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DAIRY CALVES CAN SAFELY BE FED ONCE A DAY

THE sale of milk rather than butterfat has increased greatly in the past few years and less than half the dairy farmers in Western Australia now own cream separators.

By R. A. BETTENAY*

Feeding whole milk once a day can be successful for raising dairy calves, even in winter when calf rearing is most difficult.

A recent experiment at Wokalup Research Station showed that satisfactory weight gains can be achieved if liquid milk is fed only once a day from a very early age. Trial calves gained 1 lb a head a day over the 12 weeks of the experiment.

Once-a-day feeding greatly reduces the labour cost of calf raising.

As a result, fresh skim milk is not available twice a day for calf feeding on many properties and alternative feeds are being used.

Feeding calves on liquid whole milk only once a day, where skim milk is not available, is a practical way of reducing the labour costs in calf rearing. Experiments in several countries have shown that this can be done and the practice is becoming widespread in the Eastern States.

The technique was investigated under local conditions in an experiment recently completed at Wokalup Research Station. It was carried out in mid-winter, when calves are most difficult to rear.

The experiment

The experiment began on June 8, 1970, when the calves were less than a week old. Male Friesian calves were used. They were split into two groups of 13. One group was fed one gallon of milk a head each day in two equal feeds, and the other group one gallon of milk a head in one feed each day.

Both groups were run on pasture and given as much hay as they would eat. A meal containing 8 parts crushed barley, 1 part skim milk powder and 1 part meatmeal was also available, up to a maximum of 2 lb a head a day. Its cost was just under 3 cents per pound.

Pasture quality was poor for the first 4 weeks of the trial but later some perennial ryegrass-kikuyu pasture was available on irrigation areas.

The whole milk fed in the first two weeks was gradually replaced by reconstituted skim milk and the amount fed was reduced in the seventh and eighth weeks. The calves were weaned at eight weeks.

The calves were weighed on arrival at the Station, then weekly to 12 weeks, when the trial was completed.

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The group fed once a day looked well and made satisfactory growth. They gained an average of 82 lb a head during the 12-week experiment.

The milk feeding schedule was:

1st and 2nd week—whole milk—up to 1 gal. per day.

3rd week—two parts whole, one part reconstituted skim milk—1 gal. per day.

4th week—one part whole, two parts reconstituted skim milk—1 gal. per day.

5th and 6th week—1 gal. reconstituted skim milk per day.

7th week—8 lb. reconstituted skim milk per day.

8th week—5 lb. reconstituted skim milk per day.

Rather surprisingly, the group fed milk twice a day ate slightly more meal than the once-a-day group, from the third to the seventh week. This may help to explain the slightly higher weight gains of the twice-a-day group.

Over the 12 weeks of the trial the once-a-day group gained 82 lb. and the twice-a-day group 94 lb. Although they gained less than the other group, the once-a-day group put on almost a pound a head a day, a rate of gain satisfactory for dairy replacements or for calves being raised for sale as steers.

The once-a-day group appeared slightly potbellied at the end of the trial, but this would not be expected to interfere with their future growth and well-being.

Both groups were healthy throughout the trial, and scouring was not a problem.

Average liveweight of calves (lb.)

<table>
<thead>
<tr>
<th></th>
<th>Once-a-day group</th>
<th>Twice-a-day group</th>
</tr>
</thead>
<tbody>
<tr>
<td>At purchase</td>
<td>83</td>
<td>81</td>
</tr>
<tr>
<td>1 week</td>
<td>91</td>
<td>89</td>
</tr>
<tr>
<td>2 weeks</td>
<td>96</td>
<td>93</td>
</tr>
<tr>
<td>3 weeks</td>
<td>106</td>
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<td>4 weeks</td>
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<td>5 weeks</td>
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<td>6 weeks</td>
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<td>7 weeks</td>
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<td>143</td>
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<tr>
<td>8 weeks</td>
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<td>150</td>
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<tr>
<td>9 weeks</td>
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<td>10 weeks</td>
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<td>162</td>
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<tr>
<td>11 weeks</td>
<td>160</td>
<td>169</td>
</tr>
<tr>
<td>12 weeks</td>
<td>165</td>
<td>175</td>
</tr>
<tr>
<td>Total gain over 12 weeks</td>
<td>82</td>
<td>94</td>
</tr>
</tbody>
</table>

For the first few days the calves fed once a day drank less than a gallon of milk a head a day, but by the fifth day all calves were drinking their full ration.
Recommendations

The experiment confirmed that once-a-day milk feeding of calves from birth can be safely carried out even in mid-winter when calf rearing is most difficult. It can be associated with weaning at 8 weeks and restricting milk intake to 1 gallon a head a day.

It is important to get calves eating a meal as early as possible and not to wean until they are eating at least 1 lb. a head a day of the meal. All changes in diet should be introduced gradually, over several weeks.

Future general practice at the Research Station will be to feed calves twice a day for the first week but once a day beyond that age. Weaning will be at 8 to 10 weeks, depending on individual health and vigour.