

Beef Up Your Biosecurity



PHOTO BY ALLISON DUBS

Tighten your boundaries to prevent problems.

by **Boyd Kidwell**

Visitors to Back Creek of Mount Ulla, N.C., may never realize that Angus breeders Joe and Robin Hampton are taking biosecurity precautions as they show people their cattle.

“When we go look at our cattle, I always suggest that visitors ride in my truck, and I get out of the truck to open all the gates. Nothing we do is earth-shattering, but these steps reduce the chances that a visitor could bring something to our farm,” Joe says.

Restricting outside vehicles and foot traffic from their pastures helps the Hamptons prevent someone from accidentally carrying a disease organism onto their farm. For most Angus producers, a few simple precautions provide a degree of biosecurity without causing hardships. However, with all the dangers lurking in today’s world, this is a good time to tighten your biosecurity a few notches.

When we think about biosecurity, terrorists and exotic diseases usually come to

mind. In fact, well-known animal diseases pose a higher level of risk for most cattle producers. Testing to learn the disease status of your own herd and preventing the introduction of diseases through incoming animals are important keys to biosecurity. Even if they appear healthy, incoming cattle can transmit devastating diseases such as Johne’s disease and bovine viral diarrhea (BVD).

“A lot of biosecurity practices are best management practices (BMPs),” says Mississippi State University veterinarian Carla Huston. One of the practices Huston recommends is isolating incoming cattle for 30 days to 60 days, if possible. Many serious diseases can be prevented with strict biosecurity.

Johne’s disease

A fatal wasting disease, Johne’s is caused by the bacteria *Mycobacterium avium*, subspecies *paratuberculosis*. Johne’s disease is

often spread by consumption of feces from an infected animal, and calves are most vulnerable during their first year of life. Signs of Johne’s include weight loss and diarrhea, though it may take years for an animal to show symptoms. Animals rarely show signs of Johne’s disease until at least two years after the initial infection.

The best way to control Johne’s disease in calves is to prevent manure ingestion by keeping cows’ udders clean and free of manure. Rotating calving areas helps prevent mud and manure buildup that contaminates udders.

Johne’s disease can also be passed to calves in colostrum from infected cows. The incidence of Johne’s disease in dairies is high — an estimated 22% of dairy herds are infected. For this reason, beef producers should use colostrum (1) from their own cows by milking out a cow that loses her calf and freezing the colostrum, or (2) from cows of known negative Johne’s status. Colostrum substitutes can also be used.

Earl and Dan McKarns of Kensington, Ohio, have focused their biosecurity efforts on disease prevention in their 200-cow Angus herd at Shamrock Vale Farms. One of their big advantages in biosecurity is that they keep a closed herd. They raise all of their females, and all of their cows are artificially inseminated (AIed), so there are no incoming animals.

Still, the McKarnses have tested for Johne’s disease for 11 years, and their cows have tested negative. They practice rotational grazing and move new calves from the calving area to a clean pasture the day they are born. They also follow their veterinarian’s recommendations on vaccinations.

“We use the veterinarian to prevent health problems more than for emergencies. Since the veterinarian treats a lot of herds, he knows the disease problems in this area,” Earl says.

The McKarnses say that showing customers their herd has tested clean for Johne’s disease has helped improve their marketing of purebred animals.

Bovine viral diarrhea

BVD usually enters an animal through an oral or nasal route. Unborn calves (infected when cows are exposed to BVD during pregnancy) can become persistently infected (PI) and shed the virus throughout their life without showing symptoms of BVD. Once in your herd, PI animals spread BVD to other animals through saliva, nasal discharge and feces. Because BVD is very destructive to animal performance, some cow-calf producers and feedlots are beginning BVD testing programs.

Testing cattle for diseases is becoming more important as a sales tool, says Jack

Evans of EE Ranches' Mississippi Division in Winona, Miss.

"We've been testing for John's disease for several years, and we've recently started testing for BVD. If the cattle industry knew how much BVD cost the feedyards, I think testing for BVD would become even more important," Evans says.

Foot-and-mouth disease

Foot-and-mouth disease (FMD) hasn't been present in the U.S. since 1929, but producers should always be on the lookout for this highly contagious disease. Brazil is battling an ongoing FMD outbreak, and China recently announced an outbreak in its cattle herd.

FMD could be brought into the U.S. on clothing or shoes that have been exposed to infected animals, or in meat products from infected animals. FMD is one reason producers are encouraged to practice biosecurity when hosting visitors from other countries.

Avian influenza

Unfortunately, there are some diseases that even strict biosecurity measures can't seem to prevent. Highly pathogenic avian influenza (HPAI; often called "bird flu") is primarily a bird disease that isn't usually thought of as a threat to the cattle business. However, there's great concern that the H5N1 strain of avian influenza could mutate and cause a human pandemic. As an emerging human-health issue, producers and the beef industry should watch the development of HPAI news carefully. An outbreak of HPAI in the U.S. could have a negative effect on the supply of feed commodities, livestock transportation, availability of workers and related agricultural industries.

Hopefully, the H5N1 strain of HPAI will never show up in the U.S., but H5N1 has

spread quickly from Asia to Europe. The ramifications are serious in ways that might surprise you.

In the long run, avian influenza could have a positive effect on cattle prices. As consumers pull back from purchasing poultry, they'll probably buy more beef.

However, the loss of poultry sales in countries where avian influenza has spooked consumers is causing a reduction in chicken exports from the U.S. As major poultry companies lower U.S. prices to sell excess chicken, downward pressure is being applied to pork and beef prices.

The combination of a rising supply of beef with falling poultry prices and disappointing exports are behind lower-than-expected cattle prices during the first quarter of 2006, says University of Missouri livestock economist Ron Plain.

Plain says there are two ways for producers to reduce exposure to price risks caused by HPAI. One way is to hedge prices on the futures market, and the second way is to minimize cattle inventory. This could mean selling calves at weaning rather than backgrounding them or retaining ownership through the feedlot.

Since HPAI spreads through wild migratory birds, the disease is very difficult to control. Health officials expect H5N1 to reach the U.S. with migratory birds later this year. In anticipation of widespread avian influenza outbreaks, businesses are making preparations to help key personnel work from home, and consumers are being urged to prepare for a period of restricted public contact. If significant numbers of people come down with avian influenza or even reduce activities to avoid exposure, beef prices could be affected.

If avian influenza finds its way to the U.S., biosecurity will be more important than ever.



Ten tips for biosecurity

As you consider tightening biosecurity at your farm or ranch, here are a few tips from North Carolina State Veterinarian David Marshall and the North Carolina Beef Quality Assurance (BQA) team:

- ▶ Form a working relationship with your veterinarian so that in the event of a disease outbreak, you have advice from someone you trust.
- ▶ Maintain the general health of your animals at an optimum level. Adequate nutrition helps animals resist diseases.
- ▶ Isolate incoming cattle for 30 to 60 days, if possible.
- ▶ Minimize visitors to areas of the farm where animals are located.
- ▶ Don't allow visitors to your farm who have been out of the country in the last seven days. If you host foreign guests, ask them to wear plastic booties over their shoes.
- ▶ Avoid lending your equipment to others at livestock shows. Disinfect all equipment that has been used around other livestock, and isolate animals that have been to shows.
- ▶ Load and unload livestock at the edge of your farm so livestock trucks don't drive through your pastures.
- ▶ Change clothes and disinfect your shoes after visiting a stockyard or livestock show.
- ▶ Make sure all cattle feeds meet Food and Drug Administration (FDA) regulations covering bovine animal parts in feedstuffs.