

Weigh added cost against added gain and other benefits.

roducers often debate the value of creep-feeding calves prior to weaning. As university specialists point out, there are several factors that determine whether creepfeeding, when carefully considered and tailored to the specifics of an operation, can translate extra pounds into profit.

"The marketing scenario of the calves will have an effect on whether you should creepfeed," says Twig Marston, Kansas State University Extension beef specialist. Factors to consider include whether producers retain ownership, sell at weaning, background calves or precondition calves. Regional, environmental and current weather conditions can also factor into the decision-making process.

'Weight gain is usually the number one reason that we creepfeed," Marston says. By supplementing the milk and forage, creep-feeding can fulfill nutrient requirements and help the calf reach its genetic potential. This is most beneficial when feed is cheap and calves are high-priced, Marston says. Both commercial and seedstock producers can reap that benefit.

However, he adds, "Cost effectiveness is something to be concerned about." While creep can add pounds, it's crucial to compare by Brooke Byrd

the cost of the supplement to the added profit from the extra pounds gained.

If it takes 10 pounds (lb.) of creep feed to make 1 lb. of added gain, Marston explains, that means the feed conversion ratio is 10-to-1. If creep feed costs \$0.15 per pound, and calves eat 10 lb. to gain 1 lb., it costs \$1.50 for that pound of gain.

"That pound of added weight has to be worth \$1.50, or we've lost money," he says. "Now, if we improve feed efficiency to where it takes only 5 pounds to put 1 pound of gain on, then it's 0.15×5 , which is 0.75. As long

Genetic effects

Worries about creep-feeding masking or unfairly enhancing genetics are not a concern when talking about expected progeny differences (EPDs), says Sally Northcutt, American Angus Association director of genetic research. "When we calculate EPDs, we account for that management difference in the contemporary group definition," she says.

"In order to sort out genetic differences, we must account for nuisance variations, such as creep-feeding," Northcutt adds. Producers who submit production data to the Association Performance Programs Department must separate calves that receive creep from those that don't into distinct contemporary groups. These groups are defined in terms of their management practices, which means all animals in the group have had the same experiences and environmental conditions.

The EPDs of the group that receives creep are generated based on the average of that group, while the same is done to the group not receiving creep. Therefore, Northcutt says, "you know you're looking at genetic differences."

as the value of the gain is more than \$0.75 a pound, we're making money."

Uniformity to profitability

John Paterson, Montana State University Extension beef specialist, notes creep-feeding also helps create a uniform calf crop. "Buyers love those uniform calves," he says. "Wouldn't it be nice if I had 250 steers in a pen, and all 250 got sold after a hundred days on feed?"

Instead, Paterson says, some are usually ready to be harvested after 140 days on feed, some at 150 days and the rest at 170 days.

> Having a uniform calf crop from the beginning prevents the need for excessive sorting, thus putting more dollars back in the seller's pocket.

> Creep-feeding, Marston says, can lessen the weight gap between the normally lighter calves from younger females and those from more mature cows. "We know the calf has the genetics to grow, so if we creep-feed that calf, he'll weigh closer to what calves out of older cows would weigh," Marston explains.

This may cause some problems in separating poorer-producing cows from their better-milking counterparts. Marston encourages producers to pay close attention to the differences between calves and

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to carefully note calves that are belowaverage gainers.

"If you creep-feed, it's going to be harder to find those cows that milk less, and it's going to make those cows that are average look more like high-milking cows," he explains. "When it comes to culling time or selecting replacement heifers, creep-feeding could make it tougher for you to make selection decisions."

However, Marston says, differences between good cows and bad cows will still show up. "If calf A is going to weigh the most not being creep-fed, he's still going to weigh the most on creep feed, but he might not weigh the most by 40 pounds like he did before. Now, he may only weigh the most by 20 pounds," he says. "Calf Z may be the littlest one without creep feed, and he's still going to be the littlest one with creep feed. However, he'll be closer in weight to the average than he would have been without the creep feed."

Preventive treatment

Marston says creep-feeding can provide an added bonus for herd health, both by including medication to prevent disease and by preventing or lessening stress later in life. "We can medicate a creep feed to reduce the incidence of foot rot or pinkeye or respiratory troubles," he says. "We'd use the creep feed as a carrier for medication or a feed additive."

Such additives would usually take the

form of antibiotics or ionophores, Marston says. "Trace minerals and vitamins can also be used to fortify feed to improve immune response and aid healing."

Creep-feeding can get calves used to eating feed, thus reducing the time it takes to get them started. "You can reduce morbidity and mortality around high-stress periods like weaning. It'll reduce shrink from stress, so you'll gain pounds that way," Marston notes.

Supplementing groceries

One of the most common reasons to creep-feed is to prepare for early weaning. "In the environment we're in right now, I want these calves off the cows," Paterson emphasizes. In times of drought or other harsh conditions, "we have got to save the grass for these cows." If possible, he recommends beginning to creep at around 120 days of age and weaning at 160 days. Normally, calves would be weaned at 200-210 days and creep-fed 60-90 days prior to weaning.

While creep may supplement for low quantity, Paterson also explains that producers often face problems of poor quality. "When forage digestibility is less than 50% and protein is less than 7%, I really want to start thinking about creep," he says. "If I'm dropping under 7% protein, I think I'm starting to hurt ruminal fiber digestion.

