CREEP FEEDING BEEF CALVES

Profitability? Rations? Management? Marketing?

Editor's Note: This article was prepared by Daryl R. Stohbehn, extension livestock specialist, in cooperation with David R. Hawkins, Michigan State University. Note: All dollar figures used in this article are subject to the current rate of inflation.

Harvey Miller always creep feeds his beef calves. Neighbor Charlie Nelson doesn't creep feed his. Who is right?

Maybe both.

In reaching a decision on creep feeding beef calves, producers should evaluate the effects of creep feeding on their farm and under their feeding and marketing system. Points to consider include effects on calf weight and condition, cow weight, calf sales price, feed costs, and later performance.

Creep feeding is defined as the practice of supplementing the normal milk and pasture diet of beef calves with higher energy feeds.

Benefits. . .

Creep feeding increases weaning weights. Data on over 50,000 calves summarized in table 1 show a response of 49.8 and 62.8 pounds for spring and fall calves, respectively. It appears fall calves raised in the winter have a greater gain response to creep feeding. This is likely due to lower milk flows because fall calving cows are not consuming lush pastures like cows rearing spring calves.

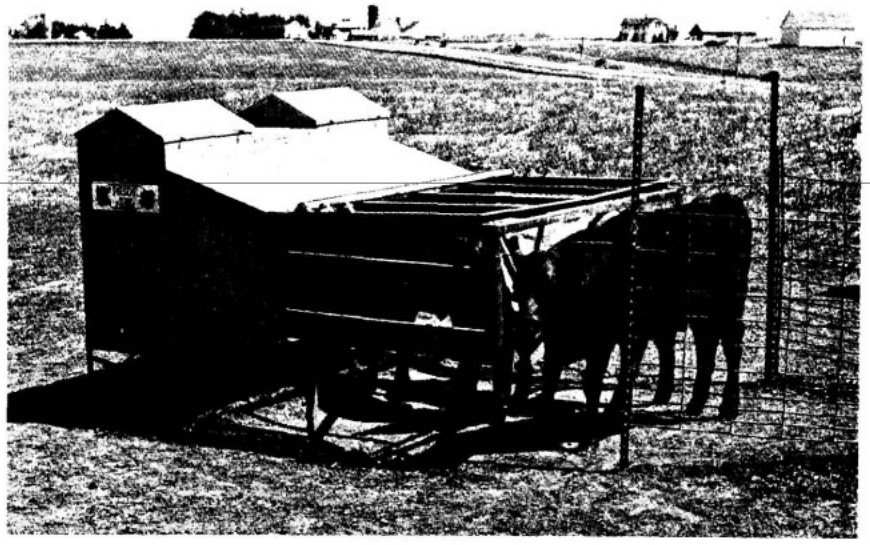
Does calf sex affect the response? Data from the Iowa Beef Improvement Association shows creep-fed bull calves were 64 pounds heavier than those non-creep fed, whereas creep-fed steers and heifers were 35 and 39 pounds heavier, respectively, than those non-creep fed.

The efficiency of creep feeding is important. As table 1 shows, feed per extra pound of gain is variable, but in general between 8 and 12 pounds of feed per extra pound of gain should be expected. However, increased calf weight is not the only benefit.

Late summer in most areas of Iowa brings on stressful cow conditions. Extreme heat and humidity, increased parasite problems, and increased calf demands on your cows bring greater nutritional demands during times of shorter, lower quality pastures.

Creep feeding helps ease these stresses. Research stations have shown cows nursing creep fed calves to be 20 to 30 pounds heavier at weaning time than cows nursing non-creep fed calves.

This is important if you're selling cull cows. An additional 25 pounds of cow across the cull scale at $.25 a pound is worth $6.25. Also, creep feeding may lower your potentially high cow feed bill for the upcoming winter. An extra 25 pounds on your



"keepers" may mean a 5 percent savings in winter feed costs. And because creep feeding lowers cow stress, it can also increase your pasture's carrying capacity by 5 percent. Five percent savings on a 3,000-pound hay bill looks good when hay is worth more than $40 a ton.

