Purina Mills Check point™
Management & Nutrition Tips For Beef Producers

Nutrition is Critical Element of Preconditioning

Feeder cattle preconditioning is a management alternative that is not only growing in popularity, but it can add value to your cattle and improve the bottom line of your beef enterprise. Experts predict the demand for preconditioned calves will only increase in the future.

Research has shown that, after feed costs, medicine costs and death loss are the most important animal performance measures in determining cattle feeding profitability.[1] In addition, source verification is increasingly important due to, among other things, increasing food safety concerns. Demand is increasing for calves that are source verified and have documented birth, health, and feeding records.

Calves that do not get sick have been shown to gain faster, convert feed more efficiently, and have higher quality grades than calves that become sick at the feedlot. Any preconditioning program must include a protocol for vaccination and parasite control. And, preconditioning should begin long before the calf is weaned through immunization and proper nutrition.

According to beef cattle experts with the Oklahoma Cooperative Extension Service, nutrition costs in a preconditioning program can make up 50 to 70 percent of the preconditioning costs.[2] So, producers considering implementation of a preconditioning program should develop a budget and evaluate the economics of a program for their specific situations.

OBJECTIVES

You first need to define and prioritize the objectives of the nutritional management program for preconditioning, according to the Oklahoma experts. They suggest that your objectives might include:

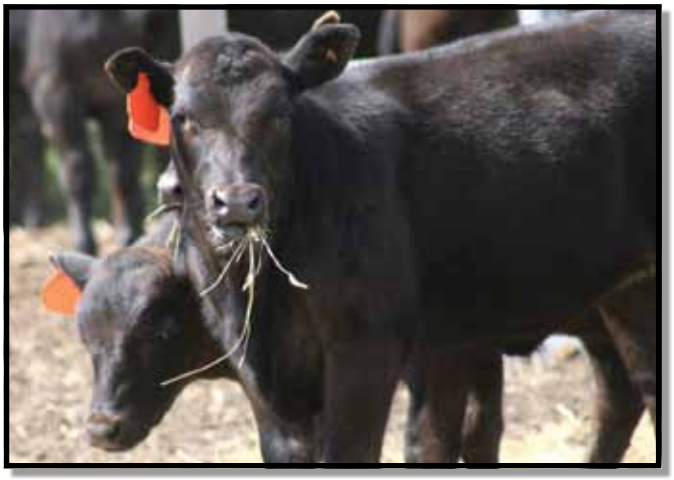
- Optimizing condition and health of the cattle for the next phase.
- Producing added weight gain at a low cost.
- Marketing home raised feed resources through the preconditioning program.
- Minimizing the risk of digestive disorders and disease during the weaning and preconditioning phase.
- Achieve a specific target weight for the cattle by sale or shipping date.
- Accomplish these objectives with minimal labor and equipment investment.

Preconditioning feeds must be highly palatable. Providing highly palatable, familiar feed serves to minimize the length of fasting, resulting in improved weight gain and reduced stress during the first week after weaning.

When properly implemented, preconditioning is the best program available for preventing shipping fever and the bovine respiratory disease complex (BRD), and according to University of Idaho livestock experts, it allows the animals to adapt quickly to feedlot rations and environment.[3]

North Dakota State University beef cattle specialists offer these tips for calf nutrition during the preconditioning period.[4]

- Try to get calves acclimated to eating processed feeds. They will adjust to dry-lot feeding more easily if they have been exposed to processed feeds before weaning.
- Creep feeding prior to weaning allows calves to become "bunk broke" or accustomed to eating dry, processed feeds prior to the stresses of weaning. Bringing the creep feeder from the pasture into the backgrounding lot will help the calves adjust to a dry-lot feeding situation more rapidly.



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- If it is not possible to bunk break calves prior to weaning, it is important to make their adjustment to life in the feedlot or backgrounding yard as stress-free as possible. Inadequate nutrient intake can be a major problem during the weaning period if calves are not accustomed to eating from a bunk. Stresses associated with weaning and transit cause feed intakes to be depressed.

