



# Increasing the Ratio of Zn From Availa® Zn Improves Performance of Holstein Cows

ZINPRO®



## Study Objective

Evaluate feeding increasing Zn levels from Availa® Zn, replacing zinc sulfate, during both the dry and lactating periods, on Holstein cow performance.



## Animals

136 Holstein cows;  
66 primiparous and 70 multiparous

## Treatments

**Control:** 75 mg Zn/kg DM from ZnSO<sub>4</sub> in the pre- and post-partum periods

**16 Availa Zn:** Availa Zn replaced 33.3 and 15.5 mg Zn/kg diet DM ZnSO<sub>4</sub> in the pre- and post-partum periods

**40 Availa Zn:** Availa Zn replaced 66.6 and 40 mg Zn/kg diet DM ZnSO<sub>4</sub> in the pre- and post-partum periods



## Study Duration

28 d pre-partum through 250 DIM



## Location

Iowa State University,  
Ames, IA, USA



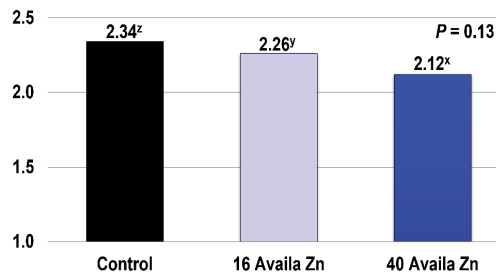
## Results Summary

Feeding 40 ppm Zn from Availa-Zn to dairy cattle during the dry and lactating periods:

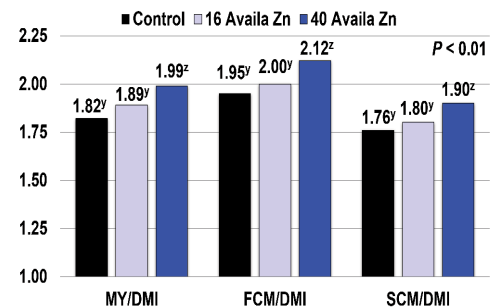
- ✓ Improved feed efficiency (FE)
- ✓ Decreased somatic cell count (SCC)
- ✓ Increased colostrum IgG content at calving

Dairy cow health and performance are improved by increasing the Zn level fed from Availa® Zn from 16 (360 mg/d) to 40 ppm.

### Availa Zn Lowered SCC, linear Score



### Availa Zn Improved FE<sup>a</sup>



### Positive ROI From Feeding 40 ppm Zn from Availa Zn to Dry and Lactating Cows

| Item   | Control | 40 Availa Zn | 40 Availa Zn Advantage |
|--|---------|--------------|------------------------|
| DM Intake <sup>b</sup> , kg/d                    | 21.8    | 20.9         | -0.9                   |
| DM cost, \$/lactation <sup>c</sup>               | 2031    | 1947         | -84                    |
| ECM <sup>d</sup> , kg/d                          | 36.6    | 37.8         | +1.2                   |
| ECM income, \$/lactation                         | 4419    | 4564         | +145                   |
| Availa-Zn cost, \$/calving interval <sup>c</sup> | -       | 12.00        | -                      |
| ROI  | -       | -            | 19:1                   |

<sup>a</sup> MY/DMI = milk yield/DM intake; FCM/DMI = 3.5 % fat-corrected milk/DM intake; SCM/DMI = solids-corrected milk/DM intake

<sup>b</sup> Dry matter cost = \$0.27/kg DM

<sup>c</sup> Assuming 405 d calving interval = 345 d lactation + 60 d dry period; DM intake did not differ during dry period

<sup>d</sup> Energy corrected milk price \$/kg = 0.35

Nayeri, A., N. C. Upah, E. Sucu, M. V. Sanz-Fernandez, J. M. DeFrain, P. J. Gorden, and L. H. Baumgard. 2014. Effect of the ratio of zinc amino acid complex to zinc sulfate on the performance of Holstein cows. J. Dairy Sci. 97:4392-4404.

