

Sorghum Variety Demonstration^{1/}

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Field Testing. University of Arizona, 1981.

Red Mountain Farms Yuma County

Elevation: 600 feet

Crop History:

Planted: July 12, 1980

Harvested: Nov. 15, 1980

Seeding Rate: 13 lbs/acre

Previous Crop: Barley

Fertilizer:

Source	Lbs/A	Time of Application	Lbs N/A
UN32	50	Prior to Heading	16
Irrigation water	--	During Irrigations	92
			<u>108</u>

Irrigation: 4.2 acre feet/acre were applied through a center pivot.

Plot size: 3.17 x 20'

Entry	Yield (lbs/plot) ^{2/}		Ave. Yield (lbs)	Yield (Calculated in lbs/acre)
	Rep 1	Rep 2		
DeKalb DK64	5.37	7.25	6.31	4340
Ferry Morse Advance 80	6.00	5.75	5.88	4040
Acco 1288	5.63	5.87	5.75	3950
Pioneer 8451	5.25	6.00	5.62	3870
Funks G-623GBR	4.37	6.25	5.31	3650
Asgrow Double TX	3.80	5.62	4.71	3240
DeKalb DK57	4.50	4.75	4.62	3180
NK 2779	4.50	4.38	4.44	3050
Funks G-522DR	3.00	3.50	3.25	2240
NK 265	3.00	3.00	3.00	2060
Ferry Morse Advance 14	3.12	1.37	2.24	1540

^{1/}Due to stand establishment problems small plots were hand harvested, bagged, dried to an equilibrium moisture and threshed for yield determinations on March 12, 1981.

^{2/}All yields adjusted to 10% moisture.

Phenotypic Performance for Maturity and Height for a Number of
Sweet and Sugar-Type Sorghums in Different Arizona Environments

Robert L. Voigt, Plant Breeder

Summary

A number of sweet or sugar-type sorghum genotypes were grown in three locations in Arizona varying from 110 to 6220 meters in elevation. Days to bloom ranged from 53 to 164 days among entries and locations indicating the importance of selecting the proper maturity to fit the local environment or crop rotation. There was a considerable range in plant heights among entries and locations.

The species sorghum has much genetic variability of plant characteristics. One of these characteristics is a sweet or sugary content of the stalk versus non-sweet. Some sorghum varieties have been grown for many years for sugar and syrup production. The current energy crisis has given cause to look at sweet-type sorghums for their potential as a source of energy for production of materials such as gasahol. Sorghum is also a warm season crop and has fast plant growth for good biomass production.