



# Picking Potential

**When selecting replacement heifers, consider traits important to the environment and the operation.**

by **Heather Smith Thomas**

**W**hen buying or raising replacement heifers, a producer generally has certain things in mind regarding traits to look for and things to avoid. Many stockmen try to keep some of their own heifers as replacements as they are typically better adapted to their ranch than some purchased heifers. Usually selecting daughters from some of their best cows and sired by bulls that also pass strong maternal traits to daughter progeny.

There are many criteria utilized by cattlemen regarding which heifers to keep and which to sell. Commercial producers want heifers that will be fertile, productive cows that stay in the herd for a long time producing good calves. Purebred breeders desire heifers that will produce high quality seedstock — bulls or females — for 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 use data as a final tiebreaker.

## **Years of replacement experience**

Al Fenton, owner of Fenton Herefords, in Irma, Alberta, has been breeding purebred Herefords for nearly his whole life and currently runs 600 cows. His parents started the ranch in 1946. Over the years, Fenton has raised thousands of replacement heifers and knows what type of heifers become the best cows for his environment.

Fenton explains replacement selections start as early as fall weaning. Fentons write down the heifers out of their favorite

cows they feel will have the best advantages to become fault-free cows. The cattle are also handled on horseback early on and learn to be held in groups and easily sorted out in big pastures. With low-stress handling, they become easy to manage, and these handling situations are also good opportunities to evaluate them.

“When you spend as many hours out there on a horse as I do, you recognize these cattle — in their different age groups — in that environment,” he says. “When you are not in a hurry to do something, you are always watching and analyzing the cattle to see which ones are the best. This helps you when making breeding decisions, culling decisions and heifer selection decisions.”

Fenton believes handling and moving cattle help sort them in his mind easier as well as help keep his cultivated eye sharp. To him it’s always easier when decisions don’t have to be made on the run and there’s time to familiarize with the cattle.

“When we are breaking and schooling colts at the same time, this same low-stress discipline helps them, too. Those young horses don’t have to make decisions on the run, either,” he says. “As the young horse becomes more confident and as the cattle gain understanding about what you are doing with them, everyone stays on the same page and you can enjoy your cattle, and enjoy your day so much more.”

He also stresses the importance of feedback from other evaluators. “It doesn’t hurt to listen to your crew or other family members regarding a certain animal or a bloodline or a heifer that you’d forgotten,” Fenton explains. “You realize that perhaps that heifer should be in a different group or the mating should be different.”

## **Selecting for key traits**

When heifers growing in a feedlot are evaluated, Fenton feels it is crucial they are weighed and assessed to look at sire groups. There can be a lot of variation among heifers when selecting, breeding and feeding them — heifers progress in different stages, mainly due to differences in bloodlines. Fenton says the perfect equation is finding the best blend of growth and maternal strengths. Often the high-performing, fast-growing heifers don’t make the best cows because their genetic makeup to grow hinders the traits necessary for a mother cow. Consequently, maternal traits may not be as high on their chart. To have a good, sustainable cow, Fenton relies on a balance of traits.

To succeed as cows, potential replacements must also match abilities with environment. Looking at expected progeny differences (EPDs), a cow with a high milk value won’t necessarily make a good cow in particular environments. For Alberta, Canada, a heifer with a high milk EPD isn’t exactly ideal. “She might have a great calf the first year, but won’t be able to cycle and breed back,” Fenton explains. “Looking at sire groups, those with high numbers on milk will be eliminated.”

Fenton says utilizing several selection tools as a breeder works through different age groups is influential when selecting and breeding heifers. There are many variants before the calving stage that are not as important as what is discovered after a group of heifers calve out. “If you have 100 head of heifers to breed and can breed and calve them all, and then do your final culling and assessments, you will have a much better cow herd in the end,” Fenton says. “You might think about culling a heifer because she’s not as big or she doesn’t quite meet your expectation on certain things, but then she calves and you realize that she’s a really good cow. After you calve them the first year, you’ll have a better handle on what you are looking for.”