Great amounts of research show 2, 3 and 4 year old cows have calves which normally weigh 20 to 60 pounds less at weaning time. A Florida study shows creep feeding helps the calves from young cows substantially more. Creep-fed calves from 2, 3 and 4 year old cows weighed 8.9 percent more than non-creep-fed calves while calves from older cows had lower positive responses.

Another documented fact is that creep-fed calves have an apparent higher weaning grade than non-creep-fed calves. Studies in five states show an average increase of one-third of a weaning grade. Creep-fed calves are bloomier, carry more condition and appear to be thicker.

Creep feeding affects post-weaning performance in two ways—one favorable and the other unfavorable. First, creep feeding is an excellent aid in your preconditioning program.

Iowa State University trials over a 4-year period show creep-fed calves weren't stressed as much following weaning. In a 14-day period following weaning, creep-fed calves gained 14 pounds, while non-creep-fed calves gained .3 of a pound.

Table 1. Effect of Creep Feeding on Growth in Spring and Fall Born Beef Calves.

Study		Response to creep feeding, lb.	Feed per lb. of extra gain
Spring			
Oklahoma, Illinois and Iowa Beef Improvement Assn.		46	--
Kansas		23	16.3
Iowa State University		71	--
Florida		30	6.5
Nebraska		47	8.3
North Dakota		20	11.0
Oklahoma		37	9.5
Texas		58	9.6
West Virginia		66	7.9
USDA		100	7.0
	Average	49.8	9.5
Fall			
Alabama		75	9.3
Indiana		42	10.6
Oklahoma		87	10.2
Kansas		47	21.0
	Average	62.8	12.0

A side benefit is that creep feeding trains calves to eat dry feed and gets them used to eating from a bunk or feeder.

Drawbacks. . .

The post-weaning management system may affect the decision to creep feed. Creep-fed calves tend to gain slightly slower in the feedlot phase. Studies from four states show a 3 percent reduction in feedlot daily gain. If the producer is finishing his own calves or will background them through the winter on a high fiber diet, creep feeding may not be desirable. However, if the calves are being finished as rapidly as possible, the creep-fed calves reach market weight at an earlier age.

In short, creep feeding takes away part of the compensatory gain many cattle feeders enjoy.

Another disadvantage is the detrimental effect creep feeding can have on replacement heifers. Research in Oklahoma has shown creep-fed heifers to be poorer milkers. Heifers which were not creep fed eventually produced calves which weighed from 4 to 20 pounds more at weaning time. This is due to less fat deposit in the udder at a young age.

Because of these results it is often recommended that cows nursing replacement heifer calves be separated from the main cow herd so the calves receive no creep feed. On the other hand, heifers need to be developed properly so they will cycle early, settle as yearlings, and calve at 2 years of age. The solution is to understand the genetic growth potential of the heifer calves and feed them for optimum growth without over-fattening.

Still another disadvantage of creep feeding is that it masks or hides poor maternal performance. In breeds where it is important for the seed-stock producer to measure and improve maternal performance, creep feeding should seriously be questioned.

Studies indicate calves from low producing cows tend to compensate for this by consuming more feed. So, true maternal performance of your cows is masked and weaning weight measurement becomes a compounded measurement of your cows' performance and their calves ability to compete at the creep feeder.

Choosing Creep Feeds. . .

Cost should be a major consideration in choosing a creep feed. But quality and palatability are important too.

Many feed companies offer excellent pelleted, highly palatable creeps that are properly balanced and easy to feed. But push your pencil before buying. In many instances you can put together your own feed at a savings.

Table 2 offers seven creep rations that'll work for you when mixed and offered in adequate creep feeder space.

Straight oats is exceedingly simple, but it may be more costly due to the high fiber and lower energy content. It takes more pounds of oats to put on a pound of gain than with a corn mixture.

