



BUL 928

BQA Guidelines for Preconditioning and Weaning

Meranda Small

Extension Educator, University of Idaho College of Agricultural and Life Sciences, Bingham County

Key Points

- Preconditioning is a management step that prepares calves to enter a feedyard with a strengthened immunity, have a lowered risk of morbidity and mortality, and potentially bring a premium price.
- Preconditioning includes a good vaccination program, proper handling of calves, weaning with as little stress as possible, and proper nutrition.
- It is recommended to wean calves 45 days prior to shipping to the feedyard.
- Creep feeding is a means of transitioning calves from one feed source to the next while also helping them put on some additional weight.



PRECONDITIONING is a period of time in which a producer implements management steps to prepare calves for the next production phase. This includes acclimating calves to a new diet, vaccination, weaning, and “bunk breaking.”

The truck ride and transition to the feedyard is extremely stressful and stress is a large factor in a calf’s health status. Once the calf arrives at the feedyard, it is immediately processed, which includes vaccinations, treatment for parasites, and tagging for identification. The calf will also be introduced to a new diet, and if their ruminal microbes are not prepared for that new diet, it can lead to acidosis and bloat. Many industry beef nutritionists will agree that preconditioning will lessen the effects of these stressful events.

Research has demonstrated preconditioned calves experience lower rates of morbidity and mortality in the feedyard compared to their freshly weaned counterparts. For producers that chose to retain ownership of their calves entering the feedyard, a higher morbidity rate translates into higher yard cost due to more medical treatment plus poor performance, ultimately leading to an animal of lesser value. Preconditioned calves are more likely to receive a premium price and will perform better, which helps lead to a quality carcass product.

The preconditioning program

A preconditioning program should include a veterinarian-directed vaccination program, proper livestock handling, good nutrition, and low stress weaning. Typically, the first round of vaccinations will be given when calves are 2 to 3 months of age. Recommended vaccines include those for clostridial and respiratory diseases plus an application of an antiparasitic, while castrating and dehorning are done at the same time. Ideally, boosters of these vaccines would be given again 14–21 days prior to weaning. This helps reduce stress at weaning time while also ensuring high levels of antibodies.

The same vaccinations should be repeated during the preconditioning stage.

The term “proper livestock handling” refers to working your herd calmly. When dealing with calves, allow time for them to pair back up with their mothers following vaccinations or other treatments, or after they’ve been moved.

During pre-weaning, calves need a high amount of protein, but not non-protein nitrogen (NPN). Calves will be able to handle a limited amount of NPN by weaning but there needs to be sufficient natural protein in the diet to allow for the utilization of NPN. Producers will also want to avoid highly fermentable ingredients such as wheat or ground corn, and provide constant free access to forage. Creep feeding is a means of accomplishing this nutritional goal.

Creep feeding may help ensure calves receive proper nutrition while also transitioning from one feed source to the next. When done 45 days prior to weaning, calves can put on additional weight without becoming fleshy. Research is inconclusive as to whether creep feeding provides a performance advantage in the feedyard.

A creep ration should contain 14–16% crude protein and 65–80% total digestible nutrients. Utilize feedstuffs high in digestible fiber and protein such as dried distillers’ grains, corn gluten, and wheat middlings. These ingredients cause less acidosis problems while still providing quality protein. Producers should pick ingredients based on cost and availability, keeping in mind what works best for their operation and production goals.

To introduce creep feeding to calves, start by providing limited amounts of the feed on the ground to cows and calves for a few days. Next, scatter the feed on the ground near the creep feeder and within the feeder as well. Because of the calf’s natural curiosity, it will explore the creep feeder. As calves begin to creep feed, continue to observe them to ensure they don’t over-consume which could result in digestive problems.

Weaning

A vital part of preconditioning is weaning, preferably in a low stress manner. In order to wean effectively, plan on doing so 30–60 days prior to shipping, with 45 days being the recommended average. This allows for monitoring and treatment of any early illness while also eliminating the separation stress that will compound stress at the time of feedyard entry. Methods of weaning include complete separation, nose flaps, fence line weaning, and calf swapping.

If doing complete separation, start with cow-calf pairs in the location where you plan to leave the calves, then remove the cows to a new location out of sight and hearing. This reduces stress for the calves as they are still in a familiar location. You can also wean in waves, by removing some of the cows so the first bunch of separated calves still have mothers around, and then remove the second bunch of cows. Another way to lessen separation stress for calves is to place culled cows with them; these mature cows provide a sense of security for the calves.

In order to accomplish fence line weaning, move cows to a pasture on the opposite side of a fence. Fence line weaning requires a strong fence such as woven wire or multi-strand made from high tensile wire. The benefit is that it allows some nose-to-nose contact between cow and calf, which helps to reduce stress. Mature cows will seldom challenge the fence, but first-calf heifers will have a stronger desire to get back to their calf. Visits to the fence will gradually decrease over the first week and the process will be complete.

Another method of weaning uses anti-suckling devices or nose flaps which prevent the calf from nursing while allowing them to remain with the cow. The nose flap attaches to the calf’s nostrils and prevents it from reaching the cow’s teat or getting the teat into its mouth. Calves can still graze and drink right alongside mom. There are various designs, some of which also cause discomfort to the cow. Nose flaps need to be in place for a period of 4 to 14 days and could be put in during the pre-weaning vaccination. Nose flaps work as a two-stage weaning

method with the first stage involving the weaning of the calf off milk following application, and the second stage being the removal of the nose flap and physically separating the cow and calf. Both fence line and nose flap weaning demonstrate benefits to the calf, with less time spent bawling and walking, and more time eating.

Calf swapping is when a cow herd is split in half into two different pastures and swapping the two groups of calves. This method accomplishes the goal of weaning the calves while they still have the comfort of mature cows present.

Bunk breaking

During the weaning process, there is an opportunity to begin the bunk breaking process. Place feed and water troughs perpendicular to the fence so calves will walk past them as they walk the fence. By spilling feed over the edge of the bunk, calves will start by eating off the ground, eventually working their way into the bunk. Adequate bunk space of 12 to 24 inches per calf is needed. Allowing water to overflow and flood the area around the water trough helps calves adjust to troughs. Be aware of water quality, though, as high amounts of sulfur or iron will create an antagonism with trace minerals such as copper.

Supplements

Calves should be provided with a high quality mineral supplement. Trace minerals important to proper immune function and proper vaccine response include copper, manganese, selenium, and zinc. Providing a portion of minerals in chelated form may improve the mineral status of calves. Producers may also need to consider supplementing with calcium and phosphorous as well as vitamins A, D, and E. Vitamin and mineral supplementation programs need to be tailored to the individual operation and in consideration with feedstuffs being used, with the guidance of a consulting nutritionist.

Summary

Calves that have gone through preconditioning will be better prepared to enter a feedyard. They will have a strengthened immune system, will have been introduced to concentrated feeds, and be bunk broke and weaned. Preconditioned calves entering the feedyard are more likely to receive a premium price and be able to perform at a greater capacity. All this leads to the ultimate finish line of a quality meat carcass to become a tasty steak dinner!

The Idaho Beef Quality Assurance Program is a partnership between University of Idaho Extension and Idaho Beef Council.

The BQA Mission

To maximize consumer confidence and acceptance of beef by focusing the producer's attention to daily production practices that influence the safety, wholesomeness and quality of beef and beef products.

BQA Certification

Certification requirements can be achieved by participating in a training session and completing the BQA quiz and personal contract. Certification is valid for three years. Learn more about BQA certification in Idaho, here: <http://extension.uidaho.edu/bqa/certification/>.

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