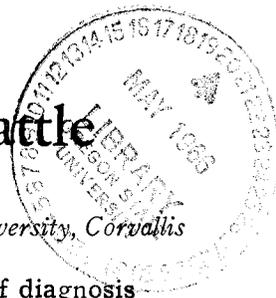


Vibriosis in Range Cattle

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Vibriosis in cattle is an infectious disease of the genital tract, causing infertility and an occasional abortion. It is a venereal disease spread by breeding, and is considered the most important cause of infertility in cattle today. Through the use of artificial insemination in dairy herds and small farm herds of beef cattle, this disease has been controlled and, in many instances, eradicated. It poses more of a problem in large range operations, especially where ranchers hold communal summer grazing permits.

Distribution

A recent survey of 83 beef herds in Colorado revealed active vibriosis in 45 of the herds. It was present in every geographic location studied. The incidence of this disease in Oregon is unknown, as no concerted effort for a statewide evaluation has been made. Reports from practicing veterinarians in various parts of the state and from the OSU Diagnostic Laboratory show that vibriosis is present and active in many range areas of Oregon.

Diagnosis

An accurate herd history is instrumental in making a tentative diagnosis of vibriosis. One common indication is a low pregnancy rate, determined either by pregnancy examination in the fall or by a poor calf crop in the spring. In older, established herds, the low pregnancy rate is observed only in first calf heifers. If young noninfected bulls are used on heifers, the low calf crop might well be associated with the second calving. Vibriosis is also indicated when many cows show estrus after three months of breeding. A third symptom is prolonged calving throughout the summer months. This occurs because many infected cows will develop immunity and abort off the infection in from 60 to 90 days. They will then conceive and carry to parturition.

Recent research has shown that although these infected cows may conceive and carry to normal parturition, some may remain "carriers" of the *Vibrio fetus* organism and have the capacity to infect clean bulls at future breeding.

The introduction of breeding stock from "dispersal sales" or "stock reduction sales," can be a source of vibriosis. Should older animals be added to your herd, the practicing veterinarian in your area can run tests to help assure they are free of vibriosis. It is best, from the disease standpoint, to buy virgin bulls and heifers as replacements.

Confirmation of diagnosis

A laboratory test is necessary to confirm a tentative field diagnosis. The only reliable laboratory test is culture and identification of the infectious agent—*Vibrio fetus*. Sterile equipment and a very careful technique must be used to obtain mucus specimens from the cervix. Careful handling of specimens is required so the infectious agent will not die in transit from the ranch to the laboratory.

Vibrio fetus bacteria often can be cultured from an aborted fetus. Here again, laboratory specimens must be handled carefully. The cervical mucus-culture test of infected cows will be about 100% positive two months after breeding. Seven months after breeding, this percentage decreases to about 20%. It has been found that if cows abort at 7 months gestation, the cervical mucus may be negative in laboratory culture, but the bacteria is plentiful in the aborted fetus.

It is possible to test bulls for vibriosis. This is done by breeding a minimum of three virgin heifers to the bull in question. Cervical mucus from the heifers is obtained and tested at six weeks following breeding.

Control

Since conditions are extremely variable from one ranch to another, the exact program for control should be worked out between the rancher and his practicing veterinarian. There is a vaccine on the market which, when used on heifers and other young cows, will give enough protection for them to conceive and deliver a normal calf, even if they are bred to a bull that is spreading vibrio. The vaccine is a bacterin consisting of a suspension of chemically killed *Vibrio fetus* organisms. The recommended dosage is 2 cc, administered to females 30 to 60 days before breeding. The duration of immunity obtained is unknown. The present recommendation is to repeat vaccination prior to the next breeding season.

Discussion

As in many disease outbreaks, an accurate diagnosis cannot be overstressed. A survey of range cattle is needed to determine the distribution and extent of this disease in Oregon. This insidious venereal disease of cattle may be present on many ranches without the owner being aware of it. Through education, accurate diagnosis, and application of effective control measures, this problem can be controlled. The result can be a substantial decrease in losses due to bovine infertility.



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