

# It's Not Rocket Science

Managing cattle from disease can be a simple task; all it takes is a little hard work.

by *Tosha Powell*

**C**attle get sick. It's something most farmers know as inevitable. However, the most important thing a farmer or rancher can know is how to be better at managing it from happening. Sounds easy, right? Maybe it's not such an easy task to accomplish, but with helpful tips from veterinarians and other farmers with the same herd situations, managing cattle to prevent diseases doesn't take rocket science.

## Death loss trends in feedyards

Mortality rates in feedyards across America have increased during the last few years. The U.S. Department of Agriculture's (USDA's) Sentinel program has shown that from 1994 to 2003 there has been an average increase in overall death loss of 69% (6% per year) and an increase in death due to

respiratory disease of 119% (9% per year) in all cattle on feed.

"The more variables that are accounted for, the less the increase in death loss occurs," says Dan Thomson, Kansas State University (K-State) assistant professor and Jones Professor of Production Medicine and Epidemiology. "The average arrival weight for a pen of cattle is a strong predictor of mortality. Lighter cattle generally have higher death loss than the same source of cattle at heavier arrival weights."

Benchmark data show that the death loss among cattle that had an arrival weight between 700 pounds (lb.) and 899 lb. has not increased much from 1998 to 2003. However, the increase in death loss in lighter weight groups (400 lb. to 599 lb.) has significantly gone up during the five-year period.

"The lighter the weight group the bigger the increase in death loss, but not as big as the increase in overall death. This indicates that more lightweight cattle are being placed. Usually, the lighter the cattle, the more days we have to feed them until harvest," Thomson says. "We can feed twice as many 150-day cattle than we can 300-day cattle."

"There are two reasons why cattle get sick," Thomson says, "overwhelming doses of pathogens entering the body and a suppressed immune system. We as managers have the most control over the immune system."

He says that cattle managers are able to better preserve healthier herds if they maintain the cattle's stress levels. "When moving cattle to feedyards, working them at home or simply going out to feed, you have got to [be aware] of the stress it puts on them."

## Deadly diseases

Custom cattle feeding is a leading supply of fed cattle. Most diseases caught by cattle in the feedyard are due to commingling with other cow herds. However, preconditioning is a great way to safeguard against disease when commingling cattle. Many custom cattle feeders are very good about preparing their animals or procuring animals that are ready for the finishing phase, Thomson says. "Cattle need to be prepared for transition in the market. Preconditioning cattle is key."

He says that some producers feel they don't receive any more money for preconditioning their cattle. Producers feel as though it takes more time and money, and they have nothing to show for it. However, they do. They have healthier cattle. Word gets around when a cowman's herd tends to

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develop sickness from commingling in the yards. Preconditioning cattle not only saves face, but it is worth it for the cattle's sake.

"We have a responsibility to the animals we breed," Thomson says.

When more high-risk cattle enter the feedyard, even low-risk cattle face an increased risk of death loss, he adds.

What is the first question that should be asked in the face of a bovine respiratory disease (BRD) outbreak? "We ask, 'Is it a morbidity problem or a case fatality rate problem?'" Thomson says. "We then need to evaluate source of cattle, viral antigens, weather, people, prior nutrition, transportation, evenness of the cattle, etc. The bottom line is that if we are going to properly analyze death loss, the least we could do is capture the morbidity data.

"Cattle don't die directly after treatment for BRD," Thomson continues. "We would like to think that the cattle dying in

the hospitals were treated the last few days. However, Fulton (2003) reported that the average time between the day of the first treatment and death for all cases was 30 days (range = 0 to 161 days). The average number of days on feed at time of death for all BRD cases was 60 days (range = 2 to 199 days)."

Transitional diseases are those that begin in one operation and travel with the calf to the next. Bovine viral diarrhea (BVD) is one transitional disease that causes abortions at the cow-calf level and can be thorny to the immune status of the feedyard steer.

"BVD infections cause abortions in beef cattle during the first four months of gestation," Thomson says. "Calves can be born normally but be persistently infected (PI) with BVD if they are exposed in utero before the immune system is established in the fetus. If BVD is in the fetus before the immune system is started, the calf simply recognizes BVD virus as self. These calves then shed BVD out of all secretions in their



body and have BVD virus in all cells. BVD can also cause congenital defects and has been associated with weak calf syndrome."

Iatrogenic diseases are those that are man-made. "Maybe the diseases or clinical syndromes aren't man-made, but the environment in which we put the animals creates a problem," Thomson says.

### Good practice equals good medicine

Cattle need to be properly prepared for transition through marketing channels. Marketing adjustments need to be made to decrease the amount of neglect and death in cattle. Thomson reiterates that preventive medicine and preconditioning are good practices of animal welfare. Transitional diseases must be eradicated out of the cow herds.

"Individual animal identification (ID) will be the start of disease eradication at the cow herd level," Thomson says. "It will also bring important changes to the way we buy and sell cattle. As far as death loss goes, there are many animal health products on the market. But, I don't know one of them that has a mortality claim. How could they? What we do every day impacts the health of the cattle in the feedyard. Good animal husbandry doesn't come in a bottle."

