-5-1   | 71.0                                  | 91.7   | 101.0    | 83.0    | 94.6   | 70.2      | 84.0        |
| AR01040-4-1   | 58.4                                  | 86.4   | 102.0    | 87.4    | 96.9   | 70.0      | 82.9        |
| AR01044-1-1   | 51.0                                  | 91.9   | 93.0     | 73.9    | 94.4   | 64.3      | 75.3        |
| Delta Grow 720X   | 68.9                                  | 93.1   | 98.0     | 82.9    | 98.2   | 86.9      | 87.0        |
| Dixie DXEX 13-3   | 70.9                                  | 95.0   | 88.0     | 82.0    | 94.1   | 69.8      | 81.0        |
| Dixie DXEX 14-2   | 42.9                                  | 95.5   | 91.0     | 80.3    | 93.1   | 67.9      | 75.0        |
| Dyna-Gro WX13622  | 62.5                                  | 92.7   | 105.0    | 82.5    | 91.0   | 88.7      | 85.9        |
| GA-041052-11E51   | 57.6                                  | 93.5   | 97.0     | 82.6    | 93.1   | 47.6      | 75.6        |
| GA-041293-11E54   | 45.9                                  | 94.9   | 101.0    | 67.3    | 94.8   | 60.0      | 73.8        |
| GA-041293-11E37   | 65.1                                  | 98.9   | 100.0    | 66.5    | 92.7   | 60.1      | 76.9        |
| GA-04434-11E44  | 55.6                                  | 88.6   | 104.0    | 64.8    | 92.9   | 43.7      | 72.2        |
| LA03200E-2  | 56.8                                  | 96.7   | 96.0     | 83.9    | 95.0   | 64.4      | 79.2        |
| LA03200E-23   | 49.9                                  | 92.8   | 96.0     | 76.7    | 97.2   | 64.8      | 76.9        |
| LA05032D-136  | 59.4                                  | 74.8   | 91.0     | 67.4    | 91.0   | 48.0      | 71.4        |
| LA05130D-P5   | 68.4                                  | 86.5   | 90.0     | 76.9    | 92.7   | 65.9      | 78.8        |
| NC09-22402  | 53.0                                  | 90.6   | 99.0     | 78.2    | 94.8   | 60.3      | 77.1        |
| Progeny PGX 13-1  | 54.6                                  | 94.0   | 96.0     | 74.7    | 89.0   | 82.9      | 79.4        |

| <b>Table 1. Continued. Summary of Arkansas Wheat Performance Trials at Six Locations in 2013-2014.</b> |  |               |                 |                |               |                  |                    |
|--|--|---------------|-----------------|----------------|---------------|------------------|--------------------|
|  | <b>Keiser</b>                          | <b>Kibler</b> | <b>Marianna</b> | <b>Newport</b> | <b>Rohwer</b> | <b>Stuttgart</b> | <b>Delta Avg.*</b> |
| <b>Variety/Brand Name</b>  | -----Standard Input Yield (bu/a) ----- |               |                 |                |               |                  |                    |
| Progeny PGX 13-2   | 48.0                                   | 104.0         | 98.0            | 87.2           | 95.1          | 70.1             | 79.7               |
| Progeny PGX 13-4   | 55.0                                   | 81.5          | 94.0            | 65.5           | 93.2          | 74.3             | 76.4               |
| Progeny PGX 13-6   | 70.3                                   | 98.5          | 99.0            | 91.7           | 91.9          | 91.7             | 88.9               |
| Syngenta SX102   | 55.4                                   | 99.6          | 102.0           | 84.0           | 93.9          | 62.3             | 79.5               |
| Syngenta SX103   | 56.9                                   | 103.1         | 103.0           | 85.4           | 92.3          | 63.6             | 80.2               |
| TXGA04417-11E21  | 58.7                                   | 94.5          | 102.0           | 73.4           | 93.3          | 57.9             | 77.1               |
| <b>Mean</b>  | 61.6                                   | 92.9          | 96.0            | 79.9           | 94.5          | 72.1             | 80.9               |
| <b>LSD (0.05)</b>  | 17.4                                   | 11.1          | 15.0            | 15.8           | 8.0           | 14.1             | ---                |

