

Breed What You Need



Traditional recommendations may not fit your ranch business goals.

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This is an era where you can customize virtually anything imaginable, from license plates and jewelry to M&Ms and burgers. As the beef industry moves forward, will customized breeding plans become more common?

“I teach students to develop a breed utilization plan based on their marketing objectives,” says Joe Cassidy, animal scientist at North Carolina State University. “The decision regarding the use of straightbreeding versus crossbreeding should be based on marketing objectives and maximizing profits.”

For decades, industry and academia have pointed to crossbreeding and hybrid vigor as one of the easiest strategies available to boost earnings. But a new discussion is emerging.

“Profit should be based on net return on assets. That requires a good understanding of costs of production,” he says.

That can be harder for producers to quantify than many care to admit. According to a 2011 survey, only 40% of operations keep individual cow records, and less than 5% of producers participate in any type of standardized analysis.

“Weaning weight is a primary driver of revenue,” says emeritus beef specialist Steve Hammack, of Texas

A&M University, but it’s not the only one. Reproduction, selling price and costs figure into the equation, too, he says.

How can a rancher capture the highest price for his product at the lowest cost to produce it?

“It’s very easy to suggest that a single change in management practice is going to provide the magic bullet with which we can turn a system around, yet this is seldom the case,” says Jude Capper, Washington State University animal scientist. “We have to advocate for continuous improvement in all systems and across all sectors rather than targeting a single management practice as ‘the answer.’”

When looking to increase weaning weights, cattlemen using a crossbreeding system often realize 3.9% improvement, according to a recent California State University report.

Is that enough?

Several surveys of commercial herd operators in the past 10 years indicate at least 70% of the nation’s cow herd is Angus-influenced, and a 2008 survey noted 58% of those are straightbred Angus herds. That suggests a significant number of producers are turning to that breed

as an alternative to the crossbred advantages.

The Roman L. Hruska U.S. Meat Animal Research Center (USMARC) publishes sire averages for major beef breeds. For 2010-born calves, Charolais leads the weaning-weight

category with more than 599 pounds (lb.), followed by Brahman (592), Simmental (591), Tarentaise (584) and Angus (582). Angus closes the gap in yearling weight at 1,036 lb. — second only to Charolais at 1,041.

David Buchanan of North Dakota

Says this “reduction in the differences between breeds,” is likely part of the reason crossbreeding is in decline, along with “the common use of random — as opposed to systematic — crossbreeding.”

Some data indicate the gap has more than narrowed. A recent analysis of Iowa’s Tri-County Steer Carcass Futurity data shows the quartile of cattle with the most Angus breeding had nearly a 6% improvement in average daily gain, compared to those with the least amount.

“Merging of the weight of breeds does not mean lower heterosis,” Hammack warns. “This merging is

phenotypic, not genetic, so if you cross breeds that weigh the same, you’ll still get heterosis.”

Birth weight first driver

Long before weaning weight or feedyard growth comes the trait most valued by producers making bull-buying decisions: birth weight. That’s according to a 2010 survey by *BEEF* magazine.

“Heterosis is not a primary driver of dystocia,” Hammack notes. “Crossing larger, high-birth-weight sire breeds on smaller cow breeds is the driver, and that’s what caused problems when the Continentals first came in.”

Cassidy reports on more than 300 North Carolina records on straightbred Angus, Angus-Braunvieh crosses and Angus-Hereford crosses.

“The straightbred Angus are lighter at birth, but there were no significant differences in preweaning gain or adjusted 205-day weights,” he says. “I believe these types of results are why producers in our area are going with straight Angus. However, we also need to look at the lifetime productivity of the heifer mates kept as replacements.”

Although longevity improvements from heterosis are well-documented, those females are often part of the reason for straightbreeding in a herd, Buchanan says.

“There is difficulty in developing a crossbreeding herd that simultaneously produces high-

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quality market animals and replacement heifers,” he says. That challenge arises in part because the breeders’ ideal programs “don’t actually match the real world in which beef producers live.”

The payout

Since the 1990s, value-based marketing takes some credit, too.

“I think straightbreds can do well if producers invest in the right sires by utilizing EPDs (expected progeny differences) and manage for the market that rewards them for that biological type of calf,” says Tom Troxel, associate head of animal science at the University of Arkansas.

Last year packers paid more than \$32 million in grid premiums for cattle that were accepted into the *Certified Angus Beef*[®] (CAB[®]) brand, and this fall CattleFax predicted a \$12 Choice-Select spread for 2013. The Prime-Select spread has moved up to the \$50 area.

That’s significant, when more than half of finished cattle are sold on grids that pay quality premiums.

“Time will reveal the impact of vertical cooperation and value-based marketing,” Hammack says. “For most producers, value is determined at weaning, and many of those producers tend to be independent souls, not prone to ‘cooperation.’”

For those focused on reaping the benefits of a growing pull-through demand for high-quality beef, breeding systems always include pressure on carcass traits like marbling and ribeye, for which they are compensated in those formulas.

Hammack notes that heterosis is “the difference from the average of the parents, but heterosis is economically beneficial only if it exceeds the best parent for overall production efficiency.”

It often works to an advantage, but not in every case, he says. “This explains why crossbreeding has not been a feature of dairy until recently when longevity has received more attention. Even though there is heterosis for milk production, crosses don’t milk as heavy as a Holstein.”

On the beef side, Hammack says, “The same is true of marbling. Nothing feasible marbles as high as Angus or Red Angus.”

Many animal scientists say it all comes down to ultimate goals and how to make those mesh with your resources.

“There has never been a one-size-fits-all solution in our industry and likely never will be, so we should be thankful that producers — motivated by market signals — can effectively choose an approach that best fits their goals, talents, constraints and opportunities,” says Tom Field, University of Nebraska.

“Which is better, straightbreeding or crossbreeding? If a producer asks me,” Cassady says, “my answer is, ‘It depends.’”

