

Arkansas  
*Soybean*  
*Performance Tests*

2001



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# ARKANSAS SOYBEAN PERFORMANCE TESTS

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*Cover illustration by Michael Halbert*

## Arkansas Variety Testing Website

Results of Arkansas variety performance tests for wheat and other small grains, rice, soybeans, cotton, corn and grain sorghum are available on the web at: [www.arkansasvarietytesting.org](http://www.arkansasvarietytesting.org)

# ARKANSAS SOYBEAN PERFORMANCE TESTS<sup>1</sup> 2001

D.G. Dombek, D.K. Ahrent, R.D. Bond, and I.L. Eldridge

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## INTRODUCTION

Soybean cultivar performance tests are conducted each year in Arkansas by the University of Arkansas Division of Agriculture. The tests provide information to companies developing cultivars and/or marketing seed within the State, and aid the Arkansas Cooperative Extension Service in formulating cultivar recommendations for soybean producers.

The 2001 soybean cultivar performance tests were conducted at the Northeast Research and Extension Center (NEREC) at Keiser, the Cotton Branch Station (CBS) near Marianna, the Rice Research and Extension Center (RREC) near Stuttgart, the Southeast Research and Extension Center - Rohwer Division (SEREC-RD) near Rohwer, the Tracy McLelland Farm (TMF) near Gum Springs, and the Vegetable Substation (VSS) near Kibler. A test location map can be found inside the back cover.

## METHODS

Soybean cultivars were entered by commercial seed companies and state and federal institutions. Recommended cultural practices were used at each location and all data were taken from a uniform set of instructions.

Cultivars were grouped by maturity groups based on information provided by the originating company or institution. To facilitate field operations, and to allow for fairer comparisons between cultivars, entries in the Group IV and V Commercial Cultivar Tests (CCT) were separated into "early" cultivars and "late" cultivars. Cultivars in the "early" Group IV test had a relative maturity range of 4.0 to 4.7 and in the Group V test, a range of 5.0 to 5.6. Cultivars in the "late" Group IV test had a relative maturity range of 4.8 or 4.9 and in the "late" Group V test, a range of 5.7 to 5.9.

Early planted tests (EPT) were established at NEREC, SEBS, TMF, and VSS. As with the CCT IVs and Vs, entries

in the EPT were subdivided into "early" and "late" cultivars.

Within each test, entries were arranged as a randomized complete block design with three replications. Plots in all tests were 4 or 5 rows wide depending on between-row spacing and 20 feet in length. Seeds were packaged for recommended planting rates and were planted with a cone planter. Specific location and cultural practice information accompanies each table.

Interior rows of each plot were harvested for yield determination after ends were trimmed. Percent moisture was recorded for all harvested seed of early-planted tests and plot weights were adjusted to thirteen percent moisture. Harvested seeds of all other tests were allowed to dry to uniform moisture before weighing, and weights were converted to yield in bushels per acre (bu/A).

Plots were visually rated for shattering and lodging. Shattering ratings were carried out on border rows according to the following scale:

1. No shattering
2. 1-3% shattered
3. 4-8% shattered
4. 9-19% shattered
5. 20% or more shattered

Lodging ratings were recorded on a scale from 1 to 5 based on the following criteria:

1. Almost all plants erect
  2. Either all plants leaning slightly, or a few plants down
  3. Either all plants leaning moderately, or 25-50% of the plants down
  4. Either all plants leaning considerably, or 50-80% of the plants down
  5. All plants down badly
- Average plant height was recorded in inches for each plot.

