Evaluation of Morbidity and Mortality in Young Dairy Heifers After Vaccination with a *Pasteurella haemolytica* A1 Leukotoxoid.

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Respiratory disease is the most common problem in weaned dairy young stock and *Pasteurella haemolytica* biotype A, serotype 1 is the organism most frequently isolated from the lungs of calves affected with severe, fibrinopurulent bronchopneumonia. The ability of a *P. haemolytica* A1 leukotoxoid to protect colostrum fed, weaned dairy calves against respiratory disease was evaluated on 4 commercial dairy farms. Holstein heifer calves (n=736) were left as unvaccinated controls (group 1), or were vaccinated at 4 and 7 weeks of age (group 2), or at 7 and 10 weeks of age (group 3) with 2 ml. of Presponse (Langford Laboratories, Inc.) by intramuscular injection. Calves were monitored daily for signs of illness by dairy personnel. Clinical signs of respiratory disease included depression and inappetence, increased respiratory rate or cough, and elevated temperature (>40.0 C). Preliminary analysis, including calves from all farms combined, indicated that the incidence of respiratory disease in calves following vaccination did not differ significantly between treatment groups (22.0, 30.0, and 18.4% for groups 1, 2, and 3, respectively). Similarly, no significant difference was found in the number of calves repulled for retreatment 10 or more days after the initial disease incident (6.3, 8.9, and 4.5% for groups 1, 2, and 3, respectively), and mortality rates due to respiratory disease (3.1, 2.5, and 2.0% for groups 1, 2, and 3, respectively) did not differ significantly between the treatment groups. These results do not support the routine use of the vaccine in all dairy operations; however, it may be possible to realize a benefit from incorporating the vaccine in some replacement management schemes.

Comparison of Various Antibiotic Treatments in Cows Diagnosed with Toxic Puerperal Metritis

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A field trial was conducted using Holstein cows to investigate the efficacy of various antibiotics in treating toxic puerperal metritis. Cows were randomly assigned to one of three treatment groups. Group one received 18 million units of procaine penicillin intramuscularly for five days (group one = penicillin). Group two in addition to receiving 18 million units of procaine penicillin intramuscularly for five days, also received an intrauterine infusion of 6 grams of oxytetracycline diluted with 75 ml of sterile water on days one, three, and five (group two = penicillin + oxytetracycline. Group three received one gram of ceftiofur intramuscularly for five days (group three = ceftiofur). Dependent variables measured included daily rectal temperature for the five treatment days, and percent milk weight change compared to previous day for 12 days. Serum ionized calcium and interleukin-6, an indicator of acute inflammation and tissue injury, were measured from serum collected on days one, three, and five. Milk samples collected on day one and day six through twelve were used to measure antibiotic residues for each group. Day and treatment group affected the variables, however,