

A Dairy Programme for Maximum Production

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INTRODUCTION

In this rapidly changing world the great technological advances which have become part and parcel of industrial undertakings must also be applied to farming. Most dairy farmers in Queensland are faced with rising costs and must meet this situation by a change in management.

Two factors can improve the farmers' gross return—higher prices or more efficient production. Prices must not reach a stage where there is buyer resistance, and higher prices invariably enter a vicious cycle of rising costs without ultimately benefiting anyone.

The remedy seems to lie in more efficient production. Our efforts to achieve this end are outlined in this paper.

DESCRIPTION OF THE FARM BEFORE THE PRESENT IMPROVEMENT PROGRAMME

The farm under consideration comprises 575 acres in the Fassifern district, Queensland. The average annual rainfall is 30 inches, with a summer dominance. Some 375 acres were subject to heavy flooding, 250 acres of which previously comprised a swamp.

A stretch of alluvial soil adjoins Warrill Creek and leads back into undulating ridges carrying eucalypt forest on poor soils.

Irrigation water is available from the creek for portion of the year, but is likely to be restricted naturally or by legislation during the annual dry periods.

The farm carries a herd of pure bred A.I.S. cows and the production is sold off the farm as whole milk. Cows are calved throughout the year. All heifer calves are reared and selected bulls sold for breeding purposes. Cows are "steamed up" before calving by feeding 5-6 lb. of grain per day for about a month until calving takes place.

FARM IMPROVEMENT

1. Water Supply and Drainage:

In order to provide for continuous irrigation water and at the same time drain the land subject to flooding, an earthen wall 9ft. high and 55 chains in length was erected with the owners' plant to enclose the lowest fifty acres of the swamp and give a storage capacity of 500 acre feet of water. The remainder of the swamp water now drains into Warrill Creek and by pumping from run-off during the floods it is hoped to maintain enough storage to irrigate 250 acres of land. The cost of this operation was £2000.

2. Irrigated Improved Pasture:

An area of 30 acres of rye grass-clover pasture has been established along the creek frontage and irrigated when water is available from the creek.

3. Dryland Improved Pasture:

Two hundred acres of undulating ridge country has been sown to lucerne and green panic and is giving good grazing.

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4. Farm Mechanisation :

In order to undertake large-scale fodder conservation a farming plant consisting of a 50 h.p. tractor, cutter-bar forage harvester, two self-unloading five-ton trucks, and a dozer blade have been added to the machinery held. This plant gives a greater output per man-hour thus cutting labour costs.

5. Fodder Conservation:

An attempt has been made to stabilise the feed position throughout the year by conservation of fodder to tide the herd over periods of food shortage. Practically all of the paddocks have been cleared of obstructions to allow passage of the machinery.

Hay making has given place to ensilage.

In 1959 some 1050 tons of pasture silage were made consisting of several hundred tons of couch and other summer grasses which yielded at the rate of seven tons of green material per acre; and 400 tons of lucerne-green panic silage from pasture which cut 6 tons of green material per acre $3\frac{1}{2}$ weeks after grazing. The silage was stored in a trench under a roof measuring 45ft. x 125ft. The cost of the silage was 15/- per ton without the added grain. Grain was added at ensiling at the rate of $2\frac{1}{2}$ per cent. by weight of green material.

6. Building Improvement:

An 8-unit set of milking bails has been erected on the herring-bone system and a feedlot constructed beside the silo.

7. Herd Testing:

Three years ago the herd was entered in a Herd Testing Scheme.

RESULTS IN IMPROVED PRODUCTION

The increased herd production is shown below:—

Year	No. of Cows	Average Production of Milk (gallons)	Average Production of Butterfat (lb.)
1957	89	443	167
1958	57	601	221
1959	63	912	341

DISCUSSION

This high production during the past year has been due to better feeding as the cows were a similar group to those of the previous years. The main ration has been the pasture-grain silage plus grazing on improved pasture. Cows which in 1958 averaged 3-4 gallons of milk a day gave up to 5-7 gallons in 1959. In October, 1959, the herd of 70 cows averaged 37lb. of milk per day after having milked for 140 days.

During the hot weather the cows ate very little between 7 a.m. and 6 p.m., and it would appear that green lot feeding under cover may be worthwhile during this period.

The experience gained during the past few years clearly indicates that pasture is the cheapest and best feed for both production and the maintenance of soil fertility. The future management of the farm must centre around the use of high quality pasture. The aim will be a continuity of feed throughout the year, a lactation length of 300 days with a 9 weeks "dry" period and a production

average of 1000 gallons of milk and 400lb. of butterfat per lactation. Calves will be reared by rotating them around small pasture paddocks and cull bulls will be reared as vealers.

Our production costs will fall by reason of higher production per acre, and the all-round convenience of the new arrangements for feeding and milking will lift the drudgery from the dairying venture.

DISCUSSION

W. H Stephens (Tas.).—What sort of grain is added to the silage and how is it added?

Answer=--Ground milo or barley is added at the rate of 60 lb. per ton of fodder by hand when the silage is being made. If the fodder were wilted before ensiling, less grain may be needed.