

# Grain Sorghum Variety Trial in Greenlee County, 1986

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## ABSTRACT

*Eleven full season hybrid grain sorghums, representing seven commercial sources, were grown on a silty clay soil south of Duncan. The test plots were managed the same as the rest of the field planted to DeKalb 69. Grain yields ranging from 6911 to 4546 pounds per acre were obtained, with DeKalb 69 the top yielder.*

## INTRODUCTION

Even though it is waning in popularity because of low prices, grain sorghum is still an important crop in Greenlee county, primarily because the climatic conditions are conducive to very good yields. This ongoing trial is shifted throughout the Duncan valley to provide growers at both ends of the valley the information they need for their planting decisions. This year the trial was conducted south of Duncan on a heavy clay soil.

## MATERIALS AND METHODS

The experimental plot was in a field of Guest silty clay located on the Mike Brown farm near Franklin, AZ. The field was rowed-off and pre-irrigated, and the seed planted, using a John Deere plateless planter.

Elevation: 3,600 feet above sea level

Planting date: 28 April

Planting rate: 7 pounds per acre

Fertilizer: 125 units of N from anhydrous ammonia injected pre-plant; 150 pounds per acre of 11-53-0

Plot size: 4 - 36 inch rows 1,200 feet long

Replications: 4

Harvest date: 24 October

The plots were harvested with a John Deere combine and weighed at the end of each plot in weigh wagons provided by the Pioneer and Northrup King seed companies.

## RESULTS

Table 1. Yields and % Moisture for Grain Sorghum Varieties Grown in Greenlee County 1986.

Source	Variety	Yield* (lbs/ac)	% Moisture	Bu Wt (lbs)
DeKalb-Pfizer Genetics	DK 69	6911 a**	14.7	59.5
DeKalb-Pfizer Genetics	DK 59E	6530 ab	14.1	59.7
Triumph Seed Company	Two 80-D	5824 bc	13.3	60.8
Cargill	PAG 6670	5809 bc	13.7	60.5
Northrup King	NK 2887	5806 bc	14.3	60.5
AgriPro	GT 565	5617 c	13.1	-
Cargill	Pmstr1125	5445 c	13.0	57.0
Asgrow	Colt	5429 c	13.8	62.3
Northrup King	NK 2888	5148 cd	13.0	57.0
Pioneer	8226	5107 cd	13.1	-
Pioneer	8300	4546 d	13.9	59.8

\* Yields are corrected to 14 % moisture.

\*\* Values followed by the same letter are not significantly different at the 5% level using the Student-Newman-Keuls test.

## DISCUSSION

DeKalb 69 yielded significantly higher than all the other varieties except DeKalb 59E. It is instructive to compare this year's data with the data from the previous year (1), which was grown on a lighter soil and with a different cooperater.

For 1985, using Asgrow colt as the standard variety, with its yield placed at 100%, Triumph Two 80-D yielded 110% and DK 69 yielded 93.7%. In 1986, setting Asgrow Colt at 100% again, Triumph Two 80-D yielded 107% but DK69 yielded 127%. The relationship between Asgrow Colt and Triumph Two 80-D remained about the same but the relationship between Asgrow Colt and DK 69 reversed.

The reason for this is not known, but it seems that local growers need to find out if their soil and management practices favor DeKalb 69 or Asgrow Colt. If they fit in the latter category, Triumph Two 80-D will probably yield better for them. PAG 6670 and Northrup King 2887 are strong contenders and should be considered.

## REFERENCES

1. DeRosa, Edith, Lee Clark and David Parsons. 1986. Full Season Grain Sorghum Variety Trial, Greenlee County - 1985. Forage and Grain, Coop. Ext., Ag. Exp. Sta. Report Series P-67, Univ. of AZ. pp. 150-151.