The Effect of Partial Wheat on the Feeding Value of Forage Sorghum Silage, 1943-44 (Project 828).

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The object of this experiment was to evaluate forage sorghum (cut at the same physiological stage of maturity) ensiled with varying moisture contents. All forage was cut during two days but ensiled at three different times: immediately after cutting; after drying in the field about 24 hours; and after drying in the field about 48 hours.

The forage was cut at a satisfactory silage stage, when the few seed heads present were approaching maturity and when the entire plant was about 50 percent dry matter.

A Houston three-row, 600 windrower and a Gold forage harvester with pick-up attachment were used to cut, then to pick the material up. The harvester was set to cut the forage to half-inch lengths but most of it was longer.

Silage was stored in upright concrete silos 12 feet in diameter and 20 feet high. They may have been too small for best preservation of the dried forage. Silage gas was greatest in the forage dried 24 hours; least in that cut and ensiled immediately.

DeSoto P53A sorghum was grown on the Animal Husbandry Farm. Production was about 7 tons, lightly seeded, leafy forage per acre. Rainfall recorded for the year was about 18 inches, 14 inches less than normal.

Two trials are included in this report. In one the calves were group fed; in the other they were individually fed. The calves used in both trials were good-to-choice Herefords from near Fort Davis, Texas, assigned to experimental diets on a random weight basis, within each trial.

Some variation in results between treatments occurred, but it likely could not be assigned to the experimental diets. The amount of forage required to produce a pound of live-weight gain was lowest for the calves fed forage ensiled immediately after cutting (30 percent dry matter), and increased with drying time. The quality of forage stored and storage conditions contained results.