



EARLY WEANING CAN IMPROVE YOUR BOTTOM LINE

Early weaning may not be a strategy you've ever adopted. But more and more producers are considering it, especially because of the extreme dry conditions the Midwest and Southwest have experienced over the past few years.

"Drought is still an issue, even in areas that have gotten some relief," according to Greg Lardy, Ph.D., professor and head of the Department of Animal Sciences at North Dakota State University. "In most areas affected by drought, there still isn't enough subsoil moisture—even if rainfall has been adequate this year. And, when forages are stressed, it takes time for them to recover."

Early weaning can reduce the demand on such forages, and it can have both short and long-term benefits. Obviously, it can stretch your forage resources during the current season. But more importantly, according to Lardy, it can help to reduce the possibility of long-term damage.

The cow and calf can also benefit from early weaning. Here's how.

Cow body condition. "Lactation requires high amounts of energy, protein and other nutrients," Lardy explained. "So, lactating cows often lose body condition. Drought conditions usually make this situation worse because forage is unavailable or of low quality. Through early weaning, the cow's nutrient requirements for lactation are eliminated. That can cut her nutrient requirements by one-third and improve her body condition score before winter feeding," Lardy explained.

Forage availability. Calves at age 6-7 months consume about half as much forage as a mature cow, Lardy commented. By weaning calves early, that forage is now available for the cow. Plus, because she is no longer lactating, she will consume less dry matter, further stretching forage.

Conception rates. Depending on the timing, you may also be able to improve conception rates through early weaning. "If calves are weaned before or during the breeding season (45 to 105 days of age), there's a greater chance for cows to rebreed in an optimum time frame, thereby increasing potential conception rates," said Lardy.

Calf performance. In some cases, calf performance may also improve

through earning weaning, especially if forage is inadequate. "Calves often have a hard time competing with cows for adequate forage during a drought," Lardy said. "Early weaning, coupled with a highly nutritious diet, can help calves reach their growth potential. Studies at several universities have shown you can actually increase quality grade in calves by getting them on a concentrate diet early in life."

Lardy said calves can be weaned as early as two months, but added that 3-4 months of age is generally preferable.

Is early weaning right for your operation? The use of this strategy depends on the producer's objectives and resources, Lardy emphasized. Early weaning requires additional labor and facilities in order to manage the calves properly, as well as increased cash costs for grain, hay, commercial feed and protein supplements.

When calves are on the cows, management is "pretty straightforward," he said. But if calves are taken off their mothers early, they must be fed, observed and treated if they fall ill. An excellent health and vaccination program will also be necessary, including:

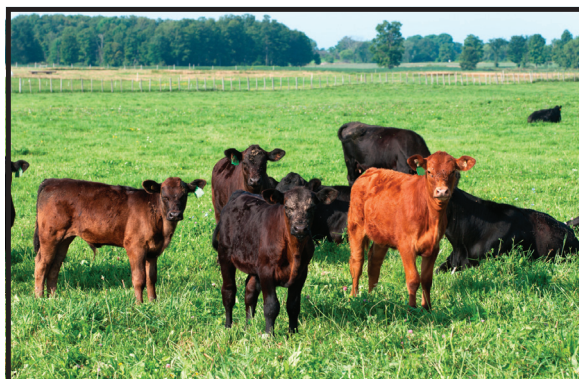
- Castrating, dehorning and branding 10-14 days before weaning
- Vaccinating for clostridial and viral infections
- Treating internal and external parasites
- Fly protection
- Mineral supplementation
- Clean water
- Monitoring intake levels and for health issues such as respiratory disease and digestive problems

For some producers, these requirements may necessitate hiring additional help. What's more, you'll need special facilities in which to manage these young calves.

"You have to separate the early weaned calves into pens appropriate for them," Lardy said. "They might weigh 250-300 lbs., so they may find a way to sneak out through an opening that a 600-pound calf can't. Feed bunks, especially those made for larger animals, will be too high for these smaller calves to reach."

