

sorghum
silage
sample costs
and
production



University of California
Agricultural Extension Service
Imperial County
Court House, El Centro

Cost Data Sheet No. 14
UC Cooperative Extension

SORGHUM SILAGE--SAMPLE PRODUCTION COSTS

Costs based on custom rates--35 tons per acre--double cropped

ITEMS	SAMPLE COSTS	
	Per Acre	Per Ton
LAND PREPARATION (After cotton)		
Disc 2x	\$ 4.00	\$
Float 1x	1.75	
Fertilize	2.00	
List 1x	2.25	
TOTAL LAND PREPARATION	10.00	.29
CULTURAL LABOR AND POWER		
Plant	2.50	
Cultivate 2x	5.00	
Insect control 1x	1.75	
Fertilize and furrow out 1x	3.50	
Irrigate 15x	9.20	
TOTAL LABOR AND POWER	21.95	.63
MATERIALS		
Seed (10 lbs @ 20¢)	2.00	
Fertilizer (300 lbs N @ 8¢)	24.00	
Irrigation water (4 acre-feet)	8.00	
Insecticides	3.50	
TOTAL MATERIALS	37.50	1.07
TOTAL PRE-HARVEST COSTS	\$ 69.45	1.99
HARVESTING		
Chop	35.00	
Haul	35.00	
Pack and seal	17.50	
TOTAL HARVESTING	87.50	2.50
CASH OVERHEAD	15.00	.43
LAND RENT (2/3 year)	45.00	1.29
TOTAL ALL COSTS	\$ 216.95	\$6.21

SUMMARY

Top quality silage depends upon the nature of the forage as well as the ensiling method.

Poor quality forage results in poor quality feed. Greater value will result when the following practices are followed--

- ✓ plant adapted varieties
- ✓ harvest at proper time
- ✓ chop fine
- ✓ pack well
- ✓ seal the silo

WHEN TO HARVEST

Maximum dry matter yields per acre are important to silage production. High tonnage reduces production costs per ton.

Harvest when grain is in the soft to medium dough stage.

TYPE OF SILO

Trench or bunker silos are common in Imperial County. Sides should slope at least 3 inches per foot in height for better packing.

Design silo dimensions to permit removal of a minimum 6 inches from the silo face daily. Silage averages 35 lbs. per cubic foot.

LENGTH OF CUT

Forage should be cut as fine as practical. Length may vary from 1/2 to 1 1/2 inches.

Some factors are the ground speed of the harvester and the size needed for adequate packing. Sharply cut forage is much easier to pack and to remove than long shredded material.

PACKING THE FORAGE

Silage is packed to exclude as much air as possible, thus rapid curing is encouraged and spoilage reduced.

Crawler type tractors with dozer blade can pack and form the fill in a single operation. Packing should be thorough with any method with the top sloped well to allow for settling.

SEALING THE SILO

Proper sealing minimizes top spoilage from mold. Black plastic has been used successfully. Sisal paper seals well also.

Anchor the seal well. Rocks, old tires, and soil can be used to hold the edges in place. Soil as a seal is difficult to remove.

SOIL PREPARATION

Soils suited to alfalfa should produce sorghums well. Keep land preparation costs low. See page 2 for usual practices.

PLANTING RATES & DATES

When soil temperature reaches 65°F, plant 6 to 12 lbs. seed per acre on 30 to 36 inch beds. Irrigate up. Plant in a mulch where crusting is a problem.

For double cropping, plant March 15 to April 1. For a single crop, plant March 15 to July 1.

FERTILIZATION

Only nitrogen is recommended. Needs for phosphorus usually furnished from previous crops.

A single crop uses 100 to 150 lbs. of actual nitrogen per acre. If double cropped, apply another 150 lbs. of nitrogen after the first cutting. On sandy soils, the same amounts should be used in split applications.

IRRIGATION

Apply water often enough to prevent leaves from curling. See page 2. UC Cooperative Extension

PEST & DISEASE CONTROL

Consult your Field Crop Pest & Disease Control guide for latest recommendations.

VARIETIES

BRAWLEY: A selection from Rex. Highest yielding when planted early and double cropped. Ready to harvest in late July and late October. High in sugar. Stands up well.

REX: Slightly less yield than Brawley. Tends to lodge more.

ATLAS: Similar to Rex in yield and lodging.

HEGARI: Stands well. Less yield than Brawley.

MIXTURES: Some yields compare well with Brawley. Some reports well over 40 tons per acre double cropped. Resistance to lodging may occur.

HYBRIDS: Several look promising. Lodging may be a problem.

VALUE OF SILAGE

Silage value as fed is usually listed as 1/3 of good alfalfa hay. To increase the value of silage, secure maximum dry matter yield, ensile properly, and feed with adequate supplement.

Prepared by
James P. Jones
and
James B. Burgess

July 1962

Co-operative Extension work in Agriculture and Home Economics, College of Agriculture, University of California, and United States Department of Agriculture co-operating. Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914. George B. Alcorn, Director, California Agricultural Extension Service.

UC Cooperative Extension