\*Delta average is calculated from Keiser, Marianna, Newport, Rohwer, and Stuttgart locations

**Table 2. Two-Year Average Wheat Yields (Bu/a) in Arkansas Wheat Performance Trials at Six Locations.**

| Variety/Brand Name   | Keiser | Kibler | Marianna | Newport | Rohwer | Stuttgart | Delta Avg.* |
|----------------------|--------|--------|----------|---------|--------|-----------|-------------|
| AgriMAXX 413         | 77.5   | 88.7   | 90.9     | 79.6    | 97.0   | 77.1      | 84.4        |
| AgriMAXX 415         | 83.7   | 84.1   | 87.5     | 79.8    | 94.0   | 77.2      | 84.4        |
| AgriMAXX 447         | 67.4   | 81.0   | 94.1     | 78.1    | 87.1   | 84.6      | 82.2        |
| AGS 2035             | 65.9   | 86.7   | 90.0     | 74.0    | 65.0   | 49.5      | 68.9        |
| AGS 2038             | 65.1   | 78.2   | 89.7     | 67.9    | 79.4   | 61.6      | 72.7        |
| AGS 2040             | 60.7   | 71.3   | 86.3     | 73.3    | 59.0   | 53.0      | 66.4        |
| AGS 2056             | 68.9   | 89.7   | 89.8     | 78.2    | 89.3   | 71.7      | 79.6        |
| Armor Havoc          | 77.6   | 90.4   | 92.2     | 78.9    | 94.3   | 77.6      | 84.1        |
| Armor Octane         | 73.5   | 84.0   | 93.4     | 71.5    | 89.6   | 85.8      | 82.8        |
| Armor Vandal         | 81.5   | 84.7   | 95.9     | 84.7    | 95.6   | 71.2      | 85.8        |
| Delta Grow 7200      | 80.3   | 82.0   | 90.6     | 76.3    | 94.2   | 72.5      | 82.8        |
| Delta Grow 7500      | 78.7   | 81.2   | 86.4     | 72.4    | 93.7   | 72.1      | 80.6        |
| Delta Grow 9700      | 80.6   | 81.8   | 95.9     | 71.2    | 86.9   | 69.6      | 80.8        |
| Dixie Bell 412       | 73.4   | 74.8   | 81.5     | 67.7    | 92.8   | 69.3      | 76.9        |
| Dixie Bell 620       | 80.7   | 81.9   | 92.4     | 81.9    | 94.0   | 78.6      | 85.5        |
| Dixie Bell 7880      | 72.2   | 86.2   | 92.0     | 75.2    | 83.4   | 79.9      | 80.5        |
| Dixie Xtreme         | 80.0   | 86.8   | 91.3     | 82.0    | 91.8   | 78.2      | 84.7        |
| Dixie McAlister      | 81.0   | 94.0   | 92.7     | 79.0    | 92.7   | 76.5      | 84.4        |
| Dixie DXEX 13-3      | 83.7   | 82.7   | 88.3     | 76.4    | 90.4   | 73.7      | 82.5        |
| Dyna-Gro 9012        | 80.8   | 91.0   | 92.5     | 78.3    | 89.8   | 78.3      | 83.9        |
| Dyna-Gro 9171        | 82.0   | 93.4   | 90.9     | 76.9    | 89.2   | 81.8      | 84.2        |
| Dyna-Gro 9223        | 73.9   | 87.9   | 94.1     | 79.7    | 89.6   | 74.1      | 82.3        |
| Dyna-Gro Yorktown    | 65.6   | 84.3   | 84.5     | 77.4    | 69.5   | 62.3      | 71.9        |
| Jamestown            | 75.0   | 73.6   | 75.3     | 65.2    | 69.6   | 55.2      | 68.0        |
| LCS L-Brand343       | 69.6   | 80.5   | 75.2     | 74.2    | 81.0   | 52.5      | 70.5        |
| Pioneer 26R20        | 75.6   | 75.3   | 87.1     | 65.9    | 89.8   | 72.3      | 78.1        |
| Pioneer 26R10        | 77.9   | 84.8   | 90.1     | 73.1    | 90.9   | 75.9      | 81.6        |
| Pioneer 26R41        | 79.1   | 85.3   | 92.6     | 81.5    | 95.7   | 76.1      | 85.0        |
| Pioneer 26R53        | 78.3   | 83.3   | 89.2     | 80.4    | 92.4   | 73.5      | 82.8        |
| Pioneer 26R87        | 66.9   | 79.8   | 87.1     | 79.5    | 74.7   | 56.1      | 72.9        |
| Progeny 117          | 66.3   | 75.1   | 76.4     | 57.4    | 66.0   | 61.2      | 65.5        |
| Progeny 125          | 68.6   | 87.2   | 86.8     | 74.2    | 62.7   | 66.0      | 71.7        |
| Progeny 185          | 68.6   | 76.8   | 83.4     | 63.7    | 75.4   | 70.4      | 72.3        |
| Progeny 357          | 77.2   | 84.0   | 79.6     | 59.0    | 93.5   | 73.6      | 76.6        |
| Progeny 870          | 77.2   | 85.7   | 91.2     | 72.0    | 93.9   | 78.5      | 82.6        |
| Syngenta Oakes       | 71.5   | 74.2   | 82.9     | 75.0    | 84.2   | 68.0      | 76.3        |
| Syngenta SY Harrison | 78.9   | 87.5   | 94.9     | 81.3    | 91.5   | 78.5      | 85.0        |
| Terral LA 754        | 58.7   | 78.4   | 92.6     | 78.9    | 67.7   | 64.3      | 72.4        |
| Terral TV 8525       | 81.9   | 82.2   | 88.1     | 68.6    | 87.6   | 78.8      | 81.0        |
| Terral TV 8535       | 75.2   | 85.9   | 87.9     | 74.5    | 90.7   | 79.2      | 81.5        |
| Terral TV 8848       | 76.3   | 86.5   | 96.4     | 73.1    | 90.9   | 82.2      | 83.8        |
| Terral TV 8861       | 72.2   | 83.4   | 88.7     | 83.4    | 92.2   | 69.9      | 81.3        |
| USG 3013             | 83.0   | 81.4   | 95.2     | 75.8    | 93.2   | 80.0      | 85.4        |
| USG 3201             | 83.3   | 88.7   | 90.8     | 72.9    | 94.4   | 83.1      | 84.9        |

