COMMERCIAL AND HOME GROWN FEEDS COMPARED FOR PRE-CONDITIONING AND BACKGROUNDING

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Cattlemen who want to background their calves after weaning have more than one feeding option. Commercial pelleted rations are popular because of their convenience and ease of handling as bagged or bulk feed, and also because of the availability of several medications desired by some producers. Home grown feeds can also be used with excellent results.

In 1977 and 1978, straightbred Hereford steer calves averaging 425 pounds were allotted into two groups and fed a pre-conditioning ration for 28 days. Group One was self-fed a commercial pelleted ration according to the manufacturer's directions. Long hay and pellets were available on day one only, with pellets being available free choice for the remainder of the trial. The control group was self-fed a mixed ration of 20% oats and 80% hay at the beginning of the trial. The percentage of oats was gradually increased so that by the end of the 28 day period, 40% oats and 60% hay was being fed.

Following the 28 day pre-conditioning period, Group One was self-fed a commercial backgrounding ration for the remainder of the trial. The control group was self-fed a mixed ration of 50% oats and 50% tame hay for the entire backgrounding phase.

In the 1979 and 1980 feeding seasons, straightbred Angus steer calves that averaged 382 and 347 pounds respectively were randomized and allotted into two groups and were fed either a commercial or home grown pre-conditioning ration for 23 days. At the close of the pre-conditioning phase, the two groups were re-allotted into three treatment groups for the following backgrounding comparisons: 1) Pre-conditioned and backgrounded on home grown feeds, 2) Pre-conditioned on commercial feed and backgrounded on home grown feeds, 3) Pre-conditioned and backgrounded on the commercial ration. The rations were fed the same as was done in 1977. Those calves that were pre-conditioned on the commercial ration and changed to the home grown backgrounding ration were started at 30% oats, which was increased to 50% after an average of 39 days where it remained until the end of the trial.

All calves were vaccinated for enterotoxemia, blackleg, malignant edema and hemorrhagic septicemia.

The steers were sold at the local auction market at the end of March each year.

Summary:

Pre-conditioning with either ration type resulted in no difference in rate of gain or feed efficiency. Cost per pound of feed for the commercial product was nearly twice that of the home grown ration (3.36¢/lb. vs. 6.42¢/lb.). The three year average cost per hundred weight gain for the home grown pre-conditioner was $16.56 compared to $32.78 for the commercial pre-conditioning ration.

Backgrounding rations comparing commercial and home grown feeds performed satisfactorily. Gains for steers receiving the commercial ration were significantly faster and were more efficient. The increased rate of gain and feed efficiency was not enough to offset the additional feed cost. Feed cost per hundred weight gain amounted to $61.44 for steers fed the commercial ration and $38.04 for those steers fed the home grown complete mixed ration. Feed cost per hundred weight gain in the third ration treatment, which combined commercial pre-conditioning with home grown backgrounding, amounted to $34.74.

While rate of gain and feed efficiency was greatest for the commercial rations, the three year average net returns were greatest for steers pre-conditioned and backgrounded on home grown complete mixed rations. Three year average net returns amounted to $62.25 for the home grown group; $39.39 for the commercially pre-conditioned and home grown backgrounded group, and -$10.61 for the commercially fed steers.

When home grown feeds are in short supply, are of poor quality, or where too few animal numbers are being backgrounded to justify the necessary investment for equipment, the stockman's best option would be to use a commercial ration.

Table 1. Home Grown Pre-conditioning and Backgrounding Ration Composition, 1979-1980

	Start %	1st Change %	2nd Change %
Pre-conditioning:			
Days Fed	7	13	
Chopped Mixed Hay	70.5	60.5	
Ground Oats	20	30	
Molasses	7	7	
Salt	2	2	
Dical	.5	.5	
Backgrounding:			
Days fed	18	22	97
Chopped Mixed Hay	60.5	57.5	47.5
Ground Oats	30	40	50
Molasses	7	--	--
Salt	2	2	2
Dical	.5	.5	.5

Table 2. Three Years Combined Economic Results of Pre-conditioning and Backgrounding

	Home Grown Ration	Commercial P.C. Home Grown Background	Commercial P.C. & Background
Returns -			
Gross return/hd, $			
1977-78	351.02	-	361.00
1978-79	511.04	524.03	552.11
1979-80	409.70	382.31	450.01
3 yr. avg.	$423.92	$453.17	$454.37
Expenses -			
Pre-conditioning feed cost/hd, $			
1977-78	12.25	-	22.56
1978-79	8.08	17.70	17.70
1979-80	8.98	18.59	18.92
3 yr. avg.	$ 9.77	$ 18.14	$ 19.73
Background feed cost/hd, $			
1977-78	97.43	-	156.33
1978-79	74.79	74.26	172.24
1979-80	93.27	94.49	213.50
3 yr. avg.	$ 88.50	$ 84.38	$ 180.69
Feeder calf cost, $			
1977-78	165.36	-	166.92
1978-79	288.02	286.50	286.50
1979-80	337.56	336.29	340.27
3 yr. avg.	$ 263.65	$ 311.40	$ 264.56
Net return, $			
1977-78	75.98	-	15.19
1978-79	140.15	145.57	75.67
1979-80	- 30.11	- 67.06	- 122.68
3 yr. avg.	$ 62.01	$ 39.26	$ -10.61

