



# Checkpoint<sup>®</sup>

Management & Nutrition  
Tips For Beef Producers



## GETTING THE MOST BENEFIT FROM YOUR SPRING FORAGE

We all look forward to spring, when the trees bud, the birds sing and the grasses are that beautiful, rich green.

It's a time when nature can help undo some of the damage that bad weather, low-quality forage—and yes, even less than perfect management techniques—may have inflicted on your herd.

Spring pastures deliver the maximum levels of protein and energy, according to Ted Perry, Purina Animal Nutrition Beef Nutritionist. While spring grasses are loaded with nutrients, a balanced mineral supplement should always be offered, he explained.

“In the spring, you want to make sure the cows are getting enough magnesium,” Perry said. “Spring forages are high in protein, energy, phosphorus and potassium, but they can be lower in magnesium. This mineral imbalance can cause grass tetany.”

When preparing cows for calving and rebreeding, there are clear benefits from utilizing as many of those spring grass nutrients as possible to increase body condition, especially in cows that have become thin over the winter.

Rotational grazing is one method that helps us take advantage of the nutrients in spring grasses. If a farm is set up to accommodate this practice, moving cows through different pastures, he recommends allowing them to graze down to 3-4 inches before moving them to other pastures where grasses are 8-9 inches high.

Forage analysis can also be helpful in determining mineral needs, Perry explained, but they only paint a “wide brush stroke”. You can't rely on such analyses alone to prescribe exactly what's needed.

Many variables affect the results of forage testing, including different species in the pasture and different times of the year. And, even when a broad cross-section of samples is diligently collected, you still may not get an accurate picture of consumption.

“In a study we conducted in the 80s, we used a lawnmower to collect samples which represented all the forages in a given area,”

Perry offered. “Then, we compared those with what the cows were eating. We found the two samples to be very different. Cows are selective about what they eat, so forage analysis tells you what's out there in total, but not necessarily what the cows are eating.”

Approximately 40 percent of cows in the United States never get any supplemental minerals, according to Perry. And, minerals are key to a cow's production efficiency, both in terms of feed efficiency and milk production.

“Minerals help make all of a cow's biological systems work better and more efficiently,” he stated. “We know that when cows receive adequate minerals, their rumen function, feed efficiency, and reproduction all improve. You can't really measure milk production in beef cattle operations, but we know milk production drops in dairy cows when they do not receive adequate minerals. So, we can presume a similar correlation in beef cattle.”

“The cost of a mineral program is minimal—only \$35-40 of the \$400-500 it will cost you to keep the cow,” he added. “Without it, you take the chance that the cow will not produce a \$1,000 calf. The minerals assure she will be as efficient as possible. And, in the drought conditions we've had the last couple of years, we need to do everything we can to enhance cow production. Mineral supplements with the appropriate additives also give us an easy, economical way to deliver fly control and antibiotics to prevent anaplasmosis.”

Purina Animal Nutrition offers more than 100 different formulations of minerals that target different seasons, different forage and pasture types and different weather patterns. The

Wind & Rain<sup>®</sup> Storm<sup>®</sup> minerals have been specially formulated for consistent, predictable intake and also resist losses due to wind, rain and even storms.

Your Purina Animal Nutrition dealer or representative call tell you more about all the mineral supplement options available to you and help you choose the mineral program that's right for your operation at any given time of year.



# IT'S BREEDING SEASON. ARE YOUR FIRST-TIME HEIFERS UP TO THE TASK?

You've used solid genetics, optimum nutrition and sound management techniques to create and develop heifers that will produce. But how do you know if they are ready for their first breeding season?

According to Jason Cleere, PhD., of Texas A&M AgriLife Extension, the answer is clear.

"We know from reams and reams of data and from producer experience that there are specific thresholds to determine whether a heifer is ready to breed for the first time," said Cleere, an A&M associate professor and extension beef cattle specialist.

