Impact of coagulase-negative staphylococci on 305-days milk production in dairy cattle
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Coagulase-negative staphylococci (CNS) are a large group of organisms that are considered as minor udder pathogens. As in most other developed dairy countries, they are the most frequently isolated bacteria from udder quarters of Canadian dairy cows. In a Belgian study, heifers infected with CNS in early lactation had a higher milk yield during their first 285 days in milk compared to their non-infected herd mates or heifers infected with a major pathogen. However, no data are available on adult cows. There is a lack of information about the impact of CNS intramammary infections (IMI) on udder health and production in Canadian dairy herds, and consequently, the present study was conducted on 89 dairy farms of the Canadian Bovine Mastitis Research Network (CBMRN) in four regions of Canada. In total, 137,316 milk samples were collected and recorded in the CBMRN database over a period of two years (January 2007-December 2008). Bacterial culturing and identification was done as per NMC guidelines. Cows were classified as culture-negative (CNEG) (all 4 quarters), major pathogen (MP) positive (at least 1 quarter), CNS-positive (at least 1 quarter, no major pathogen), or other minor pathogen (OMP) positive (at least 1 quarter, no major pathogen). 305-days milk yield data were extracted from the DHI milk production database. Generalized linear regression model will be built to determine the impact of CNS IMI on 305-days milk production. Mean 305-days milk yield (kg) of cows in different parities was as under: Parity 1: CNEG (10,311) > CNS (10,082) > MP (9,785) > OMP (9,648) Parity 2: CNEG (10,629) > CNS (10,566) > OMP (10,363) > MP (10,136) Parity 3: CNEG (10,963) > CNS (10,817) > OMP (10,733) > MP (10,688) Preliminary results indicate that cows with CNS IMI had higher 305-days milk production than cows infected with major pathogens or other minor pathogens. The results suggest a protective role of CNS in udder health.