

ENHANCE REPRODUCTION—AND PROFITS—BY MAINTAINING BODY CONDITION

During the winter months, it's easy to find reasons to skip supplementary feedings. After all, trudging across fields when it's windy and cold—and sometimes snowing— isn't anyone's favorite task.

The cold, wind, dampness and mud all take a toll on your herd, 24 hours a day, increasing their energy requirements dramatically. And, for spring calving cows, that's especially significant. Their bodies are already struggling to meet the energy demands of a maturing fetus. And, it's crucial they remain in sound body condition to successfully calve, produce milk and rebreed promptly.

"The last third of gestation accounts for about 70-80 percent of calf growth," said Les Anderson, Ph.D., extension professor at the University of Kentucky. "During the last two weeks, an average calf grows about two pounds each day."

Anderson explained that cows must at least maintain body condition—preferably gain slightly—during that last period so they will have sufficient energy stores to calve rapidly and easily.

He said one common myth is that increased feeding will increase calf birth weight, thus raising the chances for dystocia. He said a number of studies have explored this and concluded the opposite is true.

"Cows that lost weight during the last trimester had smaller calves, but also had more problems calving," he remarked. "They simply didn't have sufficient energy stores in their bodies to calve rapidly and easily on their own. On the other hand, cows that maintained or gained weight had a lower incidence of calving problems—even though their calves weighed slightly more."

But, the benefits of maintaining body condition during winter don't stop there. Body condition also affects fertility,

rebreeding and pregnancy, all of which can have a direct impact on herd profitability.

Lee Dickerson, PhD and Senior Cattle Consultant at Purina Animal Nutrition, agrees that body condition throughout the entire reproductive cycle makes a significant difference on reproductive success and overall net return to the producer. Dr. Dickerson recommends "targeting a body condition score of 6 at calving, a 5.5 at bull turn-in, AI (artificial insemination), or ET (embryo transfer) and a 4.5 to 5 at weaning."

So what keeps producers—and Anderson says it's a big percentage of them—from achieving the desired body condition, especially during winter?

He says the short-term cost of feed to supplement cattle during the winter months often blinds producers to the long-term return they will receive on that investment.

"With feed costs being what they have been over the past few years, producers ask, can I afford it right now?" Anderson explained. "Ultimately, if they don't make the expenditure, they end up paying the price because their cows will have a reduced ability to conceive—and conceive early, plus a lower overall reproduction rate. But, they don't see that loss right off."

He said the University of Kentucky Extension helps producers make better decisions through "enterprise analyses" that evaluate potential expenditures against projected calving rates, weaning weights, rebreeding rates and pregnancy rates. "This makes intelligent decisions a lot easier," he explained.

Anderson described a retrospective analysis his extension conducted for a producer who had experienced an excessively dry summer and fall. The producer opted not to spend the \$6,000-\$7,000 needed for feed to maintain body condition from calving to breeding. On review, they found he only achieved a 42 percent pregnancy rate. That lower rate resulted in a \$17,000 loss—more than twice the amount he would have spent on feed to achieve his usual 85-90 percent pregnancy rate.

Clearly, maintaining body condition in the winter is important. And, to achieve it, supplementation is required.

"You need to boost the nutrient supply when the weather gets colder to maintain the cows' nutrient needs," Anderson explained. "Even with balanced forage, a rudimentary ration won't take into account their additional needs during these months."

Of course, Purina has a wide range of supplemental feeds, such as Accuration® supplement, to provide that extra nutrition.



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CUSTOMIZED FEEDING PROGRAM HELPS JONES FARMS THRIVE

"It's what I've always wanted to do, since I was old enough to ride a tractor."

And now Tyler Jones is living his dream. After graduating from the University of Missouri in 2008 with a degree in agriculture systems management, he has joined his father, Charles, and grandfather, David Wendell, in Dawn, Mo. at Jones Farms, which was started by Tyler's great-grandfather more than 80 years ago.

Tyler prepared himself for this day with active involvement in Future Farmers of America (FFA). He returned home just about every weekend in college to tend his herd and earn money to pay college expenses.

The Jones family raises corn, soybeans and a little wheat on approximately 3,000 acres, along with 400 to 500 head of cattle—most of them Black Angus, with a few Angus-Charolais cross.

"We put up all our own hay—about 700-800 acres of it a year," Tyler said. "We also chop silage and pack it into an in-ground pit so we can feed it throughout the winter to our feedlot cattle, along with distiller grains, ground hay, corn and supplemental protein. The ration proportions change as the cattle grow, but those are the main ingredients," he added.

Tyler said they feed out all but about 90-100 heifers they keep as replacements. And, they buy their bulls from Fink Beef Genetics and Mead Angus.

The number one trait they look for in replacement heifers is gentleness, Tyler said. "Docile animals are a lot more apt to take care of the calf and they're easier to handle with less chance for injury."

And, the number one thing they look for in feed supplements is value. Tyler said they've found that in the wide range of Purina products they utilize both for the brood cows and for finishing.

