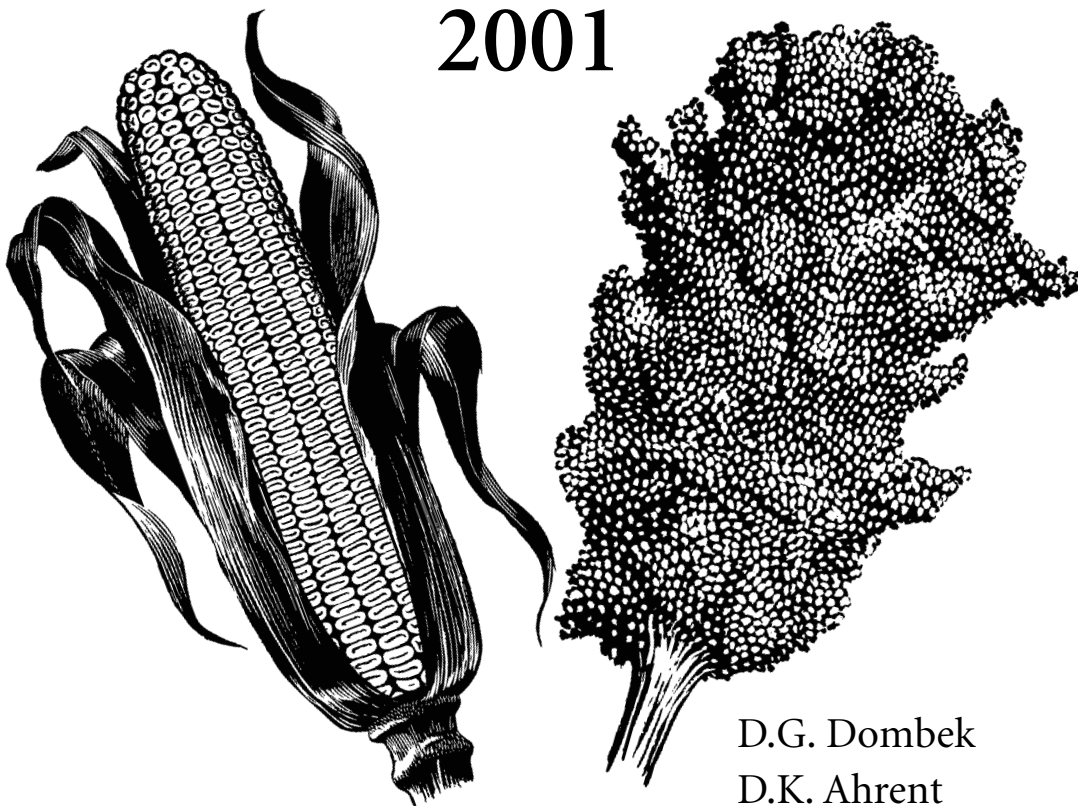


Arkansas Corn and Grain Sorghum Performance Tests

2001



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I.L. Eldridge

ARKANSAS AGRICULTURAL EXPERIMENT STATION

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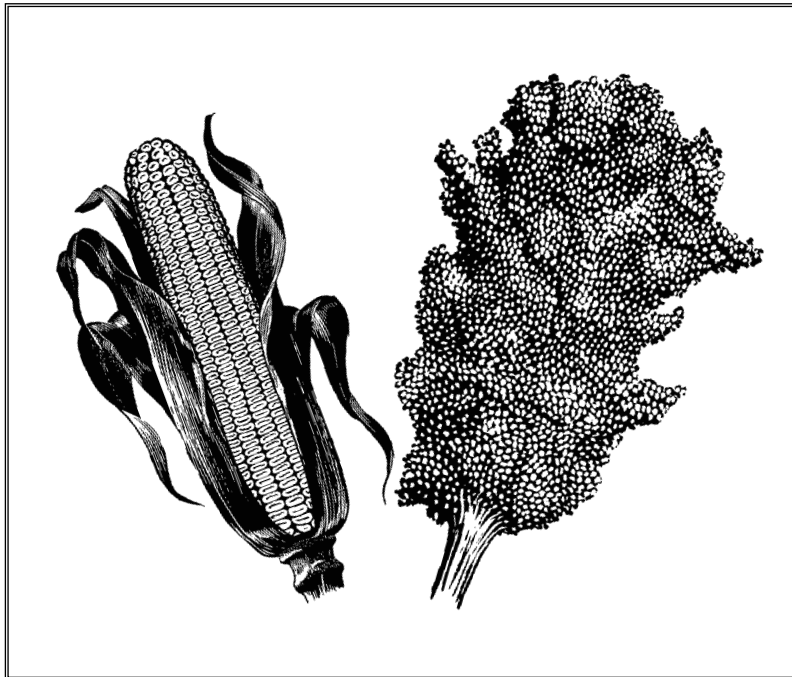
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Arkansas Variety Testing Website