**Age.** The most important criteria, he says, is age. "Cows must be of a certain age before puberty kicks in, regardless of how they are fed," Cleere said.

That age can vary widely, depending on the animal's breed, health and nutrition, but he offered that most producers shoot for a 13 to 14-month window for breeding, which puts the heifers calving a little ahead of the older cows in the herd.

"If you push the first-time heifers earlier than the rest, you have a little more buffer time—about a month—to allow them to recover and successfully breed back a second time and be in sync with the rest of the herd," Cleere explained.

**Body Weight.** "We want heifers to be at 65 percent—or better—of their mature body weight before we turn them out with bulls," Cleere explained.

Most producers know their herd's average cow size, which they can use as a basis for estimating what weight heifers should attain before breeding, he stated. For example, if they know their average cow size is about 1,000 pounds, they will be looking for a target weight of about 650 pounds. But, target weights and cycling efficiency can vary significantly, depending on breed type, as demonstrated in the chart at below.

**Body condition.** Equally important is body condition—not too fat and not too thin.

"When it comes to body condition, more is not always better," Cleere asserted. "Overweight heifers can have problems breeding.

We think it's because they get too much fat around the reproductive organs, and they just don't settle as well."

Lee Dickerson, PhD., Purina Animal Nutrition's senior cattle consultant for the Mid-South and South-Atlantic, exhorts producers to target a body condition score (BCS) of 6 for best results at breeding and calving. That means a thin layer of fat over the entire body, with no ribs showing—but with fat in the tailhead and brisket area, he explained.

"If you really want to optimize production, you want to have your heifer or cow at a BCS of 6 when they calve, and no less than 5.5 when you turn her out with a bull," Dickerson advised. "Whether it's a first-time heifer or a mature cow, a BCS less than 6 results in more days to show heat, later breeding and lower conception and pregnancy rates."

**Nutrition.** The most limiting factor to achieve proper weight and BCS is nutrition. "You have to develop them to the weight at which they will be cycling," said Cleere.

He added that the drought experienced across parts of the country in the past few years can present additional challenges.

"In drought, you could see calves that are lighter at weaning," said Cleere. "So, you will have to put on more weight after weaning and before breeding than you normally would. If you are going to stay in business, you have to manage heifers to breed when they should. So, nutrition is critical, especially for heifers.

Cleere recommends visiting with your local veterinarian to establish a heifer health program, including vaccinations and deworming. Then, you have to figure out how much weight they need to put on per day to reach their target weight at the desired breeding time. If they only have to gain 1 - 1 ½ pounds per day, forage often will work, he said. A higher rate of gain may require supplemental feed.

To assure proper heifer development, Purina suggests offering Accuration® feed/Cattle Limiter Containing Intake Modifying Technology®. With IM Technology, your heifers will eat only what they need, based on the quality of your forage.

But, don't stop once you reach that 65 percent target weight, Cleere cautioned. Continuing to develop heifers until they calve is critical.

"Producers do a pretty good job developing heifers to get them bred, but then they begin to relax a little," Cleere explained. "If you don't continue to manage them to achieve their BCS and target calving weight (90 percent of adult body weight), they may not cycle back as quickly. In extreme cases, they may have trouble calving."

Occasionally, producers over-feed energy or protein, which can result in calving problems, as well, according to Cleere. Your Purina Animal Nutrition dealer or representative can help you assess your needs and design a balanced supplemental or full feeding program to bring your heifers to their target weights.

As one last bit of advice, Cleere suggested not forgetting about the bulls you will put with those heifers. "Be sure that they are calving-ease, low-birth-weight bulls so you don't go through all this work and use a bull that doesn't have the right genetics. If you do, you may have problems down the road."

