

EFFECT OF WORMING ON RATE OF GAIN IN THE FEEDLOT

Raymond J. Douglas, James L. Nelson and William E. Dinusson

Trials over a three-year period have shown no significant advantage in rate of gain when feedlot heifers were treated with thiabendazole to control intestinal and stomach worms of the species *Cooperia*, *Ostertagia* and *Haemonchus*.

A high roughage ration of corn silage, dry rolled barley, alfalfa hay and minerals was fed throughout the trial. The average daily ration fed per head per day is summarized in Table 2.

Table 1. Summary of Data from the Worming Trial with Heifers, 1969-1971.

	1969	1970	1971	3-Yr. Avg.
Wormed Lot				
Number of head per lot	10	10	6	26
Avg. initial wt/head	526.0	521.5	523.3	523.6
Avg. final wt/head	898.0	911.0	991.7	933.6
Avg. gain/head	372.0	389.5	468.3	409.9
Days fed	213	239	267	239.7
Avg. daily gain/head	1.75	1.63	1.75	1.71
Feed cost/cwt gain	\$17.88	\$18.44	\$16.39	\$17.57
Lbs. feed/cwt gain	2479	2160	1826	2155
Hot carcass wt/head	527.1	522.9	584.7	544.9
Avg. dressing percent	58.7	57.4	59.0	58.4
Avg. USDA grade	10.1	9.2	9.5	9.6
Avg. carcass value	\$208.63	\$239.91	\$318.42	\$255.65
Control Lot				
Number of head per lot	10	10	6	26
Avg. initial wt/head	521.5	521.0	524.2	522.2
Avg. final wt/head	915.5	922.5	963.3	933.8
Avg. gain/head	394.0	401.5	439.2	411.6
Days fed	213	239	267	239.7
Avg. daily gain/head	1.85	1.68	1.64	1.72
Feed cost/cwt gain	\$16.99	\$17.90	\$17.51	\$17.47
Lbs. feed/cwt gain	2367	2099	1960	2142
Hot carcass wt/head	545.5	531.3	567.5	548.1
Avg. dressing percent	59.6	57.6	58.9	58.7
Avg. USDA grade	9.5	9.8	9.5	9.6
Avg. carcass value	\$214.08	\$247.46	\$309.50	\$257.01

Douglas is animal husbandman, Nelson is assistant animal husbandman, Dickinson Experiment Station; Dr. Dinusson is animal nutritionist, Department of Animal Science.

The authors acknowledge the assistance and cooperation of Dr. F. E. Brutsman, DVM, Merck & Company, for identifying parasite species present, for making EPG counts, and for providing materials used for worming treatments.

In 1969 and 1970, the wormed heifers were treated with thiabendazole at the rate of 5 grams per 100 pounds of body weight. This was administered by top dressing the ration with a commercial cattle wormer fed for one day only according to manufacturer's directions.

In 1971, the thiabendazole was administered as a bolus with each animal treated receiving 5 grams of active thiabendazole per 100 pounds of body weight. This treatment was also administered according to manufacturer's directions.

Fecal worm egg counts were used in 1969 and 1970 to identify the species of internal parasites present and to determine the EPG (eggs per gram) count which is used as an indicator of the degree of infestation.

Fecal worm egg counts made in 1969 showed 420 EPG in the wormed lot and 410 EPG in the control lot before treatment. After treatment the count showed 20 EPG in the wormed lot and 320 EPG in the control lot, indicating the effectiveness of the treatment.

In 1970, the initial EPG count was 130 in the wormed lot and 140 in the control lot before treatment. No EPG counts were made in 1971.

Discussion

Flack, Frank, Easterbrooks and Brown (1) have reported on similar trials conducted with commercial feedlot cattle. They report no significant difference in daily gain in their trials, but suggest that

Table 2. Rations Fed in the Worming Trial with Heifers, 1969-1971.

Ration:	Wormed Lot				Control Lot			
	1969	1970	1971	3-Yr. Avg.	1969	1970	1971	3-Yr. Avg.
Alfalfa hay	1.5	2.0	1.9	1.8	1.5	2.0	1.9	1.8
Corn silage	32.7	24.8	20.2	25.9	33.2	24.9	20.4	26.2
Barley	8.9	8.8	9.7	9.1	8.9	8.8	9.7	9.1
Minerals	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Agricultural Experiment Station
NORTH DAKOTA STATE UNIVERSITY
of Agriculture and Applied Science
University Station
Fargo, North Dakota 58102
Publication

Allen L. Hayes

DIRECTOR

to

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101



R. L. WITZ
AGRIC. ENG. DEPT.

feed efficiency was improved. The trials conducted at Dickinson were designed primarily to measure rate of gain.

There was no statistically significant difference in rate of gain in these trials between treated and untreated feedlot heifers. An outbreak of coccidiosis, which was not considered due to treatment, may have slowed gains in the wormed lot in 1969.

Reference

1. Flack, D. E., Frank, B. N., Easterbrooks, H. L. and Brown, G. E., *Thiabendazole Treatment, Effect Upon Weight Gains, Feed Efficiency and Cost of Gain in Commercial Feedlot Cattle*. VM-SAC June, 1967.

From the Director

(Continued from page 2)

gration of crops and livestock information that can be translated into cash income to the producer.

Consequently, the trials conducted at this new facility will be developed by cooperative effort between the superintendent of the Carrington Irrigation Branch Station, and the Departments of Animal Science and Agronomy at the Main Station at North Dakota State University. Other departments such as Agricultural Economics, Agricultural Engineering, Cereal Chemistry and Technology, Plant Pathology and Soils also will be involved in the trials and evaluation of data from these trials.