Purina Mills Preconditioning/Receiving Chow® and IMPACT® Starter Complete have set the standard in the beef industry for preconditioning and receiving rations. So, contact your Purina dealer today for more information on these and other beef cattle nutrition products that will fit your specific preconditioning program.

References: 1. http://pubs.caes.uga.edu/caespubs/pubcd/B896.htm#Feeding 2. http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1957/F-3031web.pdf 3. http://www.iowabeefcenter.org/pdfs/bch/05475.pdf 4. http://www.ag.ndsu.edu/pubs/ansci/beef/as1160w.htm

Nutrition is Key to Marketing Alliance Success

Bill Koch, DVM
Western Illinois Veterinary Clinic

Looking at the feeder cattle marketed through the Western Illinois Cattle Alliance (WICA) might make you think the cattle had come from a single producer.

The color, condition, health status and quality are remarkably similar, but these cattle have been produced by 19 different producers representing a total of about 1,200 cows within a 35-mile radius of Quincy, IL. These producers, each a member of WICA, represent herd sizes from 10 head to 280 head.

Bill Koch, DVM, a large animal veterinarian with Western Illinois Veterinary Clinic, Quincy, was instrumental in getting cattle producers together seven years ago to start WICA. He continues to be facilitator of WICA today.

"It was put together in the aftermath of the hog situation that had developed," Dr. Koch explains. That situation saw a rapid consolidation in the pork industry following very low hog prices in which many smaller hog producers went out of business, he says.

The first year, there were seven cattle producers involved in WICA, says Dr. Koch. "We were able to put together about a trailer load of cattle, which is about 50,000 pounds. "That first year we backgrounded and then sent the cattle to a feedlot in western Kansas.

"We retained ownership of the cattle so we were able to retrieve information about production costs, rate of gain and other information we needed on those cattle from the day of arrival to the day they were slaughtered."

WICA eventually evolved to where it began video marketing the cattle through Superior Livestock Marketing. These days, cattle are sold via video marketing in August for delivery in the fall and early winter.

QUALITY IS MISSION

Dr. Koch says the mission of the cattle marketing alliance has always been to consistently produce a quality product and receive a price that allows the members to make a profit.

"We have been able to increase the quality of the product over the last five years due primarily to improved genetics and nutrition," says Dr. Koch.

Because WICA sells its animals via video in August for delivery later in the year, it is critical that cattle have predictable traits so that buyers can be reasonably assured of what they will be receiving from the producers, he explains.

Genetics and nutrition are two drivers of consistency and predictability, according to Dr. Koch

"We need to produce a consistent product that we can predict, and this requires a consistency in genetics. Most of our group's genetics include an Angus base on the cow side and crossbred on the bull side."

PURINA® NUTRITION

Nutrition is the other main part of the consistency/predictability equation, says Dr. Koch. "We use Purina feeds because they have proven to give us consistency in gain."

The WICA nutrition program includes Purina's Accuration® and Impact® Starter feeds.

"We have been working with them for about four years now. In my opinion, the Purina products have been on the cutting edge. I understand the products and the programs. When I sit down year after year and figure the cost per pound of gain, it's within a very reasonable range, which we can afford. Purina's nutrition program has given us consistency, predictability, and affordability."

Dr. Koch emphasizes that it is important to follow the complete nutrition program. "We don't feel that we can just pick parts of it. Everything ties together. We do have to follow the complete program for consistency and for cost of gain to be efficient."

In addition to consistency in genetics and nutrition, WICA members also agree to follow consistent health protocols, according to Dr. Koch. "The producers all follow consistent vaccination programs, time of weaning, time of castration, implanting, parasite control and other health protocols."