**Table 2. Continued. Two-Year Average Wheat Yields (Bu/a) in Arkansas Wheat Performance Trials at Six Locations.**

| Variety/Brand Name | Keiser      | Kibler      | Marianna    | Newport     | Rohwer      | Stuttgart   | Delta Avg.* |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| USG 3251           | 76.0        | 81.6        | 90.4        | 74.2        | 90.7        | 82.3        | 82.7        |
| USG 3438           | 79.5        | 86.9        | 97.9        | 75.5        | 93.8        | 81.1        | 85.5        |
| USG 3523           | 83.5        | 82.6        | 86.5        | 75.8        | 86.8        | 79.0        | 82.3        |
| USG 3833           | 71.0        | 81.8        | 91.4        | 76.6        | 89.9        | 82.0        | 82.2        |
| USG 3993           | 65.7        | 76.8        | 84.1        | 60.0        | 67.8        | 76.3        | 70.8        |
| <b>Mean</b>        | <b>74.9</b> | <b>82.3</b> | <b>89.1</b> | <b>74.5</b> | <b>86.0</b> | <b>72.9</b> | <b>79.5</b> |

\*Delta average is calculated from Keiser, Marianna, Newport, Rohwer, and Stuttgart locations

**Table 3. Three-Year Average Wheat Yields (Bu/a) in Arkansas Wheat Performance Trials at Five Locations.**

| Variety/Brand Name   | Keiser      | Kibler      | Marianna    | Rohwer      | Stuttgart   | Delta Avg.* |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AgriMAXX 413         | 73.8        | 82.9        | 88.0        | 96.5        | 74.0        | 83.1        |
| AgriMAXX 415         | 79.4        | 83.9        | 83.1        | 95.1        | 73.7        | 82.8        |
| AGS 2035             | 65.8        | 82.8        | 85.0        | 75.4        | 54.2        | 70.1        |
| AGS 2038             | 68.8        | 81.4        | 88.3        | 90.5        | 63.7        | 77.8        |
| AGS 2040             | 57.2        | 70.5        | 82.1        | 65.6        | 53.9        | 64.7        |
| AGS 2056             | 66.9        | 81.9        | 85.9        | 91.8        | 69.4        | 78.5        |
| Armor Havoc          | 73.3        | 86.0        | 90.4        | 89.0        | 76.1        | 82.2        |
| Delta Grow 7500      | 74.8        | 83.9        | 82.6        | 96.2        | 70.9        | 81.1        |
| Dixie Bell 412       | 70.1        | 77.8        | 79.1        | 93.6        | 66.8        | 77.4        |
| Dixie Bell 620       | 75.9        | 85.9        | 88.3        | 95.3        | 76.0        | 83.9        |
| Dixie McAlister      | 77.0        | 86.2        | 87.0        | 94.7        | 75.0        | 83.4        |
| Dyna-Gro 9012        | 77.0        | 85.3        | 86.4        | 91.4        | 74.3        | 82.3        |
| Dyna-Gro Yorktown    | 63.3        | 76.2        | 83.2        | 80.0        | 63.2        | 72.4        |
| Jamestown            | 70.6        | 77.3        | 75.7        | 76.3        | 56.4        | 69.8        |
| Pioneer 26R20        | 77.3        | 83.0        | 83.2        | 95.9        | 70.2        | 81.6        |
| Pioneer 26R10        | 75.0        | 85.1        | 87.6        | 90.5        | 72.7        | 81.5        |
| Pioneer 26R41        | 77.1        | 89.4        | 89.9        | 94.8        | 72.1        | 83.5        |
| Pioneer 26R53        | 74.6        | 83.9        | 87.4        | 95.0        | 72.5        | 82.4        |
| Pioneer 26R87        | 66.0        | 80.9        | 85.1        | 83.7        | 57.7        | 73.1        |
| Progeny 117          | 63.6        | 74.1        | 70.9        | 63.8        | 61.3        | 64.9        |
| Progeny 125          | 67.5        | 81.6        | 84.8        | 66.1        | 63.7        | 70.6        |
| Progeny 185          | 65.6        | 75.8        | 78.8        | 77.0        | 69.1        | 72.6        |
| Progeny 357          | 72.0        | 74.4        | 77.2        | 90.3        | 70.3        | 77.5        |
| Progeny 870          | 73.3        | 80.4        | 87.9        | 95.8        | 75.8        | 83.2        |
| Syngenta Oakes       | 70.6        | 75.7        | 80.8        | 87.7        | 65.8        | 76.2        |
| Syngenta SY Harrison | 75.8        | 87.8        | 90.1        | 94.9        | 76.6        | 84.4        |
| Terral LA 754        | 57.5        | 70.8        | 85.5        | 78.8        | 64.2        | 71.5        |
| Terral TV 8525       | 79.9        | 86.4        | 86.8        | 88.7        | 77.8        | 83.3        |
| Terral TV 8535       | 73.3        | 82.5        | 84.3        | 95.0        | 75.8        | 82.1        |
| Terral TV 8848       | 71.7        | 79.3        | 92.9        | 90.7        | 77.4        | 83.2        |
| Terral TV 8861       | 71.2        | 82.6        | 85.5        | 90.2        | 70.7        | 79.4        |
| USG 3201             | 76.2        | 82.3        | 84.2        | 96.2        | 80.7        | 84.3        |
| USG 3438             | 75.3        | 84.2        | 93.2        | 93.8        | 75.1        | 84.4        |
| <b>Mean</b>          | <b>71.5</b> | <b>81.3</b> | <b>84.9</b> | <b>87.9</b> | <b>69.6</b> | <b>78.5</b> |

