Stay Vigilant

Dan Thomson shares ways to 'get better.'

by **TROY SMITH,** *field editor*

In no uncertain terms, veterinarian Dan Thomson will tell you he is dismayed about certain cultural changes in America. He laments the decline in basic civility and the way people show disrespect for one another, particularly for those in authority. Really disturbing to Thomson is the apparent decline in personal accountability.

"For more and more people, their personal best is doing just enough to get by," says the third-generation veterinarian. "When their shortcomings show, people want to blame someone else."

That kind of attitude wouldn't have been tolerated by his father or grandfather, or by the clients Thomson served while in private practice. As a faculty member at Kansas State University's College of Veterinary Medicine, he has challenged students to set goals beyond the ordinary. As host for seven seasons of RFD-TV's *DocTalk,* Thomson has prodded livestock producers to "never be satisfied. Always try to get better."

Thomson says beef producers can be proud of their product's wide acceptance as a protein source that's well-suited for a white-tablecloth soirée or a simple backyard barbecue. The beef industry can also be proud of the attention it has given to cattle health and well-being throughout the production chain. Lest they become content to rest on their laurels, however, Thomson reminds producers of opportunities to "get better" still.

Pathogen playground

In particular, Thomson sees a crying need to improve management of calves facing a change of address. In Thomson's opinion, too many multiple-source, lightweight, unvaccinated, weaned-onto-a-trailer calves are hauled long distances and commingled in a feedyard. These are the "high-risk" calves that, typically, have been exposed to heavy doses of pathogens, and their immune response has been suppressed by a long list of stress factors.

It isn't surprising that morbidity and mortality rates run high. Not to Thomson, who uses a tongue-in-cheek analogy likening mismanagement of calves to a mismanaged first day at kindergarten.

"Think about sending a bunch of little kids to their very first day of school. But just forget about the 'kindergarten roundup' acclimation process. Don't give them any childhood vaccinations beforehand, because that can wait until we get them to class," says Thomson.

"Just drive to the school house and unload. Herd them in and shut the door. There will be quite a bit of bawling, but just go ahead and sort them into classrooms. Have some untrained people vaccinate the whole bunch. If we only have a 6% to 10% death loss, that's acceptable."

Mismanaged calves might be the industry's greatest liability.

That analogy is not as much of a stretch as people might think, according to Thomson. He thinks mismanaged calves might be the industry's greatest liability. He suggests preconditioning and acclimation of calves could reduce reliance on metaphylaxis upon arrival at the feedyard — mass treatment with antibiotics administered in expectation of a disease outbreak.

"It's not that this kind of antibiotic use poses a global health risk, because it doesn't, but we have to ask ourselves if it promotes resistance to the limited products we have available. Can we manage cattle to reduce their use and save these products for when they are most needed?" asks Thomson. "We need to look at preconditioning as our responsibility for the sustainability of the industry."

PHOTO BY TROY SMITH

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Get out the knife

Another calf management issue of concern to Thomson is the number of intact male calves that are castrated after arrival at a feedyard. He cites research indicating that bull calves castrated at the feedyard experience 140% more respiratory morbidity than calves received as steers. Mortality rates are that much higher for bull calves compared to steers.

While some producers cling to the notion that intact male calves will wean heavier as a result of testosterone production, Thomson says bull calves typically produce little testosterone until after they reach 7 months of age. The stress associated with castration after arrival at a feedyard results in reduced performance, so timely castration is a financial issue, as well as a matter of animal well-being.

"I'm less concerned about how than when castration happens," states Thomson, "although I think knife-cut calves experience the least pain long-term (compared to banding). The important thing is that it needs to happen early."

PHOTO BY SHAUNA ROSE HERMEL

Unwanted pregnancies

Also on Thomson's list of concerns is feedyard heifer pregnancy. Many feedyards report the highest pregnancy rates among heifers received in the fall, following a grazing period during which they, evidently, were exposed to bulls. Calling it "a major issue," Thomson says it is not uncommon for 20% of heifers to be pregnant upon arrival. In his experience, 10% are further than 120 days into gestation. Besides reduced feedyard performance exhibited by pregnant heifers, there is a high mortality rate among those that calve during the feeding period.

Mitigating weather

Thomson also points out things that feedyard managers could do to better respond to unfavorable environmental conditions, such as muddy pens. Mud happens, and it can significantly reduce average daily gains. Yet, some managers do nothing until conditions are really bad, paralyzed by the idea that they can't clean part of a pen instead of the whole thing.

Mitigation of heat stress isn't just about providing an ample quantity of drinking water. It might mean using extra water tanks, temporarily, to make sure all animals have ample access. Providing shade is desirable, added Thomson, recommending 20 square feet of shade per animal.

In pens with no shade, bedding can help mitigate heat stress. Thomson noted how bare pen surfaces can reach temperatures significantly higher than the air temperature, discouraging animals from laying down. However, 6 inches of wheat-straw bedding can lower the pen surface temperature by as much as 25° F.

There is room to improve for every segment of beef cattle production, but Thomson points again to calf management as an area where improvement might have the most impact on the industry. He recommends collaborative relationships between cow-calf producers and calf buyers, including stocker operators and feedyard managers, to develop calf preconditioning protocols that reduce stress, enhance immunity to disease and better prepare calves for transition through marketing channels.

Editor's Note: *This story is based on comments during Dan Thomson's presentation titled "The U.S. Beef Cattle Production Journey: The Destination is Up to US," delivered during November 2017 at eight locations across Nebraska. Thomson was the invited speaker for the annual Traveling Roadshow co-sponsored by the Nebraska Grazing Lands Coalition and University of Nebraska Extension.*