# Grain Yield From Wheat Variety Trials 2002-2003
# Production Technology – Crops

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## Test Locations

As of July 11, the Oklahoma Agricultural Statistics Service estimated the wheat crop was 192.7 million bushels harvested from 4.7 million acres for an average yield of 41 bushels per acre. This average yield is the highest recorded in Oklahoma. The previous record was 39 bushels per acre in 1998. The record production of wheat in Oklahoma was 227.7 million bushel in 1982 when 6.9 million acres were harvested. Test weights were also very good in those fields harvested without rainfall between maturity and harvest.

## Production Season

The 2002-2003 wheat crop in Oklahoma started very well. Based upon Crop Reporting statistics, 56% of the wheat was planted by September 30, well ahead of the five-year average of 35%. Cooler than normal conditions in October reduced growth from early plantings. By December 1, excellent stands had been obtained except where heavy rains resulted in replanting.

In spite of the cool October, forage production from early plantings was very good. In February the Crop Reporting Service indicated that 62% of the wheat was being grazed. Moisture during the late winter and spring in southwest Oklahoma was just adequate to support wheat production. In the north central region, growing conditions were excellent. Heading started during the normal time but warm temperatures resulted in a short heading period. Excellent growing conditions existed during grain filling except for drought stress for dryland wheat in the panhandle.

## Pest Problems

Pest problems during the fall of 2002 included weeds, leaf hoppers, and winter grain mites. No problems with greenbugs were observed. In the late winter many locations had high levels of bird cherry-oat aphids and a few locations had greenbug problems. Later stripe rust, tan spot, septoria leaf blotch, and in a few locations powdery mildew were the predominant diseases. Finally, sharp eyespot root rot was commonly found during grain filling, but few white heads ever appeared. Severe lodging occurred in many fields in north central Oklahoma. The root rot may have contributed to this lodging. Leaf rust appeared very late in the season. Over all, stripe rust reduced yields more than

other diseases. Variety response to septoria and tan spot were evaluated by Dr. Hunger at Lahoma and in the greenhouse. Similar evaluations for stripe rust were conducted by Dr. Carver at Kingfisher and Apache (see pg.3).

## Harvest

Harvest began a little earlier than normal, but rains delayed harvest in many areas of the state including the panhandle. Some sprouting was apparent in the variety trial at Gage. Harvest was delayed by rains for variety trials at Apache, Buffalo, Gage, and Kingfisher and sprout damage is being evaluated by collecting falling number data for these trials.

## Location of Trials

Data are reported for all trials planted except for Balko, Goodwell dryland and Boise City irrigated. Balko received severe hail damage just prior to harvest in a trial where yield had previously been reduced by drought stress. Goodwell dryland was too dry. Boise City did not receive nearly enough irrigation and weed problems interfered with the trial.

## Production Practices

The variety trials were all conventionally planted. The producer practices for weed control, fertilization, and insect control were applied to the variety trial. OSU did apply 50 pounds per acre of 18-46-0 in the seed furrow at planting. Seeding rates were 60 and 120 pounds per acre for grain and forage plus grain trials, respectively. Soil type, soil pH, and unique production conditions are noted on individual location tables.

## New Varieties for 2002

Varieties included in the trials for the first time were AgriPro AP 502 CL - a Clearfield® wheat, Avalanche - a Colorado released hard white wheat, AgriPro Platte - another hard white wheat, Cisco - a Goertzen red wheat, and TAM 111.

## Experimental Lines Included

For the fifth year, we included several OSU candidate cultivars that have potential for release in the next year or two. These were included to evaluate their capability at sites not normally used as test locations in the OSU wheat breeding program. Seven hard red winter wheat lines called OK94P549-11, OK94P549-21, OK95616-56, OK95548-54, OK96705-38, OK98690, and OK98699 were included. Characteristics of each of these are available by selecting candidate cultivars on the web at http://www.wit.okstate.edu.

## Additional Information on the Web

For information on disease resistance and other characteristics of all wheat varieties grown in Oklahoma, see the ®Wheat Variety Characteristic Chart® under Variety Information on the web at http://www.wit.okstate.edu. The variety information is updated regularly to give the latest in disease ratings for these varieties and adding new varieties as they become available. From the above address you can also connect to the latest fall and full-season wheat forage production data.

**Cooperation Acknowledged**

These data result from a cooperative effort between the Oklahoma Agricultural Experiment Station, the Oklahoma Cooperative Extension Service, the Oklahoma Wheat Commission, and USDA-CSREES agreement no. 2001-34198-10403.

## Outstanding Varieties

(Based on more than 2 years of data)

| **Yield** | **Test Weight** |
|---|---|
| AgriPro Cutter | 2174 |
| 2174 | AgriPro Thunderbolt |
| Jagger | Intrada |
| AgriPro Thunderbolt | |

## New Varieties to Consider

| **Yield** | **Test Weight** |
|---|---|
| AgriPro Jagalene | AgriPro Jagalene |
| Ok102 | Ok102 |



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