

Zoonotic Diseases: When Your Work Can Make You Sick

David C. Van Metre, DVM, DACVIM

Most ranchers are aware, at some level, that some of the infectious diseases that affect cattle can make us ill as well. Diseases that can be shared by vertebrate animals (such as livestock) and humans are termed zoonotic diseases, or zoonoses for short. These are infectious diseases – diseases caused by bacteria, viruses, and parasites - that can be transferred from animals to humans...and for many of these diseases, from humans to animals! While many may consider these diseases to be uncommon, the truth is, well over half of all known infectious diseases of humans are zoonoses. Some of the more common zoonotic disease agents that might be transmitted from beef cattle to ranchers and their family members include *Cryptosporidium* (a parasite) and bacteria such as *Salmonella*, *Leptospira*, and *Coxiella*. While it is not practical to learn about every possible zoonosis that a rancher might encounter, it is worthwhile to understand situations where zoonotic pathogens could be lurking, and to take appropriate precautions. Situations that you should consider as higher risk for encountering potential zoonotic disease agents include the following:

- Diarrhea in adults or calves
- During calving, even if the calving is uneventful
- During abortions – many of the bacteria that can cause abortion in livestock can cause zoonoses.
- Unfamiliar signs of illness and/or unexplained death in livestock

It is common for farmers and ranchers to dismiss their risk of acquiring such infections by commenting that “Those diseases are just part of my job,” or, “I’ve been around livestock all of my life, so I’m probably immune.” While both statements may be true, the fact remains that your immunity is neither permanent nor infinite – a person’s immunity can wax and wane with your overall health status, your age, and factors such as stress and diet...just like it can in cattle. Further, the amount of these pathogens that you encounter during ranch work is not always the same; you may encounter, for example, an overwhelming amount of a particular pathogen in a certain scenario – again, livestock suffering from infectious causes of abortion can shed massive numbers of potential zoonotic agents. Therefore, dismissing these diseases as something that can’t or won’t cause you health problems is probably not in your best interest.

What makes better sense is to employ some fairly simple steps to reduce your risk of acquiring zoonotic infections. First, work with your veterinarian to maintain a solid herd health program – cattle that are well fed and well-protected from preventable diseases are less likely to develop infectious diseases of any kind. Second, should you become ill, make sure that your physician clearly understands your occupation and your daily exposure to livestock, and encourage your physician to contact your veterinarian to discuss your potential for recent exposure to zoonotic agents. Veterinarians can serve as valuable consultants to physicians in this regard. Third, wash your hands with soap and water after handling livestock, particularly before eating or drinking. And finally, consider the potential for your

shoes and clothing to be contaminated with these agents, and whenever possible, change out of your work clothes before you enter your home or someone else's, particularly after encountering the higher risk situations described above. Be particularly careful about hygiene when you (or your clothing) come into contact with children, the elderly, or anyone whose immune system may be not functioning well. These rules of thumb will help you to greatly reduce the chances of you or someone you contact developing a zoonotic disease.