Table 3. Three Year Combined Results on Backgrounding Trial, 1977-1980

	Home Grown Pre-conditioned and Backgrounding	Commercial Pre-conditioned Home Grown Backgrounding	Commercial Pre-conditioning and Backgrounding
Total number of calves	17[1/]	12[2/]	19
Average days fed	128	133	128
Average starting weight, lbs.	444	432	442
Average final weight, lbs.	676	674	735
Weight gain, lbs.	232	242	293
Average daily gain	1.81	1.82	2.29[3/]
Feed Summary:			
Feed consumed per head, lbs.	2315	2294	2637
Feed cost per Cwt, $	3.81	3.67	6.83
Feed per pound of gain, lbs.	10.0	9.50	9.02
Feed cost per head, $	88.25	84.08	180.03
Feed cost per Cwt gain, $	38.04	34.74	61.44

1/ One steer died of bloat.

2/ Pre-conditioning with a commercial feed and backgrounding with a home grown ration are for two years only.

3/ Average daily gain was significantly (>.05) faster.

Table 4. Three Year Combined Result of Pre-conditioning Trial, 1977-1980

	Home Grown	Commercial
Total calves	19[1/]	20
Average days fed	24	24
Average starting weight, lbs.	386	385
Average final weight, lbs.	445	445
Average gain, lbs.	59	60
Average daily gain, lbs.	2.46	2.50
Feed consumed per calf, lbs.	290	306
Average feed cost per Cwt, $	3.37	6.43
Feed per pound of gain, lbs.	4.92	5.13
Feed per head per day, lbs.	12.0	12.8
Feed cost per calf, $	9.77	19.67
Feed cost per Cwt gain, $	16.56	32.78

1/ One steer died of bloat.

Table 5. 1979-1980 Results of Combined Pre-conditioning and Backgrounding

	Home Grown Ration	Commercial P.C. Home Grown Backgrounding	Commercial P.C. & Background
Pre-conditioning:			
Gain, lbs.	74	76	62
Feed/lb. gain, lbs.	3.2	3.2	4.0
Feed cost/Cwt, $	3.86	7.80	7.80
Feed cost/head, $	8.98	18.59	18.92
Backgrounding:			
Gain, lbs.	239	236	314
Feed/lb. gain, lbs.	10.2	10.4	8.8
Feed cost/Cwt, $	3.83	3.84	7.73
Feed cost/head, $	93.27	94.49	213.50
Returns/Calf:			
Selling price/Cwt, $	62.00	58.00	62.00
Gross return/hd, $	409.70	382.31	450.01
Expenses:			
Pre-condition feed/hd, $	8.98	18.59	18.92
Backgrounding feed/hd, $	93.27	94.49	213.50
Feeder calf cost @ 97.00/Cwt, $	337.56	336.29	340.27
Total dollars	$439.81	$449.37	$572.69
Net (gross return minus expenses)	- 30.11	- 67.06	- 122.68

Table 6. 1979-1980 Results of Backgrounding With Home Grown or Commercial Feed

	Home Grown Pre-Condition & Backgrounding	Commercial P.C. Home Grown Background	Commercial P.C. & Backgrounding
Number of head	6	6	6
Initial weight, lbs.	422	423	412
Final weight, lbs.	661	659	726
137 day weight gain, lbs.	239	236	314
Average daily gain, lbs.	1.74	1.72	2.29
Feed consumed/head, lbs.	2434	2462	2762
Feed cost/Cwt, $	3.83	3.84	7.73
Feed/lb. gain, lbs.	10.2	10.4	8.8
Total feed cost/head, $	93.27	94.49	213.50
Feed cost/Cwt gain, $	39.02	40.03	67.99

Table 7. 1979-1980 Results of Pre-conditioning With Home Grown or Commercial Feed

	Home Grown	Commercial P.C. Home Grown Background	Commercial P.C. & Background
Number of head	6	6	6
Average initial weight	348	347	351
Average final weight	422	423	412
Average 20 day gain/hd	74	76	62
Average daily gain, lbs.	3.7	3.8	3.1
Feed consumed/head, lbs.	233	238	242
Feed consumed/hd/day, lbs.	11.6	11.9	12.1
Feed/lb gain, lbs.	3.17	3.22	3.99
Feed cost/head, $	8.98	18.59	18.92
Feed cost/Cwt gain, $	12.14	24.46	30.52