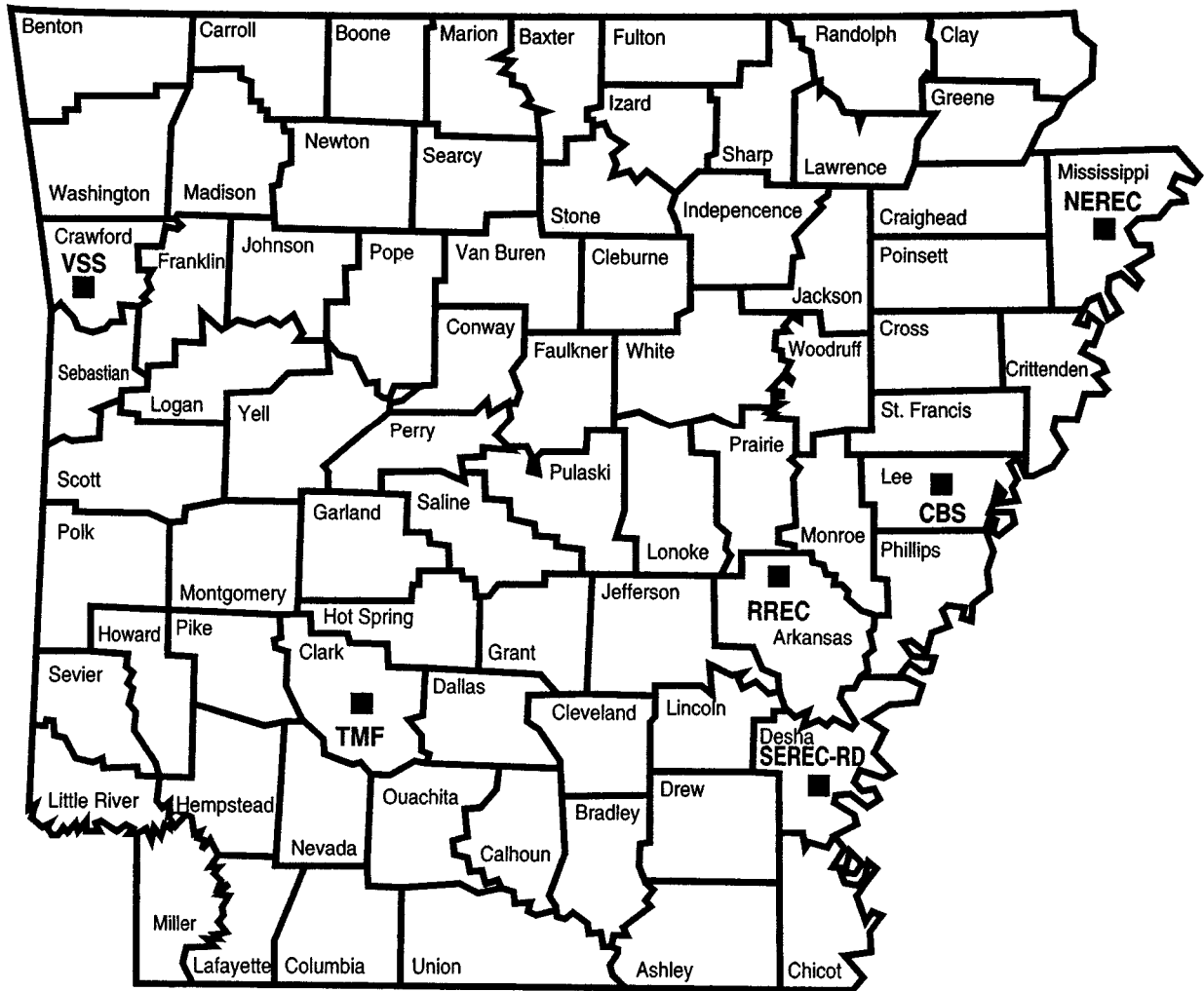
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<sup>1</sup> Use of products and trade names in this report does not constitute a guarantee or warranty of the products named and does not signify that those products are approved to the exclusion of comparable products.

Tests were established at the Main Experiment Station at Fayetteville on a Taloka silt loam soil to evaluate cultivar sensitivity to the herbicide propanil. Propanil was applied over-the-top of one-half of each plot at 0.75 lb active ingredient/A (0.25X recommended rate) when plants were in the V4 to V5 growth stage to simulate drift from rice fields. Plots were visually rated 7 and 21 days after propanil application by Marilyn McClelland.

Cultivars were screened for tolerance to soil chloride in greenhouse tests conducted by Dr. J.D. Widick, ASU, Jonesboro.

# SOYBEAN TEST LOCATIONS



- CBS** Cotton Branch Station, Marianna, Arkansas
- NEREC** Northeast Research and Extension Center, Keiser, Arkansas
- RREC** Rice Research and Extension Center, Stuttgart, Arkansas
- SEREC-RD** Southeast Research and Extension Center-Rohwer Division, Rohwer, Arkansas
- TMF** Tracy McLelland Farm
- VSS** Vegetable Substation, Kibler, Arkansas



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