Evaluation of yeast, mineral, and antioxidant bolus administration at calving on transition performance in Holstein dairy cows at a Czech Republic dairy farm

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Introduction

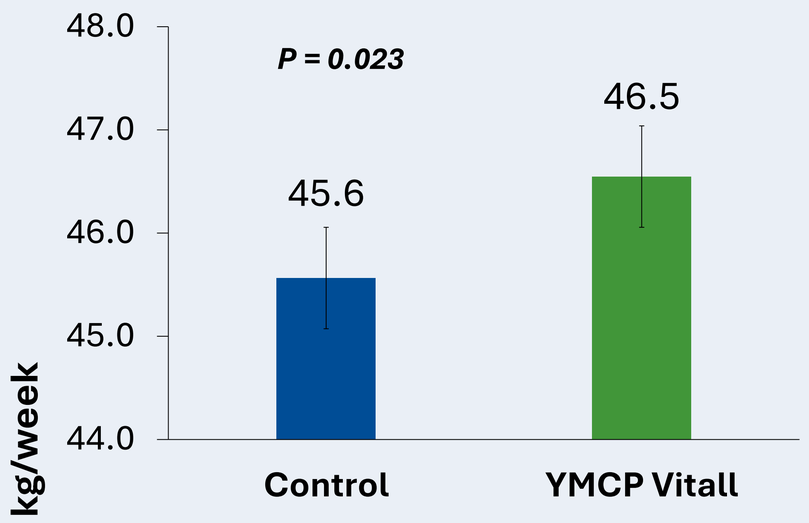
High-yielding dairy cows experience substantial metabolic and nutritional challenges during the transition into early lactation, a period associated with increased risk of subclinical hypocalcemia and impaired immune function. These conditions can predispose cows to disorders such as mastitis. While calcium supplementation at calving is a common preventive strategy, additional functional additives such as live yeast and electrolytes may further support milk yield and health during this critical phase.

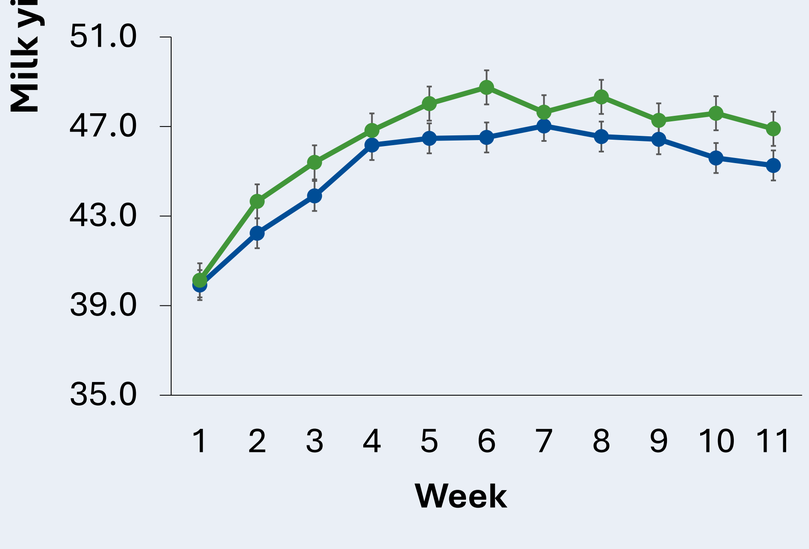
Objectives

To evaluate whether a bolus containing live yeast, minerals and antioxidants administered at calving influences milk yield and the incidence of clinical mastitis compared to a calcium-only bolus under commercial conditions.

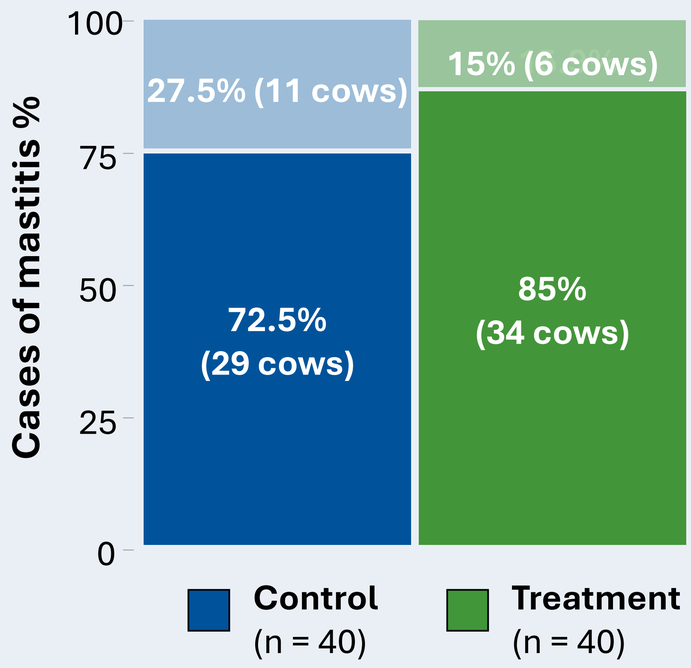
Results

Milk yield





Mastitis incidence



The overall incidence of clinical mastitis was 21.3%, with 11 cases in the control group and 6 cases in the treatment group (OR = 0.46; 95% CI: 0.15–1.41; P = 0.169).

Conclusions

The administration of a bolus containing calcium, live yeast and electrolytes at calving was associated with increased milk yield, while the incidence of clinical mastitis was numerically lower in treated cows.
Overall, this supplementation may support milk production during the transition period.

Materials and Methods

Experimental animals

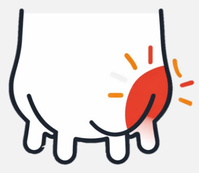
80 Holstein dairy cows enrolled at calving and randomly assigned to 2 treatments*:

- **Control;** calcium-only bolus (n = 40)
- **Treatment;** bolus with live yeast, minerals and antioxidants (n = 40)

**Groups were balanced for parity and previous milk yield.*

Measurements
11 weeks postpartum

Average weekly milk yield



Mastitis incidence

Statistical analysis
One-way ANOVA JMP 19

Differences in milk yield data were assessed using the Wilcoxon rank-sum test. Mastitis incidence was analyzed by nominal logistic regression. Differences were considered significant at $P \leq 0.05$.

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