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

ARKANSAS CORN AND GRAIN SORGHUM PERFORMANCE TESTS¹ 2001

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

INTRODUCTION

Corn and grain sorghum performance tests are conducted each year in Arkansas by the University of Arkansas Division of Agriculture. The tests provide information to companies marketing seed within the state, and aid the Arkansas Cooperative Extension Service in formulating recommendations for producers.

The 2001 corn performance tests contained 52 entries and were conducted at the Northeast Research and Extension Center (NEREC) at Keiser, the Cotton Branch Station (CBS) near Marianna, the Bell Farming Company (BFC) near Des Arc, the Southeast Research and Extension Center - Rohwer Division (SEREC-RD) near Rohwer, and the Williams Farm, (WF) near Gin City. The 2001 grain sorghum performance tests contained 32 entries and were conducted at the NEREC, the Pine Tree Experiment Station (PTS) near Pine Tree, the SEREC-RD, and the McLelland Farm (MF) near Gum Springs. Test location maps for grain sorghum and corn can be found inside the back cover.

MATERIALS AND METHODS

Corn hybrids were divided into two broad maturity groups. Based on information provided by the originating companies, entries were placed into an early- to mid-season group or a mid- to full-season group.

Within each test, entries were arranged as a randomized complete block design with four replications. Plots were two or three rows wide and end-trimmed to a uniform length of 20-25 feet depending on location. Seeding rates for each corn and grain sorghum hybrid were based on the recommendations of the originating company.

All plots were harvested with a plot combine. Specific location and management practice information accompanies each table.

GRAIN SORGHUM PERFORMANCE MEASUREMENTS

Yield: Yields were calculated from the weight of threshed grain from each plot and are expressed as pounds per acre (lbs./A) at 14% moisture.

Grain Moisture: Expressed as a percent moisture of grain at harvest.

Plant Height: Average height in inches from the soil surface to the top of the grain head.

Head Exertion: Average distance in inches from the flag leaf to base of panicle.

Head Compactness Scale:

1 = Head short and oval. Rachis branches intermediate in length.

2 = Head long and slender. Rachis branches strong and short.

3 = Head elongated and oval. Rachis branches beginning to weaken and intermediate in length.

4 = Head elongated and rectangular in shape. Rachis branches intermediate in strength and length.

5 = Head open and elongated. Rachis branches weak.

Test Weight: Test weights, where reported, are expressed in pounds per bushel (lbs./bu), and were determined using subsamples from each plot.

Bird Damage: A visual estimate of total percent grain loss from each plot.

¹ 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.

CORN PERFORMANCE MEASUREMENTS

Yield: Yields were calculated from the weight of shelled corn harvested from each plot and are expressed as bushels per acre (bu/A) at 15.5% moisture.

Grain Moisture: Expressed as a percent moisture of shelled grain at harvest.

Root Lodging: Plants leaning more than 40 degrees from vertical at harvest were classed as root lodged.

Stalk Lodging: Plants broken below an ear were classed as stalk lodged.