"I'm just not getting enough groceries in these calves from the forage," Paterson notes.

However, in regions where protein may be high and forage lush, he advises against creep-feeding. "When that cow has great intake, great quantity and beautiful quality, why would I want to creep?" Paterson

Proven profitability

Creep-feeding has been a beneficial tool to many producers, says Kim Hager, a beef nutritionist with CHS Nutrition. Selling approximately 50,000 tons of creep feed annually through dealers in the Northwest, Hager says, "It's economical. Cattle put gain on, and the gain cost from the creep feed is probably half of what producers sell that gain for."

He tells of a producer whose cost per calf for creep-feeding was \$25 per head, and his calves were 50 pounds (lb.) heavier. "He made at least \$2 for every \$1 invested," he says.

When asked about creep-feeding, Roland Starnes, manager of Southern Cattle Co., Campbellton, Fla., says, "We can't afford not to." With a 95% purebred Angus herd producing about 900 calves a year, Starnes says, "It falls into our total program."

Currently selling 20- to 24-month-old bulls, Starnes says he hopes to sell 15- to 18-monthold bulls. "To do that, we need that extra size from Day 1," he emphasizes.

"We get bigger, healthier calves at weaning time," he notes. "Right now, with the price of corn versus the price of calves, it's a no-brainer."

He also says creep-feeding is an important tool when dealing with an inhospitable climate. "We fight the climate and the humidity and the heat down here in the South," he notes. He uses creep-feeding to provide calves an environment conducive to growing.

Scott Cymbaluk, Belfield, N.D., calves out 115 cows and puts creep feed in front of their calves when they're just a few weeks old. He feeds creep partly to start the calves and partly to help out the cows by saving forage. "We've been so dry up here that it's important to save on grass," he says.

"I think for every dollar you put in creep feed you're probably getting two back in just what you save in cows and grass and less headaches," Cymbaluk says. "Bottom line, what you're doing is for the dollar. If you put 80 extra pounds on them, when they're bringing \$1 a pound, that's \$80 extra you have in your pocket." suggests taking a forage sample when deciding whether to creep.

A common misconception about creepfeeding, Paterson says, is that it takes pressure off cows. What does help cows, he notes, is early weaning.

Fighting flab

One of the biggest downsides to creepfeeding is the possibility of animals getting too fat. Paterson says he likes the effects of creep-fed performance-tested bulls, but is concerned with overconditioning. "The bulls don't have their working clothes on when they've got that kind of weight gain," he says. "What I'm hoping to do is put frame on these cattle and not put a lot of fat on them."

Marston echoes his concerns about reproductive ability. "In replacement heifers, creep-feeding that is done at too high of an energy level for too long could cause some fat deposition around and within the udder tissue, and we could have some effect on future milking potential of those females," he says.

He also acknowledges that creep feed can cause calves to be too fleshy, but says, "creepfeeding will not be detrimental to your marketing of fat cattle as long as you market them when they're ready." Creep-fed cattle could receive discounts due to Yield Grade (YG) 4s if fed too long, but, Marston says, "If you feed the cattle to the proper end point, you might actually save money buying creepfed calves because they were in the feedyard fewer days."

To prevent fleshiness problems and maximize effectiveness of creep feeds, Marston says there are three factors that can be controlled: nutrient density of the creep feed, the length of time it's fed and daily intake.

Diluting the energy in creep feed, or reducing the calories per pound fed, will make the creep feed safer to feed, and you'll still get a weight response, Marston notes. However, reducing the nutrient density can also negatively affect feed efficiency, thus making the creep less cost-effective.

Intake can be adjusted similarly. Producers could decide to only creep-feed calves 30-60 days before weaning or to start them on creep feed when only 30-60 days old, giving them access to creep for 150-180 days.

Some producers use salt to limit intake without decreasing nutrient density, Marston explains. "Salt will limit intake to desired levels," he says, but advises producers that it takes constant management and can be hard on creep feeders.

Final considerations

Some producers may be concerned about the labor required. "Creep feed needs routine inspection to make sure you're not getting that feed wet or moldy," Paterson says. "If it gets like that, intake's going to go to zero." But, besides checking the feeders and restocking inventory, he says labor should be fairly minimal.

"Know your operation and know the benefits; know the pros and cons of a management practice," Marston says. "Then you can make an educated decision on whether creep-feeding is a practical management style for your ranch."

A creep-feeding calculator is available at *www.agric.gov.ab.ca/app19/calc/livestock/ creepsheet.jsp* to help producers decide if creep-feeding is the right decision for their operations.

Creep and carcass quality

Another item to take into consideration when weighing the pros and cons of creepfeeding is its effects on carcass quality. Research done at the University of Illinois (UI) by Dan Faulkner and others indicates that creep-feeding can influence final quality grade. Based on the research data, Faulkner has recommended that calves be creep-fed for at least 80 days to obtain results.

Data from the UI study also suggest that the type of creep feed used has an effect on carcass quality. Calves fed a high-energy diet, based on corn, had a greater chance of having improved carcass quality than those fed a high-fiber diet, based on soybean hulls.

For producers aiming for a target of increased *Certified Angus Beef*[®] (CAB[®]) acceptance, improving carcass quality is an important step.

For more information about Faulkner's research, visit his faculty Web site at www.ansci.uiuc.edu/aboutus/faculty/details.cfm?ID=29.

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