These health measures, along with the genetics and nutrition programs, help the WICA producers add value to their products and enable them to produce a high quality consistent product at a profit even during times of economic insecurity, concludes Dr. Koch.

Managing First-Calf Heifers

First-calf heifers need to be fed and managed properly to reduce their susceptibility to calving and reproductive failure.

To be reproductively efficient, a heifer needs energy, protein, minerals and fat to support growth and performance. Use of organic trace minerals from 60 days prior to calving to 60-80 days after calving also is recommended to improve overall reproductive performance.[1]

According to the Beef Cattle Handbook, successfully calving and then rebreeding first-calf heifers presents one of the greatest challenges to cow-calf producers.[2]

Calving difficulties, weak calves, calf death loss and scours are all potential pitfalls that can be avoided or reduced with proper management and nutrition, according to beef cattle experts.

Cattle production experts suggest you pay attention to these management considerations:

BREEDING

- Breed fist-calf heifers early as yearling replacement heifers. Research has shown that first-calf heifers have a longer postpartum interval than cows. Heifers that calve late as two-year-olds are difficult to manage and will usually calve late in the season and wean younger, lighter weight calves.
- Either start the breeding season for yearling heifers two to three weeks ahead of the cow herd or shorten the breeding season on the yearlings to help assure an early calving group of first-calf heifers.
- If you are purchasing replacement heifers, buy only heifers that are due to calve early in your calving season.

PRE-CALVING NUTRITION

- Research has shown that first-calf heifers fed diets with low energy can have calving difficulties and produce lighter weight calves. First calf heifers fed high energy diets are more likely to return to estrus more rapidly, resulting in a higher percentage of cows cycling at both the beginning and end of the breeding season.
- Studies have also demonstrated a strong relationship between body condition score (BCS) at calving and subsequent reproductive performance. A target BCS of 6 is recommended for first-calf heifers at calving (good muscle in the shoulders and hindquarters, fat in the tailhead and in the brisket, No ribs showing, and rounded across the top of the back with fat/muscle over the backbone).

CALVING

- Avoid calving difficulty. Among other things, calving difficulty in first-calf heifers delays return to estrus, lowers pregnancy rates, increases cow and calf death losses and dramatically increases costs of production.
- Sire selection and proper development of replacement heifers are the keys to reducing calving difficulty.
- Restricting energy prior to calving might reduce birth

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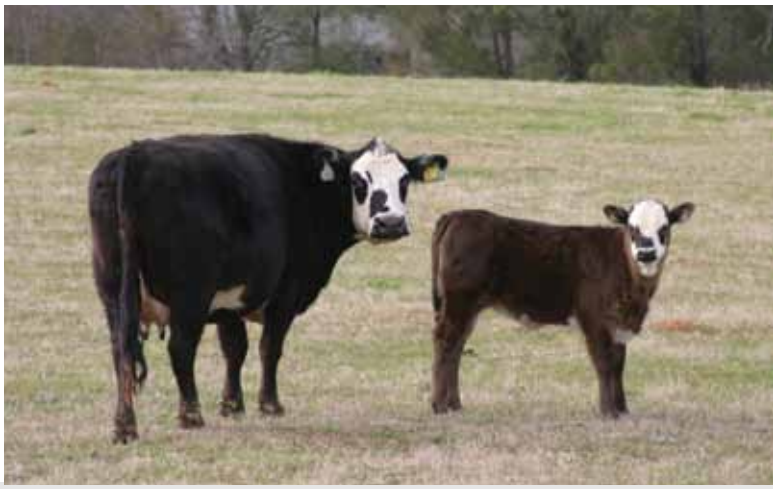

TIPS FOR ROTATING PASTURES

Rotational grazing can provide pastures with higher yields and more efficient utilization of your forage resources. Here are some quick tips to help you get the most out of rotational grazing of pastures:

1. Strive for a minimum of five to eight different paddocks where each paddock can be grazed for a maximum of two to three days and rested for at least 21 days.

