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Clostridium perfringens C & D Vaccination in Young Beef Calves: How Protective Is It?

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Abstract

Enterotoxemia in young beef calves is a common clinical diagnosis of acute deaths and/or neonatal scours. Since it is difficult to obtain a definitive diagnosis due to the nature of the agent, clinical recommendations are often made to utilize available vaccines, antiserum, or both to prevent further losses. Due to scarce data available, this field study was undertaken to determine antibody response levels to various injection protocols.

Approximately 240 beef calves born unassisted to first-calf heifers (synchronized at breeding and due to calve within 3 days of each other) were divided into four groups. After each calf nursed colostrum naturally, it

received either an appropriate dosage of 7-way Clostridial toxoid subcutaneously using the "tenting" technique in the cervical region; 10 cc of Clostridial antitoxin in the same manner; both injections; or 10 cc of saline as a control. All dams were boosted with *Clostridium perfringens* Types C & D toxoid 2-4 weeks prior to the due date. All calves were boosted at branding (80-90 days-of-age) with 7-way Clostridial toxoid.

Blood samples were taken (pre-injection) within 48 hours of birth; at branding; and at weaning (6-7 months). Assays using ELISA techniques were performed to determine the antibody response levels for each treatment group.