

GRAIN OUTLOOK

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THE KSU WHEAT QUALITY SURVEY

The Kansas State University Department of Grain Science and Industry is conducting a hard red winter wheat quality survey this summer. Wheat samples were collected in Texas, Oklahoma, Kansas, Colorado, Nebraska, and South Dakota as harvest moved northward. Samples from the last three states are still being evaluated, but shouldn't change the final results very much. The samples came from wheat sheds in each state. A wheat shed is a defined geographic area in which wheat tends to flow to a certain country elevator. The samples were sent to the KSU campus in Manhattan for grading, milling, and eventually baking trials. Results from the baking trials; yet to be performed, will be available later in the summer.

Preliminary grading and milling results from samples taken in Texas, Oklahoma, and Kansas show this year's hard red winter wheat crop to be of excellent quality. Average test weight from the three states was 60.7 pounds per bushel, higher than last year's 60 pounds per bushel. There was a difference in test weight among the three states. Oklahoma had the highest test weight, averaging 61.3 pounds per bushel. Kansas and Texas both averaged 60.3 pounds per bushel.

Kernel size tended to be much smaller in Texas where the crop was severely stressed by drought. Kansas had the largest kernel size with a rating of 29.9 compared to the Texas rating of 25.7.

The biggest difference from last year was in the wheat protein level. In 2006, the three state average protein was 13.9 percent compared to 12.1 percent last year. The high protein level was confirmed by the wet gluten test which came out to 33.8 this year, much higher than last year's 29.5. Kansas had the highest protein levels of the three states. Kansas wheat protein was 14 percent and the wet gluten for Kansas wheat was 35.2, both higher than either Texas or Oklahoma. Flour yield per unit of wheat milled was two points higher this year.

To compare, preliminary data for soft red wheat show an average wheat protein level this year of 10.2 percent, slightly higher than normal, but far below the hard red winter wheat. Flour made from soft red wheat is used where a high level of gluten is not desired, to make crackers, cakes, and pastries, for example.

Another quality factor is falling number. The falling number test measures the level of enzyme activity in flour or ground wheat. A low falling number indicates high enzyme activity which reduces the baking quality of flour. Wheat or flour with a falling number above 300 is considered good quality. The three hard red winter wheat states already surveyed had a falling number of 345. In contrast, early results for soft red wheat show a falling number of 311. That is good enough, but bakers would feel more comfortable with a higher falling number.

Wheat quality surveys have been conducted in the past years by private firms who made the information available to those willing to pay a hefty fee; mostly big companies. This year, Kansas State University will release the information to the public so that wheat producers, elevator operators, millers, and bakers can use it in making selling and purchasing decisions with equal knowledge. Reporting by wheat shed will allow millers and bakers to purchase wheat from geographic regions with exceptionally high quality. They can then blend lower quality and lower priced wheat and flour from other areas to reduce the cost of flour and baked goods and to stretch the short supply of good quality milling wheat produced in the United States this year.