

Producing With Optimums

by Micky Wilson



Twig Marston, Kansas State University, discussed using optimums for production goals.

BOISE, IDAHO (Sept. 26, 2006) — “Centuries ago, what our forefathers did, was they tried to find cattle that would survive. ... We are trying to create the most satisfying eating experience we possibly can for the American public,” Twig Marston, Extension beef specialist from Kansas State University, said Sept. 26 at the 2006 National Angus Conference & Tour, headquartered in Boise, Idaho.

Trying to maintain profitability while shooting to produce the ideal consumer eating experience is challenging. Producers must deal with several dichotomies in the beef industry, including matching cows to the production environment vs. matching calves to the marketing environment (see Table 1).

In his recipe for the “optimum cow,” Marston identified the following traits in a female.

- She survives her environment.
- She transfers genetics from bull to bull.
- She supports her offspring.
- She does her own work.
- She produces a salvage value.

Necessity traits, he said, include structural soundness, domestication ability (docility), longevity and reproductive performance. Developing optimum females, he said, can be done by changing gene frequency using expected progeny differences (EPDs) as indicator traits, using independent culling levels, focusing on economically relevant traits (ERTs) to simplify the EPD matrix, and using selection indexes such as

the American Angus Association’s dollar value indexes (\$Values). In the future, DNA gene marker selection will play a role.

Marston said the Association’s \$Values are good tools for genetic selection because they have been

researched and carefully defined. They are also biologically economical and oriented toward the production system. The trick, Marston said, is finding the optimum balance between traits that are antagonistic.

Cow size correlations

Though it may seem elementary, Marston reminded conference attendees that as cow size increases, feed intake also increases.

Relating this information to the packing side of the industry, Marston pointed out that hot carcass weight (HCW) is highly correlated (0.81) to cow size. Thus, harvested animals that hang heavy carcasses do so because they are progeny of big cows. But increasing growth and milk in the cow herd can lead to extended calving intervals, which lowers herd productivity.

Marston said tools such as the Association’s Optimal Milk Module can help producers identify ideal milk levels considering the growth potential of the herd and the feed resources that are available. The module is available online at www.angus.org/tools/optmilk/index.html.

Conclusions

Marston concluded with three paradigms of beef production. The cattle producer, he said, leads a labor- or task-driven life. The red meat producer is considered the recordkeeper and economist. Driven by the cost- and quality-controlled production of food made from beef, the food producer will be rewarded by those who know the value of quality.

Marston said he fully expects all three of these segments to be vital parts of the industry in the future.

You can listen to the audio of Marston’s presentation and view his PowerPoint® by accessing the files in the newsroom at www.nationalangusconference.com.



Table 1: Dichotomies in the beef industry

- Forage-based vs. concentrate-based
- Individuality, independence vs. alliances
- Commodity-based vs. value-based marketing
- Disciplined breeding vs. mongrelization
- Matching cows to production environment vs. matching calves to the marketing environment