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Effects of Bovatec, Rumensin or GainPro Fed to Yearling Summer Grazing Steers

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Tylan (Table 1). The improvement in daily gain for MSE was about 10%. The numerical increase in dry matter consumption for the MSE fed steers was not statistically significant ($P=.54$). Figure 1 shows the dry matter feed consumptions by treatment during each week of the 119-day trial. An expected reduction in feed intake for Rumensin occurred during the first week when cattle were adjusting to this ionophore. Cattle on MSE went off feed during the third and fourth weeks, but after recovering, appeared to average higher in feed intake during the remainder of the trial. There was an improvement ($P=.08$) in feed conversion for the MSE fed steers that was 7.5% greater than the average for the steers fed Rumensin-Tylan at typical finishing diet levels.

Carcass measurements showed an increase ($P<.01$) in dressing percentage for MSE fed steers. It is not known why this occurred, as fat cover was the same for both treatments. In addition to heavier hot carcass weights ($P<.05$) for MSE fed steers, rib eye area was also greater ($P=.05$) for MSE fed steers. This increase in rib eye can be attrib-

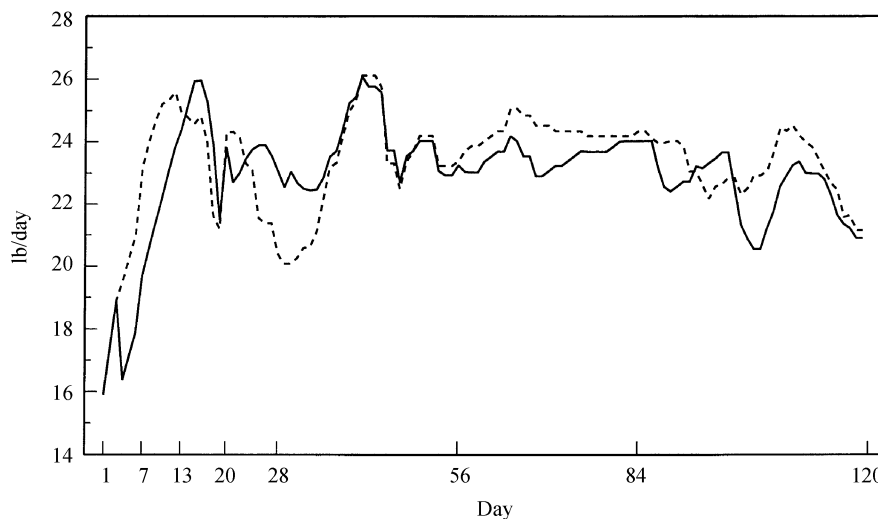


Figure 1. Dry matter intake/day for MSE (----) and Rumensin-Tylan (—).

uted to increased carcass weight as rib eye area per cwt of carcass was not different. Quality and yield grade means were similar for the two treatments. There was only one abscessed liver in all of the steers.

The chances for affecting fermentation with the MSE enzyme-microbial feed product would suggest that it improved utilization of the high grain

diet during fermentation and digestion. However, the mechanism for achieving this improvement with a multiple component product is yet to be defined.

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Summary

Yearling steers on summer pasture were fed Bovatec (lasalocid), Rumensin (monensin) or GainPro (bambermycins) in a mixture of 2 lb of corn and .2 lb of dry molasses per day. Control steers received the same supplement without an additive. Daily gains during the 113-day grazing season on primarily crested wheatgrass pastures

were improved ($P<.1$) by all three additives, averaging 17.8, 13.3 and 22.2% greater for Bovatec, Rumensin and GainPro, respectively. There were no significant differences in daily gains among the additives.

Introduction

Studies of beef production systems often indicate profitability can be increased in calf growing and feeding programs if yearling cattle are grazed at least during part of the growing phase. If yearling cattle are grazed on summer range, it is important that the summer

gain be as efficient and economical as possible. The use of implants and ionophores can improve gain in grazing cattle. A feed additive, bambermycins (GainPro™), has been released for the purpose of improving weight gain in cattle, especially in those consuming high roughage diets. Data from practical grazing conditions are limited with bambermycins so the objective of this trial was to evaluate the effect of bambermycins, lasalocid (Bovatec®) and monensin (Rumensin®) on weight gain of yearling grazing steers when hand-fed daily on summer pasture.