Young calves also require higher

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concentrations of nutrients than heavier calves, he said. And, because they are accustomed to forage and milk, they must have help adapting to a totally different diet. Lardy recommends good quality water and fresh, palatable feed. To appeal to their familiarity with forage, he suggests starting them out with forage in the bunk and top-dressing with ration. Finally, he recommends not starting calves on fermented feeds such as silage, which have an unfamiliar odor. Silage can be introduced later when calves are accustomed to consuming processed feed.

Clearly, early weaning is not a practice to be adopted without careful consideration. But sometimes, producers can be pleasantly surprised by the benefits, Lardy remarked.

Over the years, producers who early wean have commented on how far they were able to stretch their forage. They were surprised by the lower quality and quantity of forage their cows could get by on. Sometimes the forage savings can be dramatic.

Contact your Purina dealer today and ask about their Great Starts® program. Your dealer will help you plan a starting program for your calves, using products like Accuration® Starters, PreCon® Complete Feed or PreCon® 5 Feed. For example, Accuration® Starter Complete LW Feed is specially designed for light-weight calves. It is a complete, coarse-textured ration, including roughage, to help assure your early weaned calves get on feed quickly and stay healthy.

TAKE A LONG-TERM APPROACH IN DEALING WITH DROUGHT-STRESSED PASTURES

While much of the country has experienced considerable relief from the dry weather of 2011 and 2012, some areas aren't out of the woods yet, according to David Lalman, Ph.D., professor and extension beef cattle specialist at Oklahoma State University.

While some places had considerable relief this spring, Lalman says that "Western Oklahoma, for instance, is still not far from where it was at this time last year. Ponds and lakes there are at 1/3 capacity or less. And, even areas with adequate spring precipitation could revert to last year's conditions if we have another record-setting hot, dry summer."

Many pastures had an overabundance of cool-season annual forages this past spring, Lalman explained. As these cool-season annuals mature and decline in quality in early summer, native warm-season grasses take over the task of feeding cattle. However, warm-season grasses are now "diluted by the cool season annuals that have long since matured, so pasture quality will be lower this summer regardless of the weather."

Lalman advises producers to avoid long-term damage to pastures by looking seriously at alternatives to overgrazing.

"If drought returns or persists, as many climatologists predict, the best way to preserve grazing resources is to reduce stocking rate accordingly," Lalman stated. "This may require selling more cows, leasing grazing land somewhere else, or moving cattle to a dry lot or sacrifice pasture—before more permanent damage is done and before cows lose weight and condition."

"Native grass species are more sensitive to overgrazing than many introduced species, which tend to be established in deeper soils and receive more fertilizer," said Lalman. "It takes a long time for native grasses to come back. So, you'll end up with a reduced carrying capacity for years to come unless range conditions are monitored closely and stocking rate is adjusted appropriately."

So, if dry weather persists in your area, how can you address the short-term needs of cattle—and the long-term health of your pastures?

Sacrifice pastures. Lalman offered that, "Last winter, many producers used what they call sacrifice pastures or dry lots to keep the cattle from overgrazing and further damaging the rest of their pastures. The most common approach here was to shut the gate and start feeding hay and a concentrate supplement. This area will be overgrazed, but the rest of the pastures are spared."

Depending on cost and availability of feed commodities and hay, a total mixed ration using primarily concentrate feeds might be more economical than hay feeding, he said. Lalman cautions that enough roughage, such as hay or silage, should be provided to avoid acidosis.

Protein is critical to development and reproduction. Many pastures affected by drought will yield lower than optimal protein levels. If so, protein supplementation will be warranted earlier than usual this year, Lalman said.

Vitamins and minerals are also leached from plants during drought and weather stress. The most significant of these is beta-carotene, which cattle convert to Vitamin A, according to Lalman. Most free-choice minerals incorporate Vitamin A for this reason.

One mineral that is often deficient in low-quality forage in Oklahoma and other areas in the West is phosphorus, which is required for "everything from bone structures and cell growth to immunity and a healthy digestive system."

Copper and zinc can also be deficient, affecting reproduction and immunity. "You might expect reduced pregnancy and conception rates, as well as more sickness in general, specifically when calves go to stocker and feed yards," Lalman said. "Geography, forage species and soil type dictate the deficiencies in any particular location."

