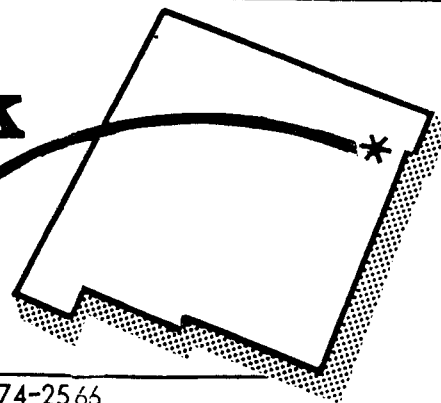




Clayton Livestock Research Center

PROGRESS REPORT



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Progress Report No. 52 (February 1988)

WHOLE SHELLED CORN IN RECEIVING FEEDS FOR NEWLY RECEIVED CALVES

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Whole shelled corn has been used in cattle feeding for many years and has proven useful under many feeding and management conditions. The purpose of the study reported herein was to determine if whole shelled corn could be used as an ingredient in rations for receiving stressed calves.

One hundred and thirty calves were purchased from an order buyer in Missouri and shipped to Clayton, New Mexico, a haul of approximately 750 miles. Upon arrival the calves were given free access to native grass hay and water over night. The following morning they were processed and placed on their respective nutritional treatments as predetermined on a random basis. Processing consisted of weighing, ear-tagging, branding, implanting, dehorning and castrating as necessary, vaccinating for IBR-PI₃ and 7-way blackleg, injection of ivermectin and vitamin A. As preventative medication all calves were given LA 200® and Albon SR®.

Following processing three pens of 10 or 11 head each were placed on the following nutritional treatments: (1) native grass hay only; (2) whole shelled corn plus native grass hay; (3) whole shelled corn plus a pelleted protein supplement containing 20% crude protein fed in a 3:1 ratio plus native grass hay; (4) a 75% concentrate milled feed with native grass hay being limited to the first week.

Feed consumption, performance and health data are presented in the accompanying table. Although calves supplied native

grass hay and whole shelled corn consumed corn readily the addition of a protein supplement increased both feed consumption and weight gains and improved the feed to gain ratio. Weight gains achieved by calves fed whole shelled corn and a protein supplement plus native grass hay were nearly equal to the gains made by calves fed the standard receiving feed used at this center, consisting of a 75% concentrate milled feed plus native grass hay limited to the first week. Calves supplied native grass hay only appeared to gain as rapidly as those fed whole shelled corn plus hay. However, earlier work has shown gains made by calves fed native grass hay alone consist primarily of fill. Weight gains achieved in this trial by calves fed only native grass hay reached a peak in the second week following arrival but dropped to -.03 lb. daily during the fourth week. Apparently they could not consume sufficient hay to increase the fill. Hay consumption also dropped during the fourth week.

Purchase price of this load of calves was \$99.67 per cwt. delivered to Clayton, NM. After four weeks on the above receiving rations the cost had been reduced to below \$90.00 per cwt. on whole corn plus the protein supplement and on the 75% concentrate milled feed. The cost of the five deads was applied to all treatments by dividing the cost of the deads by the number of calves remaining and dividing it equally among the four groups.

From this study it appears feasible to feed whole shelled corn and a protein supplement with grass hay.

Performance, Health and Costs for a 28-Day Receiving Period

Item	Receiving Feed			
	Grass hay only	Whole corn plus grass hay	Whole corn plus protein supplement and grass hay	75% conc. plus hay first week
Number of calves purchased	33	32	32	33
Purchase weight, lb. per calf	353	352	371	365
Daily feed intake, lb.				
Native grass hay	9.7	3.0	3.0	1.2
Whole shelled corn	0	7.7	7.3	0
Protein supplement	0	0	2.4	0
75% conc. milled feed	0	0	0	10.2
Totals	9.7 ^a	10.7 ^a	12.7 ^b	12.1 ^b
Gross daily weight gain, lb.	1.96 ^a	1.96 ^a	3.25 ^b	3.39 ^b
Feed to gain ratio	4.95	5.46	3.91	3.57
Number of calves treated for BRD	2	3	4	2
Treatment days	6	7	15	7
Treatment days per sick calf	3.0	2.3	3.8	2.3
Deads	0	2	1	2
Cost of Medication, \$ per pen	10.30	13.60	29.86	10.98
Purchase price per head, \$	351.84	350.84	369.78	363.80
Medication cost per head, \$.31	.43	.93	.33
Feed cost per head, \$	9.64	12.36	17.12	17.67
Death loss, \$ per head ¹	14.35	14.35	14.35	14.35
Cost per head at 28 days, \$	376.14	377.98	402.18	396.15
Weight per head at 28 days, lb.	408	407	462	460
Cost per cwt. at 28 days, \$	92.19	92.87	87.05	86.12

¹
$$\frac{\text{Mean purchase weight} \times \text{purchase price per pound} \times \text{no. of deads}}{\text{number of surviving calves}} = \frac{(360)(.9967)(5)}{125} = \$14.35$$

a,b Values having unlike superscripts are significantly different.

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AGRICULTURAL EXPERIMENT STATION
NEW MEXICO STATE UNIVERSITY
LAS CRUCES, NEW MEXICO 88003-0058
Darius M. Briggs, Acting Director
Publication

PENALTY FOR PRIVATE USE, \$300

BULK RATE
POSTAGE & FEES PAID
USDA
PERMIT No. G269