Development of a Bovine Leukemia Virus Control Program for Alberta

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Bovine Leukemia Virus (BLV) is present in approximately 90% of Alberta dairy herds. It is the causative agent of Enzootic Bovine Leukosis (EBL). EBL is the development of tumors in about 5% of infected animals. Besides causing tumors, the virus also disrupts the immune system of infected cattle, resulting in a less effective response to infectious agents and vaccines. Additional effects of BLV-infection include the restricted export to BLV-free countries, decreased cow longevity, as well as decreased milk production, and the disposal of diseased carcasses. To underline the necessity of BLV control, an economic assessment of the current losses due to BLV infection, as well as the benefits and costs of its control is being conducted. Preliminary results suggest that implementing control measures and thereby decreasing the number of infected animals on farm, is beneficial.

In order to reduce BLV-related losses to the dairy industry as well as to raise awareness, a Bovine Leukemia Virus Control Program is developed. A risk assessment combined with testing strategies on farm will identify practices that involve high BLV transmission risk. We already finalized the evaluation of commercially available testing platforms to identify BLV infected animals. We established that these assays are very reliable and accurate. The on-farm action plan we propose can be tailored to individual producers' needs and specific on-farm situations. The strategies in this plan aim to replace infected with uninfected animals, while preventing new infections with BLV. To ensure the strategies are practical, easy to implement, and adhered to, group discussions with about 40 producers during March and April 2017 will seek feedback on the feasibility and practicality of the proposed measures that are needed on farm level. To ensure feasibility, we will test the suggested control program during a trial on about 10 farms which will start in October 2017. The mentioned discussions, additional interviews, as well as follow-up meetings that are scheduled in 2017-18 are also meant to identify incentives and barriers producers experience, when implementing the BLV control program. A better understanding of the considerations of why or why not an on-farm BLV control program will be started and maintained for a long time is essential to be successful. We aim for a high, sustained participation rate of Alberta dairy producers and elimination of BLV from their farms.