Energy. Mature or poor quality forage is less digestible, causing weight gain to slow. One way to boost energy consumption is to reduce the number of cows on a given pasture, allowing cows to pick through the forage for a higher quality diet. For producers taking a wait-and-see attitude about selling cows, supplementing energy is another option to keep cows in acceptable condition.

Byproducts such as wheat middlings, soybean hulls, corn gluten feed and distiller grains are good sources of energy, as is commercial feed, Lalman said.

Purina offers a complete line of supplements that provide the protein, minerals and energy your cattle may lack due to recent droughts. Contact your Purina dealer or sales representative about products such as Accuration®, containing Intake Modifying Technology®, formulated so cattle eat only what they need based on the quantity and quality of forage, and Wind and Rain® weather-resistant cattle minerals. Your dealer will help you assess your situation and develop a customized feeding program to keep your herd in top condition, regardless of the weather.

KENNY HINKLE TAKES SCIENTIFIC APPROACH TO RAISING CATTLE

When it comes to raising cattle, Kenny Hinkle has it down to a science. So much so that the sale price of bulls from Hinkle Prime Cut Angus (HPCA) averaged \$5,400 this past March.

That's something Kenny is proud of, but what he finds even more gratifying is that over 70 percent of his bull sales went to repeat customers last year.

With his wife, Janyce, Kenny runs about 200 commercial and registered Angus cows on approximately 600 acres in Nevada, Mo. Their enterprise, which they began in 1995, sells around 200 bulls a year through private treaty or a production sale Kenny conducts every March. And, everything is done through artificial insemination (AI) or embryo transfer (ET).

To be able to sell 200 bulls a year, HPCA transfers around 300 embryos per year and also does "joint venture" bulls with small Angus producers who have purchased females in HPCA sales.

"They buy females, and when they calve, we partner on any bulls out of our cows, as long as they follow AI and ET, and use the same sires out of the group we are currently using," Kenny said. Then we market those bulls. They do the weaning; we take it from there and split the profits."

Kenny flushes about eight donors every 60 days throughout the year. A group of females is selected once a year to be included in the donor group. Currently about 70 percent of the bulls HPCA sells are the result of embryo transfer.

As far as selecting the donors, Kenny said they sort females at a young age and let them calve at two years. Then, they observe the heifers' mothering skills and milk production. Based on their observations and DNA profiling for such attributes as marbling, yearling weight, fat and internal fat, they select 12 that excel.

"We select what we think are our best females, based on what we see," Kenny offered. "Then with six drops of blood on a card—and \$75 for the DNA profile—we will know more about that cow than if she had eight calves naturally."

"DNA allows us to improve our genetics more rapidly than we've ever been able to," Kenny stated. "It's amazing what science can do. A lot of people don't realize how much we use science in the cattle business."

Besides genetics, the other thing that has helped Kenny's operation prosper is sound nutrition. He buys all his hay, rather than raising his own. And, he provides automatic water, fencing off all ponds, which he says are too difficult to keep clean.

And, over the past three years, he has employed Purina's Accuration®, which he credits with maintaining—even benefiting—his herd during drought conditions.

"I learned about Accuration at a seedstock producer conference in 2010 at Purina's Animal Research Farm," Kenny explained. "I had never used it before, but it has made a world of difference."

"What really impressed me was the last two dry summers we got by without feeding any hay," Kenny said. "We fed straight Accuration from the middle of July on, and the cattle were in as good shape as they have ever been in their lives. Plus, we had



Kenny and Janyce Hinkle with some of their 200 cows.

the best conception rate ever on AI, and I think a lot of that is because of Accuration."

Their first round of AI yielded a 78 percent conception rate, and the first round of ET resulted in a 68 percent conception rate at 45 days.

The feeding program, customized to the needs of bulls, heifers and cows, was designed by Purina Nutritionist N.T. Cosby, Ph.D., along with Leland Browning at Heiman, Inc. in Rockville, Mo.

Leland explained, "We start Kenny's calves on a special mix. Then after the calves learn how to eat, they go on Accu-Creep®. After weaning, the bulls go on to the Accuration® Impact® Grower program, and the heifers go on a development program built around Accuration, corn and forages. All groups are provided mineral supplements year round. The minerals selected vary based on forage quality and the needs of cattle."

