Once daily calf feeding lowers rearing costs

Department of Agriculture, Western Australia

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RESULTS FROM RECENT RESEARCH

ONCE DAILY CALF FEEDING LOWERS REARING COSTS

The usual method of hand rearing dairy calves involves twice daily feeding of milk or milk substitutes. This routine adds considerably to the labour necessary at milking time and may have prevented many farmers from putting much effort into dairy beef production.

The report below comes from a 1969 trial carried out at Bramley Research Station to see if once-daily calf feeding was as effective as twice daily feeding. The trial’s results should be considered as early findings from a series of trials being conducted into calf rearing regimes by both the Animal and Dairying Divisions of the Department of Agriculture.

Method
Twenty autumn-born Friesian steer calves were taken from their mothers after three days and allocated into two groups according to their dates of birth. Each group was then placed in a 1⁄2-acre paddock and fed daily on hay, dry supplement and 1 gal. whole milk per head.

The supplement used contained 21.6 per cent. crude protein on a dry matter basis and cost 2.5c per pound. It was fed to appetite and consisted of—

76 lb. coarsely ground barley,
14 lb. Welko lupins,
9.5 lb. meatmeal,
0.5 lb. mineral mixture, and
Vitamins A and D.

Both groups were given the ration for six weeks with the control group receiving five pints of whole milk twice daily.

The experimental group was fed its whole milk as 5 pints twice daily for one week, then was gradually changed to daily feeding via the following mixtures—

Days 8-11
Five pints whole milk, 1 lb. skim milk powder and 1 pint of water in the morning—2½ pints whole milk in the evening.

RESULTS—CALF FEEDING FREQUENCY TRIAL

<table>
<thead>
<tr>
<th></th>
<th>Once daily feeding</th>
<th>Twice daily feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. purchase date</td>
<td>25/4/69</td>
<td>25/4/69</td>
</tr>
<tr>
<td>Av. wt at purchase</td>
<td>85 lb.</td>
<td>85 lb.</td>
</tr>
<tr>
<td>Av. wt at 6 weeks age</td>
<td>162 lb.</td>
<td>150 lb.</td>
</tr>
<tr>
<td>Av. gain to 6 weeks</td>
<td>77 lb.</td>
<td>65 lb.</td>
</tr>
<tr>
<td>Av. wt at 7 months age</td>
<td>405 lb.</td>
<td>415 lb.</td>
</tr>
<tr>
<td>Feed consumption—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Av. dry supplement consumption</td>
<td>14 lb.</td>
<td>14.5 lb.</td>
</tr>
<tr>
<td>Av. hay consumption</td>
<td>15 lb.</td>
<td>15 lb.</td>
</tr>
<tr>
<td>Av. milk consumption</td>
<td>32 gal.</td>
<td>32 gal.</td>
</tr>
<tr>
<td>Av. skim powder</td>
<td>33 lb.</td>
<td>nil</td>
</tr>
<tr>
<td>Feed costs—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry supplement at 2.5c/lb.</td>
<td>$0.35</td>
<td>$0.25</td>
</tr>
<tr>
<td>Hay at 1.2c/lb.</td>
<td>$0.18</td>
<td>$0.18</td>
</tr>
<tr>
<td>Milk at 20c/gal.</td>
<td>$6.40</td>
<td>$10.50</td>
</tr>
<tr>
<td>Skim powder at 10c/lb.</td>
<td>$3.30</td>
<td>nil</td>
</tr>
<tr>
<td>Total</td>
<td>$10.23</td>
<td>$11.04</td>
</tr>
</tbody>
</table>

Day 12-6 weeks
Five pints whole milk, 1 lb. skim milk powder and one pint of water in the mornings only.

Results
Feed consumption, costs, and calf growth rates, are shown in the table.

Discussion
No digestive upsets occurred in the once daily fed group, which also grazed much earlier and more readily than the twice daily fed group. The once daily fed group also grew as fast as the twice daily fed animals.

Both groups of calves thrived satisfactorily after being weaned onto pasture only (with no supplements) in early June when they were six weeks old. After weaning the calves grew at about 1½ lb. per day.

Mixing of skim milk powder with the milk was not done very thoroughly but the calves readily ate any lumps left in the buckets. It is probably not even necessary to add the pint of water to the mixture.

Apart from the direct labour saving offered by feeding once daily, a further fringe benefit is that utensils need to be cleaned only once.

Acknowledgments
Thanks are extended to Mr. N. A. Scott, manager, and Mr. H. G. Payne, technician, at Bramley Research Station, for their assistance during the trial. The work was partly financed by the Australian Meat Research Council.