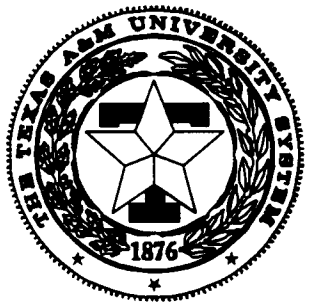
FORAGE-LIVESTOCK FIELD DAY REPORT - 1998

TEXAS A&M UNIVERSITY AGRICULTURAL RESEARCH and EXTENSION CENTER at OVERTON

Texas Agricultural Experiment Station
Texas Agricultural Extension Service



April 16, 1998

Research Center Technical Report 98-1

PRODUCTION SYSTEMS TO IMPROVE THE COMPETITIVENESS OF THE SOUTHERN DAIRY INDUSTRY

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Background. The southern dairy industry has had a marked reduction in the number of dairy farms in the past few years. For Example, Texas has lost 327 dairy operations from December of 1995 to December of 1997 which is an eighteen percent reduction . Reduced activity in the dairy sector has had large negative economic impacts on the communities of the region.

Two systems are working in Texas to keep the southern dairy farmers competitive. The two systems are, intensive-rotational grazing and well managed free-stall operations.

The grazing operations are low-input operations while the free-stall operations maximize milk production. Both systems have radically different management styles and objectives but operate under the conditions of the southeast with high temperatures and humidity for much of the summer months. In addition, both operations grow most of their own forage which consists of coastal bermudagrass and sorghum for summer with small grains being utilized in the winter months. Each of these operations will be described.

Research Findings. The grazing operations will typically have about 225 to 250 acres which are divided into 40 to 60 small paddocks of 5 to 8 acres each. There will be between 500 and 600 cows run on this acreage the year around with cows being divided into one breeding group, two higher production groups and a late lactation group in addition to a dry cow group. Cows will be moved to a new paddock each day. In summer the cows graze coastal bermudagrass and during the winter small grains are seeded into the bermudagrass sod to supply the forage needs of the animals. Supplemental bermudagrass hay is offered to the grazing cows from specially made hay wagons which are moved from paddock to paddock with the cows. Cows will normally eat less that seven pounds of hay per day when there is sufficient forage but during times of slow growth due to winter cold or drought, cows will consume enough hay to meet nutrient requirements.

These East Texas free-stall operations are very similar to free-stall operations in any location of the southern states. Most of these dairy farms consist of 350 to 1000 cows. The barns are equipped to keep the cows as comfortable as possible during hot weather with water spray systems and cooling fans. The cow are fed total mixed rations with southern forages making up the bulk of the forage.

Cows are well managed and BST is used in the operations to maximize milk production. The cows are milked three times per day. On the 750 cow dairy 10 full time workers are employed with some part-time help used during the silage harvests. All cows are artificially bred and all heifers are

raised on the farms. The land base for the operation consists of 430 acres which is fully utilized for forage production.

Application. To compare the grazing and free-stall operations of East Texas, 16 dairy farmers were brought together under the direction of persons from the Dairy Policy Group at Texas A&M University. These dairy farmers made up four panel groups of dairies: one smaller group of grazers, one smaller free-stall group; one large grazer group and one large free-stall group. The data collected from this effort was subjected to Policy groups computer model for profitability over the horizon of 1996 to 2002. Return on Assets was determined from the model.

Both small grazing and small free-stall operations were determined to be marginal by the model but the two larger groups showed good possibilities. Results of the computer projections are shown in Table 1.

Table 1. Comparison of Grazing and Free-Stall Dairies.

Item	Grazing		Free Stall	
Averages 1996 - 2002	**Moderate**	**Large**	**Moderate**	**Large**
Cash receipts/cow (all sources)	$1,901.21	$1,775.76	$2,874.97	$3,052.00
Cash receipts/cwt. (all sources)	$15.16	$14.64	$15.13	$15.36
Cash expenses/cow	$1,647.58	$1,558.53	$2,494.17	$2,750.58
Cash expenses/cwt.	$13.14	$12.85	$13.12	$13.85
Net cash income/cow (all sources)	$253.63	$217.23	$380.80	$301.62
Net cash income/cwt. (all sources)	$2.02	$1.79	$2.00	$1.51
Average investment per cow	$5,336.00	$2,185.00	$5,197.00	$4,015.00
Average debt per cow	$1,400.00	$645.00	$1,601.00	$1,699.00
Avg. Return on assets	7.9%	12.8%	11.6%	12.9%
Avg. Return on equity	4%	6.2%	8.3%	8.3%
Beginning long term debt to equity ratio	74.7%	75.5%	69.0%	73.7%
Ending debt to equity ratio	46%	46%	60%	60%
Avg. ending net cash position before borrowing per cow	22%	23%	31%	31%

Reference:
Schwart, Robert B. Jr., David Anderson, Max Sudweeks and Joe Outlaw. 1997. Alternative Dairy Technologies: Some Preliminary Results. Handout at Southwest Dairy Field Day. 1997. Texas Agricultural Extension Service.