"The key thing in rebreeding cows is to keep them in good body condition," he stated. "Then they are more likely to get rebred and have another calf next year. Sup-R-Lix® supplement keeps them in good condition during the winter when weather is harsh, and they are relying on hay and supplements. We keep them producing milk by keeping Sup-R-Lix out in front of them." Sup-R-Lix® supplement is a molasses-based protein supplement that incorporates energy, protein, vitamins and minerals in the appropriate balance.

They keep the Sup-R-Lix "in front of them all year round," Tyler remarked, and they noticed the cattle "actually consume fewer pounds per head per day." That means they are maintaining, he said, and they don't consume as much as if they were catching up after not having it.

When operating that way, it's important to have some "limiter" in the feed to keep them from overeating, he offered. That's what Purina's Intake Modifying Technology® does, stimulating cows to eat smaller, more frequent meals, thereby enhancing digestion and weight control.

This Intake Modifying Technology also "reduces the amount of labor required to go out and keep blocks out or put hay out," according to Tyler.



That same Intake Modifying Technology® is incorporated into the Purina Wind and Rain® Minerals they also keep in front of the brood cows year round. In the spring, they use a high magnesium formula that includes Altosid and Aureomycin. Tyler said, "The Altosid prevents horn fly larvae from hatching, and the Aureomycin prevents anaplasmosis." During the summer and winter months, Jones Farms uses Wind and Rain® All Season formulas.

Tyler, Charles and David Wendell all have separate operations, but they work collaboratively in everything they do. And, as their calves mature, they are all put together in a feedlot. When they are, the feedlot cattle receive a customized blend of homegrown rations and Purina supplements, designed by Purina's Senior Cattle Consultant, N. T. Cosby, Ph.D.

"Dr. Cosby and our Sales Specialist, Glen Waters—have been very helpful. Dr. Cosby has helped us—for more than 20 years—develop the right blend of rations and products that are the most effective and economical for us," Tyler explained. "He has helped us figure out the proportions of hay, silage, distiller grain, corn and protein supplements that should be included, depending on their stage in life and whether they would be fed a growing or finishing ration."

They have used a number of products over the years, including Accuration®, Sup-R-Lix® and 4 Square Stocker Grower® supplements. Their current feedlot supplement is BP Balancer, a dry feedlot supplement that Purina recommended to deliver necessary nutrients at a lower feeding rate and lower cost per head per day.

It's the kind of complexity that Tyler says he enjoys most about what he does.

"I enjoy the interrelationship of everything," Tyler deduced. "We use a lot of our crops to feed cattle ...

Everything is tied together. Making everything balance and work together is really interesting."

Plus, he says, you're not doing the same thing day in and day out. One day you might be working cattle, the next planting beans.

"That opportunity is not always present. For a person going into farming from scratch today, it would be pretty much impossible with the cost of land, equipment, fuel and other inputs. I feel privileged that I have that opportunity."



AGE AND SOURCE VERIFICATION, A VALUE-ADDED PROPOSITION

Programs to verify the age and source of cattle were pivotal in reopening export markets after the first cases of BSE (bovine spongiform encephalopathy) originated in the United States in 2004. So, clearly, these programs provided real value to the beef industry as a whole.

But, for the right producers, age and source verification can also help to increase the value and/or saleability of calves, according to Scott Greiner, professor of beef and sheep production and management at Virginia Tech.

Age and source verification programs were designed to guarantee to foreign markets that product exports would originate from cattle less than 30 months of age when harvested, Greiner explained.

"BSE doesn't usually occur until after 30 months," Greiner stated. "So, that's the age agreed upon when trade was reopened."

To ensure that, the United States Department of Agriculture (USDA) created its Process Verified Program (PVP), through which it authorizes third party organizations to verify the age and source of cattle produced for human consumption.

Greiner said interested producers can contact one of these organizations, complete a short enrollment and participate in a training session.

"The verification company then establishes that the producer keeps adequate records and identifies calves by birth date, or at least by grouped birthdates established by a defined calving season," he elaborated. "They are verifying that the producer does, in fact, have the management and recordkeeping to ensure the process is working."

The verification company also retains records on behalf of the producer, and passes them along to the next person in the production chain, he added.

For that service, the third party charges fees, often a yearly enrollment fee, Greiner explained. And, producers must pay for ear tags, most of which are electronic, and invest the time to tag animals and keep appropriate records.

Generally, though, he estimates premiums fall between \$15 and \$35 per animal.

Greiner emphasized, however, that age and source verification is just one element in the value equation. "There are other things we know add value to a calf ... things like reputation, weaning, vaccinations, genetics," he commented. "All these things must be in order before considering age and source verification."

In order to get the greatest return on the investment in these value-added traits, Greiner advises producers to make sure their marketplace realizes the value—and that they can deliver a full load of calves. Sometimes neighbors will work together in commingling load lots of weaned, vaccinated, preconditioned animals, often bringing new buyers to the market.

Mark Harmon, who has worked at the Joplin Regional Stockyards in Joplin, MO for over 30 years, concurred on the importance of delivering volume—and a complete value-added product.