\*Delta average is calculated from Keiser, Marianna, Rohwer, and Stuttgart locations

**Table 4. Disease Reactions of Selected Wheat Varieties in Arkansas, 2013-2014.**

|                           | Stripe | Leaf | Septoria Leaf | Stagonospora   | Fusarium Head | Bacterial |
|---------------------------|--------|------|---------------|----------------|---------------|-----------|
| <u>Variety/Brand Name</u> | Rust   | Rust | Blotch        | (Glume Blotch) | Blight (Scab) | Streak    |
| AgriMAXX 413              | R      |      | MR            |                |               |           |
| AgriMAXX 415              | R      |      | MR            |                |               |           |
| AGS 2026                  | R      |      | MR            | MS             |               |           |
| AGS 2035                  | MS     | R    | MR            | S              |               |           |
| AGS 2038                  | R      | R    | MR            |                |               |           |
| AGS 2056                  | R      |      | MR            | MS             | S             |           |
| AGS 2060                  | MS     | R    | MR            | MS             | S             |           |
| Armor Havoc               |        | S    |               |                | MS            | S         |
| Armor Octane              |        | R    |               |                | MS            | MR        |
| Armor Rampage             | R      |      | MS            |                | MR            |           |
| Armor Ricochet            | R      |      | MR            | S              | MS            | MS        |
| Armor Vandal              |        | R    |               |                | S             | MS        |
| Croplan 554w              | S      |      |               |                |               |           |
| Croplan 8302              | R      |      | MR            | MR             | MS            |           |
| Croplan 8925              | R      |      | MR            |                |               |           |
| Delta Grow 5000           | R      |      | MS            |                |               |           |
| Delta Grow 7000           | MR     |      |               |                |               |           |
| Delta Grow 7300           | R      |      | MR            |                |               |           |
| Delta Grow 7500           | R      | MS   | MR            | MR             | MS            |           |
| Delta Grow 9700           | R      | S    | MR            |                |               |           |
| Dixie Bell DB 412         | R      | MS   | MR            |                |               |           |
| Dixie Bell DB 620         | R      | S    | MR            | MS             |               |           |
| Dixie Kelsey              | R      |      | MR            | S              | MR            |           |
| Dixie McAlister           | R      | S    | MR            | MS             | MS            | MS        |
| Dixie Xtreme              | R      | S    |               |                | MS            | MR        |
| Dyna-Gro 9012             | R      | MS   | MR            |                |               |           |
| Dyna-Gro 9171             | R      | S    | MR            | MR             |               |           |
| Dyna-Gro 9223             | R      | MS   |               |                |               |           |
| Dyna-Gro Baldwin          | MS     | R    | MR            | MS             |               |           |
| Dyna-Gro Yorktown         | MR     |      |               |                |               |           |
| Pioneer 25R32             | R      |      | MR            | MR             |               |           |
| Pioneer 26R10             | R      | S    | MR            |                | MS            | MS        |
| Pioneer 26R20             | MR     | MS   | MR            | MR             | S             | MS        |
| Pioneer 26R22             | MS     |      | MR            | S              | S             | S         |
| Pioneer 26R41             | R      | MR   |               |                | S             | MS        |
| Pioneer 26R53             | R      | MS   |               |                |               |           |
| Pioneer 26R87             | MR     | R    | MS            | MS             |               |           |
| Progeny 117               | VS     |      | MR            | S              |               |           |
| Progeny 125               | R      | S    | MS            | S              |               |           |
| Progeny 185               | S      | MS   | MR            | MS             | MS            | MS        |
| Progeny 308               | R      |      | MR            |                | MS            |           |
| Progeny 357               | MR     | S    | MR            | S              | MS            | MS        |
| Progeny 870               | R      | MS   | MR            | MS             | S             |           |
| Syngenta Arcadia          | MS     |      | MS            | S              | S             |           |
| Syngenta Beretta          | MR     |      | MS            | S              | MS            | S         |

