Ridin' Herd

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To creep or not to creep

Creep-feeding is a management practice where the calf is supplemented while still nursing its dam. The primary objective of this management practice is to put additional weight on the calf before weaning. From a marketing standpoint, the weight gain should not result in calves that are fleshy, especially if sold at weaning. Fleshy calves are discounted in market price. The challenge for commercial producers is to determine if and when creep-feeding is a management practice to consider and if it can be accomplished economically to increase profit potential.

There are many different creep-feed formulations. Because calves have small rumens and high nutrient requirements, only high-quality feeds should be used in creep-feed formulations. Creep feeds can be pelleted, a combination of a pellet and other feed ingredients, or single feed ingredients mixed together as a complete diet. If feed ingredients are mixed together to form a complete creep diet, it is critical that the ingredients be similar in size so calves will not sort the ration and consume only certain components. Most creep rations will contain an ingredient, such as salt, to control intake so calves will not overeat.

Another creep-feeding technique used by producers who use management-intensive grazing (MiG) is to allow calves access to young, vegetative forage/grass before their dams. However, there is not a lot of data using controlled experiments that evaluate calf performance using forage-creep diets.

The most common creep feed is high in energy and contains about 16% crude protein (CP). Data suggest that high-energy creep feeds result in the greatest weight gain. Calves will eat about 3.2 pounds (lb.) per head daily; creep intake by calves ranges from 0 lb. to 6.5 lb. per head per day, depending on the length of the creep-feeding period. A feed-to-gain ratio of 6 lb. of creep per 1 lb. of weight gain (ranging from 4.2:1 to 10:1) and an average daily gain (ADG) increase of 0.3 lb. (ranging from a 0.15-lb. increase to a 0.65-lb. increase) can be seen in creep-fed calves compared to non-creep-fed calves.

There are also creep diets that are high-protein formulations, containing more than 30% CP. These formulations are mostly soybean meal or a combination of soybean and cottonseed meal. Intake is controlled by inclusion of salt. Overall weight gain is less than with energy creeps. Daily consumption is about 1.25 lb. per head per day (ranging from 0 lb. to 2.5 lb.). The feed-to-gain ratio is generally about 4:1 (ranging from 3:1 to 7:1).

When to creep-feed calves

Almost all the data suggests that creep-fed calves will weigh more than non-creep-fed calves at weaning. A University of Nebraska NebGuide by Guyer et al. (see Fig. 1) suggests the longer non-creep-fed calves are retained after weaning, the more creep-fed calves' weight advantage tends to decrease. Based on this information, if calves are retained after weaning, creep-feeding may not be a management option to consider.

However, the final decision should be based on economics. There is a growing body of data suggesting that creep-feeding has a positive effect on carcass quality. The effect of creep-feeding on carcass quality is influenced by the length of the creep-feeding period and type of creep feed used.

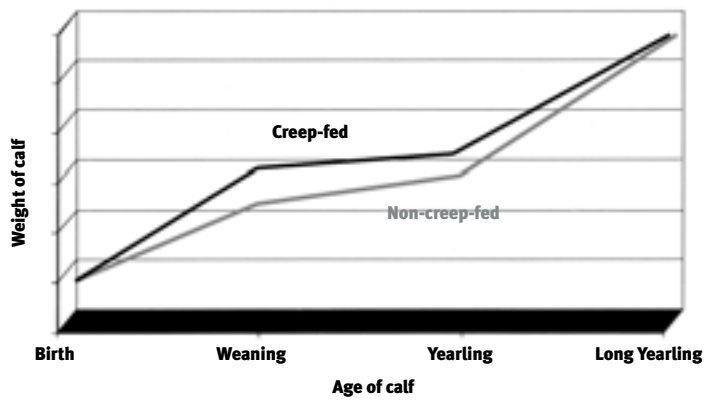
If calves are sold at weaning, creep-fed calves will be heavier than non-creep-fed calves; therefore, more calf weight can be sold. Recently, there has been interest to creep-feed because of high market prices for calves at weaning and the low cost of grain. The question is, can this management practice be accomplished economically and increase the profit potential of the

