

Facilities for Handling, Storing and Processing
Feedstuffs on the Farm

by
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In 1978, the decision was made to build an on farm feed mill at Richardson's Dairy. On the recommendation of Dr. Barney Harris, we visited four dairy farms with feed mill operations. We then designed and built our mill. Construction was started in November of 1978 and mill operation began in June of 1979.

Our feed mill is 140 feet long, 60 feet wide, and 24 feet at eave height. It is divided into 9 compartments. We have 8 compartments 20 feet by 20 feet, each of which can hold 80 to 100 tons, and 1 area for cottonseed hulls which is 40 feet by 60 feet, which can hold 400 tons. The feed mixing area is 20 feet by 40 feet.

All feed ingredients are put into the mill by overhead conveyors. Ingredients are moved from the storage area to an Oswalt stationary mixer with a small articulated loader. After mixing, the complete ration is stored in upright storage tanks and distributed to overhead feeders that serve feed troughs with self locking stanchions. All feeding is done in this manner except for feeding replacement heifers. Heifers are fed in pasture troughs with an auger wagon.

We lease a rail siding and also have facilities for receiving truck deliveries. All shipments are weighed in on truck scales at the farm. In 1983, we installed a bucket elevator with dump pit and two 25,000 bushel grain bins. We also purchased a roller mill. This addition allows us to use the small grains that are becoming more plentiful in the Southeast. In the past year, truck delivery has been more economical than rail.

Feed ingredients are bought from brokers and feed merchandisers. Brokers operate on a commission and merchandisers usually own the ingredient. We shop both when buying. Purchasing feed ingredients is not difficult. It is like buying a truck, tractor, or any other piece of equipment; you shop for the best deal. In this case, you shop by phone on the feed dealers' Watts line.

In 1982, we purchased a micro-computer to balance rations and keep our feed inventory. Reliable inventory accounting without a computer is extremely difficult. With many tons of ingredients moving in and out at different prices, the computer keeps accurate records of inventory and actual costs of ingredients on hand.

The economic advantages of on-farm feed mixing are considerable. The following table shows our cost for the fiscal year May 1, 1982 - April 30, 1983, and the same period for 1983-84. All costs have been included except hay fed in the pasture.

FEED COST PER TON

| | 1982-83 ===== | 1983-84 ===== |
|------------------------------|------------------|------------------|
| Depreciation ¹ | 5.51 | 6.45 |
| Labor ² | 4.48 | 4.38 |
| Interest | 3.74 | 5.87 |
| Insurance | .38 | .34 |
| Power | .21 | .34 |
| Fuel | .21 | .20 |
| Ingredient cost ³ | <u>105.40</u> | <u>131.24</u> |
| | <u>\$119.93</u> | <u>\$148.71</u> |

¹Equipment is depreciated in five years. Building is depreciated in fifteen years. Anticipated useful life of equipment is fifteen years; of the building is thirty years.

²Total labor cost for one employee includes wages, health insurance, employer's share of FICA, all bonus and retirement plan benefits. This employee spends only 75% of his work hours in feed operation, which is his main duty. All costs are charged to feed mixing, however.

³The rations fed in 1982-83 contained 25% cottonseed hulls and in 1983-84 contained 19% cottonseed hulls. No urea was used. Crude protein was approximately 14%.

We produced complete rations for 576 adult cows and 450 replacement heifers in 1982-83. 44% of net milk income (less all Co-op deductions) was used to feed all animals. Net milk income was \$16.09/cwt. Charging all feed against milk receipts, the feed cost per hundred weight of milk was \$7.08. In 1983-84, we fed 661 cows and 600 heifers. 49.5% of milk income was used for feed during this period. Net milk price was \$14.60/cwt. and feed cost per hundred weight of milk was \$7.23.

Assuming a price difference of \$25.00 per ton for commercially mixed feed over our cost:

1982-83 4454 tons at \$25.00 Diff. = \$111,350.00
 1983-84 4970 tons at \$25.00 Diff. = \$124,250.00

The price differential of \$25.00 per ton of commercial feed could prove to be high or low. We have a total of \$220,000.00 invested in the feed facility. The figures shown above indicate a two year pay-off possible.

I urge you to take these figures and compare your cost. The on-farm feed mill is not for everyone. It is a separate business and must be approached with a sound business attitude. Whether we, as Florida dairy farmers mix our own feed or produce silage, we must gain control of our feed dollars.