

Availa®Zn and TruCare® Zn LQ Improves Nursery Pig Immune Response to a *Lawsonia intracellularis* Infection



Study Objective

Investigate the effect of Availa®Zn and TruCare® Zn LQ in response to *Lawsonia intracellularis* infection in nursery pigs.



Animals

72 mixed sex commercial wean pigs (11.8 kg BW; 4 weeks of age)

Treatments

Negative Control: 125 ppm Zn as ZnSO₄ in feed, unchallenged pigs

Positive Control: 125 ppm Zn as ZnSO₄ in feed, *L. intracellularis* challenged pigs

Availa-Zn: 75 ppm Zn as ZnSO₄ + 50 ppm Zn as amino acid complex in feed, *L. intracellularis* challenged pigs

TruCare Zn LQ: 125 ppm Zn as ZnSO₄ + 40 mg TruCare Zn LQ per L of water, *L. intracellularis* challenged pigs



Study Duration

Pigs were challenged with 8.0×10^7 *L. intracellularis* via oral gavage at 0 days post inoculation (dpi) and remained on test for 28 dpi.



Location

University of Minnesota,
St. Paul, MN, USA

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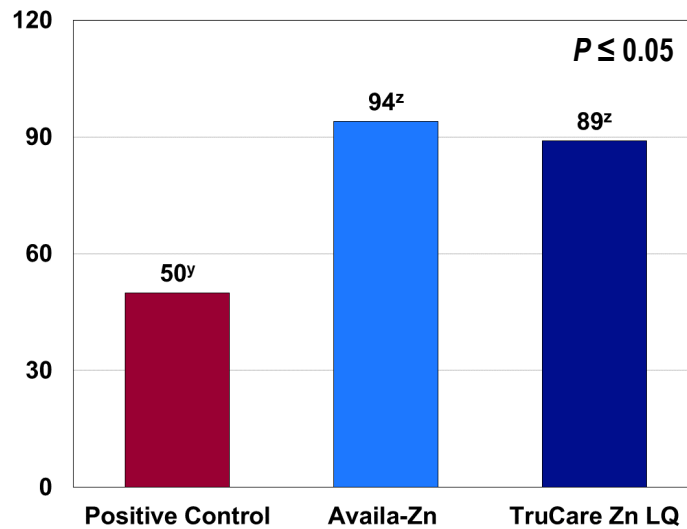
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Results Summary

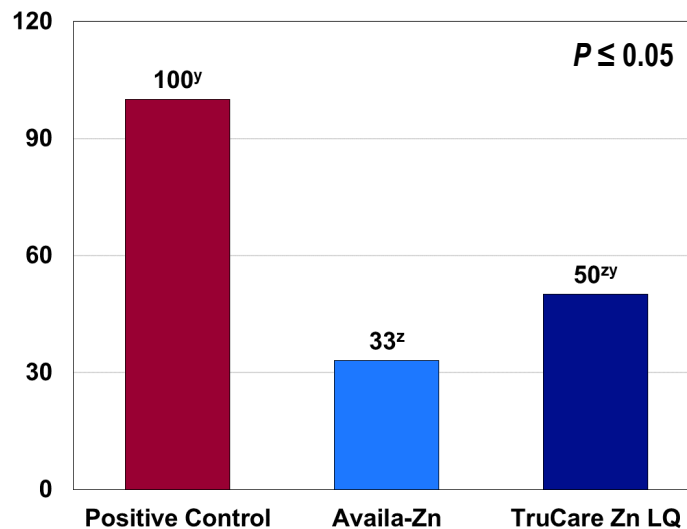
Availa-Zn and TruCare Zn LQ supplementation aided the immune response following a *L. intracellularis* challenge:

- Seroconverted sooner, 14 vs. 21 dpi
- Increased T-cell counts in infected and non-infected crypts
- Decreased the incidence of gross porcine proliferation enteropathy (PPE) lesions and gross lesion severity

Nursery Pigs with *L. intracellularis* Antibodies at 14 dpi, %



Animals with Gross PPE Lesions at 28 dpi, %



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Leite, F. L., E. Vasquez, F. A. Vannucci, C. J. Gebhart, A. Rendahl, J. Torrison, A. Mueller, N. L. Winkelman, Z. J. Rambo, and R. E. Isaacson. 2018. The effects of zinc amino acid complex supplementation on the porcine host response to *Lawsonia intracellularis* infection. *Vet Res.* 49:88.