"Cattle are the only product out there that is worth more in potloads," he offered. "Everything else is volume discount, but cattle are worth more in large quantities."

On average, he said, that comes to about 48,000 pounds of cattle on a truckload. And, buyers want a truckload that offers a consistent product, which they can find at a venue such as the Joplin Stockyards, which sold 435,000 cattle in 2011 and sees 400-500 sellers on any given day.

Often, that product is value-added calves, said Harmon, who also runs about 60 SimAngus cows of his own, using AI and age/source verification.

"Preconditioned cattle are a big thing, especially because of the cost at the feedyard," he explained, "If they can get a calf that is low risk, bunk-broke, with vaccinations, they like that."

Age and source verification is what Harmon calls "another bell and whistle," one that he estimates brings an extra \$25-30 per carcass. And, he says, "if the right guys are in the audience, I can get \$.02 more per pound for them."

The way Harmon looks at it, if producers are already bunk-breaking, teaching calves to drink out of a water tank and giving two sets of shots, they might as well age and source verify.

"You might get 2-3 cents more per pound; your cost to do it is just the price of the ear tags and some basic record keeping, so why wouldn't you do it?" Harmon queried. "If you're calving once a year, you've got one chance to showcase your product to buyers. You have to keep in mind everything from choosing the right bull and preconditioning your cattle to your marketing date and plan."

Remember, a good preconditioning program includes a solid nutrition plan to help assure healthy, high performing cattle. Talk to your Purina dealer today about a life-stage feeding program for your herd.



(Continued from Cover)

Accuration® supplements not only provide balanced protein and energy, but also incorporate Intake Modifying Technology® which enhances digestion and prevents overeating by stimulating cattle to eat smaller, more frequent meals. This self-regulated eating means cattle eat just what they need, so less feed is wasted and less hand feeding is required.

In addition to supplementing during winter,
Anderson emphasized
the importance of getting
cattle in shape before the
cold weather hits. Plus,
he cautioned producers to
avoid the "rush to grass" in
the spring, which can also
have a negative impact on
rebreeding.

"Early spring grass is so nutrient-dense that it passes through animals rapidly and they are not able to absorb all the nutrients. They can actually get in a negative energy balance because they don't have it in their bodies long enough to absorb it."

He recommends adding supplements at this time as well, to slow the passage rate and keep energy up.

But, most of all at this time of year, Anderson says it's important to keep in mind that "when the weather gets bad and you don't want to go outside, that's when the cattle need you most. They're trying to fight that weather, and they need more energy. It's well-documented that if they lose weight during this time, it will affect their ability to rebreed."

Cow "Stay-Ability" Depends on Body Condition

By Larry Hollis, DVM, M.Ag.

Many producers don't realize how critical cow "stay-ability" is to their bottom line. Farm management records indicate that a cow must have her fifth calf in a row before you break even on her cost—regardless of whether you added her to the herd or developed her yourself.

And, that "stay-ability" all ties back to body condition, which drives everything from successful calving and weaning weight to colostrum production and rebreeding.

We know that cows in good body condition have fewer calving problems. Research also demonstrates the tremendous effect of body condition scores (BCS) on cycling. It's simple. If cows are in good condition at breeding, they are much more likely to cycle. Here's how it breaks down:

BCS	Cycling Rate
4.5	48 percent
5.0	59 percent
5.5	72 percent
6.0	80 percent or better1

Of course, cycling rate drives pregnancy rate. So, early cycling means earlier pregnancy and calving, allowing more time for rebreeding within an optimum time frame—plus providing more time for calves to grow and develop prior to sale. There are tremendous weight advantages for front-end-loaded calving seasons.

Colostrum production is also affected by BCS. The amount and quality of colostrum directly ties back to body condition. Calves

receive more volume and more antibodies as the cow's BCS goes up.

Also, pay close attention to body condition. I tell producers to take a notebook or Big Chief tablet with you, make a column for BCS 3, 4, 5, 6 and tally within the columns as you look at each cow. When you are finished, you can tell by your tallies how your herd is doing. Do this every month.

If you need to move them up one BCS, you should feed them enough to gain 80 lbs. each. You can't do that in late gestation; you must be doing it throughout the winter. And, be sure you are measuring flesh, not hair, which can often skew scores during the winter. You have to look past the hair to see what's really happening underneath. When in doubt, put them through a chute and feel them.

Everyone thinks they know how to body condition score, but that may not always be the case. Our extension office has held clinics at sale barns and had producers test their body condition scoring abilities on pre-selected cows. Many producers missed the weights by 200-300 lbs. and missed BCS by two full scores.

So many things are directly tied to BCS. It just makes sense to learn how to do it correctly—and to do it regularly. If in doubt, your university extension office can help, and you can find charts online—even mobile apps for your smart phone—to refresh your memory and keep your skills sharp.

1. Stevenson, JS, Johnson, SK, and Milliken, GA. Symposium Paper: Incidence of Postpartum Aanestrus in Suckled Beef Cattle. The Professional Animal Scientist, 19(2003):124-134.

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