BREED AND WEIGHT DIFFERENCE AFFECTING PERCENT OF HEIFERS CYCLING**			
Breed*	Weight at Breeding, Lb		
	600	700	800
	----- % Cycling -----		
Angus	70	95	100
Angus x Hereford	45	90	100
Brahman crossbreds	15	45	85
Charolais crossbreds	10	65	95
Gelbvieh crossbreds	30	85	95
Hereford	35	75	95
Shorthorn	75	95	100
Simmental crossbreds	25	80	95

\*Assumes heifers are at least 13 months of age.

\*\* Crossbreds are from Angus and Hereford cow base.

BEEF PRODUCTIONS AND THE BEEF INDUSTRY, ROBERT TAYLOR



## HERD QUALITY IMPROVEMENT IS RICHARDSON'S GOAL

Whether it's through genetic strategies, standardized health protocols or quality feed products, Jimmy Richardson has one goal in mind: to raise the highest quality beef cattle possible.

That's how he believes his Carlsbad, N.M., commercial cattle and cow-calf operation, Richardson Cattle Company, will succeed. And that hasn't always been easy, especially during the severe drought in the Southwest over the past few years.

"It's arid desert country, and water is a big issue. We've been through ups and downs over the years, but this is the most severe I've seen it," Jimmy said. "We've had to cut deeper than ever before. Our current cow inventory is 60 percent of what it is in an average rainfall year."

Nevertheless, his enthusiasm remains strong for the 144,000-acre ranch he started with his father in 1986. His dad was involved in registered quarterhorses, breeding and training them back in Texas where Jimmy grew up. And, Jimmy's grandfather was a cotton farmer.

Today, while they use horses on the ranch, the primary focus is Angus cattle. Jimmy and his wife, Linda, share responsibilities with their son and his wife, along with three other families who live and work full-time on the ranch. Over the years, their breed selection has shifted from crossbred cattle to purebred Angus.

"In 2000, we started buying registered Black Angus bulls with strong EPDs (Expected Progeny Differences) for carcass quality and marbling and maternal traits and growth," Jimmy said. "We raise our own replacement cattle now. We've made a lot of progress because we've developed better genetics."

He says the Angus breed has done an excellent job of helping him do that by identifying bulls, based on EPDs, that will fit his needs ... marbling, milk, growth, yearling weight ... or other traits his cows might be lacking.

In fact, for this engineer-turned-cattle-rancher, the genetics and reproduction are the most fascinating part his work.

"I believe AI is key to our future success, and we're moving toward that more and more," said Jimmy. "It allows us to use the very best Angus bulls available – with exactly the traits we are seeking – without making a multi-year commitment to a particular bull. So, we can make adjustments faster to improve the herd."

"Plus, finding the right bull for each cow is fascinating," he stated. "It's like a puzzle. And, what's really rewarding is getting her calf on the ground and seeing that he's better than his mom was. Then you know you're making progress."

As a result of such efforts, Richardson Cattle has customers nationwide who come back year after year for Angus bulls and replacement heifers. Jimmy feeds out the remaining 50 percent of the herd, striving to meet Certified Angus Beef (CAB) requirements for carcass quality and premiums.

That emphasis on quality extends to herd health. Working closely with their veterinarian, Jimmy has developed a protocol for weaning and backgrounding, including respiratory vaccines and de-worming. And, because he sells bulls and heifers, their veterinarian does fertility and trich testing, as well as ultrasounds.



*Jimmy and Linda Richardson (right) share responsibilities on the ranch with their son, Clay, and daughter-in-law, Lauren. Grandchildren Dalainey and Solomon—along with Charlee (not pictured), who just joined them in March—don't have chores yet, but they already wear cowboy boots!*

"Our vet is out here every week," he said. "That costs some money, but it's pretty cheap insurance to keep you out of trouble."

Another way he insures success is by investing in a wide range of Purina feed products, including Accuration®, Special Feedlot 40, Sup-R-Lix®, Wind and Rain® Minerals and Range Cubes.

