Neospora caninum control strategy based on testing herds for antibody

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A survey of 93 dairy and five beef herds from five regions of the United States revealed that at least one cow in 90% of the herds was seropositive for antibody to Neospora caninum (1). The prevalence of seropositive cattle in these herds was 2 to 65%. With Neospora caninum, seropositive cattle are infected because the organism is persistent and not cleared. There are several problems that result from having seropositive cows in a herd. The major problem is production losses from decreased milk production and abortion. Independent studies in the United States demonstrated that seropositive cows had decreased milk production of 2.5 lbs/day/cow in one study (2) and 2.8 lbs/day/cow in another study (3) when compared with seronegative cows. In the later study, decreased milk production caused a $128 loss per lactation period/seropositive cow. Another major problem with having seropositive cows in a herd is that vertical transmission occurs. The frequency of vertical transmission varies considerably, but can reach 100% (4). A recent evaluation of economic considerations for diagnostic and control options for Neospora caninum-induced abortion in beef cattle used a 5-year economic simulation model (5). A seroprevalence of 10% in cow-calf herds decreased mean return to fixed assets by 22.2%. The control strategy with the best economic return involved testing the entire herd for antibodies to Neospora caninum and excluding heifers from seropositive cows as replacements (5).

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