

SORTING GATE

Making the big decisions

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For many, weaning time means a couple of things: 1) deciding how to market steer calves, and 2)

figuring out which heifer calves to keep as replacements. Selecting and then developing these females comprise one of the most costly investments a cattle operation makes each year.

Unlike with bull selection, in most cases expected progeny differences (EPDs) and dollar value indexes (\$Values) are not available to help select commercial replacement females. Cattlemen know reproductive performance, cow longevity, structure and docility play important roles when selecting these females.

So, what tools are available to support these decisions?

The eyeball test is heavily employed by many cow-calf operations when making these decisions, and for good reason. Females must be of the right size, structural integrity and temperament to fit the needs of each individual's environment. However, this should not be the only test replacements need to pass.

Consider past decisions

In spring 2018, cattle operations were planning for these decisions. Bull matings were made to target specific breeding goals for next year's calf crop. Analyze those past mating decisions. Which bulls were chosen with heifer replacements in mind? Focus on tools like heifer pregnancy (HP), mature cow size (MW), docility (Doc), maternal

calving ease (CEM) and maternal milk (Milk) EPDs. Those genetic tools help to predict how valuable those sires' daughters will be as breeding females.

Focus on the females

Pull out past performance records. Identify heifer progeny out of females or maternal lines that stay in the herd past age 5 or 6 and that have calved on schedule each year. Heifers out of these females may be good candidates for selection.

Analyze culling remarks, or why dams have exited the herd. If a dam weans a nice heifer calf, but she herself has been put on the "cull" list because her udder has broken down early in life, her heifer calf may not be a good candidate for selection.

Think about mature cow size, or how big your cows are at 6 years of age. Everyone wants to have nice, big heifers in the replacement pen. Being the biggest, while it can have advantages, doesn't necessarily equate to being the best. Bigger cows tend to have larger maintenance energy requirements and therefore tend to eat more during the course of their lifetime. This could lead to more required feed stored and fed in the winter months and lower stocking rates in the summer.

Look under the hood

After passing the herd's initial criteria for the "keep" pen, use GeneMax[®] Advantage[™] to fine-tune the details. GeneMax Advantage is a DNA test to aid in the selection of heifer replacements. It is a way

for producers to dig a bit deeper into the genetic merit of these females.

The test evaluates females for 10

different maternal and terminal traits along with three economic selection indexes, including Cow Advantage, Feeder Advantage and Total Advantage. These indexes allow for producers to make multi-trait genetic selection decisions about females based on a specific breeding goal or objective.

Cow Advantage aids cow-calf producers who sell their calves at weaning and keep replacement females from within their herd. This maternal index includes individual traits such as calving ease, weaning weight, maternal milk, heifer pregnancy and mature cow size.

Feeder Advantage helps pinpoint females that will have large net returns from the feeder-calf progeny they produce due to growth, feed efficiency and carcass merit. This terminal index includes traits such as postweaning gain, carcass weight, marbling, ribeye area and backfat thickness.

Total Advantage combines all the maternal and terminal traits into one simple number to predict cattle that will be profitable through the entire production system.

For only \$28 per animal, a commercial cow-calf producer can have an intensive look into the genetic merit of their heifer replacement candidates, as well as the ability to Sire Match these females, which is valuable in itself.

Not only does this test help to select replacement females, but it also allows operations to avoid inbreeding through the Sire Match tool and to better mate individual females. Using this tool may help a producer select which bulls he or she will use in a heifer artificial

\$M aims to keep weaning weights consistent with today's production standards while increasing female fertility, docility and foot structure.

insemination (AI) program or what bulls to turn out with a specific group.

Looking ahead

In the future, commercial cattlemen can take advantage of a new \$Value tool to build replacement female candidates. Maternal weaned calf value, or \$M, more keenly focuses on cow fertility and functional traits that affect an operation's profitability from conception to weaning.

This new tool is designed to assist cattlemen who have a self-replacing herd model, replacing 20% of the breeding females per year and selling the rest of their progeny as feeder calves. This index focuses more exclusively on the cow cost side of the equation, assuming producers receive no economic benefit for postweaning traits such as postweaning average daily gain or carcass traits.

\$M aims to keep weaning weights consistent with today's production standards while increasing female fertility, docility and foot structure. Look for more information on \$M and the many other selection tools the American Angus Association[®] offers in next month's issue. |

Editor's note: "Sorting Gate" is a regular *Angus Beef Bulletin* column featuring herd improvement topics for commercial producers using Angus genetics. Authored by staff of Angus Genetics Inc. (AGI), regular contributors include Dan Moser, president; Stephen Miller, director of genetic research; and Kelli Retallick, director of genetic service. For additional information on performance programs available through the American Angus Association and AGI, visit www.angus.org and select topics under the "Management" tab.

