

Forage Yield From Wheat Variety Trials 1999-2000
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The 1999-2000 wheat crop in Oklahoma started slowly. Even though soils remained dry in early September, producers who wanted to emphasize forage planted wheat. Rainfall started between September 13 and 20, depending on the area of the state. In many areas the first rain was heavy, poor stands were obtained, and replanting occurred. On September 12, 7% of the wheat was planted compared to a five-year average of 10%; by September 27, however, 34% of the wheat was planted, compared to 28% for the five-year average.

After September rains, many areas of the state turned dry again before the wheat was planted and hopes for forage to graze cattle dwindled. Temperatures remained above normal until mid-December. In the northern half of the state rainfall was above normal in November. The temperature and moisture combined to result in more wheat growth than expected by January 1, and as much as 46% of the wheat was being grazed in late January into February. The southern half of the state remained dry through out the fall. Wheat in many fields had not emerged by mid-December.

Pest Problems

The primary pest problems during the fall of 1999 were aphids and brown wheat mite. Both greenbugs and/or oat-bird cherry aphids were present in high enough numbers that fields were sprayed. In particular, greenbugs were a severe problem in two- to three-leaf wheat in November. A few fields were verified to have barley yellow dwarf virus as early as mid-December. Fields looking unusually purple were quite common in north central Oklahoma in January, but no common cause could be identified. Low pH, low phosphorus, and barley yellow dwarf virus were eliminated as causes in most of the fields. It was concluded that the purpling was probably caused by anthocyanin accumulation. However, we were not able to identify why this occurred in some fields and not others.

Location of Trials

Forage trials were planted at Balko, Chickasha, Eakly, and Perkins. Forage trials were planted in mid-September at 120 lb/a. One of the trials intended for grain only, Kingfisher, was planted on October 1, 1999 at 60 lb/a. It had so much forage by mid-December that it was harvested for forage. Data are presented here for Chickasha, Eakly,

Kingfisher, and Perkins. Data for Balko were not included due to excessive variability.

New Varieties for 1999-2000

Varieties included in the trials for the first time were AgriPro Thunderbolt and Trego. Thunderbolt is expected to have medium maturity, height, and test weight. Thunderbolt is susceptible to low pH and to soilborne mosaic virus tolerance, but has good leaf rust resistance. Trego is a hard white wheat variety released by Kansas State in 1999. Trego appears to be the highest yielding white wheat available in Oklahoma and has good test weight, medium height, and medium late maturity. Trego is very susceptible to low pH, resistant to soilborne mosaic virus, and moderately resistant to leaf rust.

Gaicho Treatment

Gaicho is a seed treatment that controls aphids early in the season. By controlling aphids, it reduces or eliminates early infections of barley yellow dwarf virus that can strongly reduce wheat yield. Trials at a few locations in recent years indicate economic benefits to Gaicho. Therefore, we wanted to investigate the benefits over many locations and have included a 2174 + Gaicho treatment to compare with untreated 2174 at all locations.

Experimental Lines Included

For the second year, we have included in the trials several candidate cultivars that have potential for release in the next year or two. These include OK95G701 and OK95G703, hard white wheat lines, and three hard red winter wheat lines called OK94P549-2C, OK95571, and OK96717. These are included to evaluate forage capability and collect grain data from sites not normally used as test locations in the wheat breeding program.

Additional Information on 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://clay.agr.okstate.edu/wheat/wit.html>. The variety information is updated regularly to give the latest in disease ratings for these varieties and incorporate new varieties. From the above address you can also connect to the latest grain and full-season forage data.

How Data Were Collected

Wheat forage data was collected by hand clipping at the soil surface. Because differences between varieties in fall forage production are so small over the last three years, our focus in a forage-plus-grain system should be on which varieties to avoid due to significantly poor forage production potential.

Cooperation Acknowledged

This data results from a cooperative effort between the Oklahoma Agricultural Experiment Station, the Oklahoma Cooperative Extension Service, and the Oklahoma Wheat Commission.

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