

WORKING WITH THE NUMBERS

Management tools can increase reproductive efficiency.

by Megan Silveira, assistant editor

The beef industry is full of numbers. From the expected progeny differences (EPDs) listed at the bottom of registration papers to crunching numbers in the checkbook, Angus breeders might find themselves swarmed with math problem after math problem.

Frank White, beef cattle technical consultant with Elanco, however, says there's only one number that matters at the end of the day.

"Getting a live calf on the ground is the first step, and it's the most important thing," he said.

Adding to a producer's calf crop was the driving force behind White's presentation during the Angus University sessions at the 2022 National Angus Convention in Salt Lake City, Utah, hosted Nov. 3-5.

"Reproduction is 10 times more important than weaning weights and 20 times more important than carcass characteristics," he told audience members. "So we're going to talk about ways to maximize reproduction and maximize your calf crop."

White encouraged producers to break the problem down into two categories they could influence: nutrition and vaccines.

The easiest way to understand nutrition in a cow is to remember what it means to be a ruminant.



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"The rumen is a big fermentation vat that's full of bugs," White explained. "Most of it's bacteria, but we've got to feed the bugs, and they'll feed the cow."

Supplementation and feed provided to a herd should be driven by the needs of those microbes that call the rumen home. White said the positive associate effect is the first tool producers should have in their arsenal.

"It's a very economic way to feed your cattle," he said. "We're going to meet the nitrogen demands for the bugs — we're going to feed the bugs — you're going to get more bacteria in the rumen, and those bacteria are going to digest the forage faster because there's more of them."

Nitrogen is the critical ingredient in this recipe. White identifies amino acids as the building blocks of protein, and those acids depend on nitrogen. Those proteins are vital for the production of proteins, muscles, hormones and enzymes. Without



proper protein, a cow's body can't focus on raising a calf.

It's the cycle of the positive associate effect, White said. Provide a little bit of supplemental protein to take care of that gut, and the cow's body can make the best use of her energy to successfully get pregnant and raise a calf.

White identifies body condition score (BCS) as the perfect measuring stick for individual animal health. He said you want a score of 5 or 6 at breeding time, but the jump up to 6 shows a 93% pregnancy rate.

"There's a relationship between fat and cyclicity," he explains.

With those ideal BCS scores, producers can rest more comfortably in gauging their animals' overall health, and in turn, their ability to get pregnant.

Once the rumen and nutrition has been properly managed, vaccinations are next on White's list of management tools to help improve reproductive efficiency.

White said in recent years, there's been a paradigm shift in the industry about recommendations for vaccinating cows. He encouraged producers to consider only utilizing modified-live vaccines from now on in animals less than 1 year of age.

"To build immunity, you have to

have a live virus," he said. "But once they become a breeding animal, you can make that switch to the killed."

He said he still believes in the importance of a modified-live vaccine. Calves have to have a modified-live vaccine, but reproductively active females should not receive one.

Several studies have shown modified-live vaccines negatively affect a cow's reproductive abilities. White said the results make sense to him — when a cow's body is concerned with fighting off a live virus, it's less concerned with getting pregnant.

The science behind the numbers

is that the modified-live vaccines are negatively affecting CL (corpus luteum) and decreasing progesterone levels, ultimately diminishing conception and pregnancy rates. White says with just one vaccination decision, the chips can be made to fall in the favor of the producer.

That's what White believes the Angus industry is all about. With a few key management decisions, producers can change the equation, so the numbers end in their favor. **AJ**

