GRAIN SORGHUM HYBRID PERFORMANCE EVALUATION

Texas AgriLife Extension Service
Nueces County, 2011

Cooperator: Ordner Farms

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Summary

This test was located on the Ordner Farm in Petronilla on CR 69. Soil moisture conditions at planting were marginal. Rainfall was below normal during the growing season. Nine sorghum hybrids were evaluated for agronomic performance. The best performing hybrid numerically in this test was DeKalb DKS 53-67 at 5,569 pounds per acre, although there was not a statistical difference between it and Pioneer 83G19, while the test average was 5,021 pounds per acre.

Objective

To evaluate commercially available grain sorghum hybrids growing under Nueces County conditions in a replicated evaluation.

Materials and Methods

Grain sorghum hybrids were planted in a replicated test. Each plot consisted of 12 rows with three replicates. Seed was planted using a John Deere Max-emerge II 24-row planter. Soil moisture conditions at planting were good at planting depth. Rainfall in the season was below normal and rainfall occurred as follows; March = 0.34 inch, April = 0 inch, May = 1.75 inches, and June = .47 inches for a total of 2.56 inches during the growing season. Plant populations were determined on March 28, 2011 and percent bloom was determined on May 11, 2011.

Table 1: Agronomic data for grain sorghum hybrid demonstration, Ordner Farms, Nueces County, Texas, 2011.

Planting Date: 3/3/2011 **Harvest Date:** 6/28/2011	**Soil Type:** Victoria clay	**Row Width:** 30 inch **Rows/Plot:** 12
Fertility: 300# 30-0-0 3S	**Herbicide:** Aatrex@ 1qt/A	**Previous Crop:** Cotton
Planting Rate: 57,000 plants/Ac		**Insecticide:** Seed Treatment

Results and Discussion

Plots were machine harvested on June 28, 2011 and weighed with an electronic weigh wagon in the field.

Table 2. Comparison of plant population, percent bloom, percent moisture, bushel weight, and yield per acre between hybrids, Ordner Farm, Nueces County, Petronilla, TX, 2011.

Sorghum Hybrid	Plt Population per Acre	Bloom (%) 5/11/11	Moisture (%)	Bu. Wt. (lbs.)	Yield/Acre[1] (lbs.)
DeKalb DKS 53-67	49,103	91	15.7 a	59.7 a	5,569 a
Pioneer 83G19	39,508	100	15.1 a	59.3 a	5,369 ab
Terral TV 96H81	49,184	100	15.2 a	61.0 a	5,112 bc
Triumph TRX85131	41,121	75	15.0 a	58.0 bc	5,067 cd
Golden Acres 5308	42,088	100	15.0 a	59.3 ab	4,962 cd
Golden Acres 3696	48,055	100	14.9 a	59.7 ab	4,945 cd
B-H Genetics 5350	44,346	100	15.0 a	57.3 c	4,829 cde
Gayland Ward 9417	42,572	100	15.0 a	60.0 a	4,794 de
Warner W-965-E	37,895	1	15.5 a	58.0 bc	4,546 e
LSD (P=.05)			0.726	1.69	283.60
CV			2.77	1.65	3.22
Grand Mean			15.15	59.15	5,021.48

[1]*Yield per acre is reported in pounds per acre and adjusted to 14% moisture. Means followed by same letter do not significantly differ (P=.05, LSD)*

Conclusions

Using the market price at harvest ($10.00 per cwt), the top yielding hybrid had a gross value of $556.90/acre, while the least productive hybrid was valued at $454.60 per acre, a difference of $102.30 per acre. This significant difference between hybrids illustrates the need to continue to evaluate hybrids for their production performance under local conditions.

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