



ZPM in Transition Period Improved Postpartum Cow Performance and Metabolic Responses

Study Objective

Evaluate the effects of supplementing Zn, Mn, Cu, and Co from Zinpro Performance Minerals® (ZPM) during the peripartur period (-30 through 30 DIM) on cow health and performance.

Study Duration

Pre-calving period (d -110 to -31): All cows were offered a common diet supplemented entirely with sulfate sources of trace minerals

Transition period (d -30 to 30 DIM): cows were fed a common diet with 35, 45, and 6 mg Zn, Mn, and Cu/kg DM from sulfate sources and one of two daily oral mineral bolus treatments

Animals

44 multiparous Holstein cows

Treatments

Control: daily bolus of 40, 20, 5, and 1 mg of Zn, Mn, Cu, and Co/kg DM from sulfate sources

ZPM: daily bolus of 40, 20, and 5 mg Zn, Mn, and Cu/kg DM from Availa® Zn, Availa® Mn, and Availa® Cu and 1 mg Co/kg DM from COPRO®

Location

University of Illinois, IL, USA



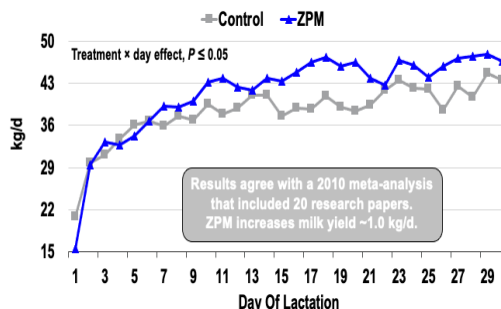
Results Summary

Feeding ZPM to dairy cows from 30 d pre-partum through 30 d post-partum:

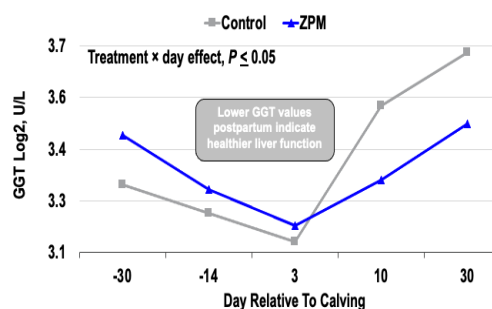
- ✓ Increased DMI and milk components
- ✓ Improved metabolic status and immune function

Feeding ZPM to peripartur dairy cows improves transition cow health and production efficiency.

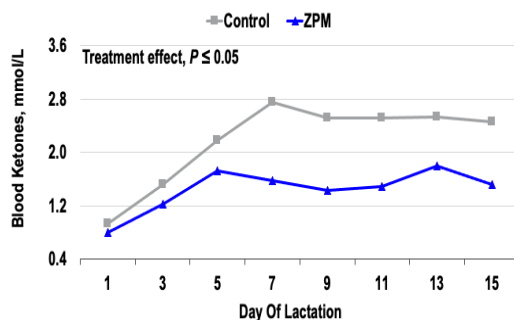
ZPM Increased Milk Yield



ZPM Improved Liver Function^a



ZPM Lowered Blood Ketones



ZPM Economics^b

Item	Inorganic	ZPM
ECM, kg	44.2	46.1
ECM:DMI	2.57	2.84
Milk @ \$16/45 kg	\$15.62	\$16.25
TMR @ \$0.26/kg	\$4.55	\$4.30
Cost/45 kg Milk	\$4.67	\$4.29

^a Gamma-glutamyl transferase (GGT); indicator of liver function

^b Milk prices and TMR costs will vary and are included as estimates for this economic example

Osorio, J. S., E. Trevisi, C. Li, J. K. Drackley, M. T. Socha, and J. J. Loo. 2016. Supplementing Zn, Mn, and Cu from amino acid complexes and Co from cobalt glucoheptonate during the peripartur period benefits postpartur cow performance and blood neutrophil function. J. Dairy Sci. 99:1868-1883.