They buy Accuration® feed concentrate and mix it themselves, based on the needs of the animals. They feed Sup-R-Lix® feed in the pasture and Feedlot 40 in the feedlot. And, they use different formulations of the Wind and Rain minerals, based on the season and recommendations from the Purina nutritionist.

"Accuration is self-feeding and self-limiting," Jimmy explained. "It works really well on bulls and heifers ... any young animal that is growing and you want to push when high quality feed is not in the pasture. It has helped us a lot during this drought. The bulls look surprisingly well today, not because the pasture is strong, but because the feed and supplements are strong."

"We also buy 20 percent Range Cubes that contain vitamins, minerals and protein," he added. "We put them in a trip hopper truck and feed in the pasture. The cattle really like them. When they see the truck, they come running. It's an opportunity to observe the cattle, and it keeps them gentle, too."

All in all, Richardson Cattle has been using Purina products for more than 25 years. So, they've developed relationships with not only Wally Menuey and the other staff at their dealer, Circle S. Feed, but also the Purina reps and nutritionist, whom Jimmy describes as "good friends."

"Purina has good people and a consistent product that they deliver on time and stand behind," he said. "And, their research farm really sets them apart from other feed companies."

Jimmy says it's those people involved in agriculture, above all else, that make his work enjoyable.

"They're handshake type people," he offered. "You don't have to have a lawyer to draw up a contract. You can take them by their word because they are honest, trustworthy people who take pride in what they do."

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

  
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## TIPS FOR BREEDING AND SELECTING PRODUCTIVE HEIFERS

*By Larry Hollis, DVM, M.Ag.*

We all know age, weight and body condition are essential for successful heifers. Here are a few additional tips for selecting heifers.

**Plan ahead.** Heifer development starts over a year before they are born. It requires careful planning and execution to assure a heifer will make a good mother for the remainder of her life in the herd.

**Select heifers from bulls with strong maternal EPDs.** Producers often pick bulls for maximum yearling size, not for maternal qualities. They continue keeping heifers from these bulls, often resulting in large, high-maintenance cows.

It's hard to find a bull that will produce a low maintenance-requirement cow for the breeding herd *and* a high weaning weight, high performing animal for the feedlot. Ideally, separate bulls would be used for developing replacement heifer offspring and for developing animals headed for the feedlot. When breeding for replacement heifers, look for bulls with EPDs for moderate milk production, body weights and calf weights, along with high pregnancy rates, calving ease, longevity, docility and mothering ability.

**Heifers born early in the calving season** are often the best candidates because they have more time to develop. They are more likely to become pregnant, especially if they are going to be bred 30-45 days ahead of the cow herd, allowing more recovery time prior to breeding for their second calf.

**Stay away from extremes in body weight.** Heavy weight-per-day-of-age heifers may seem attractive, but they normally turn into

cows that are too heavy, and will cost a lot more to feed. Research shows you are better off economically with a lighter cow. Retain heifers that:

- Were born early in the calving season
- Have a body condition score of 6
- Will reach 65 percent of adult body weight by breeding
- Were born out of bulls with the right EPDs

**Reproductive tract scoring (RTS) can help.** Once you've done your initial selection, consider having your veterinarian palpate the reproductive tract of heifers. Using a 1-to-5 scoring system, this technique evaluates the size, tone and structure of the ovaries to ascertain which are cycling, and mature enough for breeding. These scores can help further cull the animals. Heifers scoring only "1" have roughly a 26 percent chance of becoming pregnant; those scoring "5" should have nearly a 95 percent pregnancy rate.

**Pelvic measurements** can screen heifers for easy deliveries. The veterinarian examines the pelvis to check for size, shape and any malformations that could affect delivery or necessitate C-sections. You want as big a calf as possible without causing problems. A heifer that is not big enough, or developed properly, can be eliminated.

**Select heifers 45 days prior to breeding.** The earlier you determine which ones you will keep, the sooner the losers will be off your dinner line.

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