Rethinking Growth Enhancements

Using fertilizer is a standard practice for farmers. Why don't beef producers view growth promotants the same way?

by ***Kindra Gordon***

"I don't like technology for the sake of technology," says South Dakota State University distinguished professor Robbi Pritchard. The well-known ruminant nutritionist labels himself a Luddite (someone who does not relish technology) and admits he does not have voicemail or the Internet in his home.

But when it comes to the cattle industry, Pritchard advocates that there is a need for the use of technology — specifically growth promotants, which he likens to fertilizers used on crops.

He gives the example of cropland with different production capabilities. Pritchard asks, "What does the farmer do with that ground?"

He answers, "The farmer uses technology (precision ag) to change their inputs and management to make that ground profitable."

Pritchard says beef producers can utilize growth promotants in finishing cattle to also manage their inputs and achieve profitability.

Why beef needs technology

Pritchard says the increasing need for the beef industry to utilize technology is driven by ethanol and how it has changed the landscape of the corn industry.

"Corn is the tip of the iceberg. Going forward, the cattle industry is going to have to figure out how to compete with energy production for virtually all of our feed inputs," Pritchard says. "Cattle feeders are going to have to make some changes, and life's going to have to be different."

During the past 20 years, he points out, the cattle industry has been able to improve average daily gains, weaning and yearling weights, feed intake and feed-to-gain ratios — some by as much as 20%-30%.

Pritchard credits these efficiencies primarily to changes in genetics at the ranch.

"Ranchers have made huge progress," he says.

However, during that same 20-year time

Do's and don'ts for using implants according to South Dakota State University's Robbi Pritchard

Don't implant:

- Sick animals
- Animals on droughty rangeland
- Animals at birth
- Replacement heifers
- Animals at weaning

Do implant:

- Yearlings at turnout
- Animals at revaccination
- Animals at branding
- Spayed animals
- Banded animals
- Any healthy cattle on feed that will not garner a non-hormone-treated cattle (NHTC) premium

Additional tips

- If you plan to hold calves over winter and put them on grass as yearlings in the spring, wait until spring to implant. Otherwise, you just increase your winter feed bill.
- Calves on 2- to 3-year-old cows should be implanted when revaccination occurs in August instead of at branding in May.
- Calves on cows 4 years and older can be implanted at branding in May.

period, feed conversion has only seen an 8% bump.

"That still needs to improve," Pritchard says.

To do so, Pritchard points to the need to better utilize bunk management, ionophores, implants and beta-agonists.

Find the right tool

There are many options available, and no one product is necessarily better than the other, Pritchard emphasizes. "Every one of these offers different doses and durations and is like a different tool in the toolbox."

He gives this analogy: "Some are like a three-quarter wrench versus a crescent wrench. You don't always want to use a crescent wrench; you have to find the right fit."

As an example, he explains that a low-potency implant can give a 7%-8% average daily gain boost, while higher-potency implants may give a 22% boost in gain.

"On low-energy backgrounding diets, the wrench that gives the 22% boost in growth is too big," he says, "and it is going to break something."

Bottom line, says Pritchard, these are tools the industry can use without changing the cows and bulls in the herd, and you have the opportunity to produce 125 more pounds (lb.) to sell with no effect on quality grade.

Of growth implants, Pritchard says, "All of the growth, with zero grade depression. That's valuable."

Beta-agonists

Newer to the beef industry are beta-agonists, which can be top-dressed into the feed during the final days of the finishing period to increase protein synthesis and muscle growth.

"This stuff is amazing," Pritchard says. "You can see the difference. It's Arnold Schwarzenegger in a can." He clarifies that beta-agonists are not steroids.

Optaflexx® and Zilmax® are currently the two beta-agonist products on the market in the United States. Studies have shown that in about a month's time they can add 15-25 lb. more to the animal.

"They are powerful tools, but more isn't always better. They must be carefully managed," Pritchard cautions. Too high of a dose can cause significant quality problems. Prolonged feeding will negate the effect, and the animal's muscle growth will go back to where it was. Additionally, Zilmax has a three-day withdrawal period.

"The feedlot must be able to manage their closeout and marketing dates. Being off by five days matters," Pritchard says.

As with implants, Pritchard notes that beta-agonists should be used for the right situation. For instance, Holsteins, cattle younger than 17 months of age, and cull cows would typically benefit most from added weight and muscle.

Heavyweight cattle and cattle intended for a higher quality-grade target would be less likely candidates. Pritchard notes that cattle given beta-agonists have produced some concerns with tenderness and ribeyes getting too large.

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Vision for precision

Returning to his comparison of precision farming and the cattle industry, Pritchard notes the amazing detail that satellite technology has allowed grain farmers.

"They have a yield map showing distribution in the field in detail. The combine tells the grain cart where to meet it and locks in speed so there are no spills," he says.

"Can we get that precise in the cattle business? Do we have the data? Yes!" says Pritchard. "We have in weights, carcass weights, ranch of origin and genetics, quality and yield grades. We have pieces of information, but what do we do with it?"

He notes that often we use it to find the defective cow or the steer with poor residual feed intake (RFI). Pritchard suggests that is the wrong solution.

Instead, he says, "We need to use the information so when cattle arrive at the feedlot, we can adapt the technology available to make them profitable. We have to get more creative and more open-minded about these things."

He concludes, "I'm a Luddite, but I'm thinking I could make money using this kind of technology in the feedlot."