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Rationalize Weaning

Finding a ration that fits feed supplies and livestock management is key at weaning time.

Story & photo by
CORINNE BLENDER

There are many diets from which producers can select when feeding weaned calves. Choose one that fits your operation's management goals.

"Cattlemen looking at a weaning program need to ask themselves, 'How long am I going to keep these calves postweaning?'" says Warren Gill, professor and ruminant nutrition specialist at the University of Tennessee (UT), Knoxville.

Gill and other UT researchers have found that the minimum time beef producers should feed weaned calves is 45 days.

"You might go as little as 30 days if you have had them on a preweaning creep," Gill adds. "If you are cooperatively marketing your calves, most programs, at least in Tennessee, require that 45 days is the minimum in order to get the benefits of a weaning program, and we tend to support that time."

Todd Steen, ruminant

nutritionist for the Tennessee Farmer's Cooperative (TFC), says there are two reasons why the TFC has a 45-day feeding requirement.

"No. 1, that gets the animal off to a good start. It gets the calf securely weaned, consuming feed and on the diet," Steen says. Calves under stress, perhaps from getting sick, tend to go backward in gains. But Steen says the 45 days will allow the animals to straighten out and start gaining weight.

Also, it allows a producer to capture weight gain, he says. The animal ought to gain enough weight in that 45-day period to pay for all the trouble the producer goes to when vaccinating, weaning, feeding and managing the calves, he adds.

Gill says that if a producer is going to retain ownership and kick the calves back out to grass shortly after weaning, the weaning program may need to be different.

"We use feed as a training device to get the calves through the transition period," Gill says,

referring to the first few days postweaning. "But right now our emphasis is on grass, and we will be keeping them on grass several months to get those inexpensive grass gains."

If a producer does want to go to grass, Gill recommends providing a minimum amount of feed, generally 0.5% of body weight.

With that small amount of feed, Gill says, "you are not going to change or hurt the rumen environment by switching them to a starch base. If you start putting them on, say, 1% of body weight — and I'm talking on a 500- to 600-pound calf — if you put them on 5 or 6 pounds (lb.) of corn, you are going to start changing the rumen environment a little bit."

However, if a producer is feeding for 45 days and doesn't expect to go to grass directly, Gills says to shoot for a gain somewhere between 2 and 2.5 lb. Monitor the calves to make sure they don't become too overconditioned.

"Bloomy calves can get discounted," he points out. "Buyers very well may not like them if they have too much condition on them."

Evaluating options

For Plattsburg, Mo., commercial producer Dan O'Connor, a weaning nutrition program is all about keeping calves healthy. He's fed weaned calves the same way for 30 years.

O'Connor retains ownership of his 500 calves from the time the calves are on the mother cows through harvest.

"We bring them home on a morning when it's cool. If there's 50 head or 80 head, we give them a pound of hay per head," O'Connor says. "We scatter it amongst two or three feed troughs so they will find it that afternoon while walking and bawling."

A key element to keeping the calves healthy is water.

Rather than relying on just one two-hole waterer, O'Connor puts a big stock tank full of water in the pen as well.

"The next morning we give them 1 pound of feed, and we sprinkle it over about a pound of hay. If there are two bunks, we only put about a quarter of a bale to the bunk, and we tear it up to where if the calves get

any hay they are going to get some molasses feed," O'Connor says. He comes back with 2 lb. of hay around noon and then another pound in the evening.

The ration fed during weaning starts with a base of half oats and half cracked corn. Aureomycin®

crumbles with sulfa is added. The final ingredient is a molasses mix, which is used at 150-200 lb. per 1,000 lb. of final mix.

The third day postweaning, O'Connor ups the feed mix to 1.5 lb. delivered with 1 lb. of hay. A total of 5 lb. of hay is provided, which is hand-delivered to the calves throughout the

day. After the morning feeding, he'll provide 2 lb. of hay and then come back with another 2 lb. that evening. "We like to get into the lot three times a day so we gentle them down and they are not spooky," O'Connor says.

The calves are brought up to 4 lb. of feed mix during the next few days by increasing it by ½ lb. per day. They are maintained at that level for a week to 10 days. During that period they are given 5 lb. of hay per day. "Then we turn them out in the pasture and the calves come up to the feedbunks. They've got grass to eat and free-choice hay," O'Connor says.

Ration basics

Gill says an ideal weaning feed consists of 13%-14% protein and 72% total digestible nutrients

(TDN). Fiber in the diet has become increasingly recognized as important. Gill says "friendly fiber" is important in calf rations. Studies at UT have shown that feedstuffs consisting of higher portions of a digestible fiber, such as soyhulls or corn gluten feed, are better for weaning rations, he adds.

Steen says he and other TFC researchers have studied the way many feedstuffs are digested to formulate their premixed weaning feed. Steen became interested in how

feedstuffs are digested while working in the feedlot arena for Land O'Lakes.

He noticed that incoming calves that had been on a high-starch, corn-based diet before they were shipped didn't acclimate as well to the feedlot ration.

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journal (*Journal of Animal Science*) articles that have been written on preshipment diets, it appeared that energy was a very important part of the ration, but there also needed to be plenty of digestible fiber with it," Steen continues.

Research at TFC and Cooperative Research Farms (CRF), while conducted on a relatively small scale, found that an animal is probably less likely to get sick and will perform better upon arriving at the feedlot if it has been fed a ration with a higher digestible fiber content. This finding was in concert with earlier journal articles.

"It's not really new," Steen says of the research on fiber's role. "The data was available, but nobody ever did anything with it."

TFC began researching individual feed ingredients to formulate a premixed weaning ration.

"We've narrowed down how the animal and the speed at which the animal will digest an individual ingredient," Steen says. "We've done very extensive animal work on this. So we know we have a pretty good handle on if a given ingredient will digest very rapidly, if it will digest kind of medium or if it will digest very slowly."

The result from this study is a balanced ration, Steen adds, which is one that allows for each ingredient to digest at a different rate. "We are trying to balance it to where the fiber is completely digestible to the animal, but we don't want it all to go very fast or very slow," he says. "We want to have a nice blend of it all." Hay is also fed with the premixed feed.

Holding back

Producers may find that their calves aren't performing as desired on the weaning ration they select. Many limiting factors, such as the weather or the ration, can contribute to lost performance.

Gill says micronutrients, primarily minerals, should be considered when weaning calves. "We certainly need to have good vaccination programs," Gill says, but without a good nutrition program that considers energy, protein and minerals, you can't maximize the health of the calves.

Gill says that when all factors are taken into account in a weaning program, weaning pays for itself. He says producers can capture the money they deserve by properly weaning and establishing a good marketing program. He encourages producers to take advantage of cooperative marketing programs and to work with neighbors to realize the benefits of group marketing.

No matter what weaning ration is used, Steen says, balance is key.

"If you do have a balanced ration with a considerable concentration of digestible fiber sources within that ration, then you can expect a high level of gain," he says. "You still have to have a balanced ration. You can't just throw a couple of ingredients out there and do it."

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