



# FIT TO STAY HEALTHY

**Follow these practices to keep cattle healthy before, during and after a show.**

by **Lowell T. Midla**

**I**n the past few months, we have become more familiar than we would like with the concept of contagious disease in humans. One of the recommendations to avoid disease transmission has been to avoid large gatherings of people. But what about your animals?

Every time cattle are brought together for a show or sale, there is a risk of disease transmission

between animals. More importantly, when you bring an animal home from an event, there is a risk of disease transmission to the rest of your herd. Below are some common maladies associated with cattle events.

### **Pneumonia/Bovine respiratory disease (BRD)**

The typical BRD scenario begins with stressors leading to viral disease which then leads to bacterial pneumonia — thus the layman’s term for BRD: shipping fever. A yearling grazing at home on pasture is unlikely to become sick with BRD. However, going to a show is full of stressors, even for well-travelled cattle.

### **Bovine viral diarrhea (BVD)**

The big deal with BVD is the persistently infected (PI) animal. Think of a PI animal as a “carrier” of the disease. It has BVD and sheds BVD for life, thus exposing other cattle to the disease. Cattle become PI as babies inside their dam between ~40 and ~140 days of gestation when the dam is exposed to BVD. Therefore, when a female is taken to a show carrying a fetus in the gestational window of susceptibility, and there is either a BVD PI animal or an acutely infected animal at the show, there is a risk the fetus will become PI. In addition, there are risks before 40 days of gestation (pregnancy loss) and after 140 days (congenital infection). Vaccination greatly reduces, but does not completely eliminate, these risks. Modified live virus BVD vaccines provide better protection against the development of PI calves than do killed vaccines<sup>1</sup>.

BVD is present in many herds — it is not limited to operations with farm equipment rusting in the

<sup>1</sup> Walz P, Chamorro M, et al. Bovine viral diarrhea virus: An updated American College of Veterinary Internal Medicine consensus statement with focus on virus biology, hosts, immunosuppression, and vaccination. *J Vet Intern Med.* 2020; 1–17.

front pasture. Indeed, because of the way PI cattle are created, BVD may be more common in animals from high-end herds that take animals to shows.

### Tips to avoid BRD and BVD:

- Immediately upon arrival, take animals to the stall or tie-outs, offer them water and hay and let them settle in the new environment.
- Do everything possible to prevent dehydration. Dehydration is an underappreciated risk factor for BRD. Immune function is severely compromised in a dehydrated animal. While you can lead an animal to water but you cannot make it drink, you can, for example, bring enough water from home for at least the first day or so.
- Do not water your animals at a trough where other animals drink.
- Be sure your animals are well vaccinated against IBR (infectious bovine rhinotracheitis), BRSV (bovine respiratory syncytial virus), BVD and PI3 (parainfluenza virus 3).
- Consider vaccinating against *Mannheimia haemolytica* and *Pasteurella multocida*.
- Be sure vitamin and mineral nutrition is and has been appropriate. For example, selenium is critical for proper immune function. Remember, however, that oversupplementation can be as detrimental as undersupplementation.
- Minimize time sharing air space with other cattle (i.e. under a roof). Take animals to tie-outs as soon as possible in the evening and bring them back as late as possible in the morning.
- When a calf is born out of a dam taken to a show during the PI formation period, consider testing the calf for BVD at birth, preferably using immunohistochemistry on an ear notch sample.



As soon as possible after arriving at a show, take animals to their stall or tie-outs, offer them water and hay and let them settle in the new environment.

- **Most importantly:** Isolate animals upon returning home. Prevent nose-to-nose contact and avoid sharing the same air with animals that did not travel — i.e. under the same roof. For most pathogens, isolation for 21 days is adequate.

### Digital dermatitis (DD) aka “Hairy Heel Wart”

DD causes lameness and typically affects the heel of cattle (see Figure 1). The disease is almost certainly caused by an infectious organism(s) but the specific bug is unknown.

Extremely contagious, DD is common on dairy farms, so avoid the dairy washrack if possible. Talk to your vet regarding treatment as well as potentially treating pre-emptively after returning from a show. Once you have DD in your home farm environment it is difficult to eliminate.

**Figure 1:** Heel of an animal affected with digital dermatitis (DD) aka “Hairy Heel Wart”



### Ringworm

While ringworm is not life threatening, it can certainly be annoying to both the animal and its owner. Ringworm is caused by a fungus — most commonly *Trichophyton verrucosum*. While ringworm is contagious, cattle are more often infected with ringworm from the environment. Grooming chutes, brushes, stalls, etc. can all harbor the fungus. Talk to your veterinarian regarding treatment of animals with ringworm. Animals with ringworm self-cure eventually, so almost all “treatments” seem to “work.” However, your veterinarian will be able to suggest a topical treatment that may speed the healing time, which is particularly relevant if you have another upcoming show. Like DD, once you have ringworm in your home farm environment, it is difficult to eliminate. Removal of all organic matter from nonporous surfaces followed by disinfection with a fungicide can help. Porous surfaces (e.g. wood) must be painted.

### Summary

The preceding is only a partial list of disease risks that arise from taking animals off the farm. Your vet would much rather help you to prevent problems than to treat them. Discuss disease risks associated with attending shows with your veterinarian and develop a plan for prevention. **HW**

**Editor’s note:** Lowell T. Midla, VMD, MS, is a cattle technical services veterinarian with Merck Animal Health. Copyright ©2020 Intervet Inc., d/b/a Merck Animal Health, a subsidiary of Merck & Co., Inc. All rights reserved.