**Table 4. Disease Reactions of Selected Wheat Varieties in Arkansas, 2013-2014.**

|                                  | <b>Stripe</b> | <b>Leaf</b> | <b>Septoria Leaf</b> | <b>Stagonospora</b>   | <b>Fusarium Head</b> | <b>Bacterial</b> |
|----------------------------------|---------------|-------------|----------------------|-----------------------|----------------------|------------------|
| <b><u>Variety/Brand Name</u></b> | <b>Rust</b>   | <b>Rust</b> | <b>Blotch</b>        | <b>(Glume Blotch)</b> | <b>Blight (Scab)</b> | <b>Streak</b>    |
| Syngenta Coker 9553              | R             |             | MS                   | MS                    | S                    | S                |
| Syngenta Magnolia                | R             |             | MS                   | MR                    |                      |                  |
| Syngenta Oakes                   | R             |             | MS                   | MR                    | MR                   | S                |
| Syngenta SY Harrison             | R             | S           | MR                   |                       | S                    | MR               |
| Taggart 496                      | MR            |             |                      |                       |                      |                  |
| Terral LA841                     | R             | R           | S                    | VS                    | VS                   |                  |
| Terral TV8525                    | R             | S           | MR                   |                       |                      |                  |
| Terral TV8535                    | R             | MS          | MR                   | MS                    |                      |                  |
| Terral TV8848                    | R             | S           | MR                   | MS                    | S                    |                  |
| Terral TV8861                    | R             | MS          | MR                   | MS                    | S                    |                  |
| USG 3013                         | R             | S           |                      |                       |                      |                  |
| USG 3120                         | MR            | R           | MS                   | VS                    | MS                   |                  |
| USG 3201                         | R             | MR          | MR                   | VS                    | MS                   |                  |
| USG 3251                         | R             | MS          |                      |                       |                      |                  |
| USG 3438                         | R             |             | MR                   | S                     |                      |                  |
| USG 3523                         | R             | S           |                      |                       |                      |                  |
| USG 3833                         | R             | R           |                      |                       |                      |                  |
| USG 3993                         | S             |             |                      |                       |                      |                  |
| VA Jamestown                     | R             | R           | MS                   | MR                    | MR                   | S                |

R = Resistant; MR = Moderately Resistant; MS = Moderately Susceptible; S = Susceptible; VS = Very Susceptible.

Leaf Rust disease data provided by Dr. Steve Harrison at LSU was used to update leaf rust ratings.

