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The Debate Continues: What's the Right Size of Cow?

by Troy Smith

According to Hereford breeder Kevin Schultz, it has become fairly common for people to ask about the size of his family's seedstock herd. But when potential buyers call Sandhill Farms near Haviland, Kan., they really aren't concerned with a tally of animals. They want to know how big the mama cows are.

"More and more of our commercial customers say they're concerned about their cows getting too big. They say they want to downsize, lower the frame score and mature weight," explains Schultz. "On the other hand, the second-highest selling bull at our last sale was the biggest-framed bull. I see it at other sales too. The biggest bulls often rank among the top sellers."

So what do commercial cattlemen really want? They still want to sell big, growthy calves. However, many producers are aware that increasing cow size has a point of diminishing returns. They're concerned about whether calf receipts can offset the increasing costs of keeping big cows.

"Weight still is the driver on sale day," Schultz adds, "but I think more cattlemen are seriously concerned about cow size. They want to lower cow maintenance costs."

Paul Bennett hears much the same thing. At Knoll Crest Farms near Red House, Va., Bennett's family markets Hereford as well as Angus and Gelbvieh seedstock. A growing segment of customers, regardless of breed preference, have expressed the desire to reduce mature cow size. At the very least, says Bennett, they want to halt any further increase.

"We're offering bulls with frame scores ranging from 5 to 6.5, because that's what our customers want," says Bennett. "I do think

more buyers are realizing they probably need a 5-frame bull if they really want to moderate cow size."

Change through the years

Certainly U.S. beef cattle have become bigger over the last few decades. In many areas seedstock measuring under frame score 6 are hard to find. It's been estimated that between 1975 and 2005, the "typical" cow's weight (in body condition score 5) increased by more than 300 lb. Rather than the 1,000 to 1,100 lb. of 30 years ago, that cow is more apt to weigh 1,300 to 1,400 lb. And, if that's average, a lot of cows weigh more. Some weigh significantly more.

Relatively cheap feed helped fuel the push for more growth in beef

cattle. But selection emphasis for heavier weaning and yearling weights, plus increased milk production to support genetic potential for calf growth, also resulted in larger mature weights for breeding females. According to a generally accepted rule of thumb, a cow consumes about 2% of her body weight in dry matter feed, maybe a little more, during lactation. Higher nutritional requirements and greater intake of feed — which isn't cheap anymore — mean maintenance costs increase with cow size.

That's the chief argument of producers and industry pundits advocating a return to smaller cows. They also point out how, generally, big cows seldom raise calves that wean at 50% of their mothers' body weight, while smaller cows more often meet that long-used benchmark. Therefore, smaller cows are called more efficient.

Valier, Mont., breeder John Holden says his customers are interested in efficiency, and they favor moderation, but they don't want "little" cows. Holden fears some of the small-cow advocates are going too far when they claim cows of frame score 2 and 3, with a mature weight of 1,000 lb. or less, are optimum for any environment.

"Most of our customers want medium-sized cows ranging from 1,200 to 1,400 lb. And I think that's about optimum in our situation," states Holden. "A rancher needs to produce all the pounds of beef he can get from the feed he's got, and he has to produce it in a package that buyers want. And, as long as the cost of production is less than what he receives for the cattle, he's going to make money."

Holden notes how beef packers continue to provide incentives for cattle feeders to produce heavy

carcasses from relatively large-framed cattle. So economics cause many, if not most, feeders to favor that kind of animal.

"And a little cow won't bring you much salvage value either," adds Holden.

Size vs. efficiency

During the 2010 Cattle Industry Convention, in San Antonio, Texas, a Cattlemen's College session addressed the topic of cow size and efficiency. Speakers representing Texas A&M University King Ranch Institute for Ranch Management (KRIRM) included Jennifer Johnson, J.D. Radokovich and KRIRM Director Barry Dunn. They said the best way to frame the question of efficiency is to ask which cattle are most efficient in a specific environment and production system.

The trio called it a mistake to equate low-maintenance requirements with efficiency. Johnson said low-maintenance cows can be efficient, but not always. Neither are high-maintenance cows always inefficient. Johnson also discounted the axiom calling for a cow to wean 50% of her body weight.

"Though it is commonly used, it's not an accurate measure of efficiency," she explained. "It doesn't consider calf age and the cow's milk production. While it doesn't reflect individual cow efficiency, the ratio of total calves weaned to the total number of cows exposed to breeding is a better evaluation for efficiency of the entire herd."

Johnson said overall efficiency is a combination of biological efficiency (the ratio of feed consumed to beef produced) and economic efficiency (the ratio of dollars spent to dollars returned). Achieving both simultaneously requires understanding and managing the genetic potential of cattle, the environment in which the cattle must perform, and decisions about what product a producer is marketing and when it is best marketed.

The KRIRM team said matching growth and milk production to the availability of feed resources is the key to creating efficient cows. The availability and cost of feed resources vary greatly by region, and utilizing cattle of differing genetic potential is a logical response to environmental differences. No one breed or size category of cattle excels in all traits or is most efficient in all environments. The cow that is efficient and represents the "right size" is one that nets the most profit by keeping marginal revenue above marginal cost.

"For the majority of cow-calf producers in the nation," contends Barry Dunn, "the most efficient cow is one with the highest milk production potential that can, without reducing the percent of calves weaned, repeatedly produce a calf sired by bulls with the growth and carcass characteristics valued most in the marketplace." **HW**

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