

Transmittable Animal Diseases¹

Prepared by Jill Shelley and Michael Dennis²

If you work around livestock, you share several things with the animals: space, air and even diseases. Up to 120 diseases that can be shared between humans and animals have been identified. The diseases that animals carry and spread to humans are known as zoonoses. "The risk to humans may be great or small depending on the disease and the situation," says Lowell Breeden, Kansas State University Extension veterinarian.

Of the 120 identifiable zoonotic diseases, Breeden says **leptospirosis** is very common. "It localizes in the bladder or kidney of infected animals. People become infected by contact with the organism through infected material or urine. One way you can catch it is swimming in contaminated water. The organism enters through broken skin, through your eyes or mouth."

Salmonella is also a common known zoonotic diseases. This is often associated with poorly cooked poultry, raw eggs and egg products, raw milk and milk products, meat and meat products. "Personal hygiene and cooking food at 155 degrees or higher helps to reduce the risk of catching a disease from food," says Breeden.

One of the methods used to prevent the spread of bacteria from animals to humans is antibiotics. The proper use of antibiotics should help keep your livestock healthy. However, Breeden says antibiotics aren't always the answer. "Some bacteria are resistant to antibiotics and antibiotics are not effective against viruses."

Another zoonotic disease Breeden says to be aware of is **toxoplasmosis**. "In sheep this virus often causes abortions." Other carriers include cattle, swine, goats and chickens. However, cats are the main carriers and pose

a real threat for some women. A pregnant woman who has never had toxoplasmosis is at greater risk of miscarrying or having a baby afflicted with some birth defect if she becomes infected during pregnancy.

"Women are exposed to **toxoplasmosis** when cleaning a litter box or working in the garden around where a cat may deposit urine or fecal material." Breeden says the organism has to live outside a cat's body three days before it becomes infective. "If you clean the litter box once a day there should be very little health risk. If it's cleaned only once a week the risk is much higher. You should also wear rubber gloves when cleaning the litter box or working in the area where cats deposit waste."

Tuberculosis and brucellosis. Tuberculosis used to be a problem in dairy animals and brucellosis would occasionally occur through occupational exposure while butchering hogs. According to Breeden the number of tuberculosis and brucellosis cases from food and milk is low because of testing programs and pasteurization.

Tularemia. A plague-like disease of humans and animals. May be contracted in any county of Kansas. "Sixty percent of cases are transmitted by tick bite from any of several tick species. Other cases are contracted from contact with blood, saliva, or fresh animal pelts of infected animals when skinning rabbits, squirrels, muskrats, raccoons, or other wild animals or from bites or scratches by a domestic cat. Signs of disease include headache, fever, swollen and tender lymph glands, and sometimes a generalized skin rash. Onset is usually two to 14 days after exposure. Tularemia is fatal in 2 to 4 percent of human cases. Early diagnosis and treatment

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are critical. There are typically four to 10 cases per year in Kansas," says Mock.

OTHER TRANSMITTABLE DISEASES

Tetanus: People who work around any type of livestock should keep their tetanus vaccinations up to date. The spores that cause tetanus are found in soil contaminated by horse feces. These spores can live in soil for several years. For tetanus to develop in animals and humans, the organism must gain entrance through broken skin, such as a wound. According to Breeden, "In the past it was recommended you get a tetanus vaccination every year. That is now extended to ten years. But any more if you have had a vaccination within the past year and go to a doctor with a severe enough cut chances are he will recommend you get another vaccination."

Rocky Mountain Spotted Fever: Carried by ticks. Breeden says it occurs in other areas more often than in the Rocky Mountains and can occur throughout the U.S. Pets and people are the carriers of the infected ticks between different parts of the country. The best prevention is to check yourself once or twice a day for ticks if you have been in a heavily wooded or grassy area. Kansas State University Extension entomologist Don Mock notes that the onset of rocky mountain spotted fever is within 10 to 12 days of a tick bite. "Early signs are flu, headache, fever, nausea, lack of appetite, extreme fatigue, and perhaps a stiff neck. A rash may occur on palms, soles or wrist area. Fatalities most frequently are the result of tardiness in seeking medical attention. From 20 to 30 cases per year were reported in Kansas during the 1980s, but increased awareness of ticks and personal protection efforts have recently reduced the number of cases to less than 10 per year."

Lyme Disease: From 20 to 30 cases per year are reported in Kansas. "Possibly several dozen more cases are not reported," says Mock. "The majority of cases occur in the eastern one-third of the state. Exposure is exclusively through the bites of certain tick species in or within a mile or so of wooded streambeds or lake shores. These various species most commonly bite during fall and springtime. Early signs of infection usually include a rash spreading from the bite site from four to 14 days after the tick is removed. Headache, fatigue, muscular pain, swollen joints, and nervous system involvement may occur early on or may begin several months later. Early diagnosis is difficult and seldom certain, but early treatment is crucial to full recovery."

Mock recommends the following for protection from ticks:

- Avoid tall grass and brushy areas as much as possible in tick season (April-September).
- Use repellents. Apply to top area of socks and pantlegs.
- As soon as practical after activity in tick infested areas, check yourself for ticks. Have someone check your scalp and the back of your neck. Search closely
- immature ticks (larvae and nymphs) may be mistaken for freckles or scabs.