HIGH ENERGY RATIONS AND "RED NOSE" SHOTS FOR CALVES AT WEANING

The weaning period is critical in a calf's life and if the weaning weight is to be maintained and a normal gain obtained, they must have a ration high in energy with ample available protein. Calves marketed at weaning are subject to heavy shrinkage which can be costly to the producer. Respiratory ailments are also a problem with calves during this critical period. According to the National Research Council, a 400 pound calf requires 7.0 pounds of total digestible nutrients with 0.9 pounds of digestible protein in order to make gains of 1.6 pounds per day.

A trial was started in October, 1968 to evaluate the practice of feeding calves a high energy ration for a period of three weeks after weaning. An evaluation of a pre-weaning vaccination for infectious rhino-tracheitis (red nose) was also made. This trial has been continued for three years.

In October, 1970 every other calf was vaccinated for "red nose" about two weeks before weaning. All calves were also vaccinated with a triple shot for blackleg, malignant edema, and hemorragic septicemia and also type C and D enterotoxemia (over eating disease) at this time. They were allowed to run with their mothers until October 13th when they were weighed and weaned. At weaning, they were allotted by sex and immediately exposed to their high energy ration. This ration was composed initially of 3 pounds whole oats, 0.5 pounds of soybean oilmeal, 260 mg. of terramycin crumbles and crested-brome hay free choice. The oats and soybean meal were gradually increased until a level of 5 pounds of oats and one pound of soybean meal per calf per day was reached. A record of the hay fed and any treatments for respiratory problems was kept.

Table 23 shows the three year performance of calves on this trial.

Table 24 shows the three year average daily rations fed and the feed costs.

Table 23. Three Year Performance of Calves Fed a High Energy Ration For Three Weeks After Weaning.

	Steers				Heifers			
	1968	1969	1970	3-Yr. Avg.	1968	1969	1970	3-Yr. Avg.
Days on trial	20	17	21		20	17	21	
No. head	48	39	43	130	49	54	44	147
Avg. Oct. wt.	381.6	386.0	388.3	385.3	370.5	382.5	373.2	375.4
Avg. Nov. wt.	403.2	414.4	424.4	414.0	387.6	404.4	410.1	400.7
Avg. wt. gain	21.6	28.4	36.1	28.7	17.0	21.9	36.9	25.3
Avg. daily gain	1.08	1.67	1.72	1.49	0.85	1.29	1.76	1.30

Table 24. Three Year Average Daily Rations Fed to Calves in The High Energy Ration Trial.

	Steers				Heifers			
Avg. daily ration	1968	1969	1970	3-Yr. Avg.	1968	1969	1970	3-Yr. Avg.
Brome-crested hay	4.2	7.1	7.3	6.2	4.2	6.2	7.1	5.8
Whole oats	3.8	4.0	3.9	3.9	3.8	4.1	3.9	3.9
Soybean oilmeal	0.6	0.6	0.7	0.63	0.6	0.6	0.7	0.63
Terramycin crumbles	350 mg.	250 mg.	260 mg.	287 mg.	350 mg.	250 mg.	260 mg.	287 mg.
Calculated TDN	5.36	7.03	7.15	6.5	5.36	6.63	7.04	6.3
Feed cost/cwt gain	$15.07	$10.33	$10.92	$12.11	$18.94	$13.32	$10.56	$14.27
Feed cost/head	$3.25	$2.99	$3.95	$3.40	$3.23	$2.88	$3.90	$3.34

Discussion

During the three years the trial has run, the calves have eaten close to the National Research Council's levels. The average daily gain has been slightly lower than expected.

In 1970, only two calves were treated, one from the group vaccinated for 'red nose' and one from the controls. Two calves were affected with bloat, one steer and one heifer.

Summary

The calves overcame the stress of weaning and made gains fairly comparable with National Research Council standards. The gains were economical, ranging from $12.11 per hundredweight for the steers to $14.11 per hundredweight for the heifers. The average gain per calf amounted to from 25.3 pounds to 28.7 over the three year period.

As far as the "red nose" vaccination prior to weaning was concerned, there appeared to be no advantage. However, there was only minor trouble with respiratory ailments in any year, with very few calves being treated.

The most serious problem encountered was a "bloat" condition in some of the calves (two in 1970).

Higher gains would probably have been obtained if the calves had been held on feed for a longer period of time, as the first few days were days of adjustment with little gain in weight accomplished.

Anyone considering this method of feeding weanling calves should be prepared to render assistance if bloat becomes a problem. Vaccination for enterotoxemia will help reduce losses.