(Continued on next page)

Procedure

Yearling crossbred steers were purchased and placed on a common diet for approximately 30 days. Upon arrival the cattle were vaccinated for IBR, BVD, PI₃, BRSV and 7-way blackleg. After the receiving period, the cattle were individually weighed on two consecutive days. Ninety six steers were randomly allotted to one of eight pasture groups. The pasture groups were then randomly allotted to four treatment groups.

The summer pastures consisted primarily of crested wheatgrass with an estimated 10% warm season grasses (primarily buffalo and blue grama). The steers were initially implanted with Synovex-S, ear tagged with one horn fly insecticide tag, tagged with a color coded tag for each pasture group, and drenched with Safe-Guard® for internal parasites. The average of the two initial weights, which were taken after holding steers off water overnight, was used as the starting weight on trial. The cattle were also treated with Safe-Guard on the 28th and 56th day of the trial when they were weighed.

Four treatment groups were randomly allotted within two pasture blocks of four pastures each. These pasture groups (treatments) were rotated within each pasture block every 14 days to minimize pasture effects. This allowed eight rotations for a total of 113 days on trial, with each treatment group in each pasture twice. Pastures were 105 acres in size. The pastures were not grazed the previous year.

Treatments were imposed by daily feeding of 200 mg of Bovatec, 150 mg of Rumensin or 20 mg of GainPro in a mixture of 2 lb of ground corn and .2 lb of dry molasses per steer (as fed basis) in bunks. Control steers received the same supplement without an additive. Bioassay of the supplements revealed that additive levels were very close to expected values.

Because of the ample lush spring grass at the beginning of the trial and the fineness of grind of the corn, the steers were reluctant to consume the supplements during the first 3 to 5 days. To encourage consumption after four

Table 1. Effects of Bovatec, Rumensin or GainPro on weight gains of yearling steers grazing summer crested wheatgrass pasture

Additive Level, mg/hd/day	Treatment			
	Control 0	Bovatec 200	Rumensin 150	GainPro 20
Number of pastures	2	2	2	2
Steers per pasture	12	12	12	12
Initial wt, lb	612	612	613	611
ADG, 113 days, lb ^{ab}	1.35 ^a	1.59 ^b	1.53 ^b	1.65 ^b
Supplement intake/day, lb	2.2	2.2	2.2	2.2

^{ab}Daily gains for additives differ from control (P<.1).

days on test, 0.4 lb of dried molasses/head daily (17.2% of supplement) was hand mixed in with the cracked corn at the time of feeding. This was continued for six days and then the level of dried molasses was reduced to 0.2 lb/head daily (6.5% of supplement) for the remainder of the trial.

At the end of the trial all steers were individually weighed on two consecutive days after being held off water for 12 to 14 hours. The average of the two consecutive weights was used as the final weight.

The data were analyzed utilizing PC SAS (Statistical Analysis System) using Proc GLM. The data were analyzed as a randomized complete block. Initial weight was used as a covariate with treatments being tested by replication (block) by treatment interaction. Orthogonal contrasts compared control versus all supplements containing additives, GainPro versus Rumensin, and the combination of Bovatec and GainPro versus control, using individual steer gains as the experimental unit.

Results

The feed additives improved rate of gain over the control (P<.1) when evaluated for the total 113 day trial (Table 1). There were no significant differences between the gains from the three feed additives. Numerically, the cattle supplemented with GainPro gained the fastest which was .3 lb daily or 22.2% higher than the control. Bovatec and Rumensin supplemented cattle gained 27 and 20 lb or 17.8 and 13.3% more

than the control, respectively. After approximately the first two weeks, the consumption of the supplements was not a problem and all of the supplement was usually consumed within 30 min of feeding. It was noted that the monensin containing supplement was slightly less palatable, especially during rainy or humid days. Consistent and adequate consumption of the additive is important for enhancing performance of grazing cattle. Previous research at this location has shown that when cattle were offered ionophores in self fed minerals and consumed at low levels, the improvement in gain has been minimal. Cattle gains were lower than has previously been experienced with similar cattle in these pastures in past years, especially during the first 28 days when gains are usually very high. The reason for the low initial gain is not clear; however the abundant old growth of grass in the pasture may have been consumed at levels that lowered the overall quality of the forage consumed. In the latter part of the grazing period, forage quality and quantity were lowered considerably due to drought and higher than normal daily temperatures. This resulted in a lower daily gain during the last 28 days of grazing. Under these conditions, all of the additives were effective at increasing summer weight gains in steers grazing primarily crested wheatgrass pastures.

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