Fenton understands not all producers are looking for the same thing in a cow, but they should be looking for the cow that fits their environment. “This is something EPDs may be able to help with. If they show you the real story, then you can feel confident that you can move on with those numbers as a tool. But until those numbers prove, in your environment, that they are what they say they are, you must be cautious. It doesn’t matter how great the EPDs and the numbers are in your environment you can’t provide an economical way of producing beef. It’s not a matter of looking for the elite cow. If you are running 600 cows, it’s a matter of looking for the cow that will do a good job over a long period of time,” he says.

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A cow base needs to be above average and continue to produce in order to thrive. “The cows that have proven they can handle your environment can then be tinkered with if you want to try to upgrade and see how far you can improve in certain areas that you might want to change,” Fenton says. “Then you won’t go too far astray, and you’ll never interfere with the basics. You’ll never have a big, heavy cow that will cost a lot of money to feed.”

### The middle group

When buying a group of heifers, he advises buying them all from the same producer. Some ranchers, if they don’t need to keep a large number of replacement heifers, can sell a group of heifers that will make productive, profitable cows.

In fact, Fenton has noticed that if a ranch only keeps 100 heifers out of the 300 they have, the 200 others sold can be every bit as good as the heifers kept back once they mature. He even often prefers the “middle group” of heifers best because they have the adequate growth development and balance of traits desired so they ultimately cycle back sooner. Although they are not the biggest with the most growth and performance, they are the cows that mature quickly and become pregnant in that first cycle. Those cows will also turn around and raise the next calf in that first cycle. According to Fenton, having a high percentage of cattle calving in the first cycle is more profitable. When selling steers, if most of them are from the first cycle, this grouping also gives a heavier, more uniform and valuable set.

Fenton is also not afraid to keep a heifer that will be a big cow if she is a good one and can consistently raise a good calf — giving a calf early in the calving season. She will also have more salvage value at the end of her career. He says the value of cull cows every year pays some of the bills around the ranch and keeps some cash flow going.

“As you design the optimal cow on your ranch, don’t be afraid to change the imprint to suit your place and fit your own environment, if you can improve it. There is nothing wrong with change, if it is gradual enough that you can see the differences without undoing the good that you already have,” Fenton says. “Change for change’s sake is what gets you in trouble, but sometimes it can be beneficial to change a bloodline, as long as you do it gradual enough you can adjust it before it tips you out of the saddle.”

### Travis Olson’s rules for heifer selection

Regardless of a heifer’s performance records, pedigree or parents’ EPDs, she must have other qualities that are more difficult to measure. There is no substitute for a good eye when evaluating



Evaluating the dam when selecting heifers provides much insight to cattle producers.