**Table 5. Agronomic Characteristics of Commercially Available Varieties in 2013-2014 Performance Trials. \*\***

|                           | <b>Test Wt.</b> | <b>Lodging</b> | <b>Height</b> | <b>Heading</b> | <b>Maturity</b> | <b>Relative</b> | <b>Awned</b>   |
|---------------------------|-----------------|----------------|---------------|----------------|-----------------|-----------------|----------------|
| <b>Variety/Brand Name</b> | <b>Lb/bu</b>    | <b>0-9</b>     | <b>Inches</b> | <b>Date</b>    | <b>Date</b>     | <b>Maturity</b> | <b>Variety</b> |
| AgriMAXX 413              | 58.8            | 0.5            | 33            | 28-Apr         | 1-Jun           | Medium          | Yes            |
| AgriMAXX 415              | 60.3            | 0.4            | 33            | 28-Apr         | 31-May          | Medium          | Yes            |
| AgriMAXX 447              | 58.0            | 0.4            | 34            | 5-May          | 3-Jun           | Late            | No             |
| AGS 2035                  | 59.0            | 0.7            | 35            | 29-Apr         | 3-Jun           | Medium          | Yes            |
| AGS 2038                  | 56.6            | 0.4            | 36            | 4-May          | 5-Jun           | Late            | Yes            |
| AGS 2040                  | 61.2            | 0.5            | 32            | 28-Apr         | 29-May          | Medium          | Yes            |
| AGS 2056                  | 59.0            | 0.7            | 32            | 28-Apr         | 1-Jun           | Medium          | Yes            |
| AGS 2057                  | 59.5            | 0.4            | 34            | 1-May          | 2-Jun           | Late            | Yes            |
| Armor Havoc               | 58.9            | 0.6            | 34            | 1-May          | 3-Jun           | Late            | Yes            |
| Armor Octane              | 59.1            | 0.3            | 32            | 1-May          | 2-Jun           | Late            | No             |
| Armor Vandal              | 59.0            | 0.7            | 35            | 29-Apr         | 3-Jun           | Medium          | Yes            |
| Delta Grow 2100           | 58.2            | 3.6            | 34            | 28-Apr         | 1-Jun           | Medium          | No             |
| Delta Grow 3200           | 59.9            | 0.6            | 30            | 29-Apr         | 1-Jun           | Medium          | Yes            |
| Delta Grow 7100           | 57.2            | 0.3            | 32            | 1-May          | 2-Jun           | Late            | Yes            |
| Delta Grow 7200           | 58.6            | 0.8            | 33            | 29-Apr         | 2-Jun           | Medium          | Yes            |
| Delta Grow 7500           | 59.2            | 0.4            | 32            | 29-Apr         | 1-Jun           | Medium          | Yes            |
| Delta Grow 9700           | 57.8            | 1.5            | 34            | 30-Apr         | 2-Jun           | Medium          | No             |
| Dixie Bell 412            | 57.1            | 1.1            | 33            | 1-May          | 2-Jun           | Late            | Yes            |
| Dixie Bell 620            | 58.4            | 0.9            | 32            | 30-Apr         | 2-Jun           | Medium          | Yes            |
| Dixie Bell 7880           | 59.3            | 0.8            | 35            | 29-Apr         | 31-May          | Medium          | No             |
| Dixie Bell 8980           | 55.4            | 0.7            | 35            | 1-May          | 2-Jun           | Late            | No             |