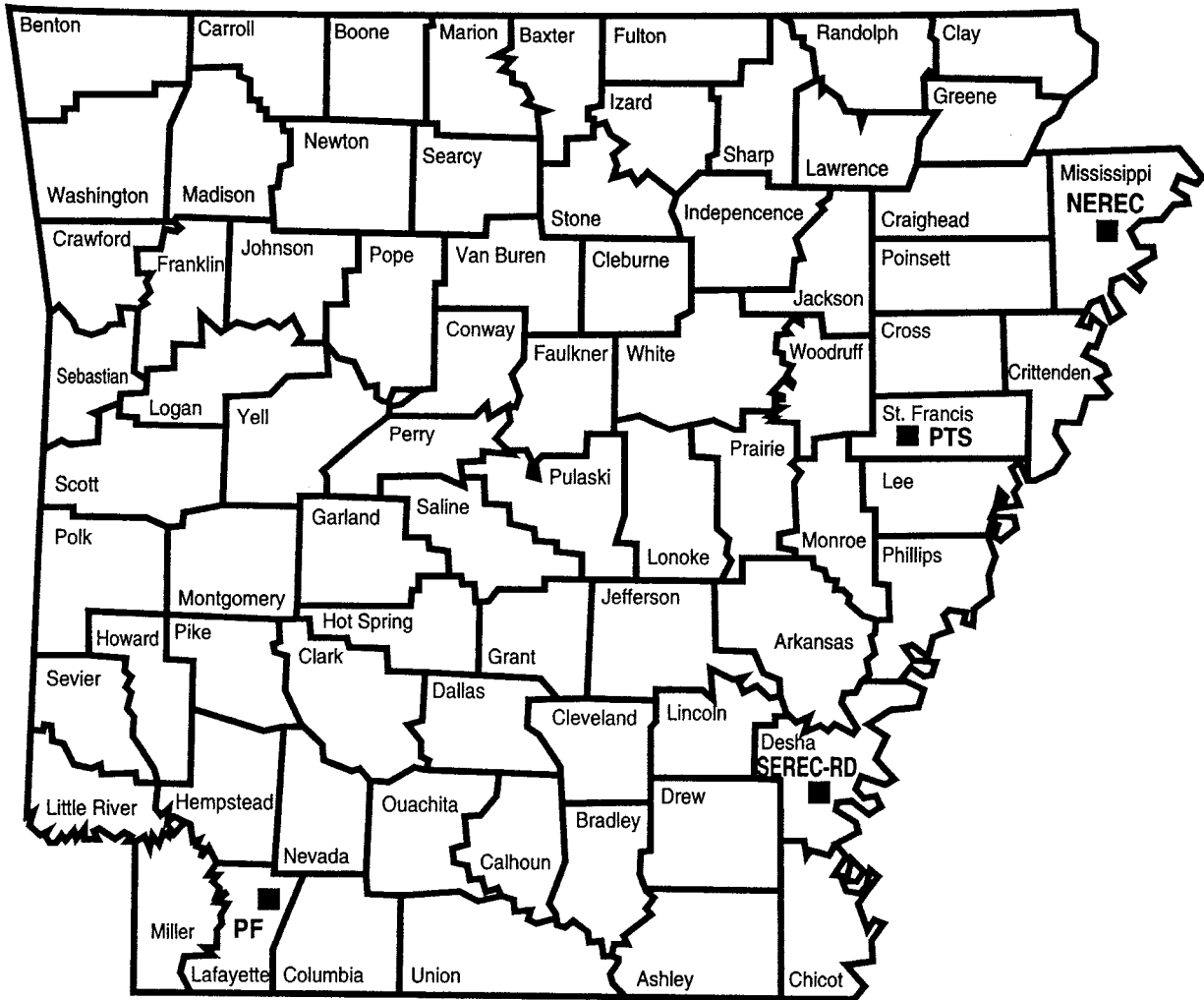
Plants/Acre: The plant population count, expressed in the number of plants per acre.

Ear Height: The average distance in inches from the soil surface to the point of attachment of the upper ear.

Test Weight: Test weights, expressed in pounds per bushel (lbs./bu), were determined using subsamples from each plot.

