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### Vibriosis

Cooperative Extension South Dakota State University

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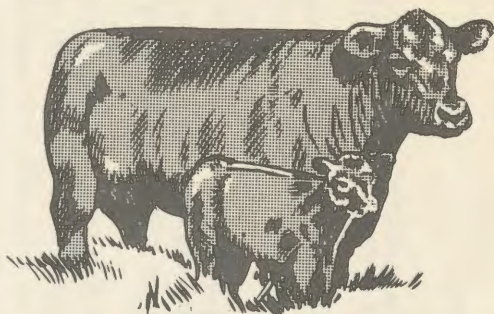
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SOUTH DAKOTA  
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FS 371

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# Vibriosis



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

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. John T. Stone, Dean of Extension, South Dakota State University, Brookings.

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# Vibriosis

Vibriosis in cattle and sheep is an infectious disease of the genital tract which causes infertility and occasional abortions. It is a venereal disease spread by breeding.

**Cause.** Vibriosis is caused by a specific comma-shaped bacterium named *Vibrio fetus*. This organism requires careful and exacting procedures for isolation from infected tissues. Heat, light, and drying destroy the organisms; however, some strains can survive for several days in soil, water, feed, or manure.



**Spread of the Disease.** Vibriosis in cattle is usually spread through breeding. Introduction of the disease into a herd can usually be traced to the addition of an infected or carrier bull or adult females from herds in which vibriosis exists. Spread by artificial insemination is possible, but commercial AI units treat semen to prevent spread in this manner.

In sheep the disease is spread by contaminated food and water or contact with aborted fetuses. It is the most common infectious disease causing abortion in sheep.

**Symptoms.** There are no signs of illness with vibriosis in cattle other than an occasional abortion. The herd history provides the best clue to vibriosis. The owner may note that some animals continue to come in heat after breeding. If he practices a limited period for herd breeding, a low calving rate can be his first real evidence of the disease. The conception rate can drop to 50% or less in a herd recently infected. There is usually a common history of the addition of a new bull or replacement cows prior to this drop in conception rate. In herds where the bull remains with the herd, calving may be spread over the entire summer.

The number of abortions usually is not large and frequently is disregarded. There is some evidence that very early abortions do occur and account for recurring heat periods in individual cows.

There are no definite outward signs of vibrio infection in bulls. However, some cattlemen complain

of bulls becoming thin because of excessive breeding caused by frequent recurring heat periods in cows in infected herds.

Infertility in females associated with vibriosis is temporary, with conception delayed for periods of 2 to 8 months.

Cattle of all ages are susceptible in a recently infected herd. Many older animals are able to eliminate infection. The disease becomes a chronic herd problem with replacement heifers and cows, carrier cows and bulls continuing the infection.

In sheep, abortion usually occurs during the last 6 weeks of pregnancy, or sometimes weak lambs may be born, but usually die shortly thereafter. Ewes usually rebreed the next season unless the uterus becomes infected.



**Diagnosis.** The herd history often provides a basis for a tentative diagnosis of vibriosis but a positive diagnosis is dependent on laboratory procedures. The isolation and identification of *V. fetus* from an aborted fetus or mucus specimens from the genital tract of infected animals provides the most dependable diagnosis. These procedures require careful collection of samples and exacting laboratory technique. Your veterinarian is familiar with appropriate methods for collection, preservation, and shipments of these specimens. Blood tests and cervical mucus tests have been used but are not dependable. Blood tests should be made to eliminate possibilities of brucellosis and leptospirosis.

Diagnosis of vibriosis in sheep depends on identification of the causative organism in stomachs of aborted lambs. This requires detailed laboratory techniques. Consult your veterinarian for assistance since this disease may be confused with other diseases.

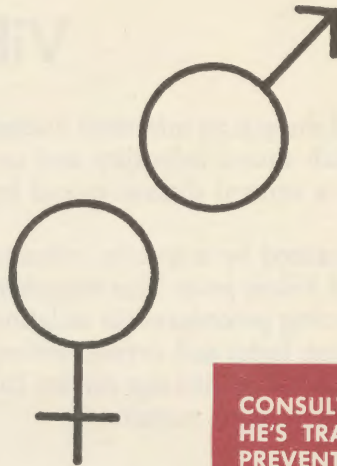


**Control.** Treatment of individual animals does not have practical application in an infected herd.

In dairy or small farm herds artificial insemination with treated semen is a recommended practice as it eliminates the natural spread by bulls.

In ranch herds, replacement of infected bulls by vibriosis-free bulls has no practical value. New bulls soon become infected when placed in service with the herd. A new herd started with virgin heifers and virgin bulls kept separate from the old infected herd may be successful but is not always practical. Your veterinarian should be consulted regarding possible vaccination against vibriosis, since under certain circumstances, this may help alleviate the problem.

Control of vibriosis in sheep may be accomplished by vaccination if properly done. Aborting ewes should be removed from the flock, isolated and the remaining ewes moved to clean pastures.



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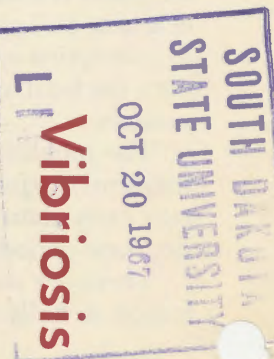
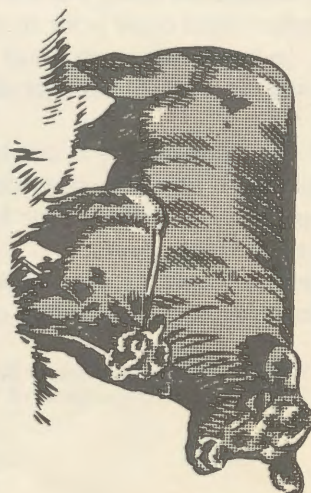
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