| Dixie Xtreme              | 58.3            | 1.3            | 35            | 30-Apr         | 2-Jun           | Medium          | No             |
| Dixie Glory               | 57.3            | 0.3            | 33            | 3-May          | 3-Jun           | Late            | No             |
| Dixie McAlister           | 59.0            | 0.5            | 32            | 28-Apr         | 1-Jun           | Medium          | Yes            |
| Dyna-Gro 9012             | 60.8            | 0.6            | 32            | 29-Apr         | 1-Jun           | Medium          | Yes            |
| Dyna-Gro 9171             | 59.0            | 0.6            | 33            | 28-Apr         | 31-May          | Medium          | Yes            |
| Dyna-Gro 9223             | 58.9            | 1.2            | 35            | 2-May          | 2-Jun           | Late            | No             |
| Dyna-Gro 9373             | 56.8            | 0.3            | 34            | 2-May          | 3-Jun           | Late            | No             |
| Dyna-Gro Yorktown         | 59.3            | 0.8            | 33            | 30-Apr         | 1-Jun           | Medium          | No             |
| Jamestown                 | 61.0            | 1.0            | 32            | 26-Apr         | 30-May          | Early           | Yes            |
| LCS L-Brand343            | 58.6            | 0.5            | 30            | 28-Apr         | 30-May          | Medium          | Yes            |
| LCS L-Brand448            | 58.1            | 2.3            | 33            | 2-May          | 2-Jun           | Late            | No             |
| Pembroke 2008             | 59.9            | 0.3            | 33            | 28-Apr         | 31-May          | Medium          | Yes            |
| Pioneer 26R20             | 59.4            | 2.4            | 33            | 30-Apr         | 1-Jun           | Medium          | Yes            |
| Pioneer 26R10             | 59.0            | 0.3            | 33            | 1-May          | 1-Jun           | Late            | Yes            |
| Pioneer 26R41             | 59.5            | 0.4            | 32            | 29-Apr         | 1-Jun           | Medium          | Yes            |
| Pioneer 26R53             | 59.7            | 0.3            | 32            | 30-Apr         | 2-Jun           | Medium          | Yes            |
| Pioneer 26R87             | 60.8            | 0.3            | 32            | 26-Apr         | 30-May          | Early           | Yes            |
| Progeny 117               | 58.8            | 2.0            | 35            | 28-Apr         | 30-May          | Medium          | No             |
| Progeny 125               | 58.9            | 0.7            | 32            | 26-Apr         | 30-May          | Early           | No             |
| Progeny 185               | 59.6            | 1.0            | 34            | 27-Apr         | 1-Jun           | Early           | No             |
| Progeny 357               | 56.9            | 1.1            | 33            | 1-May          | 3-Jun           | Late            | Yes            |
| Progeny 870               | 59.8            | 0.6            | 33            | 28-Apr         | 1-Jun           | Medium          | Yes            |
| Syngenta Oakes            | 60.2            | 2.2            | 34            | 30-Apr         | 1-Jun           | Medium          | No             |
| Syngenta SY Harrison      | 57.8            | 0.5            | 33            | 29-Apr         | 1-Jun           | Medium          | Yes            |

