

## **The effects of *Tritrichomonas foetus* and nutritional status on the fertility of cows on a community pasture in Saskatchewan.**

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#### **Abstract**

A prospective observational study of a breeding season in a Saskatchewan community pasture was carried out to determine the cause or causes of a chronic infertility problem. There were 774 cows, from 27 herds, divided into 4 breeding groups (A,B,C,D) on the pasture. Cows entering the pasture in May were weighed, had their body condition scored and height measured. All bulls received breeding soundness examinations and a preputial wash, which was cultured for *Tritrichomonas foetus* and *Campylobacter foetus* subsp. *venerealis*. In July, cows were also weighed and had their body condition scored and again when they left the pasture. In addition, cows were pregnancy checked when they left the pasture. Bulls were tested again for *Tritrichomonas foetus* at the end of the grazing season. Two breeding groups had *T. foetus*-positive bulls and an average pregnancy of 84%, which was significantly lower than that of the two *T. foetus* negative groups (93.5%) ( $P = 0.0001$ ). A cow was 2.97 times less likely to be pregnant if she had been exposed to *T. foetus*-positive bulls. Cows with average daily gains above the mean for the pasture were 2.12 times more likely to be pregnant. Body condition score upon entering and leaving the pasture, height, age, and breeding group were significant predictors of average daily gain.