Table 1: The value of added weight and net return from creep-feeding 90 days

	Value, $/lb.	Weight, lb.	Total value, $
Weaning weight without creep, lb.	$1.00	500 lb.	$500.00
Weaning weight with creep, lb.	$0.95	560 lb.	$532.00
Extra gain on creep			
Total gain	$0.53	60 lb.	$32.00
ADG		0.66 lb.	
Feed costs/cwt.	$10.00		
Daily intake		3.5 lb.	$ 0.35
Total intake		315 lb.	$31.50
Net return from creep feed[1] per head			$ 0.50

[1]Doesn't account for feeders, labor and other equipment.

Fig. 1: Effect of creep-feeding on calf weight over time



cow-calf enterprise? When determining costs for creep-feeding, include feed costs, equipment costs (creep feeder, tractor and wagon with an auger to fill the feeder if not done by the creep supplier) and labor costs.

In drought conditions, it is generally thought that creep-feeding calves will take lactational pressure off cows. However, data suggests that creep-fed calves nurse as often as non-creep-fed calves. It may be more economical to wean the calves and feed them a complete diet.

Fall-calving herds in the Midwest are challenged by low nutrient quality of forage resources when lactation occurs. The concern, in my opinion, is for heifers to be selected as replacements. The challenge is to ensure they are of ample weight at weaning. Also, it may be difficult to develop heifers at a rate that a producer would be comfortable with to get them to reach puberty and cycle before the start of the breeding season. In this situation, creep-feeding may be warranted.

What's the gain worth?

As calf weight increases, calf value diminishes on a dollar-per-pound or dollar-per-hundredweight (cwt.) basis. In other words, per pound, there is a price decrease for calves that weigh 500 lb. compared to calves that weigh 400 lb. This is important to understand because the added calf weight from creep-feeding should not be priced at market value, but should be priced at something less than market price.

Table 1 illustrates the price decrease and a way to calculate the dollar value of added weight given a specific price structure. The example in Table 1 uses a price for a 500-lb. calf of $1 per lb. or $500 total, and a $5-per-cwt. price decrease for a 560-lb. calf for $0.95 per lb., or $532 total. Therefore, the extra 60 lb. returns an extra $32 per head. The value of each added pound was worth $0.53 ($32 ÷ 60 lb. = $0.53).

In 1995, with lower calf prices, a 500-lb. calf would bring about $68 per cwt., or $340 total. There was a less severe price slide, and the heavier 560-lb. calf sold for $66.42 per cwt., or $372 total (560 × $0.6642 = 371.95). Again, the extra 60 lb. brought $32, and the value of each pound of added gain was $0.53. Obviously not all situations result in exactly $0.53 per pound of added gain. However, it is amazing how often the value of added gain is between $0.45 and $0.65.

The dollar return for implementing creep-feeding can also be calculated (see Table 1). If the cost of the creep feed is $10 per cwt., and the calf eats an average of 3.5 lb. daily, in a 90-day creep-feeding period, the calf will eat 315 lb. of creep feed.

The cost of feed for the 90-day creep-feeding period is $31.50. In this scenario, the net return from creep-feeding is $0.50 ($32 income – $31.50 feed costs = $0.50) per calf. The return from creep-feeding in these calculations only includes the feed — not labor and equipment. Do the calculations with your numbers.

Final thoughts

Creep-fed calves will weigh more at weaning compared to non-creep-fed calves. If calves are retained after weaning, the weight difference between non-creep and creep-fed calves tends to decrease. If calves are taught to eat prior to weaning, we know that morbidity and mortality are reduced once the calves are weaned. Some producers have offered creep feed to calves three to four weeks prior to weaning to teach them to eat. Producers who have used this management practice indicate, based on records, that they treat fewer calves postweaning.

Remember, there is a price decrease based on weight. Do the calculations with your numbers to determine if and when creep-feeding fits your operation.

Editor's Note: *"Ridin' Herd" is written by Rick Rasby, professor of animal science at the University of Nebraska. The column focuses on beef nutrition and its effects on performance and profitability.*