

Double Crop Grain Sorghum Variety Trial in Graham County, 1986

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ABSTRACT

Nine medium to medium-late maturing grain sorghum hybrids were compared for yield, percent moisture at harvest, bushel weight, plant height, percent bird damage and standability. The highest yielding entry in the trial was a new hybrid from Northrup King (NK 2656). Its yield of 6185 pounds per acre was 11% higher than the most commonly grown hybrid in the area.

INTRODUCTION

Double-cropping grain sorghum is not as popular as it was a few years ago when grain prices were higher, but it is still practiced by some farmers in Graham county. Some time has passed since the last mid-season grain sorghum variety trial; several new hybrids are now on the market that should be evaluated in this area.

MATERIALS AND METHODS

The experimental plot was located on a loam to clay loam soil in the Grabe-Gila-Anthony soil association bordering the Gila river near the town of Eden. After harvesting a barley crop, the field was worked up, listed and pre-irrigated. After the soil dried sufficiently, the beds were knocked off and the seed was planted into moisture. The cooperators, Colvin Farms, managed the plots according to their normal management procedures.

Elevation: 2,800 feet above sea level.

Planting date: 23 June

Planting rate: 11 pounds per acre

Fertilizer: 200 units of nitrogen from anhydrous ammonia injected pre-plant

Plot size: 6 - 38 inch beds, 1,400 to 1,650 feet long

Replications: 4

Harvest date: 4 December

The plots were harvested with an International 1460 combine and were sampled and weighed in the field using a weigh wagon provided by the Northrup King company on one end of the field and electronic truck scales on the other end of the field.

RESULTS

Table 1. Yields and Other Agronomic Data for Mid-season Grain Sorghum Varieties Planted as a Double Crop in Graham County 1986.

Variety	Yield* (lbs/ac)	% M	Bu Wt (lbs)	Pl Ht (in)	% Bird Damage	St**
NK 2656	6185 a***	12.2	59.3	43.0	1.5	2.8
Asgrow Topaz	5992 ab	12.7	58.8	45.3	3.1	3.5
PAG 5572SA	5757 bc	12.4	56.6	43.3	2.5	3.5
Asgrow Sierra	5629 cd	12.9	60.0	44.0	2.0	4.0
DeKalb 64	5569 cd	13.3	61.5	46.5	8.5	3.8
Pioneer 8226	5371 d	12.8	60.8	44.8	8.9	3.0
Pmstr 1096Y	5062 e	12.9	58.6	47.5	2.6	3.8
Cargill C61	4881 e	12.2	61.1	43.0	3.8	3.3
Pmstr FS455	3465 f	14.4	47.1	77.8	0.9	6.0

* Yields are corrected to 14% moisture.

** Standability rating from 1 to 6 with 6 being best.

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

DISCUSSION

NK 2656, a new medium-late maturing hybrid from Northrup King, was the best yielder, beating the most popular entry (DeKalb 64) by 11%. It was one of the shorter entries in the trial; lodging was not a problem, in spite of its below average standability rating.

Bird damage is often a severe problem, especially if roosting areas are near by. The ratings in Table 1 are averages taken from both ends of the field over all replications; thus, the ratings are smaller than at individual sites where as much as 30% damage was observed. In this setting, with all the grain available, Paymaster FS 455 and NK 2656 were their least preferred choices. Paymaster was probably the least preferred because it matured later than the rest, as shown by the high moisture content of the grain at harvest. NK 2656 matured as early as any of the other hybrids; why the birds shunned it is not known.