



Back to Basics

by **RON TORELL**, *University of Nevada Cooperative Extension Livestock Specialist*

Why 45-day weaning?

Interstate, diesel smoke or yellow-line weaning; these are all terms used to describe the way many cow-calf producers prefer to wean and market calves. It is easy and requires minimal effort and ranch facilities. We strip the bawling calves off the cows, sort for sex, weigh on the ground with a 2% pencil shrink, and then load the bawling calves on the truck, sending them to the next segment of the industry to deal with.

More often than not, when these calves reach their destination a wreck occurs within 45 days. At this point, it's someone else's wreck. Back at the ranch, cows are settled and all is fine within a week.

In this issue of "Back to Basics," let's examine why buyers prefer calves weaned 45 days to calves weaned 15, 20 or even 30 days.

Stressful environment

Viewing 7-month-old calves as teenagers leaving home for the first time, weaning is physically and

psychologically the most stressful time of the young animal's life. The only experience this calf has had for the first seven months of its life has been at its mother's side. This calf has not experienced any of life's challenges, such as a truck ride, a change of diet, eating from a bunk, drinking from a trough or being processed in a strange facility. Being young, this calf has an immature immune system and has not yet been exposed to many of the disease pathogens that are present in the outside world. Cumulatively, the stress level is at an all-time high.

Elevated stress during the first 30 days postweaning is the real culprit, says David Thain, University of Nevada Cooperative Extension (UNCE) veterinarian. "It often takes an absence of stress for the immune system to fully mount an adequate immune response to vaccines. As the calf learns to live without mom, eat strange feed from a bunk, drink from a trough and grow accustomed to its new surroundings,

stress plummets and the immune system becomes functional. The first 30 days of weaning are ridden with stress, leaving the last 15 days of a 45-day weaning protocol for the calf to fully mount an immune response."

"There are so many changes going on in this calf's life 30 days postweaning, including an abrupt change in nutrition. Seldom do you see a sick calf that is eating and drinking," says David Bohnert, Oregon State University (OSU) researcher and nutritionist. "What was yesterday a diet of milk and green grass is now, in the absence of mom, a diet of long dry hay or a total mixed ration fed in a bunk. Often a lack in quantity of dry matter consumed is an issue up to 30 days postweaning. Additionally, these feeds are all new to the animal and the rumen bugs responsible for breaking these feedstuffs down. It takes up to 30 days for animals to familiarize themselves to a new lifestyle, for the rumen to develop and become functional and acclimated to these new

feeds. The extra 15 days in a 45-day weaning program allows the animal's immune system time to get up and running at full capacity at a time when adequate nutrition is consumed in a low-stress environment."

Harold Newcomb, technical service veterinarian for Intervet Schering-Plough agrees with Thain and Bohnert and goes on to state, "Young calves fresh off cows and green grass often harbor high parasite loads. Research clearly shows that parasites contribute to suppression of the immune system. Utilizing a parasite control product at weaning that kills parasites rapidly should be incorporated into weaning programs. It takes 45 days for the suppressed immune system in these young calves to fully respond and mount immunity from vaccines in a parasite-free animal, longer for parasite-loaded cattle."

Mineral's carryover effect

Montana Extension Beef Specialist John Paterson offers the following advice

relative to the importance of mineral supplementation and weaning: “Calves need minerals so their immune system will mount a response to expensive vaccines. Additionally, calves need minerals to help overcome the stresses of weaning and shipping. Proper calfhooood and preweaning vaccinations and mineral nutrition at the ranch go hand in hand.”

Paterson cites a Colorado study that showed among calves that were preconditioned about one-third were still getting sick at the feedlot. Paterson attributes that to poor mineral supplementation. Specifically, he states, “the reason we often see sickness in feedlots is probably due to lack of mineral management starting in the cow herd. Trace minerals can have a significant carryover effect on feedlot performance and health of calves.”

Steve Lucas, Western Video Market field representative and owner/manager of Sandhills Feedlot of Winnemucca, Nev., agrees, saying, “Look at the marketing success of the VAC-45 program (see sidebar story “VAC-45”). There is something magical about a calf weaned 45 days or more vs. a calf weaned 20 or 30 days.

“There is more to it than just taking the bawl out of them. It takes a minimum of 45 days for these young calves to get lined out nutritionally and healthwise. This is why we are seeing a \$15-per-hundredweight (cwt.) price differential between unweaned or short-weaned calves and calves

VAC-45

VAC-45 stands for a value-added calf that has been weaned 45 days before being offered for sale *and* has received immunizations for the bovine respiratory diseases. Many producers have the capability to gather calves and vaccinate them prior to weaning. If calves are allowed to return directly back to familiar surroundings with their dams immediately after vaccination, better immunity is established.

Calves immunized when under very little, if any, stress have been shown to develop a more functional immune system. With this in mind, the concept of the VAC-45 program has developed some momentum in the cattle industry.

Two options are available for use with this program. One is based upon a preweaning vaccination followed by revaccination at weaning. The other is based upon vaccination at weaning followed by a booster revaccination 14 to 21 days later. The type of vaccines used depends upon whether or not the calves are nursing or weaned at vaccination. In both options, the cattle are backgrounded at least 45 days after weaning before delivery for sale.

Calves that are vaccinated while still nursing should be vaccinated with a product that clearly states on the label that it is approved for use on calves nursing pregnant cows. After the calves are weaned, a modified-live vaccine (MLV) given to the calf can be used with no risk of abortion to the cow. Consult with your local veterinarian about the vaccine choices that are best suited for your herd.

The VAC-45 program was developed at Texas A&M University. The feedback comparing auction market source cattle weighing less than 550 pounds (lb.) to VAC-45 source cattle of similar weights received at commercial feedlots during a 10-year period from 1990 to 2000, showed the VAC-45 calves had only one-third as many sick calves, less than half as many dead calves, 0.3-lb.-per-day increased gain, and 0.8-lb. better feed conversions. These numbers calculated in today’s market dollars — assuming a \$35 treatment cost on a calf that costs \$130 per cwt. and feed that costs \$100 per ton (on a dry-matter basis) — lowers production costs by approximately \$78.

— *Glenn Selk, OSU Extension cattle reproduction specialist, and Dee Griffin, University of Nebraska-Lincoln professor*

sold under the VAC-45 program. Buyers are no longer willing to shoulder the consequences of unweaned or short-weaned calves.”

Many common statements are, “I am not set up to wean calves,” or, “When I get paid to wean my calves I will look into it,” and yet another, “They have to be

weaned somewhere so why not at their next destination?”

It appears that the answers to these statements are loud and clear: If you want \$15 per cwt. more for your calves, get set up to wean at home. The added stress and problems associated with interstate, diesel smoke or yellow-line

weaning is no longer economical for buyers.

As always, if you would like to discuss this article or simply would like to talk cows, do not hesitate to contact me at 775-738-1721 or torellr@unce.unr.edu.

