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A-MAX Concentrate Trial in Dairy Cows - Grass Grazing Conditions

Introduction: A trial was conducted at Aberystwyth University in Wales, United Kingdom by Dr. Michael Rose.

Objective: To test the effects of adding A-MAX™ Concentrate in the diet of early lactation cows while on summer grass grazing conditions.

Materials & Methods: Thirty-seven Holstein-Friesian dairy cows in peak lactation were used for this trial. Trial was conducted from June to September of 2008. Cows were housed in pasture conditions, and therefore, had full access to grass during day and night. Additionally the cows received on average 7.25 kg/cow per day of protein concentrate. Cows were milked twice per day. All animals were housed together and rotated thru 3 feeding periods:

- Period 1: 27 days normal feeding, no yeast added
- Period 2: 31 days inclusion of A-MAX Concentrate at 50 grams/head/day
- Period 3: 27 days normal feeding, no yeast added

Cows received the same amount of protein concentrate in all feeding periods. In periods 1 and 3 all of protein concentrate was fed in the parlor. In period 2 the cows received 6 kg/cow protein concentrate in the parlor. Additionally 1.25 kg/cow of protein concentrate was mixed with the yeast and fed to the cows as a group after milking in a feeding area-passage. To facilitate the feeding of the A-MAX Concentrate, the cows on trial were in their own grass paddock during period two, separated from the rest of the herd. Throughout all three periods of the trial, the height of the grass was maintained at 5-9 cm. Milk production was measured at each milking. Milk protein and fat was measured once at the end of each test period.

Cows were an average of 64 days in milk (DIM) at the start of the trial; therefore, the peak lactation had been reached and milk production was trending down.

Results: Complete results are shown in Table 1. The milk yield increased in period 2, when cows were on A-MAX, by an average of 1.46 kg/cow/day relative to the average of periods 1 and 3 (30.64 versus 29.18). There was no significant effect on milk concentration of fat or protein relative to the three feeding periods.

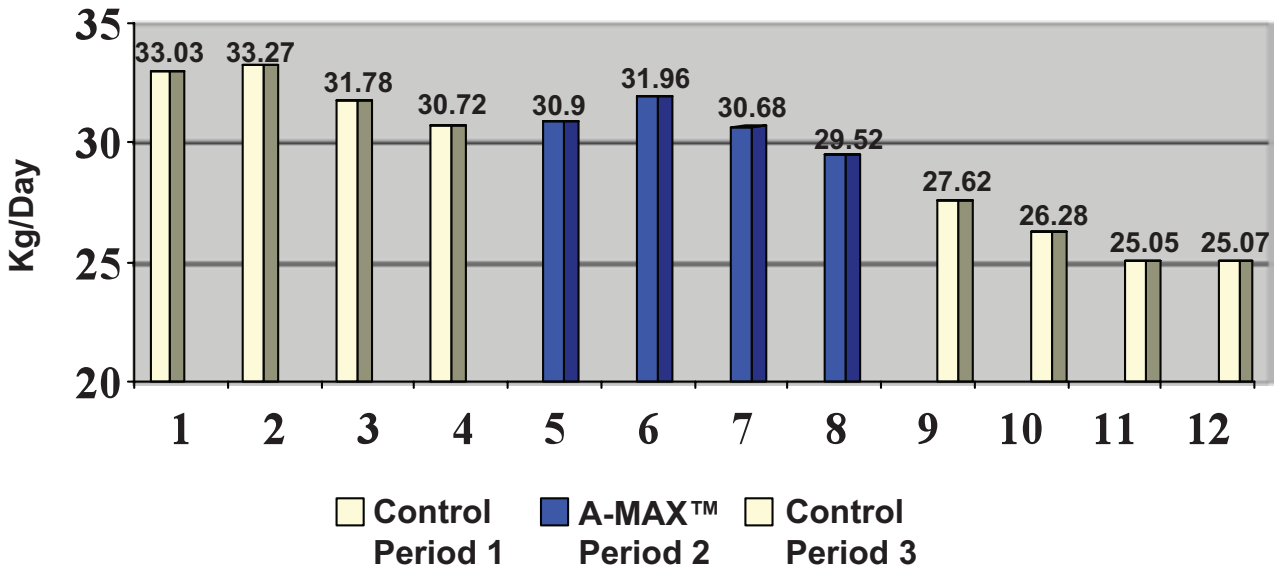
This conclusion must be seen in light of the trial design, in that all cows were on the same treatment. These changes in milk production could be attributed to other factors, for example, weather or grass. However, looking at the trend in weekly average milking yield (Figure 1), it is noticeable that milk production was declining in period one, and then increased in period two when yeast was added. Then, in period three, when yeast was removed, milk production started trending down again.

Conclusion: A-MAX Concentrate showed improvement in milk production when introduced into the diet of cows under summer grass grazing conditions in this trial.

Table 1: Results

	Period 1	Period 2	Period 3	Avg. of Period 1 & 3
Milk Yield	32.26	30.64	26.15	29.18
Milk Fat %	3.79	3.90	3.63	3.71
Milk Protein %	3.16	3.13	3.10	3.13

Figure 1: Weekly Avg Milk Production



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