

# MATCH COW TO



PHOTO BY SHAUNA HERMEL

# OVERALL GOALS

## Control what you can and deal with the rest.

by Miranda Reiman, Certified Angus Beef LLC

Cattlemen can't stop drought or hurricanes, but they can set their herd up to be successful during "everyday" challenges.

"We can manage their feed. We can manage their health protocol. We can't manage their stress," said Kelly Sanders, Westway Feed Products. "From my feed standpoint, how do I mitigate that problem the best I can?"

Sanders and colleague Cheramie Viator spoke Nov. 4 at the Angus Convention in Columbus, Ohio, during an Angus University session, addressing the importance of providing cows the nutrients they need when they need them. Merck Animal Health sponsored the popular Angus University sessions at the convention.

Sanders talked about epigenetics, or the way a cow's environment can change the ultimate makeup of the calf she is carrying.

"The DNA remains the same," he

explained, but nutritional problems or other stressors "mess up" the translation, or transcription, of the DNA.

It's not a new concept. It was first discovered in humans by analyzing health records of babies born toward the end of World War II. During the *Hungerwinter*, when the Germans cut off Dutch food shipments, most of the population received about 30% of their caloric requirement.

"When they went back and studied the ladies that were under this malnutrition ... children that came from them had a lot of health problems," Sanders said, noting they correlated certain trimesters with specific challenges, such as cardiovascular disease and diabetes.

In cattle, researchers are looking to determine the level of nutritional stress — and during which trimesters — that can affect everything from subsequent reproduction in breeding animals to quality grade in fed steers and heifers.

"A lot of stuff goes in the first

trimester, because that's when the heart's put together and developed, all the interior organs. A lot of the muscle fiber is developed during

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that time frame," Sanders said. Marbling cell development happens during the third trimester.

Studies have tracked how feeding 60% and 70% of cow energy requirements affects future progeny.

### Application

How can producers be sure they don't put that kind of stress on their herd?

It starts with selecting cattle that are well-adapted, Viator said.

"Match your cow to your environment and your production system, and match your bull to

your end point," she suggested, noting it's a good idea to develop females in a similar environment to their permanent one.

It's up to seedstock producers to help other cattlemen assess which genetics are a good fit.

"We need to think about our customer's production environment," Viator told seedstock producers. "Don't sell into a production environment where they're not going to survive." That means considering everything from forage type and temperature swings to water quality.

Then, individual ranchers need to understand the energy requirements of their cattle, she said. "We chase size and growth, and I'm all about it; but when we do, the more we push that spread, the more we increase the genetic requirement of our cattle."

Surveying breeders who have made it in the industry for 50 years or more, Viator said she found a common thread: "Optimums versus maximums."

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"Sometimes optimum is much more profitable in the long term than the maximum is today," she said.

The key is correctly using genetic tools and making smart decisions.

"Sometimes it's fun to think about what's really neat and what's really popular, but sometimes we have to take a step back and think about what really works," Viator said. ■

Editor's note: Miranda Reiman is director of producer communications for Certified Angus Beef LLC. The 2018 Angus Convention was hosted Nov. 3-5 in Columbus, Ohio. For additional coverage, including video of this presentation, visit the newsroom at [www.angusconvention.com](http://www.angusconvention.com).