

Clayton Livestock Research Center

PROGRESS REPORT

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COMPARISON OF CONTINUOUS WITH DAILY OR WEEKLY ALTERNATE FEEDING OF LASALOCID AND MONENSIN PLUS TYLOSIN ON PERFORMANCE OF GROWING/FINISHING BEEF STEERS

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In previous ionophore rotation research conducted at the Clayton Livestock Research Center (Progress Reports No. 47 and 60), the effects of weekly rotation of lasalocid and monensin on performance of feedlot cattle have been inconclusive. Likewise, in order to maintain adequate liver abcess control with tylosin, the shortest possible rotational period would seem desirable. thus indicating potential for daily ionophore rotation. The objective of the study reported herein was to evaluate continuous feeding of lasalocid and monensin plus tylosin compared with daily and weekly rotation of the two ionophores in diets of growingfinishing feedlot cattle.

hundred yearling steers were assigned randomly to five treatment groups consisting of: no ionophore (C); lasalocid fed continuously (L); monensin plus tylosin fed continuously (MT); alternate feeding lasalocid and monensin tylosin at weekly intervals (WR); and alternate feeding of lasalocid and monensin plus tylosin at daily intervals (DR). Each treatment was replicated in five pens. During the first two weeks, all cattle were fed 75% concentrate milled diet with grass hay provided for the first week only. Monensin and tylosin

provided levels at οf g/ton, respectively. On day 15, all cattle were placed on a concentrate milled diet. Monensin and tylosin were provided at levels 26 and 10 g/ton, respectively. Lasalocid was added to the diet at a level of 30 g/ton throughout the Ionophores, vitamins A, D, E and trace minerals were supplied in a premix at a rate of 1% in each diet.

Results for the entire 134-day feeding period (Table 1) indicated receiving that steers the daily rotation of monensin plus tylosin and lasalocid had a greater (P<.10) daily gain (ADG) than C or MT steers, but were not different (P>.10) from L or Daily feed intake among WR steers. treatments did not differ (P>.10),although L steers had the greatest intake. Feed efficiency was improved (P<.01) for DR compared with C, L and Feed efficiency for WR did not differ (P>.10) from other treatments. Comparing observed ADG with values predicted from net requirements indicated that observed ADG was increased by 4, 6, 5, 11 and for С, L, MT, WR and respectively, compared with predicted values. Correcting for differences between observed predicted ADG for C cattle resulted in net improvement of 2, 1, 7 and 9% observed ADG compared

predicted gains for L, MT, WR and DR, respectively. Results of this study suggest that daily rotation of lasalocid and monensin/tylosin can be

an effective method for improving performance of feedlot cattle with minimal downside risk.

TABLE 1. AVERAGE DAILY GAIN, FEED INTAKE AND EFFICIENCY DURING THE ENTIRE FEEDING PERIOD

Treatment		Initial Weight lb		Daily Weight Gain Ib	Fed per 1b. Gain 1b	Final Wt. lb
No ionophore Continuous Feedir	40 1g	650 ^a	23.33	• • • •	6.46 ^b	
Lasalocid	37	651 ^a	23.70	3.730,	5 6.35b	1147ª,b
Monensin plus tylosin	40	649 ^a	22.98	3.59ª	6.40 ^b	11254
Ionophore Rotatio		a sa b		2 263.	b 6.21ª,	baseb
Weekly	38	661 ^b	23.36	3.76%	5 6.21a,	~115/~
Daily	40	649 ^a	23.49	3.900	6.02a	11665
SEC		3.0	.34	.08	.08	11.4
Observed signific	cance 1	evel .0	5 .76	.10	.01	.08

a,b Means in the same column that do not have common superscripts differ (P< observed significance level). C Standard error of least squares means, n=5.

TABLE 2. COMPARISON OF OBSERVED AND PREDICTED WEIGHT GAINS

Treatment	Initial Weight	Daily Feed Intake	Daily	Predicted Daily Gain	Observed as Percentage of Predicted
	1b	1b	1b	lb	949
No ionophore Continuous Feeding	650	23.33	3.61	3.48	104
Lasalocid	651	23.70	3.73	3.51	106
Monensin plus tylosin Ionophore Rotation	649	22.98	3.59	3.42	105
Weekly	661	23.36	3.76	3.40	111
Daily	649	23.49	3.90	3.45	113

 $[\]begin{array}{l} {\rm NE_{g}} = .039 {\rm W}^{.75} \\ {\rm g} = 694.44 \ \ \, \sqrt{\ \ \, .0001504 \ + \ \, .00288 \ {\rm NE_{g}/W}^{./5}} \ - \ \, 8.5139 \\ {\rm NE_{m}} \ \ {\rm of} \ \, {\rm basal} \ \, {\rm diet} = .84 \ \, {\rm Mcal/lb}. \\ {\rm NE_{g}} \ \, {\rm of} \ \, {\rm basal} \ \, {\rm diet} = .53 \ \, {\rm Mcal/lb}. \\ \end{array}$

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