8 Tips for Selecting Productive Females

Tips on evaluating and selecting replacement heifers.

by Heather Smith Thomas





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Stockmen who keep heifers as replacements usually select offspring from some of their best cows, sired by bulls that pass good maternal traits to daughters. Those who purchase replacements try to select heifers that will improve the genetics in their herd.

Commercial cattlemen want heifers that will be fertile, productive, long-lived cows that stay in the herd a long time producing good calves. Purebred breeders want heifers that will produce high-quality seedstock — bulls or females — for their customers.

Some breeders look first at performance records and then visually evaluate the heifers, while others make their first sort in the corral or pasture and then use records as a final tie-breaker.

Regardless of performance records, pedigree, expected progeny differences (EPDs) of sire and dam, etc., a heifer must also have some qualities that are more difficult to measure. Travis Olson, Ole Farms, Athabasca, Alta., Canada, raises seedstock and commercial cattle, with 1,000 registered Angus cows and 500 commercial cows.

He says many things are self-explanatory regarding traits you wouldn't want and some you'd select for, but other criteria are more subtle. Olson

has a list of eight things that he says are important. Some might not be so obvious.

1. Evaluate the dam

"Many people go into a pen of heifers and pick the ones they like the looks of, but the most important factor is the mother, not the looks of the calf," says Olson. "If you have records, use those to closely evaluate the dam. Are her feet good? Is her udder sound? Does the heifer have good temperament? Does mama have good temperament? Do you have production records and weights on her calves? Has she had a calf every year?"

There are many things you can't tell about a heifer's potential as a cow without evaluating her mother.

"Everything goes back to profitability, and the number one factor in profit or loss in North American beef herds is how many calves you wean for every cow exposed to a bull," Olson explains. "Choose a daughter out of a cow that has produced for several years and hasn't missed a calf or fallen back; she's breeding up every year, her calving interval is tight, she has a sound udder and feet. Most people don't pay enough attention to this."

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2. Choose older, not bigger

You want heifers that were born early in the calving period as that means their mothers were fertile, Olson says. "You'll have a better herd if you sell your heifer calves on choice, because buyers will come in and pick the biggest 10%. Many commercial producers make the mistake of selecting the biggest heifers. The best ones are in the middle — not too big, nor too small."

Anyone who always keeps the biggest heifers ends up with cows too large, he emphasizes.

Choosing females that were born early puts more emphasis on fertility and keeping the calving interval tight. There are several reasons that the

younger heifers in the group could be less successful, he notes. They'll have less time to mature enough to have a cycle or two before you start breeding them.

Select from the middle

"Don't pick the smallest 10% nor the biggest. Avoid extremes in all traits. You don't want

the extremely long heifer or extremely short heifer. Extremely muscular can be a really big problem. You don't want a heifer that looks like a steer because often her endocrine balance is off and she doesn't regulate hormones correctly. There's more chance that she'll come up open," says Olson. "Most people pick their biggest, most muscular heifers, but this leads to bigger-framed cattle that are not as fertile."

4. Select for femininity

Females should look like females. Select feminine heifers. There should be some angularity to the heifer's head and neck, he says. There's more chance that she will be fertile, maternal and productive.

5. Find easy keepers

Fleshing ability is harder to evaluate at weaning time because a fat heifer may have a dam that milked too well. The dam may actually be thin. It's easier to evaluate the heifer's fleshing ability after her first winter, before her first breeding season.

"A heifer going into the breeding season that doesn't have enough fat isn't going to breed," Olson says. "She probably won't last if she's in a difficult environment. If she doesn't flesh as a yearling heifer, she won't [put on] flesh as a cow." She'll fall apart when she's lactating and raising a calf.

6. Check her coat

"A highly productive, feminine, fertile heifer will be one of the first to lose her guard hairs in the spring, shedding quicker," Olson says. "She has a soft, smooth hair coat, compared to a male."

Males have coarser hair, especially over the head and the crest. This has to do with higher levels of

testosterone, he explains. The hair will be kinkier and coarser over those points; whereas, the females' hair tends to be softer and smoother.

