

**Forage Research
In Texas,
1985**

Forage Sorghum Performance Test

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Summary

Twenty forage sorghums for silage production were tested for dry matter production and protein content at

TABLE 1. DRY MATTER PRODUCTION, PROTEIN CONTENT, AND NUMBER OF DAYS FROM PLANTING TO HARVEST OF SILAGE TYPE FORAGE SORGHUMS

Cultivar	Seed Source	Yield Tons/A	Protein Content percent	Days from Planting to Harvest
FS-25a+	DeKalb	7.8 a	5.0 h-j	133
HW-5574	Funk	7.3 ab	4.5 j	143
Hi-Energy	SeedTec	7.1 a-c	6.0 c-g	98
Cow Vittles	Conlee	7.0 a-c	4.8 ij	133
TE Yieldmaker	Taylor Evans	6.7 a-c	5.2 g-j	133
Pioneer-923	Pioneer	6.5 a-d	5.4 f-j	133
G102-F	Funk	6.5 a-d	5.8 d-i	98
FS 455	Cargil	6.2 a-e	5.8 d-i	98
Pioneer-911	Pioneer	6.2 b-e	6.5 b-d	143
Titan-R	Asgrow	5.9 b-f	5.5 e-j	124
Silo Fill 35	Ring Around	5.8 b-f	5.2 g-j	98
NK-405	Northrup King	5.7 c-f	5.1 g-j	122
NK-300	Northrup King	5.1 d-f	5.8 d-h	115
FS 351	Paymaster	5.0 d-f	5.8 d-h	115
Silomaker	Taylor Evans TE	4.8 ef	5.0 g-j	122
FS-5	DeKalb	4.5 fg	6.4 b-e	102
FS-1a+	DeKalb	3.3 gh	7.1 ab	88
811A-GB	Ring Around	3.1 h	7.0 ab	88
H-84D	Horizon	2.9 h	7.7 a	88
H-101G	Horizon	2.4 h	6.9 a-c	88

Stephenville under dryland conditions. Production varied from 7.8 to 2.4 tons/A and protein content varied from 7.7 to 4.5 percent. The number of days from planting to harvest varied from 88 to 204. In general, the earlier maturing cultivars had lower yields and higher protein, but there are exceptions to this.

Introduction

There has been a renewed interest in the use of silage by the Texas dairyman. Corn silage is considered to be superior to sorghum silage under dryland conditions, but production is risky because of frequent summer drought. This study was undertaken to determine the performance of silage type forage sorghums marketed in the Stephenville area.

Procedure

Twenty silage type forage sorghums were planted on April 27, 1984 at a rate of five plants per row feet in Windthorst fine sandy loam soil. Plots consisted of three rows spaced 3 feet, 15-feet long arranged in a randomized block design with four replications. Prior to planting, fertilizer was applied to the plot area at a rate of 148-60-0, N-P₂O₅-K₂O/A, and disk-incorporated. On May 3, 1984, 0.75 inches of irrigation water was applied to promote germination.

Ten feet of the center row were harvested at the soft dough stage of maturity to determine dry matter production per acre. Samples were taken, oven-dried at 70°C, ground to pass a 20-mesh screen, and used to determine crude protein using Kjeldahl procedures.

Results and Discussion

No significant differences were observed among the top eight cultivars (Table 1). The four lowest yielding

cultivars were the earliest maturing but had the highest protein content. Protein content for the test varied from 7.7 to 4.5 percent. In general, there was a negative relationship between yield and protein content. Also, the later maturing cultivars had the highest yield.

KEYWORDS: Silage production/sorghum bicolor/protein.