

Adding Adaptive Replacement Heifers

Now is the perfect time to change the status quo process of adding heifers to the cow herd from mediocre to positive.

by **Bruce Derksen**

Cow-calf producers may choose to add or subtract animals from their base herd for reasons as variable as making use of increased resources to swapping out herd sire breeds with the females following suit. Often this change can include the addition of replacement heifers through either outside purchase or internal home-raised candidates. As this routine process may have yielded mediocre and mixed results when attempted in the past, there are various questions to ask when the present situation once again demands a change.

Sourcing replacement heifers

Of course, one of the first things to address is where should replacements originate? David Lalman, professor at Oklahoma State University and Extension beef cattle specialist, says for smaller operations, he recommends purchasing heifers or even two-year-old cows to fit the herd.

“For smaller producers and people who aren’t full time ranchers, they just may not have the time and the skillset to deal with the more intense management and calving issues of 2-year-old heifers,” he says. The numbers point to a higher majority of cattlemen raising their own replacements, but he thinks some of those operators are in it for the enjoyment and tend to factor in an amount of pride that comes with the raising of their own livestock.

Billy Whitehurst, owner and operator of Makale Livestock, Whitehall, Mont., also suggests it may be prudent for more cow-calf operators to purchase replacements from outside sources rather than to raise their own.

“Usually it’s cheaper to buy them than to raise them if you really value your time and the entrepreneurial costs,” he says. “You’ve got to feed those heifer calves from weaning time until they’re ready to breed. Keep groceries in them by whatever means, by grazing or feeding them in a feedlot, you’ve got to cover that. It’s an often-underestimated real cost.”

He adds many find they are simply not very good at raising productive replacements, so look at other options. Whatever the choice of origin, it is only the first of several considerations.

Matching heifers to the environment

Lalman recommends producers seek replacement females to match the environment they will be placed in without modifying or increasing the inputs at the operator’s disposal. “It concerns me that over time we tend to encourage people to do certain things, like gradually stepping up the hay feeding season, or slowly increasing the amount of feed or the supplementation rate. Those are two simple examples of modifying the environment to fit the cattle we like, instead of selecting for and retaining cattle to fit the environment.”

He acknowledges there are environmental extremes throughout North America dictating choices to a certain degree and cattlemen need to pay attention to those to run a productive beef system. “Obviously, you can’t take Brahman cattle to Canada and be very successful and on the opposite end, in the deep south, parasite resistance is critical as well as heat stress and tolerance. These are obvious points but there are also things



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to fine tune such as genetic potential for milk production. Some parameters can be adjusted to fit an environment but if you modify the inputs too much to match the cattle, that's not productive in any way."

Whitehurst echoes the same sentiments regarding the connection between livestock and the environment. He urges producers to have the courage to step outside the normal way of thinking. "Instead of building your operation around genetics people are trying to push on you, try to find genetics that are actually going to fit your operation. If you create an input dependent system hooked to other inputs that you need to keep laying cash out for to keep your operation profitable, it can be the beginning of a slow march to financial death. But if you can match your replacements to your climate and environment, profitability can be controlled, and expenses can be reduced." He admits input dependent systems can work when times are good and markets are high but questions what happens when they are not?

Selecting for seasonal-aged heifers

Beyond matching potential heifers to existing environmental conditions, producers often look to their largest and oldest heifer calves as the best candidates. Lalman says it is important to be careful with this way of thinking. If a producer is only selecting for growth and weight traits, the average size of the cow in the herd will eventually be much larger. This type of selection can lead to larger-framed heifers resulting in the potential of stifled fertility due to a later puberty age and higher feed costs in comparison to medium- and smaller-framed females.

"I think one of the simplest and most logical things to do is always be looking for the oldest or 'early born in their season' heifers. Then I would recommend not exposing them for very long. Keep the breeding season down to 45 days or less if you can and in that way, you will end up keeping the ones that breed," Lalman suggests. "If you do those two things, keep early born and then early bred heifers, you will be selecting the reproductively successful females."

A 2013 study by the U.S. Meat Animal Research Center in Nebraska looked at the productivity of heifers in relation to when they conceive during their first breeding season. The study found those heifers remained in the herd longer as cows because of early conception, and also weaned a higher-weight calf each year. The earlier conception date yielded an older and heavier calf at weaning, and the females had a greater reproductive performance over the years.

Zeroing in on female longevity

Whitehurst sees cow longevity as an extremely vital consideration when selecting replacements. He tries to pick females that can produce an extra calf or two before being culled.

"Maybe I can cull them at 12 years old instead of 10," he says. "I look at cutting costs not going to negatively affect the income. Usually if you find those costs, if you select for genetics with more longevity, more efficiency and lower maintenance requirements, your depreciation costs go down because that cow is going to stay in the herd longer. The depreciation on a cow is a real cost people often don't value enough."

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Lalman agrees, and thinks the industry may be reaching a new frontier with fertility expected progeny differences (EPDs) and genomic systems. "A good example of a major step forward is the stayability or longevity index. The Hereford breed introduced their sustained cow fertility (SCF) EPD and it has been absolutely phenomenal. It calculates up to 12 years or 10 calves in 10 years — a calf every year for 10 years in a row."

He encourages cattlemen to use available EPDs for as many traits as possible and especially for longevity. "If you try to predict the performance of one or two animals, you might not have very good luck, but if you try to predict based on EPDs of performance in a thousand, they do a really good job."

For commercial operators purchasing heifers, the tools are available to help identify productive cattle from an output and carcass quality standpoint, all while matching the traits to the environment. "EPDs have been around for quite a while now and continue to improve in the way they are calculated and estimated," Lalman says. "They aren't perfect yet but are gradually getting better all the time."

Now is the perfect time to question the status quo when cow-calf producers add heifers to the cow herd, especially if mediocre results have been realized in the past. Every animal added offers a chance to improve the foundation, and matching them to their environment plus choosing older heifers born early in their calving season will help drive a positive reproductive cycle. Combined with the use of available EPDs and longevity indexes such as the American Hereford Association's SCF EPD, the process can turn the status quo from mediocre to positive. **HW**