"You'll see varying degrees of this in heifers, but if you look at your open heifers, they are often the ones that shed off last — so watch those guard hairs," he warns.

If you are buying heifers or selecting your own, weed out the ones that don't shed off as quickly. They hold their guard hairs longer because they haven't been cycling. Hormones change the body metabolism and make a difference in many things.

7. Wider is better

Select for width through the pins (pelvic size), Olson advises. He recommends palpating and measuring pelvic width in heifers.

Some females just don't have a very wide birthing canal. Selecting the ones with adequate pelvic size can prevent some calving issues, and it's possible to detect something abnormal like a bone spur.

8. Find some slope

Olson advises cattlemen to look for slope from hooks to pins.

"This is probably one of the most important factors, but often overlooked, especially in North American cattle. You won't find any animal in the



wild that is level from hooks to pins," says Olson.

Elk, deer, moose, bison, etc., all have a sloping rear end. Cattle that are level from hooks to pins are exhibiting a serious man-made fault, he says. Many cattlemen feel that being level looks more balanced, but it is actually more natural to have the hooks considerably higher than the pins, with good slope to the rear end.

"Lack of slope causes reproduction issues. The showring has been part of the problem. People talk about a square hip, for instance, as a good trait,

whereas in reality it is a detriment to a cow," says Olson.

Many producers tend to choose cattle that are straight in the hind leg. All wild animals are cow-hocked, and also have some angle to the hock joint when viewed from the side, which is much stronger structure than straight hind legs or post-legged cattle. Olson encourages cattlemen to copy Mother Nature.

"If you have an animal that has a straight hind leg, this moves the patella and also changes the angle

of the leg, rotating the pin. When the hooks and pins become level, the hind legs become straight (construction that often won't hold up) and changes the angle of the pelvis," he adds.

This changes the birth canal and makes it more difficult for the calf to come through in a natural arc. The calf's feet tend to jam up against the backbone and high, tipped-up tailhead. The lack of slope and smaller birth canal also makes drainage from the reproductive tract more difficult after calving.

"Another worrisome thing that it does, with the short tailhead, is move the anus forward inside the body cavity. This is called a recessed anus, with the vulva tipped forward. Like a 'windsucking' mare, fecal material falls into the vagina. Many commercial producers are finding that a lot of these

sharp-tailed, level-pinned cows are coming up open.

"They are also harder to calve. If you do have to make an assist on that kind of cow, and are pulling the calf, it's often a hard pull and you hear a pop. This means that the thurl — the bone halfway between the hook and the pins, where the ilium and ischium meet (the hip joint) — is out of place," Olson says.

If there is adequate slope, the birth canal is more open and actually has more room.

These are some of the structural traits that

should be closely evaluated. "I recommend a book written in the 1950s by the South African researcher Ian Bonsma, entitled Man Must Measure. 1 strongly encourage all purebred and commercial producers to read that book," he states. "There needs to be a slope toward the rear, as shown in illustrations in lan Bonsma's book. His research was done 65 years ago. He pointed out the Bos indicus cattle and many breeds that do have

Tuber Sacrale (Hooks)

Sacrum

Ilium

Tuber Ischii

(Pins)

Femur

Tibia

Metatarsus

Reduced Pelvic
Opening
Opening
Opening

Fig. 1: Skeletons of the hind limbs of a straight-backed

cow on the left, and a normal cow on the right

Source: Man Must Measure, Jan Bonsma.

many breeds that do have a good slope, and singled out some of the European breeds that became too level and had more reproductive problems. Now we are seeing this problem in the modern Angus. Breeders are starting to bring the tailheads down again, but it was really bad in show cattle 10 years ago," he says.

Some of these important structural traits have to be evaluated visually because there are no EPDs for conformation. "Some of these things are fairly easy to measure, however. You can easily see if a cow has slope from hooks to pins, especially if she has short summer hair; you can see the highlights of the hook and pin bones," says Olson. A

Editor's Note: Heather Smith Thomas is a freelance writer and cattlewoman from Salmon, Idaho.