Creep ration 3 in table 2 requires no protein supplementation and, therefore, in many cases, will end up being the least cost.

In creep feeding, grain processing is desirable. Cracking shelled corn and wheat and rolling or flaking barley is recommended for optimum digestion and utilization by calves. Crimping or rolling will aid digestion of oats, but it is not critical.

Many producers are adding cane molasses to their creep at the rate of 5 pounds per 100 pounds of creep. This lowers dust problems and increases creep ration palatability.

Table 3 presents creep feed costs with various grain prices. The expected feed cost per additional pound of weaning weight is 44 cents or more. Thus, with feed costs like example 1, one needs to sell calves at $44 per hundredweight to break even on feed costs. This may be easy with seedstock cattle as bloom tends to help sell many calves.

Table 2. Creep Rations for Beef Calves Using Normal Moisture Contents for Ingredients.

	Ration						
Feedstuff	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Cracked shelled corn	85		65		90		38
Oats		100	35	70			30
Processed barley				30		40	
Protein supplement[a]	10				10		
Dehydrated alfalfa pellets						60	
Soybean meal							20
Cane molasses	5						10
Dicalcium phosphate							1
Trace-mineralized salt							1

[a]All natural protein supplement. Crude protein content is 30 to 35 percent. Soybean meal can make up 75 percent of the supplement.

Table 3. Cost of Creep Ration 3 in Table 2 at Various Grain Prices.

	Grain price levels		
Item	**1**	**2**	**3**
Corn ($/bu.)	2.00	2.40	2.80
Oats ($/bu.)	1.45	1.65	1.85
Creep cost per cwt.	$4.41	$4.59	$5.27
Creep feed per extra pound gain (lb.)	10.0	10.0	10.0
Cost of gain (¢/lb.)	44.1	45.9	52.7

Your Decision. . .

Will it pay **you** to creep feed? This depends.

In past years non-creep-fed calves sold higher. However, since grain prices have gotten higher, feedlot gain costs have jumped, and often creep-fed calves have sold for a premium. Cattle feeders de-

cided it was cheaper to buy pounds than to feed them on. This may happen often in the future. If so, you will not need the calf selling price which breaks even with the cost of creep gain. This is shown in table 4.

Creef-fed calves were assumed to weigh 50 pounds more and would sell for $3 a hundredweight more than non-creep-fed calves. Note that the cost of additional pounds weaned, 45.9 cents was more than the selling price, but the first 450 pounds were marketed at a higher value.

Don't stop pushing your pencil now on possible economic advantages. Let's incorporate additional cow weight and winter feed savings with added calf value and look at the end statement. Table 5 incorporates 25-pound heavier cull cows which make up 15 percent of the herd. The other 85 percent of the herd has a 5 percent winter feed savings. Hay valued at $50 per ton was used, and each cow consumed 20 pounds each day for 120 days.

As shown in table 5, increased calf value, cull cow value and winter cow-feed savings add up to a sizeable amount for a 40-cow herd. Even with equal sale value for creep and non-creep-fed calves, the profit and loss statement would have been in the black.

Table 4. Economic Analysis of Creep Feeding Calves.

	Non-creep[a]	Creep[b]
Weaning weight	450	500
Calf value	$184.50	$220.00
Added calf value	--	35.50
Creep feeding cost[c]	--	22.95
Return per calf weaned	$184.50	$197.05

[a]Calf price is $41 per cwt.
[b]Calf price is $44 per cwt.
[c]Grain price levels 2 in table 3 were used.

Table 5. Other Economic Implications of Creep Feeding for a Herd Raising 40 Calves.

