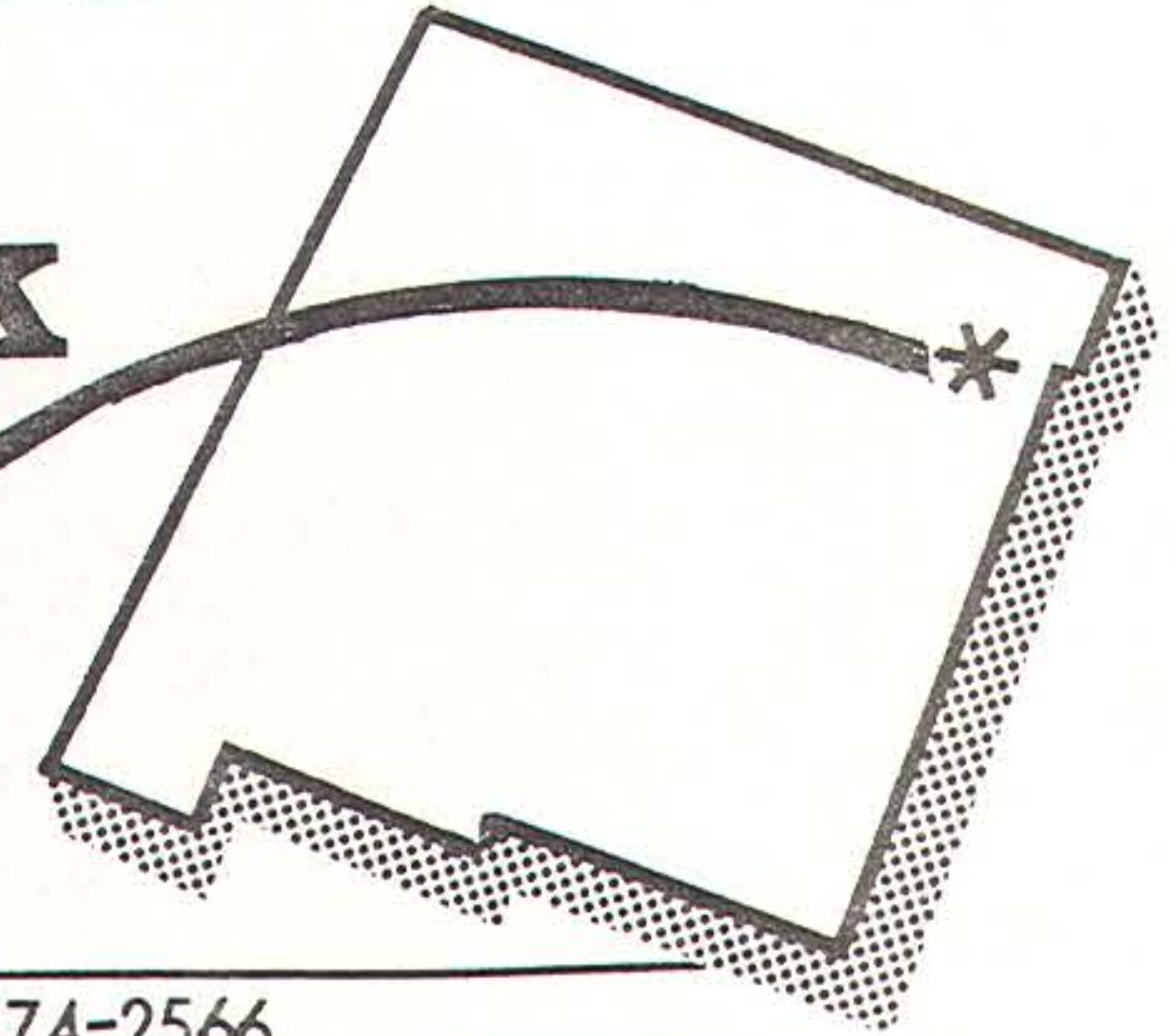




Clayton Livestock Research Center

PROGRESS REPORT



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INFLUENCE OF ALTERNATE FEEDING OF MONENSIN AND LASALOCID ON PERFORMANCE OF FEEDLOT HEIFERS - PRELIMINARY DATA

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A major goal of ruminant nutrition research is developing methods to improving performance and feed efficiency in growing cattle. In recent years, a group of chemicals known collectively as ionophores has been used extensively by the beef cattle. Ionophores are functionally related to other antibiotics and are effective in decreasing the population of certain species of ruminal bacteria, thus altering ruminal fermentation to achieve improved feed conversion efficiency. However, continuous exposure to one particular ionophore for an extended period of time may result in microbial adaptation and increased tolerance to ionophores. This suggests feeding a single ionophore continuously throughout an entire feeding period could result in a diminished response from the ionophore and less than maximal animal response. In an attempt to minimize possible microbial adaptation to ionophores, an exploratory trial was conducted to study the effects of alternate feeding of two ionophores used commercially (monensin and lasalocid) on performance of finishing feedlot heifers.

The trial was started in January, 1987 with 24 yearling Hereford heifers (avg wt 825 lbs). All cattle were fed an 85% concentrate diet throughout the finishing

period. Two dietary treatments were imposed, consisting of a control diet that continuously provided monensin at 30 g/ton, and a diet in which monensin (30 g/ton) and lasalocid (30 g/ton) were alternated at weekly intervals (Table 1). Each treatment was then replicated into each of two separate pens with six heifers/pen. All cattle were fed once daily in amounts sufficient to insure ad libitum consumption. Cattle were individually weighed at 28 day intervals.

Results of this trial (Table 2) indicated heifers fed monensin and lasalocid on alternate weeks had ($P < .05$) greater average daily gain and feed intake than heifers provided monensin on a daily basis. Likewise, feed conversion efficiency was improved greatly for cattle receiving alternating ionophores. The results of this trial tentatively suggest alternating ionophores at specified intervals may be a viable method for improving performance of feedlot cattle; however, because of the limited duration and small number of animals involved in this trial, definite conclusions regarding the efficacy of this type of feeding program cannot be drawn. Additional research is currently being conducted to further investigate the merits of this program.

¹ Monensin supplied as Rumensin 60® and lasalocid supplied as Bovatec 68®.

Table 1. Supplementation schedule of Ionophores

Treatment	Week							
	1	2	3	4	5	6	7	8
Monensin	M	M	M	M	M	M	M	M
Monensin/Lasalocid	M	L	M	L	M	L	M	L

M = Monensin in the feed (30 g/ton)
L = Lasalocid in the feed (30 g/ton)

Table 2. Effects of Alternating Monensin and Lasalocid at One-week Intervals on Feed Intake, Gain and Efficiency in Finishing Heifers

Item	Monensin only	Monensin/Lasalocid
Days 1-28		
Average daily gain, lb/d	3.67 ^a	4.78 ^b
Feed intake, lb/d	20.83 ^a	22.60 ^a
Feed/gain	5.68 ^a	4.73 ^a
Days 29-56		
Average daily gain, lb/d	2.72 ^a	3.25 ^b
Feed intake, lb/d	22.82 ^a	25.69 ^a
Feed/gain	8.43 ^a	7.91 ^a
Days 1-56		
Average daily gain, lb/d	3.20 ^a	4.01 ^b
Feed intake, lb/d	21.83 ^a	24.15 ^b
Feed/gain	6.85 ^a	6.03 ^b
Animal weights, lbs		
Initial	819	832
Final	998	1056

a, b Row means that do not have common superscripts differ (P<.05).

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