EFFECT OF LASALOCID ON PERFORMANCE OF STOCKER CATTLE ON WHEAT PASTURE

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Story in Brief

Twenty-seven fall-weaned Hereford heifers that weighed 462 lb going on wheat pasture were individually fed 6 days/week 2 lb of ground corn that contained 0, 100 or 200 mg lasalocid. The grazing period on wheat pasture was 100 days (December 28, 1982 to April 8, 1983). Weight gains of heifers fed 0 or 100 mg lasalocid/day were similar (i.e., 1.76 and 1.73 lb/day), whereas gains of heifers fed 200 mg of lasalocid/day were higher (i.e., 1.99 lb/day).

Introduction

Lasalocid[4] is an ionophore that is cleared by the FDA for use in feedlot cattle for improvement of feed efficiency and increased rate of weight gain. Very few data are available with regard to effects of lasalocid on forage intake and utilization and weight gains of stocker cattle on wheat or other small grains forages. A two-year study is presently underway to determine effects of lasalocid on weight gains, ruminal fermentation, forage intake and dry matter digestibility by stocker cattle on winter wheat pasture. Effects of lasalocid on weight gains of the cattle during the first year of the study are reported herein.

Materials and Methods

Twenty-seven fall-weaned Hereford heifers that weighed 318 (SD=24.6) lb were used. Prior to being placed on wheat pasture, the heifers had free-choice access for 70 days to a growing ration that consisted primarily of cottonseed hulls, ground corn, ground alfalfa hay and soybean meal. Calculated NE_m, NE_g and crude protein contents of the ration were, respectively, 70.0 Mcal/cwt, 34.2 Mcal/cwt and 12.0 percent. At the end of the drylot period, the heifers were blocked according to weight and assigned within blocks to three treatments of 9 heifers each in a randomized complete block design. Treatments consisted of 0, 100 and 200 mg of lasalocid/head/day fed in 2 lb of ground corn. During the lasalocid feeding period (December 28, 1982 to April 8, 1983, 100 days), the heifers grazed a single wheat pasture and were fed the supplements 6 days per week in individual feeding stalls under a barn.

Weights of the heifers were taken after the heifers were held off feed or pasture and water for about 16 hours. Weight gains of the heifers were analyzed statistically by (1) analysis of variance of a randomized complete block design with block (initial weight group going on wheat pasture) and treatment sources of variation and (2) analysis of

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covariance with daily gains during the initial drylot period as the covariable.

Results and Discussion

Average daily gain of the heifers during the drylot period was 2.05 (SD=.29) lb. Daily gains of heifers fed 200 mg lasalocid/head/day during the first 57 days on wheat pasture were .23 and .17 lb greater than those fed 0 or 100 mg lasalocid/head/day (Table 1). However, differences among treatments were not significant (P>.05), and method of statistical analysis did not greatly affect either the error mean squares or observed significance levels. During the last 43 days of grazing wheat pasture, daily gains of heifers fed 200 mg lasalocid/head/day were about .32 lb greater than those fed 0 or 100 mg lasalocid/head/day. Analysis of the data by analysis of covariance with daily gains during the initial drylot period as the covariable increased both the error mean square and the observed significance level. Gains of heifers during the entire wheat pasture grazing period (100 days) were similar for heifers fed 0 or 100 mg lasalocid/day and were increased about .25 lb/day by feeding 200 mg lasalocid/day.

Table 1. Effect of lasalocid on weight gains (Least Square Means) of stocker cattle on wheat pasture.

		Lasalocid, mg/head/day				
		0	100	200	EMS[a]	OSL[b]
Number of Heifers/Treatment:		7[c]	9	9		
RANDOMIZED COMPLETE BLOCK DESIGN[d]		----Daily Gains, lb ----				
Grazing Interval	Days					
12/28/82-2/24/83	57	1.48[e]	1.54[e]	1.71[f]	.057	.168
2/24/83-4/8/83	43	2.17[e]	2.03[e]	2.42[f]	.041	.004
12/28/83-4/8/83	100	1.76[e]	1.73[e]	1.99[f]	.030	.013
ANALYSIS OF COVARIANCE[g]						
12/28/82-2/24/83	57	1.47[e]	1.54[e]	1.71[f]	.055	.122
2/24-83-4/8/83	43	2.18[e]	2.03[e]	2.43[f]	.077	.021
12/28/83-4/8/83	100	1.75[e]	1.73[e]	1.99[f]	.033	.010

[a] Error mean square.
[b] Observed significance level.
[c] Two heifers died of bloat.
[d] Blocks = weight groups of heifers when placed on wheat pasture.
[e,f] P<.05.
[g] Covariable = daily weight gains of heifers during initial 70 days in drylot.