Effects of Rumensin® Ruminal Delivery Devices[1] in Grazing Cattle on Subsequent Feedlot Performance

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Summary

Rumensin® Ruminal Delivery Devices put in place 76 days prior to steers entering a feedlot resulted in an average reduction in daily dry matter intake of 3.6% and a small 1.8% increase in daily gain during a controlled 28-day feeding phase. All steers were fed an 85% concentrate feedlot diet fortified with 30g/ton of Rumensin® and 10g/ton of tylan®.

Introduction

A ruminal device that would deliver a daily dose of Rumensin® during grazing should yield all the advantages of Rumensin without the problem of daily supplement feeding. However, if the device is still active when cattle are placed in the feedlot, will Rumensin in the feedlot ration still work? We designed this experiment to answer that question.

Experimental Procedures

Sixty steers from one ranch that had been used in an early-intensive stocking, native range grazing trial to evaluate the Rumensin Ruminal Delivery Device (RRDD) were selected to go directly from the grazing project to the Beef Research Unit for a 28-day feedlot trial. All steers had been implanted with Compudose.® Half of the cattle (30) received a RRDD at the beginning of the 76-day grazing phase, whereas the other 30 served as controls.

The 60 steers were weighed individually after an overnight stand without feed and water at the conclusion of the grazing trial (July 15, 1986) and this shrunk weight served as the initial weight for the feedlot study. The steers were blocked by weight and allotted to five pens of control steers and five pens with RRDD's. Each pen contained six steers. Composition of the final daily diet (DM basis) was 79% sorghum grain, 15% sorghum silage, and 6% supplement. The supplement was formulated to provide 30g/ton of Rumensin and 10g/ton of Tylan when mixed with the complete diet. Cattle were fed ad libitum twice daily and at the end of the 28-day adaptation trial, individual weights were taken prior to the morning feeding (August 12).

[1]Rumensin® Ruminal Delivery Devices, Compudose® and partial financial assistance provided by Eli Lilly Co. Appreciation is expressed to Dr. Cal Parrott for assistance with the trial.

Results

Table 7.1 summarizes the cattle performance on the two treatments. Steers with the RRDD consumed an average of 3.6% less daily dry matter and showed an average 1.8% increase in daily gain. Results of this trial suggest that RRDD's given as recently as 76 days prior to going into a feedlot will not decrease feedlot performance, even though the supplement contains the normally recommended level of Rumensin.

Table 7.1. Effect of Ruminal Delivery Devices on Feedlot Performance

Item	Control	RRDD
Length of trial, d.	28	28
Number steers	30	30
Initial Wt., lb.	838.7	842.6
Final Wt., lb.	945.5	951.7
Gain, lb.	106.9	109.1
ADG, lb.	3.82	3.89
Feed Intake (DM), lb.	18.44	17.78
Feed/Gain (DM basis)	4.83	4.57