



Biosecurity and animal welfare are important management practices to consumers' and producers' bottom lines.

by Kindra Gordon

Biosecurity became a buzzword a few years back when the threat of foot-and-mouth disease (FMD) and bovine spongiform encephalopathy (BSE) were major concerns for American cattlemen. Today the focus is on animal welfare as the likes of McDonald's®, Burger King® and Smithfield Foods have made announcements about establishing animal care and welfare guidelines for the producers and processors with whom they work.

Beef industry experts contend that these management considerations will continue to be important to the American public; as a result, these industry experts will increasingly be sought for their knowledge about food safety and food production.

This means that at the ranch, cattle producers will need to continue to be diligent in implementing and documenting biosecurity and animal welfare safeguards. While these practices can help appease consumer concerns about beef safety, they can also add value for the producer.

In short, Russ Daly, South Dakota State University Extension veterinarian, says, "Keeping problems out pays."

Stepping up biosecurity

Whether it's the threat of bovine viral diarrhea (BVD) or other reproductive diseases among cow herds or more serious animal health risks like BSE or FMD, in today's fast-paced beef industry these are all very real

concerns. South Dakota State Veterinarian Sam Holland explains, "With the rapid and extensive movement of animals for new genetics, marketing, or participation in shows and performance events, the risk of exposure to any animal disease is a lot greater today than it was 15 years ago."

Daly defines biosecurity as the steps producers can take to decrease the risk of new domestic or foreign diseases from entering their farm or ranch. He points out that diseases within cattle herds can be economically devastating because they are difficult to diagnose and may cause infertility, abortions and overall reduced animal performance.

A starting point for many biosecurity programs is to be aware of potential diseases, especially when purchasing animals from other states or regions. This is because most diseases are introduced to herds when new animals are added to the herd, Holland says.

Thus, when buying breeding bulls or females, he recommends asking appropriate questions such as:

- 1) Has the seller's herd been tested for diseases?
- 2) What has the herd breeding percentage been?
- 3) Has the herd experienced any problems with fertility?



- 4) What vaccination programs have been followed?

"The single most important thing a producer can do to protect his herd when introducing new animals is to get a health certificate from a veterinarian — even if the animals are only coming from a neighboring ranch,"

Holland suggests. "That way you know a trained professional has inspected them."

Likewise, once you've purchased any new animals and brought them to your farm or ranch, Daly strongly advises they should be isolated from the herd for 30-60 days.

This isolation period should include bulls, replacement females, bred heifers and mature cows — any new animal being brought onto the property. Even if you bring in foster calves, you should isolate the pair for 30 days.

Show cattle that are taken to different events should also be kept separate for a minimum of 30 days before being commingled with the herd.

During isolation, new arrivals should have no contact with the home herd. This includes direct nose-to-nose contact, contact with feces, contact via contaminated feed and water, and contact through contaminated facilities.

Daly says isolation allows new animals an opportunity to recover

from any transient illnesses — such as infectious bovine rhinotracheitis (IBR), bovine respiratory syncytial virus (BRSV) and pinkeye — that they may be incubating on arrival. And it prevents them from shedding the infectious agents to animals in the existing herd.

In a biosecurity program, blood testing may also be useful to look for diseases that do not present themselves during the isolation period. Holland and Daly recommend consulting with a local veterinarian when animals are in isolation to determine if additional vaccinations or tests should be given.

Consider the environment

An element often overlooked in disease control and biosecurity is the environmental factors that can aid disease transmission. Daly says cleaning and disinfecting equipment, eliminating standing water, and controlling rodents and canines can all be helpful in minimizing transmission of disease causing organisms like *lepto*, *salmonella* and *Neospora*.

Also store feed in locations where contamination from animals, chemicals and humans will not occur.

Another consideration: be cautious about entering arrangements for sharing pasture space, wintering space or otherwise mixing animals. “When you commingle, you are ‘introducing’ new animals to your herd. In these situations, disease risk is higher,” Holland says. But he adds that owner communication and use of coordinated health programs can help reduce disease transmission.

Transmission of disease from animals to humans (zoonotic diseases) can be a concern for human health. Bird flu, West Nile virus, severe acute respiratory syndrome (SARS), anthrax, *E. coli*, *salmonella*, rabies, cryptosporidium, roundworms and ringworm are all examples that pose this threat.

Daly says people who work around livestock need to take precautions so they don’t get sick from these pathogens. And, he emphasizes that when city kids or grandkids come to visit the farm

(or pet the animals at a livestock show or petting zoo), their immune systems are usually not prepared for those particular pathogens, so special precautions should be taken when they are around livestock as well.

To decrease exposure to zoonotic disease risks, Daly suggests:

- When possible, stay away from sick calves, stressed animals (calving cows), and manure contamination.
- Keep barn clothes and boots out of the house and away from children.
- Disinfect barn interiors and animal equipment.
- Be diligent about hand washing after being around livestock.

Welfare wise

Lastly, as the food industry moves toward raising awareness about animal care and welfare, cattle



producers also need to be persistent about sharing their animal husbandry practices with the public.

As the saying goes — if you don’t tell your story, someone else will — and it may not

be the way you want it told.

Barb Wilkinson, director of communication with the Colorado Livestock Association, says the message producers need to share is simply telling people about what they do every day — how you raise your crops and care for your cattle and land. She says, “As we’ve moved so many generations away from the farm, there’s a lot of curiosity. Consumers are concerned about having a safe, wholesome product, and we need to reassure them of what we are doing to make their product safe.” **HW**

Does BVD screening pay?

While biosecurity practices can cost producers time and money, the big question is, “Do they pay?” Managers of the Montana BVD-PI Herd Screening Project are trying to answer that question — particularly in regard to screening cattle for persistent infection (PI) of the bovine viral diarrhea (BVD) virus.

The group’s initial findings suggest cattle screened for BVD-PI may be worth more when they go to market.

“We think calves screened as PI-negative deserve at least a 4-cent per lb. price advantage over unscreened calves,” says Clint Peck, Montana’s director of Beef Quality Assurance. “PI-negative status says the animals are not persistently infected with the BVD virus and greatly reduces the risk of spreading the disease throughout the production chain.”

Peck adds, “We always suggest to ranchers the first reason to screen herds for BVD-PIs should be for herd health purposes. Then if they can use their screening results to gain a market advantage, that’s like icing on the cake.”

The cost of having at least one PI animal in a beef breeding herd ranges from \$14-24 per cow per year, according to Peck. BVD can inhibit conception and/or cause abortions in susceptible females. The virus also suppresses the immune system, making infected animals more susceptible to other diseases.

Moreover, the costs and effects of the BVD virus can escalate once calves leave the ranch and end up in a feedlot. “The BVD-PI calf that exposes its feedlot pen mates to massive amounts of BVD virus on a daily basis creates economic chaos for the feedlot operation,” says John Paterson, Montana State University Extension beef specialist. “Kansas feed yard research indicates there’s a \$47 cost for every animal going into the feed yard because of PI exposure.” **HW**

Source: Montana State University