2. Move cattle from one paddock to another based on forage growth rather than a rigid time schedule.

3. The best time to graze is immediately following rapid growth of the plant but before flowering or seed head formation.

4. Some target heights to begin grazing are from 6 to 8 inches for cool season grasses and legumes, 12 to 14 inches for warm-season perennial grasses, and at least 18-24 inches for summer-season annuals.

5. Don't over graze pastures. The closer a pasture is grazed, the more time it takes the forage to recover. One rule of thumb is to leave 3 inches of stubble for cool-season grasses and legumes and 4 to 8 inches of stubble for warm-season grasses.

6. Pay attention to your cattle's grazing habits. Regardless of the quality and yield of a pasture, cattle spend roughly the same amount of time each day grazing. They should be grazing about eight hours per day with the heaviest grazing period beginning as soon as it gets light in the morning. Cattle do not graze when it is dark except during the hottest days of the summer.

Fighting Parasites with a Strategic Deworming Program

Don't let worms and other parasites eat away profits from your beef cattle enterprise.

Deworming has evolved into a standard recommended practice for most cattle producers because it provides the economic benefits of improving efficiency and beef quality, says Donald H. Bliss, PhD, a well known veterinary parasitolgist and owner of MidAmerica Agricultural Research, Inc., Verona, Wis.

Dr. Bliss points out that today, more producers are deworming their cattle at strategic times of the year to prevent economic losses, rather than just wait until after their cattle get damaging levels of parasites.

A recent development, according to Dr. Bliss, has been the increasing attention on parasite resistance to the macrocyclic lactones (ML), anthelmintic parasiticides which have been widely used to treat livestock for parasites. These would include invermectin, doramectin, eprinomectin and moxidectin. The ML products come in pour-on formulations or as injectables.

This comes "at a time when the economics of parasitism constitute one of the most important factors involved in beef production," says Dr. Bliss, who believes that producers who utilize the correct strategic deworming program fitted for their specific enterprise can minimize their concerns about the resistance issue.

PREVENTING LOSSES

"The goal of a strategically timed anthelmintic application is to prevent economic loss and reduce environmental parasite contamination by eliminating worm-egg shedding for a period of time at least equal to the life cycle of the parasites removed," explains Dr. Bliss.

"This strategy entails more than simply applying a dewormer," he emphasizes. "The timing of the deworming is very important, and things to be considered include the season of the year, type of grazing programs practiced and the overall management goals of the operation.

"The success or failure of these strategically timed programs depend upon a number of factors, one of the most important being the ability of the anthelmintic to stop parasite eggs being shed back on the pastures, especially during the early part of the grazing season.

"If the anthelmintic fails to stop worm-egg shedding and cattle continue to shed worm eggs back on the pasture following treatment, the potential for pasture cleanup is greatly reduced or, in many cases, eliminated."

Dr. Bliss says that you want to strive for having your cattle parasite-free in the winter not only to keep them healthy and producing efficiently but to ensure that they are not shedding parasites back on the pasture when grass begins to grow in the spring.

For strategic deworming of cow-calf operations, Dr. Bliss recommends that you include Safe-Guard®* mineral or cubes in the spring about four to six weeks after the pasture greens up and cattle are turned out on the pasture.

"That means any worms that they pick up in the spring are killed before they shed them back on the pasture," says Dr. Bliss. "With such a strategic deworming program, you are going to have those animals parasite free for 60 to 90 days. That means they are not shedding any parasites on the pasture in the spring and that reduces the challenge for the entire year by about 75 to 85 percent."

Another important aspect of this strategic deworming program would be to use Safe-Guard® Mineral in combination with pour-on deworming products in the late fall when traditionally you may have only used a pour-on product.

Trials have shown that this strategic combination is very effective in eliminating parasites from cattle and pastures, says Dr. Bliss.