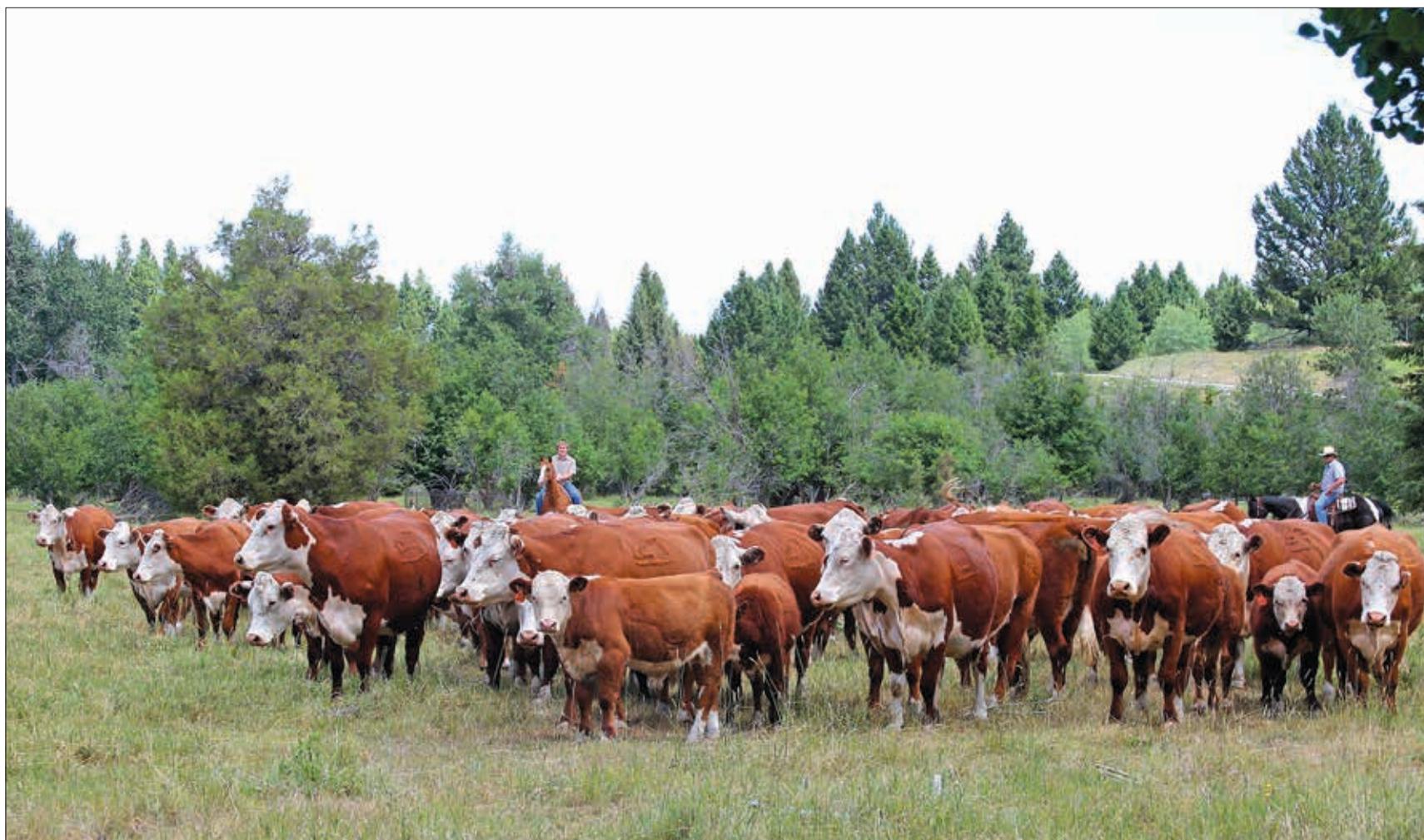
heifers. Travis Olson of Ole Farms in Athabasca, Alberta, says many things are self-explanatory regarding traits for which you would select, but other criteria are subtler. Olson has developed a list of eight things he feels are important.

**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. If records are available, use those to evaluate the dam. Important questions to ask are these: Are her feet good? Is her udder sound? Does the heifer have a good temperament, and does her mom have a good temperament? Are there production records and weights on her calves? Has she had a calf every year? There are many things you can tell about that heifer’s potential as a cow by 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 — most people don’t pay enough attention to this.”

**Choose older heifers, not bigger heifers** — Heifers that were born early in the calving period should be desired because that means their mothers were fertile. A person who always keeps

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Spending time riding through a herd can help cattle producers keep an eye on high performing offspring.



Selecting from the middle is key when identifying the most productive females in a herd. Staying away from extremes on either spectrum is vital.

the biggest heifers ends up with cows that are too large. Heifers born from the first or second cycle put more emphasis on fertility and a tight calving interval. There are several reasons the younger heifers in the group could be less successful. Their mothers may not have been as fertile, and the youngest heifers will have less time to mature enough to have a cycle or two before breeding starts.

“You end up with a better herd if you sell your heifer calves on choice, because your neighbors will come pick the biggest 10%. Many producers make the mistake of keeping the biggest.