Item	Costs	Returns
Added calf value (40 calves x $35.50/calf)		$1420.00
Increased cull cow value (25 lb./cow x 6 cows x $25/cwt.)		37.50
Winter cow feed savings (5% x 1.2 tons/cow x $50/ton x 34 cows)		102.00
Total savings and gross income		$1559.50
Creep feeding cost ($22.95/calf x 40 calves)	$918.00	
Creep feeder cost ($1.50/calf x 40 calves)	60.00	
Labor to fill feeder (10 tons x $2/ton)	20.00	
Total costs	$998.00	
Return above costs		$561.50
Additional return per calf		$ 14.04

Summary. . .

Creep feeding is not the answer to management dilemmas. Further, it is difficult to agree on a recommendation for creep feeding which will fit every management system. Purebred breeders who get a premium for bloomy calves with heavy weaning weights have different objectives than the commercial producer who winters calves on a high fiber diet and then grazes them on grass before selling them as yearlings.

Producers must evaluate the objectives of their operation and then decide whether creep feeding will maximize profits. But remember, market structures in the beef business change, so be sure to evaluate the economics often. Creep feeding does not fit for every herd, but it does have a place in the beef cattle industry.

Advantages of Creep Feeding:

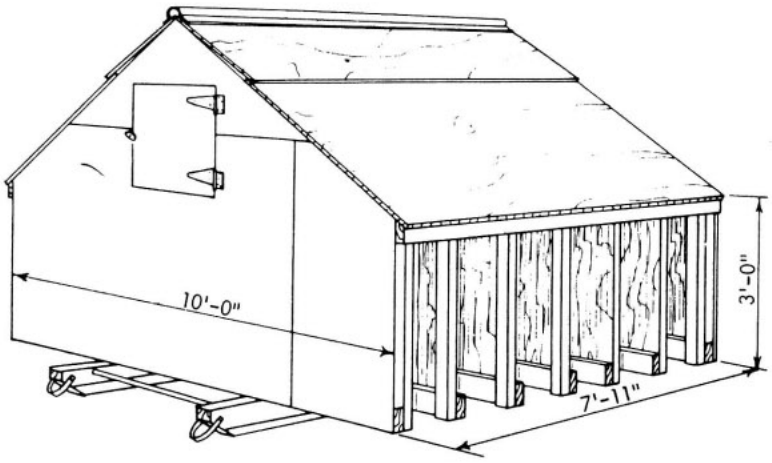
1. Increases calf weaning weights by 40 to 60 pounds.
2. Increases apparent calf feeder grade by one-third of a grade.
3. Improves the uniformity of the calf crop in size and finish.
4. Eases the stress on first-calf heifers.
5. Eases the stress on drought-shortened or overpopulated pastures, thus giving pastures additional carrying capacity.
6. Cows may be heavier in the fall which increases cull cow value.
7. Heavier fall cow weights may lower the winter feed bill.
8. In times of high feedlot gain costs, heavier creep-fed calves bring higher sale prices.
9. Creep feeding lowers stress at weaning and makes feedlot ration adaptation easier.

Disadvantages of Creep Feeding:

1. High feed costs may mean poor creep feeding economics.
2. Fleshy calves may be discriminated against during periods of low feedlot gain costs.
3. Post-weaning performance in backgrounding and feedlot periods will be lowered by 3 percent.
4. Creep feeding requires extra labor, equipment and feed.
5. It is not easily adapted to large pasture or range conditions.
6. Replacement heifers may become too fat resulting in lower life-time milk production.
7. Measurement of milk production or mothering ability by calf weight is biased by creep feeding making selection procedures inaccurate.