It also might help to counter the effects of parasite resistance to ML pour-ons, says Dr. Bliss. "Fecal egg reduction tests have shown where ML pour-ons have been used repeatedly, Safe-Guard may be necessary to break the resistance to these parasites during the winter in order to prevent re-infection by resistant parasites on spring pastures."

NUTRITION PRODUCTS FOR STRATEGIC DEWORMING

Land O'Lakes Purina Feed can help in your efforts to develop a strategic deworming program to keep worms and other parasites from robbing profits from your cattle enterprise. The company offers the following products:

- **Safe-Guard® Cattle Cube 4** – 50 pound bag. Each 4 pounds of cubes will deworm 1,000 pounds of body weight.
- **Safe-Guard® Mixing Mineral** – 50 pound bag. Each pound of mineral will deworm 1,000 pounds of body weight.
- **Safe-Guard® 0.5% Cattle Pellets** - 25 pound bag. Each pound of pellets will deworm 1,000 pounds of body weight.

Safe-Guard® (fenbendazole) has been approved for cattle in the United States since 1984. It is approved as an oral suspension, oral paste, in a free-choice mineral to be fed over a three- to six-day period, in a medicated block to be fed over three days, as a top-dress crumble, pellet, or meal or can mixed in the ration in a one-day feeding.

Safe-Guard® has a high degree of safety due to its mode of action and ability to kill parasites by destroying their means to metabolize food stuff. By destroying the ability of the parasite to utilize food stuff, it kills the parasites within the first 24-hours after product exposure.

** Safe-Guard is a registered trademark of Intervet, Inc. or an affiliate.*

SEVEN WAYS TO ADD VALUE TO YOUR CALVES

Proper management can go a long way toward adding value to your calves and preventing discounts on cattle that buyers don't desire.

According to animal scientists with Texas A&M University, following are seven important calf management practices that can help you add value to the calves you produce: [1]

1. Parasite control – Calves are more susceptible to internal and external parasites than adult cattle. Managing these parasites can add additional pounds of weaning weight. Texas field trials indicate that deworming nursing calves along with their dams in the spring can increase daily weight gains in calves, resulting in increased weaning weights. Controlling external parasites also improves weaning weights.

2. Creep feeding – Creep feeding is designed to add weight to nursing calves on pastures, especially in situations where cows and calves are stressed by a lack of forage, extreme temperatures, or other adverse environmental conditions.

3. Dehorning – In the feedlot, horned cattle require more bunk space, can cause bruises that lower carcass values and are a safety concern for people. Discounts for calves with horns are usually about $2 per hundredweight. Dehorning is inexpensive and should be done on calves as young as possible to reduce stress on the calf. Methods and devices used to dehorn calves include polled genetics, hot iron method, Barnes dehorner, dehorning saw, tube dehorner, and dehorning paste.

4. Castrating – Castrate bull calves. Depending on weight, steers are worth more per hundredweight. Older and heavier bull calves are discounted to allow for shrink and possible death loss from castration. To minimize stress and risk, calves should be castrated as young as possible, preferably before 4 months of age. Calves can be castrated as soon as they are nursing. Methods of castration include surgery (knife cut), banding and the burdizzo method.

5. Growth implants – There is a high net return on implanting suckling calves because it can increase daily weight gains and weaning weights.

6. Fill – Cattle fill is classified as gaunt, shrunk, average, full or over-filled (also called tanked). A small amount of fill variation is tolerated by order buyers, but extremes are discounted. Keeping cattle within the shrunk-average-full range should eliminate discounts for fill.

7. Group size and uniformity – Buyers prefer feeders that are bred alike, managed alike, and sold in truck-load lots of 90 to 100 head. When determining uniformity among a group of feeder cattle, the traits buyers look for most are weight, color, breed type, frame, muscle and condition.

Your local Purina dealer can help you design creep feeding, deworming and management programs specific to the needs of your herd.

