

# Check Out Momma

*Tips for selecting a heifer sire.*

BY HEATHER SMITH THOMAS

**W**hen selecting a new herd sire, producers can use expected progeny differences (EPDs) on weaning weights, yearling weights, birth weights, yearling hip height, milk, etc. Much progress has been made in charting the genetics of beef production, and there's lots of data to help choose a bull that will sire growthy calves.

Perhaps even more important in breeding profitable cattle, however, is improvement of the cow herd. To be successful in the cow-calf business, you need fertile, long-lived, productive cows that will raise big calves while still breeding back on time year after year — cows that give peak performance on what feed the ranch produces.

The cow herd is your future. If you raise your replacement heifers, the most important choice you make when buying a new bull is selecting a good heifer sire. The quickest way to change the genetics of a herd is through sire selection. The bull makes a lasting contribution to the herd — good or bad. You want that contribution to move your herd toward your breeding-program goals.

While EPDs are of great assistance in selection for some traits, there are no EPDs for some of the most important traits you need to evaluate when selecting breeding stock: conformation, fertility, disposition, udder shape and teat size.

## Background check

The first thing Clyde Nelson does when evaluating a bull is a background check. The Salmon, Idaho, Angus breeder prefers evaluating at least three generations in the pedigree.

"His ancestors need to be the kind of cattle that you want in order to get any consistency in his calves," he says. "And you really need to go back and double-check the female side of his pedigree in those three generations to make sure they are the right kind of cows."

Nelson also values a visual appraisal. "A lot of the things that are important to us you can't see on paper, like disposition, udders and structural soundness. There are a lot of



PHOTOS BY JENNIFER SHIKE

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things you need to actually see. The paper records are fine. We certainly look at those, too. But on any bull we use, we like to see the individuals (ancestors and offspring) if we can."

To evaluate young bulls, Nelson says he does a pedigree search, then tries to see as many ancestors and half-siblings as he can.

## Optimums

A mistake some stockmen make in using EPDs is selecting for extremes, thinking one bull is better than another because his EPD for that trait is "better." In and of themselves, there are no "good" or "bad" EPDs. The "goodness" of a set of EPDs depends on your selection criteria.

Breeders must think in terms of optimum EPD levels rather than maximums. Production levels (calf size and growth rate) should fit the ranch environment and management conditions. Otherwise you get problems with increased birth weights and calving difficulty, lower calf-crop percentages, decreased fertility, increased cow size, higher maintenance

costs, and decreased profits.

The seedstock producer has a responsibility to customers because the commercial cattleman needs bulls that sire efficient cattle — not just fast-growing steers, but also replacement heifers that will work profitably under a variety of conditions without pampering.

Rodger Swanson of Leadore Angus Ranch, near Tendoy, Idaho, says breeders need to strike a balance and to tailor their cow herds to fit their situations and those of their customers.

"You want easy-fleshing cattle, and the bull has a big influence on this," he says. Often the highest milking cows are harder to maintain.

"You can get this trait too high and have heifers that are giving so much milk they are harder to keep weight on and slower to breed back," he says. "A lot of the good bulls have high milk EPDs, and even though everything else is really good about them, this is a factor that sometimes needs to be considered, especially if you have a ranch

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situation where cows have to work hard, like on range pastures.”

A bull with a negative EPD value for milking ability is only “bad” if your herd needs increased milking ability. If you already have heavy-milking cows or marginal pasture conditions where heavy-milking cows may not get enough nutrition to milk well and still retain their own body condition, a negative EPD may be just what you need to add profitability.

### Birth weight

Swanson selects for moderate birth weight when choosing a herd sire.

“Even though a lot of people might think I’m doing this just so I can sell heifer bulls, that’s not the reason. If you have a sire with a big birth weight, his daughters will have big calves themselves and can have trouble calving, even if they are big heifers,” he says, adding the largest heifer he calved last year was the one he had to help. “She had a big moose of a calf. It was by an easy-calving bull with moderate birth weight and EPD ... Her genetics made a big calf.”

His advice is to go easy on birth weight. The heifer inherits her own birth weight from her sire and dam, and if she comes from family lines with heavy birth weights, she may have trouble having her first calf, even if you breed her to an easy-calving bull. If she had a heavy birth weight herself and inherited this genetic trait, her calf may be large and hard to deliver.

