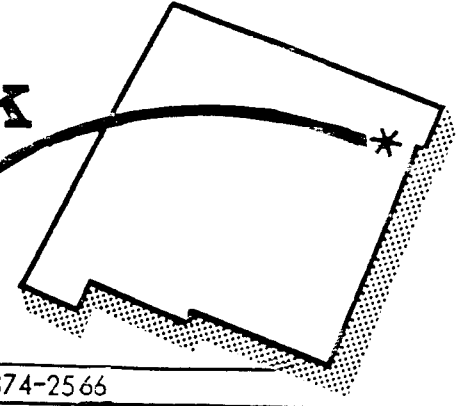




Clayton Livestock Research Center

PROGRESS REPORT



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EFFECTS OF SUPPLEMENTAL GRAIN AND MONENSIN ON PERFORMANCE AND BLOAT IN STEERS GRAZING WHEAT PASTURE

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Previous research at this station (Progress Report No. 35) has demonstrated increased performance and reduced incidence and severity of bloat in wheat pasture stocker cattle by providing a limited level of grain supplement containing monensin. The objective of this study was to evaluate further the effects of providing a grain supplement with different levels of monensin on performance and incidence and severity of bloat in stocker cattle grazing winter wheat pasture.

Two trials were conducted during 1984 and 1985 at the Clayton Livestock Research Center on a 120-acre irrigated winter wheat field. In Trial 1 (March 14 to April 13, 1984), 57 steers were assigned to treatments consisting of no supplement (C), grain supplement only (G), or grain supplement with monensin (M). Supplement was group fed three times weekly at a rate providing 1.3 lb/head daily. Monensin was supplied in the supplement at a rate equal to 170 mg/head daily. Trial 2 was conducted from March 22 to May 21, 1985 with 63 steers assigned to treatments consisting of: no supplement (C), grain supplement only (G), grain supplement providing 100 mg monensin/head daily (100 M), or grain supplement providing 200 mg monensin/head daily (200 M). In Trial 2, supplements were fed on a daily basis.

Grain supplement in both trials consisted of 85% steam-flaked milo, 10% hominy feed, and 5% molasses. Throughout both trials, incidence and severity of bloat were evaluated for individual steers.

In Trial 1 (Table 1), average daily gain (ADG), was not different statistically between treatments, although ADG for cattle supplemented with M was greater numerically than ADG of either C or G steers. Incidence and severity of bloat, however, was significantly reduced by providing monensin in the supplement. In Trial 2 (Table 2), ADG again was not influenced markedly by any supplement treatment during the 60-day trial compared to C; however, incidence and severity of bloat was reduced in both 100 M and 200 M groups. The greatest reduction in incidence and severity of bloat was observed in the 100 M group. While the overall incidence and severity of bloat was rather mild and no death loss was experienced during either trial, these results support previous research demonstrating that providing monensin in a wheat pasture supplement at a rate of at least 100 mg/head/day is an effective method of reducing wheat pasture bloat.

During times when bloat is more prevalent and severe, feeding a grain-based supplement containing monensin could be an

¹ The authors wish to thank Dr. Nollie Elliston for his advice and assistance and to Elanco Products Co, Inc. for partial financial support.

² Monensin provided in the supplement as Rumensin 60®.

effective method of reducing death loss from bloat and improving performance of wheat pasture cattle. Further research is

planned to study methods of improving performance and profitability of stocker cattle grazing winter wheat pasture.

Table 1. Influence of grain and monensin supplementation on performance and bloat of steers grazing wheat pasture.

Item	Treatment ^a			SE ^b
	C	G	M	
Number of steers	19	19	19	
Initial weight, lbs	532	541	532	12.3
Final weight, lbs	632	636	635	13.6
Average daily gain, lbs/day	2.44	2.31	2.53	.11
Bloat days/steer	6.2 ^c	6.8 ^c	1.9 ^d	.95
Mean bloat score/steer ^d	1.81 ^c	1.69 ^c	.70 ^d	.22

^a C = Control; G = Grain supplement only; M = Grain supplement with monensin.

^b Standard error of mean.

^{c,d} Means with different superscripts are different (P<.01).

^e 0 = No bloat; 1 = mild bloat; 2 = moderate bloat; 3 = severe bloat.

Table 2. Influence of grain supplementation and grain supplementation with two levels of monensin on performance and bloat in steers grazing wheat pasture.

Item	Treatment ^a				SE ^b
	C	G	100 M	200 M	
Number of steers	16	16	15	16	
Initial weight, lbs	454	450	451	461	11.2
Avg. Daily Gain, lbs/day					
First 28 days	3.78	4.00	3.52	3.52	.22
Second 32 days	2.55	2.49	2.73	2.82	.13
Overall 60 days	3.12	3.19	3.10	3.15	.13
Bloat days/steer ^d	7.6	5.1	2.3	4.6	
Mean bloat score/steer ^d	1.23	1.10	.76	1.06	.14

^a C = Control; G = Grain supplement only; 100 M = Grain supplement providing 100 mg Monensin/hd/day; 200 M = Grain supplement providing 200 mg Monensin hd/day.

^b Standard error of mean.

^c 0 = no bloat; 1 - mild bloat; 2 = moderate bloat; 3 = severe bloat.

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