CALF CREEP FEEDER

42 BU.

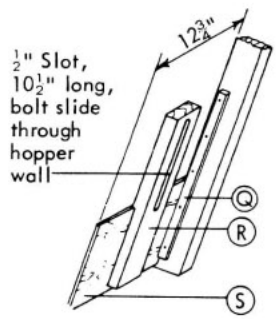


CUTTING LIST

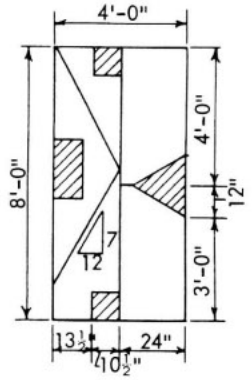
Item	No.	Description
A	14	2x4 x 6'-0"
B	14	2x4 x 4'-8"
C	18	2x4 x 3'-0"
D	5	3/8" x 4' x 8' plywood (dividers)
E	7	2x4 x 10'-0"
F	2	4x4 x 10'-0" pressure-treated
G	2	2x4 x 10'-0" pressure-treated
H	8	2x4 x 3'-3"
I	2	2x4 x 32"
J	2	2x4 x 3'-8 1/2"
K	2	2x4 x 21"
L	4	2x4 x 24"
M	9 1/4	3/8" x 4' x 8' plywood 3 - roof 1 - floor 2 - hopper 3 - ends 2 - 2' x 2' door
N	2	1x6 x 7'-11"
O	2	Clevis
P	1	8' ridgeroll
Q	24	1x2 x 24"
R	12	2x4 x 23"
S	12	5/8" x 12" x 12 3/4" plywood (4' x 3'-3" sheet)
T	5	1x4 x 24"
U	2	1" x 4'-4" pipe

To use this feeder in a creep pen, omit members C & D; shorten member E; leave solid endwall.

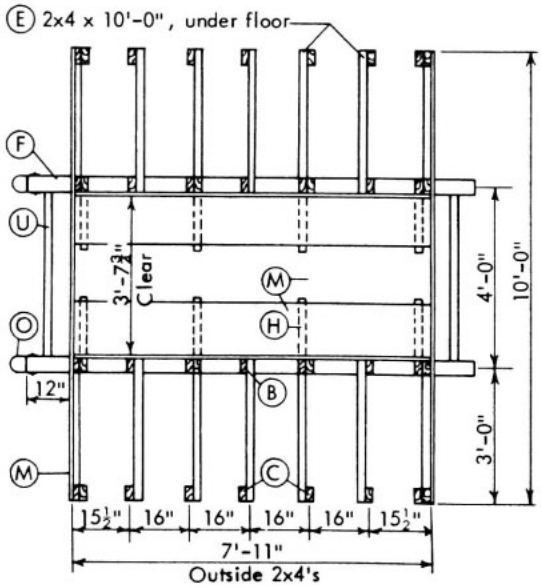
Nail & glue plywood to framing with type A casein & 6d galv. nails. Do not substitute other materials for plywood.



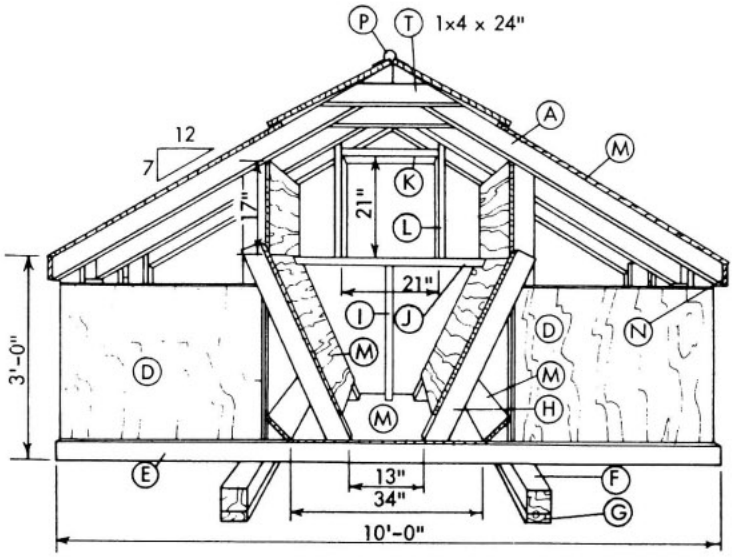
Throat Slide Detail



Cutting Diagram



Plan



Section Perspective