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Is a computer feeder necessary in the dry lot cow?

Abstract

Springing heifers and dry cows were introduced to a computer feeder either 2 wk before their estimated freshening date or at calving. There was no significant difference in milk production, percentage milk fat, percentage milk protein, or somatic cell count (SCC). Lead feeding with a computer feeder resulted in a 40% decrease in concentrate consumption over bunk feeding during the dry period.; Dairy Day, 1986, Kansas State University, Manhattan, KS, 1986;

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IS A COMPUTER FEEDER NECESSARY IN
THE DRY COW LOT?

J. C. Kube, J. E. Shirley, and K. D. Frantz

Summary

Springing heifers and dry cows were introduced to a computer feeder either 2 wk before their estimated freshening date or at calving. There was no significant difference in milk production, percentage milk fat, percentage milk protein, or somatic cell count (SCC). Lead feeding with a computer feeder resulted in a 40% decrease in concentrate consumption over bunk feeding during the dry period.

Introduction

When purchasing a computer feeder, dairymen must decide if a feed station is necessary in the dry cow lot. This trial was designed to determine if there is a benefit to having a feed station.

Procedures

Twenty-six springing heifers and 22 cows were challenge-fed either by the computer feeder or in a bunk starting 2 wk before the expected calving date. The computer-fed group started at 5 lb of grain intake per day. This level was increased daily to achieve 1% of body weight of grain intake by the expected calving date. The bunk-fed group received 16 lb of grain per day until calving. Both groups were housed in the same lot after calving and managed equally. Milk production and composition, SCC, and bodyweight were monitored for the first 9 wk of lactation.

Results and Discussion

Differences in production are shown in Table 1. Cows and heifers that were lead-fed by the computer feeder produced less milk with a lower percentage milk fat, but a higher percentage milk protein and a lower SCC. These values were not significantly different. The small difference may be explained by the fact that bunk-fed animals consumed more grain during their last 2 wk of gestation (Table 2). Table 3 illustrates the body-weight changes following calving. The computer-fed group gained more weight in the first 9 wk of lactation than the group that was bunk-fed.

Table 1. Differences in measured milk parameters^a

Group	Averages over the first 9 weeks of lactation			
	Milk Weight lb	Milk Fat %	Milk Protein %	SCC (1000's)
Heifers	-3.1	-.32	+.03	-7
Cows	-4.6	-.13	+.15	-83

^aThe difference between the computer-fed group and the bunk-fed group. Positive (+) number indicates that the computer feeder group had a higher value. Negative (-) number means the computer feeder group had a lower value.

Table 2. Grain intake during last 2 weeks of gestation

Item	Computer Lead-Fed	Bunk Lead-Fed
Days lead fed (average)	12.3	13.7
Total grain intake (lb)	86.5	219.6
Average grain intake per day (lb)	7.0	16.0

Table 3. Body weight (lb) of computer-fed (CF) and bunk-fed (BF) cows and heifers

Week	Heifers		Cows	
	CF	BF	CF	BF
-2	1181	1210	1454	1503
1	1016	1076	1313	1379
5	1054	1087	1298	1346
9	1093	1113	1327	1357

^aTwo values are significantly different ($P < .05$).

^bTwo values are close to being significantly different ($P < .07$).

It appears that the animals that were computer-fed consumed more grain in their first 9 wk of lactation than their counterparts, as noted by their advantage in body weight gain. Bunk-fed cows were mobilizing body reserves stored before calving, which accounted for their slightly higher milk production. It should be

noted that the animals in the bunk group happened, by chance, to be larger than the animals in the computer group. This may explain some of their advantage in milk production.

Economics

The amount of money that would be saved by the lower intake of grain by the computer-fed group is shown in Table 4.

Table 4. Grain savings with computer feeder compared to bunk feeding

Computer Lead Fed Group	Bunk Lead Fed Group
7.00 lb Daily intake (Table 2)	16.00 lb Daily intake (Table 2)
x 4.5¢/lb ^a	x 4.5¢/lb ^a
<u>31.5¢/hd/day</u>	<u>72¢/hd/day</u>
x 14 days	x 14 days
<u>\$ 4.41/hd/year</u>	<u>\$10.08/hd/yr</u>
	\$10.08
	-4.41
	<u>\$5.67 savings/head/year</u>

^aAssumes concentrate cost at \$90/ton.

Recommendations

1. Production does not increase with the use of a computer feeder in the dry cow lot.
2. Some feed savings is expected with the use of a computer feeder in the dry cow lot.
3. Cows did not show any signs of problems in adjusting to the computer feeder after calving.

Therefore having a computer feed station in the dry cow lot is not necessary, if the dairyman can still lead-feed the cows by some other means. If there is no other means of lead feeding, a computer feeder may be economical.