Purina's Wind and Rain® All Season 7.5 with Altosid® was used for fly control from May until first frost, and All Season 7.5 with Aureomycin® the remainder of the year. In addition, Availa 4® Tubs were provided to donor cows year round and for bulls 60 days before semen was collected.

The results were so impressive, Leland added, that one of Kenny's heifer customers from Louisiana called Heiman, Inc. to find out how they had fed the cattle because "he had never seen cows that looked that good."

Kenny concurs. "We would not have had a \$5,400 bull sale without them being developed on Purina. Plus, if I need anything I pick up the phone and call Leland or Bud Mareth, the Purina regional rep, and they will get in touch with N.T. and get it done."

Kenny praises the program's cost-effectiveness, exhorting other producers to think more analytically about their feed choices.

"People look at price per ton of feed. Instead they should look at price per pound of gain—or conception rate, or whatever their goals are," Kenny declared. "Our bull feed costs us about \$4 per day per head, but the average cost of gain is 93 cents. Anybody today would be tickled to put on four pounds per day at 93 cents per pound."

For more information, call or visit your local Purina dealer.



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INSIDE THIS ISSUE

EARLY WEANING CAN IMPROVE YOUR BOTTOM LINE

TAKE A LONG-TERM APPROACH IN DEALING WITH DROUGHT-STRESSED PASTURES

KENNY HINKLE TAKES SCIENTIFIC APPROACH TO RAISING CATTLE

TESTING FOR TRICHOMONIASIS IS JUST SMART MANAGEMENT

By Larry Hollis, DVM, M.Ag.

Many western states have required trichomoniasis testing for years, but this invisible threat has recently become a hot topic in the Midwest. In fact, Nebraska, Missouri, South Dakota, Oklahoma and Texas have recently passed regulations, and Kansas is in the process of doing so.

Bulls are generally the carriers of this protozoan disease, but it doesn't bother them in the least, so it often goes undetected. However, cows bred with those bulls often miscarry at 2-4 months.

To complicate matters, the miscarriage occurs after day 17 (when the cow recognizes she is pregnant and stops cycling), so you'll assume she is pregnant. Plus, she won't come into heat again for another 35-40 days after she miscarries. Consequently, unless you have a long breeding season, that cow is done for the season.

Most cows will clear the infection within 4 months and breed again, but they can get it again if exposed anew. Some mature cows develop immunity, so the disease is more common in heifers.

The first sign of problems is when you find a lot of open cows. You won't know for sure there's a trich problem, especially if you are using multiple bulls, but an open rate of 50-60 percent is a red flag.

Producers in eastern states without trichomoniasis programs should beware when purchasing bulls from western states. Bulls there can't be sold in-state without trich testing, but can be shipped to other states.

In fact, producers in eastern states with suboptimal pregnancy

rates may have been living with trich in their herds for years. If they leave bulls in year-round and don't keep records of calving dates, they may never notice a problem. The cow may abort unseen, clear the infection and later breed back while she has a little post-infection immunity.

There are several tests that can detect trich. The PCR (polymerase chain reaction) test, which most states require, is more accurate than the microscopic test, which has to be administered three times, each a week apart. The PCR is extremely accurate, with false positives virtually impossible. False negatives occur occasionally. To avoid this, bulls should have two weeks of sexual rest before the test, as sexual activity can reduce the number of protozoa in a sample.

When purchasing bulls, I recommend securing the results of PCR tests, or in the case of virgin bulls, a certificate from the seller stating the animal is younger than 18 months and has not been exposed to any breeding-age females. That constitutes a legal document if the bull brings trich into your herd.

If you have a multiple bull set-up, the state will consider one positive a positive herd, so it's best to get rid of all the bulls and open cows, selling them only for slaughter. If you do that—and your neighbor does too—it's usually a two-year effort.

I emphasize involving neighbors, because as we all know, bulls don't respect fences. If they see breeding activity in your pasture, they can easily jump a 5-wire fence and infect your cows.

Larry Hollis is extension beef veterinarian and professor of beef cattle management and nutrition at Kansas State University.