Size at birth is influenced just as much by the female side as by the “easy-calving bull” to which you bred her, Swanson says. Many ranchers who use light-birth-weight bulls on first-calf heifers can still have calving problems if the heifers themselves were produced from heavy-birth-weight sires. A light- to moderate-birth-weight sire is best for producing daughters that calve easily.

You want genetics that produce light-birth-weight calves that grow swiftly. Swanson always tries to couple low or moderate birth weight with fast growth.

“A real minus birth weight scares a lot of people because, often, this type of bull has heifer calves that mature too small; they don’t grow fast enough to catch up, and they’ll be hard calvers just because they don’t have the pelvic area,” he comments.

All too often a heavy birth weight and high yearling weight go together, Swanson says, because this is what a lot of breeders have selected and perpetuated in their attempt to create bigger cattle. “You have to look a little harder to find cattle that



Seedstock producers are finding that maternal qualities are as important to their bull buyers as weaning and yearling weights.

combine light birth weight with fast growth and good weaning weight,” he says. “There are some out there, if you look for them. And they are often moderate-size.”

Cattle that can combine calving ease and growth are much more profitable to the cow-calf rancher than heavy-birth-weight cattle that create higher risk for death losses and labor-intensive calving.

“One of my best bulls has a plus 41 EPD on weaning and is in the top 15% of the breed for growth, but only a plus 6 or 7 for yearling weight, which isn’t extreme,” Swanson says. That bull works well for producing the kind of cattle he wants. “I want a bull that matures out quickly, even if he doesn’t have a really high yearling weight. You want bulls that have a real high rate of growth, but not a huge mature size.”

Nelson also looks for calving ease but says the way the calf is made is more important

than its actual birth weight. “If a calf is made right, he will be born easily even if he’s big, though there is a limit to what you want on size.”

### Frame size

“I select for moderate frame size,” Swanson says. “Size is another thing that can get you into a wreck if you have great big bulls; these cattle are too high in their maintenance requirements. It takes too much feed for that kind of cow. This goes hand in hand with milking ability. You can end up with big, heavy-milking cows that can’t produce very well unless you use a lot of extra feed. You want something that can mature quicker. Big-framed cattle won’t work out on the range or in relatively rough conditions and won’t work for a lot of my customers.”

The breeder should have a target goal for

frame size. If your cow herd's mature size is large enough already, don't buy bulls with high EPDs for growth. The bulls in a sale may range from 15 to 45 on yearling weight EPD, for instance, and you may need 25. Judge the potential performance of a bull by your own needs.

The important thing is not how far from breed average a bull is; pick one that, when crossed with your cows, will produce offspring right for your own conditions, market and future cow herd.

With EPD information, you can evaluate the performance of a bull's ancestors and get a feel for what you can expect from him. EPDs can tell you some things about a bull you can't see by looking at him, but you also need to evaluate him visually.

### Structural soundness

No matter what records and performance data a bull has, there are still some things about him you can judge only by looking at him, including conformation and structural soundness. Breeding soundness and fertility are important. Bulls should look masculine, and cows should look feminine.

"We like females that look like females. They've got to have a good, long, thin neck and not a lot of garbage and fat

underneath," Nelson says. "We don't want them to look like steers."

Swanson agrees: "You want a heifer with femininity; a steer-looking heifer is generally not as fertile and has less fertile offspring." A steer-headed, beefy-type female is often not as good a mother or producer as the more feminine individual, and the cow-headed bull is rarely as good a producer as the more masculine bull.

"Sometimes you'll get a bull that sires really good daughters, but his sons are not spectacular, or vice versa. It's not always easy to find one that does a good job in all aspects," Swanson says.

Structural soundness of a bull is important, especially feet and legs. A bull's conformation, which affects athletic ability and breeding function, is crucial to his breeding soundness and to his offspring. You want daughters that have good conformation and durability, being able to travel and to stay sound for a long, productive life. You don't want conformation problems that might cause premature culling due to soundness problems.

Swanson looks for sound feet. "Bad feet sure show up. I don't care what kind of fancy bull you get, there's always going to be a hole or two in him. There's no perfect bull. So

when selecting a bull with daughters in mind, you want to make sure you don't perpetuate a problem."

### Conformation

In looking at a cow's conformation, Nelson says, "We are pretty critical on the hip area. I like a fairly level topline from hooks to pins and extra width in the pins, when looking at them from behind. That goes along with a larger birth canal if the pins are wider.

