

MIXED OAT-HAY RATIONS FOR CALVES FROM WEANING TO MARKET

This trial was designed to study the feasibility of feeding a mixed ration (oats and tame hay) to calves from weaning to market.

This trial, started in November, 1970, utilized three lots of Hereford steer calves averaging 430 pounds at the start of the trial. All calves were self-fed and had access to automatic waterers.

The rations fed in 1970-71 were as follows:

Ration 1 – Whole oats and chopped tame hay plus minerals^{1/} self-fed as separate ingredients. When calves reached 600 pounds oats was ground. Shift 15% of oats to barley every month until barley reaches 60% of the grain in the ration.

Ration 2 – 75% ground oats, 20% tame hay, 5% alfalfa plus minerals^{1/} self-fed as a complete mixed ration.

Ration 3 – 75% ground oats, 20% tame hay, 5% alfalfa plus minerals^{1/}. After calves weighed 600 pounds, 15% of oats shifted to barley each month until the barley made up 60% of the grain in the ration.

^{1/} Mineral mixture was made up of 3 parts di calcium phosphate and one part trace mineral salt fed at the rate of 0.2 pound per head per day.

Both mixed rations were processed in a portable grinder-mixer using a 3/16 inch screen for the oats and a one inch screen for the hay. The mixed rations were fed in straight walled, self-feeders designed for high roughage mixed rations.

Table 4. Results from 1970-71 Trials with Complete Mixed Oat Rations for Calves

Data on:	Ration 1	Ration 2	Ration 3
Number of head per lot	7	7	7
Initial weight per lot	3010	3030	3015
Average / head	430.0	432.9	430.7
Final weight per lot	7705	7695	7615
Average / head	1100.7	1099.3	1087.9
Gain per lot	4695	4665	4600
Average / head	670.7	666.4	657.1
Days fed	331	331	331
Average daily gain per head	2.03	2.01	1.98
Hot carcass weight per lot	4646	4580	4674
Average per head	663.7	654.3	667.7
Average grade	10.00	9.14	8.57
Average dressing percent	60.30	59.52	61.38
Average carcass value	\$328.54	\$319.64	\$323.57
Return per head over feed	\$227.93	\$227.52	\$230.53

Table 5. Data on Feed Cost and Returns from Trials with Complete Mixed Oat Rations

Ration fed:	Ration 1	Ration 2	Ration 3
Oats	\$410.02	\$487.96	\$343.25
Barley	\$160.42	----	\$150.86
Alfalfa	\$ 31.01	\$ 25.15	\$ 25.20
Tame hay	\$ 50.91	\$ 70.67	\$ 70.81
Minerals	\$ 22.24	\$ 22.24	\$ 22.24
Grinding	<u>\$ 29.70</u>	<u>\$ 38.86</u>	<u>\$ 38.94</u>
Total cost per lot	\$704.30	\$644.88	\$651.30
Cost per head	\$100.61	\$ 92.12	\$ 93.04
Cost per hundredweight gain	\$ 15.00	\$ 13.82	\$ 14.16
Ration / head / day:			
Oats (lbs.)	10.35	12.32	8.66
Barley (lbs.)	3.91	----	3.68
Alfalfa (lbs.)	1.07	0.87	0.87
Tame hay (lbs.)	2.44	3.39	3.40
Minerals (lb.)	<u>0.20</u>	<u>0.20</u>	<u>0.20</u>
Total pounds per head per day	17.97	16.78	16.81

Summary

The first year's results appear very promising. Although Ration 1 was not a complete mixed ration, it does show the voluntary intake of roughage when the grain and hay are fed separately. The cost of this ration averaged \$15 per hundred pounds of gain, with an average intake of 17.97 pounds per head per day. This was the best grading lot with an average of choice, and had an average daily gain of 2.03 pounds per head per day.

Both of the complete mixed rations (2 and 3) were cheaper to feed per hundred pounds gain and had lower daily feed intakes by about one pound per head per day. However, neither ration graded as well as did Ration 1.

It appears that good heavy oats can be used to advantage in feeding calves from weaning to market.