Reference: 1.http://animalscience.tamu.edu/images/pdf/beef/beef-producing-marketing-high-value-calves.pdf

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weights, but it has also been shown to cause increased calving difficulty, poor calf vigor, decreased calf survivability and reduced conception rates.

POST-CALVING

- Separating first-calf heifers from the mature cow herd can help improve reproductive performance.
- Provide a higher quality diet for lactating first-calf heifers than for lactating cows.
- Monitor heifers for changes in BCS from calving through breeding.
- On pasture, first-calf heifers may have problems consuming enough forage to meet dry matter and energy requirements. Additional energy and other ration adjustments may be necessary if heifers start to lose condition.
- Continue to monitor BCS of first-calf heifers even after the breeding season. Preventing excessive body weight losses during late lactation can reduce winter feed costs and help to prevent reproductive failures as three-year-olds. Target first-calf heifers to reach a BCS of at least 5.5 at breeding time (good flesh in the shoulders and hindquarters with no more than 1 rib showing, and with good muscle/fat coverage over the back and down the backbone).
- When first-calf heifers are losing weight and BCS or pasture conditions are becoming poor during late lactation, early weaning and supplementation may be necessary to prevent loss of body energy reserves.

Purina understands cattle nutrition in all life stages, including first-calf heifers. The company has performed in-depth research for many years to develop programs and products to meet specific animal needs.

These include mineral supplements in the Wind and Rain® weather-resistant line that are specifically formulated for regional and seasonal needs. These minerals can offset forage deficiencies and are proven palatable and reliable.

In addition to mineral supplementation products, Purina has two product lines for heifer development–4-Square Brand Stocker/Grower, and Accuration® Cattle Limiter™ feeds.

The 4-Square Brand Stocker/Grower nutrition line of hand-fed range products are balanced protein and energy supplements. They are designed to enhance forage digestion, allowing your cattle to get more of their nutritional needs from your home-grown forage.

Accuration/Cattle Limiter brands include Purina's exclusive Controlled Intake Systems with Intake Modifying Technology®. These products have been designed specifically for cows and heifers.

Contact your Purina dealer today for help in developing a nutrition program for all life stages of your herd, including first-calf heifers.

References: 1. http://www.feeddealer.com/publications/lol_PMI/PDF/First-Calf-Heifers-10-07.pdf 2. http://www.iowabeefcenter.org/pdfs/bch/02110.pdf

QUICK TIPS
TO HELP IMPROVE WATER MANAGEMENT

A shortage of drinking water for your cattle can happen quickly during hot, dry summer months. Assuring good quality water for your animals also can be a challenge in warm weather.

Good quality water is one of the most important nutrients required by cattle and must be provided on a daily basis. In the summer, ponds and other sources of water can get low and concentrate any contaminates that may be present. Ponds also may have algae present that pose water quality problems. Further, water quality can be reduced because animals entering ponds may stir up mud.

Small changes in water management can result in improved performance and financial gains associated with decreased potential for illness and disease, according to the University of Florida (UF) Extension Service.[1]

UF EXPERTS PROVIDE THESE TIPS TO HELP YOU ASSURE YOUR CATTLE ALWAYS HAVE ADEQUATE, HIGH QUALITY WATER:

- Offer water in adequate quantity for the number and type of animals on your property.
- At least two feet of accessible linear water space is needed per 10 head of cattle.
- Make sure that watering devices are spaced appropriately and located away from stream banks.
- Watering devices should be easily accessible by animals.
- Strategic placement of watering devices can influence grazing, compaction, and nutrient deposition patterns.
- Avoid using pond water as a drinking source if possible. Recent research has shown that heifers with access to water pumped from a well or spring gained 23 percent more weight than heifers drinking pond water.
- Clean watering devices frequently.
- Test the water on your property for contaminants. Your county extension agent or beef cattle consultant can help you develop a testing plan and identify an appropriate laboratory.

Reference: 1. http://edis.ifas.ufl.edu/document_an187

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