"We're fussy in the hip area and also the topline; we want a good strong topline with no swayback," Nelson continues. A bull should be long, but not swaybacked. A swaybacked bull is not as strong and athletic as he should be, and may not hold up well. A swaybacked bull also may tend to be potbellied and sire daughters with this type of conformation.

"A cow needs some capacity but not look tanky or have too much gut," Nelson says. "She should have a straight barrel — something that would indicate that her steer calves would be high yielding without a lot of gut." He says keeping enough length in the cattle will prevent too much gut. So a bull with length, good topline and smoothness (no "belly") will tend to sire daughters with these characteristics.

If you are selecting a bull to sire heifers, also be critical of his tail set. A little downward slope or level rump is preferred to a tipped-up pelvis with high tail set. If a bull sires daughters with a tipped-up pelvic area, they may have more calving problems.

When the calf is born, it has to come up from the uterus into the birth canal, in an arc up over the pelvis. If the cow has a tipped-up pelvis (high tail set), the feet of the calf tend to jam under the backbone and tail head, making a more difficult birth and more pain for the cow. As a cow gets older and saggier, this problem is accentuated.

### Scrotal characteristics

Another facet of conformation is scrotal size and shape. Size is important to fertility; there is a correlation between scrotal circumference and sperm-cell volume and percent normal sperm. Small testicles often have less total sperm and more sperm abnormalities.

There is also a strong genetic correlation between scrotal size and fertility (as measured by age at puberty) of a bull's daughters.

Scrotal shape is also important because a



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bull needs to be able to raise and lower his testicles for proper temperature control. The testicles should hang down in a pear shape from the body, especially in hot weather, with an obvious neck at the top.

A factor to be considered with large-testicled bulls, Swanson says, is that as the bull gets older, his testicles may hang down so far he is more apt to suffer injury. Larger, lower-hanging testicles are also more prone to frostbite in cold or windy weather because the bull can't raise them against the body for protection and warmth.

"Extremes of any kind can get you in trouble — either too large or too small," Swanson says. He selects for moderate testicle size and says that "a yearling bull with 36 to 37 [centimeters (cm)] scrotum is big enough."

#### Look at the bull's mother

One of the most important factors when selecting a bull to raise daughters is a close evaluation of his mother's milking ability, udder shape and teat size, general

conformation, fertility, hardiness, disposition, longevity, mature size, fleshing ability, and nutritional needs for optimum production. A cow might be excellent in several of these traits, but her genetics may still be of no value to your herd if she is deficient in even one of these categories. Take a good look at the bull's mother and other female ancestors and their records.

Nelson checks any carcass data that's available on the female side of the pedigree.

"Some of this newer data needs to be included in your evaluation, to give you an idea what the cow side will contribute to her offspring. If there has been any carcass work done and it's positive, that's always a plus when selecting genetics. That's another reason to research the pedigree, to see as much of the bull's background as you can and be able to draw some conclusions," Nelson says. "If you have the kind of cattle you like, with the characteristics you like, and they have the ability to produce — good maternal and good carcass characteristics — and it's in there for several generations, you

can be pretty sure they will breed true and produce what you want."

The history of the bull's mother and female line are revealing. Does the cow get big teats at calving time? Did she reach puberty at an early age and settle quickly? Has she had a calf every year? Does she calve easily? Does she have a manageable disposition?

All too often the bull buyer only has information on the sire, or a breeder is only interested in showing you male relatives and their records. You must have information on the female line as well; a bull's daughters will show those traits.

Swanson says, "I always look at udders and teat length and size. The bull's mother is important because his daughters will have udders a lot like hers; they are fairly consistent. Bag structure and teats are generally passed from a bull to his daughters. I quit using a couple of bulls just because of that."

Nelson also feels strongly about the importance of good udders and proper-size teats. "Some cows are good milkers, but they don't have a balanced udder," he says. "Many don't have as much forequarter as rear quarter, for instance. A balanced udder is becoming more important to cattlemen. Years ago, no one paid much attention to that, but it's pretty important now."

Swanson says disposition is also important. A bull may inherit a bad disposition from his mother. If he is flighty or wild, there's a good chance his daughters will be, too.

Always take a look at the bull's mother, if you can, for she is the most important individual in his pedigree to judge critically. If you don't like her, you won't like her granddaughters. She will have more influence on your replacement heifers than any other single individual, since the female characteristics the bull passes to his daughters are predominantly those of his mother. If she is an outstanding cow, with traits you want in your herd, there's a good chance those traits will come through in her granddaughters.

When buying a new herd sire, always check out his momma.



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