Cattle Health Surveillance System (CHeSS): Monitoring major infectious diseases and antimicrobial resistance in the Western provinces

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Significant investments have been made to understand endemic infectious disease control in Canadian dairy. However, most projects have focused on the control of one specific disease over a limited time period. These projects have demonstrated that the prevalence of important diseases varies widely among herds. To introduce a comprehensive approach, project objectives are: 1) determine the prevalence of *Staphylococcus aureus*, *Streptococcus agalactiae*, *Mycoplasma bovis*, leukosis, leptospirosis, neosporosis, Johne's disease and *Salmonella* dublin on Western Canadian (BC, AB, SK, MB) dairy farms; 2) develop control measures for each infectious disease on a subset of infected farms, increasing the understanding of farm-specific risk factors for infectious diseases; 3) determine how to improve producer motivation for disease control and understand drivers and barriers towards adopting biosecurity measures; 4) economically evaluate each disease control program; and 5) determine antimicrobial resistance (AMR) prevalence in AB and BC dairy and its relationship to antimicrobial use. By focusing on the surveillance and control of multiple important infectious diseases and AMR, this study will provide practical and performance-based standard operating protocols that could be adapted to the industry as a whole. CHeSS will have major emphasis on knowledge transfer to the dairy industry by utilizing written reports, annual producer meetings and demonstration farms to facilitate peer-to-peer learning opportunities. Take home messages: CHeSS will result in understanding the prevalence and relevant risk factors for infectious diseases on Western Canadian dairy farms, and identify best practices related to AMR. This will improve dairy farm profitability and animal welfare, improved animal and public health, and higher consumer confidence in Canadian milk and dairy products.