**Effects of cold pasteurizing colostrum with formic acid on bacteria count and calf IgG absorption**

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**Colostrum is vital to the health of the newborn calf; however, farm practices often lead to bacterial contamination. Cold pasteurization has been used successfully to lower bacteria counts; however, the effects of such treatments on IgG absorption in the calf remain uncertain.**

**Aims:**
1. To determine if ‘cold’ pasteurization of colostrum with formic acid (FA) in combination with refrigeration would prevent bacteria growth.
2. To determine the effects of feeding FA treated colostrum on IgG absorption by new born calves.

**Methodology:**

**Trial 1:** Fresh colostrum from 8 cows was subjected to 1 of 4 treatments: 1) addition of FA to achieve a pH of 4.3 and refrigerated (4°C), 2) addition of FA and left at ambient temperature (20°C), 3) refrigerated, or 4) ambient temperature. Subsamples of each treatment were taken at 0, 24, 48, 96 and 192 h

**Trial 2:** 24 Holstein bull calves were fed 3L of colostrum from 1 of 3 treatments through an esophageal feeder 2h after birth: A) harvested and frozen immediately B) Left at ambient temperature for 4h then frozen or C) left at ambient temperature for 4h then treated with FA to a pH of 4.3 and frozen 24h later

**Formic acid was successful at maintaining low total plate counts in colostrum for up to 8 days. Further, the addition of formic acid to colostrum does not interfere with IgG levels or absorption in calves.**

L.A.V was supported by NSERC URA