**Table 5. Agronomic Characteristics of Commercially Available Varieties in 2013-2014 Performance Trials. \*\***

|                           | <b>Test Wt.</b> | <b>Lodging</b> | <b>Height</b> | <b>Heading</b>  | <b>Maturity</b> | <b>Relative</b> | <b>Awned</b>   |
|---------------------------|-----------------|----------------|---------------|-----------------|-----------------|-----------------|----------------|
| <b>Variety/Brand Name</b> | <b>Lb/bu</b>    | <b>0-9</b>     | <b>Inches</b> | <b>Date</b>     | <b>Date</b>     | <b>Maturity</b> | <b>Variety</b> |
| Terral LA 754             | 59.9            | 0.8            | 33            | 28-Apr          | 30-May          | Medium          | Yes            |
| Terral LA 841             | 59.1            | 0.5            | 32            | 30-Apr          | 31-May          | Medium          | Yes            |
| Terral TV 8525            | 60.4            | 0.6            | 33            | 28-Apr          | 31-May          | Medium          | Yes            |
| Terral TV 8535            | 59.4            | 0.6            | 33            | 28-Apr          | 1-Jun           | Medium          | Yes            |
| Terral TV 8848            | 58.1            | 1.0            | 35            | 30-Apr          | 2-Jun           | Medium          | Yes            |
| Terral TV 8861            | 58.5            | 0.7            | 33            | 1-May           | 2-Jun           | Late            | Yes            |
| USG 3013                  | 58.4            | 1.6            | 35            | 1-May           | 3-Jun           | Late            | No             |
| USG 3024                  | 58.7            | 0.5            | 30            | 28-Apr          | 30-May          | Medium          | Yes            |
| USG 3201                  | 60.2            | 0.6            | 33            | 30-Apr          | 1-Jun           | Medium          | Yes            |
| USG 3251                  | 58.2            | 1.1            | 34            | 1-May           | 2-Jun           | Late            | Yes            |
| USG 3404                  | 58.3            | 0.3            | 34            | 1-May           | 3-Jun           | Late            | Yes            |
| USG 3438                  | 59.2            | 0.6            | 33            | 28-Apr          | 1-Jun           | Medium          | Yes            |
| USG 3523                  | 58.6            | 1.3            | 33            | 29-Apr          | 2-Jun           | Medium          | Yes            |
| USG 3833                  | 58.3            | 0.3            | 34            | 2-May           | 3-Jun           | Late            | No             |
| USG 3993                  | 57.1            | 1.3            | 34            | 1-May           | 4-Jun           | Late            | No             |
| <b>Mean</b>               | <b>58.8</b>     | <b>0.5</b>     | <b>32</b>     | <b>30-April</b> | <b>1-June</b>   | <b>--</b>       | <b>--</b>      |

\*\*Test weight, lodging (0-9 scale with 0 having no lodging), plant height, heading date and maturity date are averages from all trials conducted during the 2013-14 growing season. Heading date is the average date that 50% of heads had emerged. Maturity date is the average date that 90% of the culms were yellow. Relative maturity rating is based on heading date.