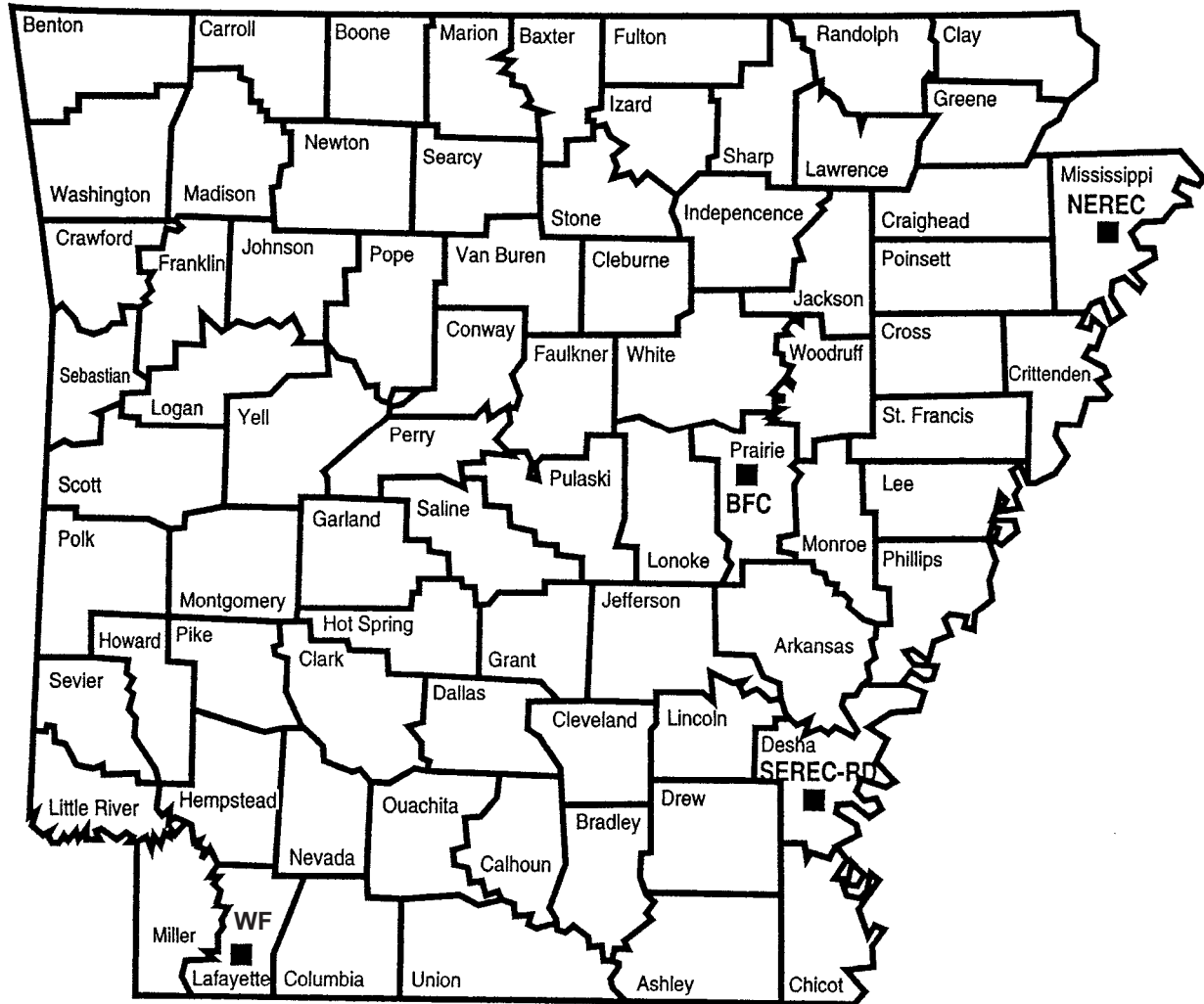
Tip Cover: Tip cover was rated as good (3), average (2), or poor (1). A rating of good was given when the husks reached well beyond the end of the ear and fitted tightly. A rating of average was given when the husks reached the tip of the ear or fitted loosely. A rating of poor was given when the ears were open to the weather.

GRAIN SORGHUM TEST LOCATIONS



- NEREC** Northeast Research and Extension Center, Keiser, Arkansas
- PTS** Pine Tree Station, Colt, Arkansas
- SEREC-RD** Southeast Research and Extension Center-Rohwer Division, Rohwer, Arkansas
- PF** Peterson Farm, Lewisville, Arkansas

CORN TEST LOCATIONS



- NEREC** Northeast Research and Extension Center, Keiser, Arkansas
- BFC** Bell Farming Company, Des Arc, Arkansas
- SEREC-RD** Southeast Research and Extension Center-Rohwer Division, Rohwer, Arkansas
- WF** Williams Farm, Gin City, Arkansas

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