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Leptospirosis

Cooperative Extension South Dakota State University

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Leptospirosis

Cooperative Extension Service of South Dakota State University and U. S. Department of Agriculture

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Leptospirosis

Leptospirosis is a bacterial infection which may occur in many species of animals and also in man. Of our domestic animals, "lepto" is most often diagnosed in cattle, swine, and dogs. Leptospira organisms have been isolated from rats, mice, and numerous other species of wildlife.

**Cause.** There are at least 40 serotypes of Leptospira. In this country, *Leptospira pomona* is the most prevalent type causing disease in cattle and swine. Three different types may infect dogs. Humans are susceptible to several types that infect animals. These small bacteria can penetrate the mucous linings of the mouth, throat, or respiratory passages and are carried for a short period in the bloodstream. They later tend to localize in the kidneys to cause a chronic kidney infection. From this location Leptospira are shed in the urine for periods up to a year.

**Spread of the Disease.** Either direct or indirect contact with urine from any animal shedding Leptospira allows for spread of this disease. Infected rodents or infected livestock may spread the disease from farm to farm. Contamination of food or water by urine provides an easy means of spread. Ponds, streams, puddles, and wallows can easily become contaminated. Direct contact with an infected or carrier animal is not essential for spread.


**The Disease in Cattle.** During the period that the organisms are in the bloodstream, there is some fever but this often is not detected. It is during this stage, however, that acute signs of disease may develop. These could include jaundice, blood-stained urine, lowered milk production, and abnormal milk. Severe anemia sometimes results in death. Abortion is a common symptom occurring at any stage of pregnancy and 1 to several weeks after the initial infection. In many infected animals, no outward signs of disease are ever detected, yet such animals become carriers and potential spreaders of disease.

**The Disease in Swine.** Various indefinite signs have been attributed to leptospirosis in swine but the most prevalent symptom is abortion. Such abortions occur in late gestation, generally in the last 3 or 4 weeks. Some of the pigs are born dead, some are alive but weak and die in a short time. The carrier state and shedding of leptospira in urine may persist for several months after the infection. Usually no outward signs of infection are seen in nonpregnant swine or in sows infected in early gestation.

**Diagnosis.** Leptospirosis may be suspected when abortions occur or certain other outward signs appear. Blood tests are an aid in arriving at a more definite diagnosis. Your veterinarian knows how to collect, preserve, and transmit samples to a laboratory for testing. Abortions from other causes must be differentiated from those due to leptospirosis.
Prevention. Vaccination of cattle and swine is a common practice to immunize against infection with *L. pomona*. Solid protection in all animals should not be expected. Vaccination is not a treatment for animals already infected. Consult your veterinarian as to need or frequency of vaccination. Purchased animals should be negative to a blood test before they are added to the herd.

**CONSULT YOUR VETERINARIAN—**
**HE'S TRAINED TO HELP YOU PREVENT LOSSES FROM DISEASE**