FORAGE AND BEEF CATTLE RESEARCH - 1982

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FORAGE UTILIZATION IN DAIRY RATIONS

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Forages are the central part of profitable dairy feeding programs because they are usually the most economical source of energy, protein, vitamins and minerals for milking cows. However, the quality of forages will vary greatly depending on maturity and other management factors. Therefore, a profitable dairy operation will require a well managed forage operation. The production and management of quality forages will become even more critical now that milk price supports are being adjusted downward when production costs are increasing.

In the East Texas B.E.T. area, there are 109,300 milking cows which produce 1,223,600,000 pounds of milk per year, generating annual gross sales of nearly 200 million dollars. This is slightly over 34% of the milk produced in Texas.

Yearly feed costs per cow in early 1981 were about $800, but now have risen to over $900 in 1982.

Table 1. Estimated annual feed costs per milking cow in East Texas in 1982

Feed	Amount fed	Cost ($)
Grain mix	6,650 (lbs)	608
Hay	3 tons	165
Pasture	220 days of grazing	150
	Total	923

[1]Adapted from budgets developed by Mr. Wayne Taylor.

A quality forage program is beneficial in two ways. First, production per acre is usually greater and second, the forage is generally more nutritious thus reducing the amount of higher priced grains needed to balance the ration. Both increased production and greater nutritious content of the forage usually increase profitability.

Research at the Overton Center has established efficient methods of managing forages for beef production. Some of these methods are being adopted for feeding dairy cows with good results in milk production and cost effectiveness. For example, in a 3-year study with seasonal application of fertilizer of 340-100-100 and harvested at 28-day intervals, S-66 bermudagrass yielded over 6 tons of dry matter per acre. The results of this study prompted a demonstration in Wood County where milking cows were stocked at the rate of seven cows per acre on bermudagrass with an annual fertilizer rate of 560-100-100 which cost $201 per acre. Average production per cow per day increased 5.9 lb for the 110 day study, resulting in a gross return of $644.78 per acre for the added milk produced.

To illustrate how forage quality affects the cost of feeding dairy cows, two rations were run on the computer for cows weighing 1350 lbs, giving 50 lbs of 3.5% fat milk. In one case, young growing bermudagrass with 19.5% crude protein and .5 MCal per pound was used. In the second case, mature bermudagrass with 8.0% crude protein and .4MCal per pound was used. The mature forage required 18.43 lbs of grain be added to the diet for a total cost of $2.68/cow/day, but the higher quality bermudagrass required only 12.93 cow/day. This is a savings of 72¢/cow or $72/day if you were milking 100 cows.

With the economic situation in dairying it will become increasingly important to adopt practices which will make maximum use of forages in dairy feeding.