



Feed the Best
For a Lifetime

Birth, Growth,
Production,
Reproduction





Lifetime Performance®

To truly thrive, dairy cattle must receive optimum trace mineral nutrition throughout their productive life stages.

IMMUNITY

Milk production, reproduction and health are influenced by a strong immune system. Proper nutrition can result in greater health and productivity. Zinpro has been shown to increase colostrum, which aids in the immune system.

REPRODUCTION

Trace mineral status before and after calving directly affects reproduction.

5.5%

Pregnancy Rate

13

Fewer Days Open

Beginning trace mineral supplementation in the dry and prepartum periods and continuing through lactation is critical for improving health. Research results by Rabiee, Lean, Stevenson and Socha show that feeding Zinpro Performance Minerals® to dry and lactating cows can help aid in an earlier return to ovarian function, which can lead to improved pregnancy rates and fewer days to conception².

Throughout the animal's lifetime, trace mineral nutrition has a positive impact on reproduction.

Reproduction



MILK PRODUCTION

Healthy cows produce more milk per lactation. Studies by Rabiee, Lean, Stevenson, Socha and Gomez showed improved milk production along with higher yields of fat and protein. This research demonstrates 604 lb more milk per lactation in mature cows, while heifers in the rearing phase produced 441 lb more milk in their first lactation^{2,4}.

MORE MILK

604 lbs/Lactation for Cows
441 lbs/Lactation for Heifers

Productivity

34%

LAMENESS MANAGEMENT

Optimal nutrition is necessary for improved claw integrity during a cow's productive life. Research shows that prevention of nutritional deficiencies allows for fewer non-infectious claw lesions⁵.

¹ Kincaid and Socha, 2004. Prof. Anim. Sci. 20:66; Kinal et al., 2005. J. Food Ag. and Environ. 3:168. ² Rabiee, A. R., I. J. Lean, M. A. Stevenson, and M. T. Socha. 2010. Effects of feeding organic trace minerals on milk production and health of Holstein cows. J. Dairy Sci. 93:1010. ³ Nayeri, A., N. C. Upah, E. Sucu, M. V. Sanz-Fernandez, J. M. DeFrain, P. J. Gordon 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. 97:4487. ⁴ Nocek et al., 2000. Digital characteristics in commercial dairy herds fed metal-specific amino acid complexes. J. Dairy Sci. 83:1553.

ductive function and hoof integrity are greatly influenced by the immune system. Less-than-optimal trace mineral status can contribute to greater susceptibility to deficiencies. Proper nutrition is key to raising immunoglobulin (IgG) levels in maternal milk to provide passive immunity for the newborn calf¹.

Birth

The stages of an animal's life, optimum nutrition has a significant impact

Growth ➤



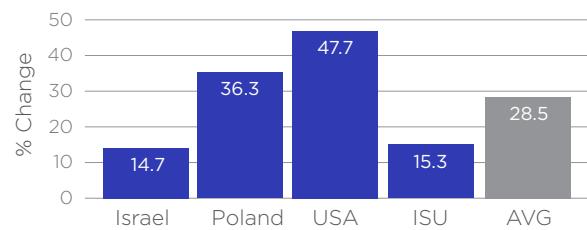
Production

White Line Separation

11% ↓

Sole Ulcers

Increase in IgG Concentration



28% ↑

HOOF HEALTH MANAGEMENT

When a heifer contracts digital dermatitis (DD) before calving, she produces less milk and suffers decreased reproductive performance⁴. In a study on digital dermatitis and lactation performance in cows, Gomez *et al.*, found that heifers having incidences of DD showed a significant decrease in first lactation performance.

The study also showed that heifers that were fed the DD formula as part of a balanced nutrition program showed improvements in hoof health. One of the improvements was a decrease in DD prevalence of more than 60%.

60% ↓

Digital Dermatitis

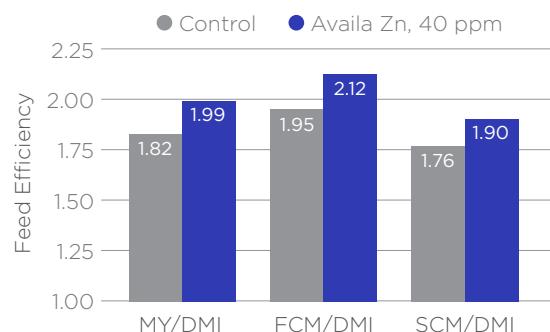
Heifer Type (Pre-Calving)	First Lactation Milk Loss (305 Days in Milk)
One DD Event	438 lb
Multiple DD Events	738 lb

FEED EFFICIENCY

Feeding zinc at a 40 ppm level has been shown through research to result in cows consuming less feed per pound of milk produced³.

Feeding 40 ppm Availa® Zn Improves Feed Efficiency

9% ↑





RESEARCH-PROVEN ZINPRO PERFORMANCE MINERALS®

At Zinpro Corporation, our investment in data and the scientific research of our products has led us to produce more than 275 peer-reviewed research publications. Zinpro provides customers with quality information to better explain how our products deliver a positive animal response and improved return on investment.

Trace minerals are essential during the animal's full productive life, from birth, to growth through production and reproduction. The table below summarizes the relationship between some of the different productive stages and the essential role that minerals play.

Birth	Growth	Production	Reproduction
Intestinal Epithelium Zn, Mn, Cu	Appetite Zn, Co	Milk Production Zn, Co	Bone Development Zn, Mn, Cu
Immune Function Zn, Mn, Cu, I	Muscle Development Zn	Hoof Health Zn, Mn, Cu, I	Fertility Zn, Mn, Cu
	Hoof Health Zn, Mn, Cu, I	Feed Efficiency Zn, Co	Fetal Development Zn, Mn, Cu
			Colostrum Quality Zn, Mn, Cu

From minerals to benefits to productive stages, Lifetime Performance shows our commitment to stand by producers at all life stages offering solutions, tools and answers to help their animals show their full potential and live a lifetime of performance.



For more information:
contact your Zinpro sales
representative or visit
zinpro.com/lifetime-performance