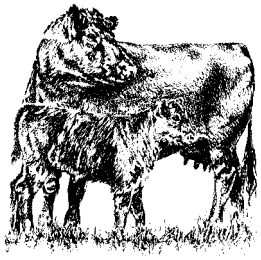

Western Beef Resource Committee *Fourth Edition*

Cattle Producer's Handbook

Animal Health Section 683

Vibriosis (*Campylobacteriosis*)

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Vibriosis, or vibrio, is a venereal disease of cattle caused by the bacterium, *Campylobacter foetus* subspecies *venerealis*. The organism is widespread and continues to affect cattle herds throughout the United States. Vibrio, or campy as it is now called by some, may be difficult to detect in an adult cow herd. This is particularly true in herds with extended breeding seasons. Elimination of this organism from a herd by vaccination alone is not common. So, the threat of reinfection of breeding stock remains in a herd indefinitely.

Transmission and Signs of Disease

Bulls serve as vecters of this disease. They transmit the organism from female to female during coitus. There are no signs of infection in the bull, but the organism lives in the tissue surfaces, or crypts, of the penis and prepuce. Most infected bulls remain carriers for life. At breeding, the bacteria are passed by the bull into the vagina of the susceptible female. Infection then develops in her reproductive organs where it may persist for 2 months or more. The initial infection may not interfere with conception but rather cause an early death of the embryo.

Typically, infected cows or heifers return to estrus 40 to 60 days after breeding. Infertility may persist for 2 to 6 months after which an immune response reduces the infection in most females and pregnancy can be established. However, some infected females may not conceive at all while others may conceive and then abort later. Still other cows remain infected and are able to deliver a normal calf. These silent carriers may infect susceptible bulls at coitus the following breeding season.

The organism may be transmitted by artificial insemination (A.I.) of semen collected from infected bulls. Usually, A.I. centers and private collectors treat the semen with antibiotics before freezing or inseminating to eliminate *Campylobacter*.

Diagnosis

Several factors other than a *Campylobacter* infection may reduce reproductive efficiency in a herd, so an accurate diagnosis must be made. Diagnosis of campy in a herd is based on breeding history and laboratory methods combined. Early signs in an infected herd are an increasing number of recycling females. An unusually large number of open cows and/or a calving interval that is newly spread over several months are later signs.

Diagnosis may require a direct culture of preputial smegma of bulls, mucus secretions collected from infected females, and/or tissues collected from aborted feti. There are other techniques that can be used to achieve a diagnosis. Your veterinarian is the person most qualified to collect samples and make the diagnosis.

Because some procedures are delicate and exacting, confirmation of a campy infection in a herd may take more than one sampling session. This is especially true if you are attempting to diagnose the disease in a small herd or sampling only a limited number of animals. The diagnostic procedures are more efficient in a herd than with a single animal.

Be sure to look for and eliminate trichomoniasis as a possible cause of reproductive inefficiency in problem herds. This disease presents the same signs as campy. It may be existing at the same time as a second infection in the herd.

To help eliminate other factors that may be contributing to reproductive failure, the body condition of cows and heifers as well as their nutritional levels at critical times of the reproductive cycle should be analyzed. Bulls should be given a complete breeding soundness exam. That is, a physical and semen exam should be performed on each bull.