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**Select from the middle** — Olson stresses to avoid extremes in all traits. It’s important to not select the smallest or biggest heifer, as well as an extremely long heifer or an extremely short heifer. Extremely muscular cattle can

also be a problem. A heifer that looks like a steer is not ideal; her endocrine balance is off, and she doesn’t regulate her hormones correctly. There’s a greater chance that cow will come up open.

“People often pick their biggest, most muscular heifers, but this leads to bigger-framed cattle in the herd that are not as fertile,” he says.

**Females should look like females** — Select feminine heifers. Although heifers shouldn’t be extremely long-necked, a short-necked heifer appears more masculine. “There should be some angularity to head and neck. A heifer should look like a heifer,” Olson says. “There’s a greater chance that she will be fertile, maternal and productive.”

**Easy fleshing** — This is hard to evaluate at weaning because a fat heifer may have a dam that milked too well. The dam herself may be thin. It’s easier to evaluate a heifer’s fleshing ability after her first winter, before her first breeding season. Olson explains a heifer going into breeding season that doesn’t have enough fat isn’t going to breed and probably won’t last if she’s in a difficult environment. If the heifer doesn’t flesh as a yearling, she most likely won’t flesh as a cow. Instead, she’ll fall apart when lactating and raising a calf.

**Hair coat** — “A highly productive, feminine, fertile heifer will be one of the first to lose her guard hairs in the spring, shedding quicker. She will have a softer, smoother hair coat, compared to a male,” Olson notes.

Males have coarser hair than females, especially over the head and crest. Higher levels of testosterone contribute to this; the hair will be kinkier and coarser over those points whereas the females’ hair tends to be softer and smoother. There are varying degrees of this in heifers, but open heifers are often the ones that shed off last. When buying or selecting heifers, weed out the ones that don’t shed 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 aspects of reproductive health.

**Width through the pins (pelvic size)** — Olson recommends palpating and measuring pelvic width because some females don’t have a wide birthing canal. Selecting heifers with adequate pelvic size can prevent calving issues. Palpating heifers could also detect abnormalities, like bone spurs. Visual evaluation can show if a heifer has adequate width through the pins or is too narrow.

**Practical structure over aesthetics** — Olson believes this is probably one of the most important, but often overlooked, factors. “You won’t find any wild animal that is level from hooks to pins,” he says. “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. Many cattlemen feel that being level looks more balanced, but it is more natural to have the hooks considerably higher than the pins, with good slope to the rear end. We need to copy nature.”

He recommends a book written in the 1950s by the South African researcher Jan Bonsma, entitled “*Man Must Measure*” and strongly encourages all cattle producers to read that book. After the author wrote the book, he toured the U.S. and gave talks about cattle structure.

Olson believes the beef industry is creating serious issues in cattle with improper hook and pin placement. “Lack of slope causes reproduction issues. The show ring 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,” he says.

Many producers lean toward cattle that are straighter in the hind leg. Most wild animals are cow-hocked, and also have some angle to the hock joint when viewed from the side, which is stronger than a straight hind leg, as occurs in post-legged cattle.

“If you have an animal with a straight hind leg, this moves the patella and also changes the angle of the leg, rotating the pin. When hooks and pins become level, the hind legs become straight — a construction that often won’t hold up — and changes the angle of the pelvis,” he explains. This change affects 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 tailhead. The lack of slope and a smaller birth canal also make drainage from the reproductive tract more difficult.

Olson acknowledges a show animal that is level from hooks to pins has more reproductive problems because with the short tailhead, the anus moves forward inside the body cavity. With a recessed anus, the vulva tips forward. Fecal material is then more prone to fall into the vagina, spreading bacteria.

“There needs to be a slope toward the rear. Some of these important structural traits must be evaluated visually because there are no EPDs for conformation” he says. “Yet, some of these things are fairly easy to measure. 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.” **HW**