

MGA FOR FATTENING BEEF HEIFERS

Melengestrol Acetate (MGA) is a progesterone-like compound that suppresses estrus (heat periods) in beef heifers when fed at the rate of 0.4 milligrams per head per day. MGA, when added to the ration, is reported to stimulate growth rate and improves feed efficiency of feedlot heifers.

This trial, initiated in January, 1969 and repeated in November, 1969 and 1970, compares heifers fed MGA with control heifers in the feed lot from weaning to slaughter.

Over the 3 years, Hereford heifer calves averaging about 400 pounds were randomly allotted and fed identical rations made up of corn silage, rolled barley, supplement and minerals. One lot received a daily allowance of 0.4 mg. MGA per head in their supplement. One lot served as a control lot. In 1970-71 one lot of heifers was included that did not receive any MGA until they reached an average weight of 600+ pounds, then they were fed the same as the MGA lot, receiving 0.4 mg. MGA per head per day in their supplement.

The reason for the delayed feeding of MGA was to wait until the heifers reached puberty and started to cycle. It was felt that by waiting, the cost of the supplement could be reduced by reducing the feeding period.

Table 11 shows the results from three years work, comparing MGA vs. control, and one year's data on the delayed MGA feeding. Rations fed in this trial are summarized in Table 12.

Table 11. Data From Trials to Evaluate MGA for Feedlot Heifers

	Control Lot				
Data on:	1969	1969-70	1970-71	3-Yr. Avg.	
Number of heifers / lot	8	8	8	24	
Avg. initial weight / head	434.4	388.1	386.3	402.9	
Avg. final weight / head	902.5	931.9	958.1	930.8	
Avg. gain / head	468.1	543.8	571.9	527.9	
Days fed	244	337	337	306	
Avg. daily gain / head	1.92	1.61	1.70	1.74	
Cost / hundred pounds gain	\$14.54	\$17.07	\$16.55	\$16.05	
Hot carcass weight / head	----	549.9	568.2	559.0 ^{2/}	
Avg. dressing percent	----	59.0	59.3	59.15 ^{2/}	
Avg. grade	<u>1/</u>	9.62	9.62	9.62 ^{2/}	
Avg. carcass value	----	\$233.97	\$279.03	\$256.50 ^{2/}	
Avg. cost / head	----	\$92.80	\$94.67	\$93.74 ^{2/}	
Return per head over feed	----	\$141.17	\$184.36	\$162.76 ^{2/}	
	MGA Lot				Delayed MGA
	1969	1969-70	1970-71	3-Yr. Avg.	Lot 1970-71
No. of heifers / lot	8	8	8	24	8
Avg. initial weight / hd.	434.4	387.5	386.3	402.7	386.9
Avg. final wt. / hd.	920.6	940.6	943.8	935.0	970.0
Avg. gain / hd.	486.2	553.1	557.5	532.3	583.1
Days fed	244	314	337	298	337
Avg. daily gain / hd.	1.99	1.76	1.65	1.80	1.73
Cost / hundred-pounds gain	\$13.11	\$15.78	\$17.56	\$15.48	\$16.49
Hot carcass wt. / hd.	----	544.8	580.2	562.5 ^{2/}	590.2
Avg. dressing percent	----	57.9	61.5	59.7 ^{2/}	60.8
Avg. grade	<u>1/</u>	9.12	9.12	9.12 ^{2/}	9.88
Avg. carcass value	----	\$231.68	\$283.34	\$257.51 ^{2/}	\$292.17
Avg. cost / head	----	\$87.29	\$97.88	\$92.58 ^{2/}	\$96.17
Return / hd. over feed	----	\$144.39	\$185.46	\$164.92 ^{2/}	\$196.00

1/ No data available.

2/ 2-Yr. averages.

Table 12. Rations Used in Trials to Evaluate MGA for Feedlot Heifers

	Control Lot				
	1969	1969-70	1970-71	3-Yr. Avg.	
Ration per head per day:					
Corn silage (lbs.)	34.1	34.2	16.4	28.2	
Rolled barley (lbs.)	6.8	5.9	8.2	6.97	
Alfalfa (lbs.)	----	----	2.0	----	
Supplement (lb.)	1.0	1.0	1.0	1.0	
Minerals (lb.)	0.2	0.2	0.2	0.2	
	MGA Lot				Delayed MGA Lot
	1969	1969-70	1970-71	3-Yr. Avg.	1970-71
Ration per head per day:					
Corn silage (lbs.)	34.6	34.0	16.6	28.4	16.5
Rolled barley (lbs.)	6.8	5.6	8.2	6.87	8.2
Alfalfa (lbs.)	----	----	2.0	----	2.0
Supplement (lb.) ^{1/}	1.0	1.0	1.0	1.0	1.0
Minerals (lb.)	0.2	0.2	0.2	0.2	0.2

^{1/} MGA Supplement: 493 lbs. soybean oilmeal, 493 lbs. ground alfalfa, 10 lbs. trace mineral salt, 4 lbs. MGA. Plain Supplement: 493 lbs. soybean oilmeal, 497 lbs. ground alfalfa, 10 lbs. trace mineral salt.

Summary

The use of MGA with feedlot heifers has improved rate of gain and lowered cost of gains over the three years. Although the differences have been small, they have been consistent. The delayed feeding of MGA in 1970-71 gave the best results both in rate of gain and feed efficiency. Although there is only one year's data, the delayed feeding of MGA until heifers reached 600+ pounds resulted in \$11.64 more net return per heifer over the control heifers. The feeding of MGA has been one hundred percent effective in controlling estrus. Under our conditions, MGA may prove to be another management tool for greater profits.