

PROGRESS REPORT
WHEAT RESEARCH AND PROMOTION BOARD
November 2004

Title: Wheat Research Verification Program
Principal Investigator: Trey Reaper, Program Associate – WRVP Coordinator
Dwayne Beaty, Program Associate – WRVP Coordinator
Jason Kelley, Extension Agronomist – Wheat & Feed Grains
Tony Windham, Section Leader, Extension Economist

The following abstract was included in the WRVP annual report distributed at the funding meeting in August. Further information can be obtained by contacting the principal investigators or at the following web site:

<http://www.aragriculture.org/cropsoilwtr/wheat/Verification/wrvp0304.asp>

The 2003-2004 Wheat Research Verification Program (WRVP) was implemented by the University of Arkansas Cooperative Extension Service on 11 producer fields located in Arkansas, Clay, Crawford, Cross, Greene, Lawrence, Logan, Mississippi, Monroe, Woodruff, and Yell Counties. Frequent rains throughout October delayed planting in the northeast part of the state. Cooperators from the counties above selected 10 varieties from a short list provided by the agent and research verification coordinator. These varieties were selected based upon performance and characteristics determined by the University of Arkansas variety tests. Soil types ranged from silt loam to silty clay, with previous crops of corn, grain sorghum, soybean, rice, and summer fallow. Seeding dates ranged from October 2 through November 1, with seeding rates varying from 90 to 180 lbs/ac. Eight fields were drill seeded and three were broadcast seeded. Cooperators in Clay and Woodruff Counties utilized a bedding system to provide multiple drain furrows. Ryegrass, wild garlic, and other winter weeds were common and required the use of herbicide on seven fields. Leaf rust appeared early in Monroe County and eventually had to be treated with Propimax. Propimax was also used in Logan County to control powdery mildew, a disease that rarely reaches treatment levels in Arkansas. Damp weather and a sensitive variety led to the rapid development of the disease. Insects were also not a factor throughout the season; however, many fields showed symptoms of barley yellow dwarf virus (BYDV), which is vectored by aphids. Most fields in Arkansas exhibited symptoms of this disease despite no obvious buildup of aphids in the fall or spring. Harvest dates ranged from June 3 through June 27. Average yield for the WRVP was 62.2 bu/ac, compared to a state average yield of 52 bu/ac on 620,000 harvested acres. As with much of the state, test weight was lower than previous years with an average of 57.0 lb/bu. Improved variety selection, good surface drainage, timely fertilization, and effective pest management practices have been frequently mentioned by producers and county agents as factors which make WRVP fields more profitable and/or produce higher yields. Economic analysis was conducted using a budget generator to estimate specific costs of production for each field. Where possible, the actual price the cooperator received for the wheat crop was used to calculate an estimate of total income as a result

of seed yield. If a price was not provided, a fixed price of \$3.44/bu was used. This price was the state average wheat price for June delivery based upon June prices at elevators throughout eastern Arkansas and the Arkansas River Valley. Seven of the 11 WRVP fields resulted in a positive net return. Fertilizer remains the greatest input cost associated with wheat production in Arkansas. The Wheat Research Verification Program continues to demonstrate that Extension's research-based recommendations can produce profitable, high yielding wheat across a wide range of conditions and soil types. Over an 18-year period, the WRVP has averaged 12.9 bu/ac greater than the state average yield. The program is funded by the wheat checkoff dollars and administered through the Arkansas Wheat Promotion Board.