

Availa®Zn Improves Intestinal Integrity in Pigs Subjected to Heat Stress Conditions



Study Objective

Evaluate Availa®Zn as a mitigation agent for severe short-term heat stress (HS) in pigs.



Animals

32 crossbred gilts (64 kg BW)

Treatments

TN-CON: thermoneutral conditions (TN) + *ad libitum* access to Control diet (120 ppm Zn from Zn sulfate)

HS-CON: HS conditions + *ad libitum* access to Control diet

PFTN-CON: TN conditions + pair-fed (PF) to their HS-CON counterparts

HS-Availa-Zn: HS conditions + *ad libitum* access to Availa-Zn diet (60 ppm Zn from amino acid complex + 60 ppm Zn from Zn sulfate)



Study Duration

After 17 d of dietary adaptation, environmental conditions were administered for 12 h.



Location

Iowa State University, Ames, IA, USA

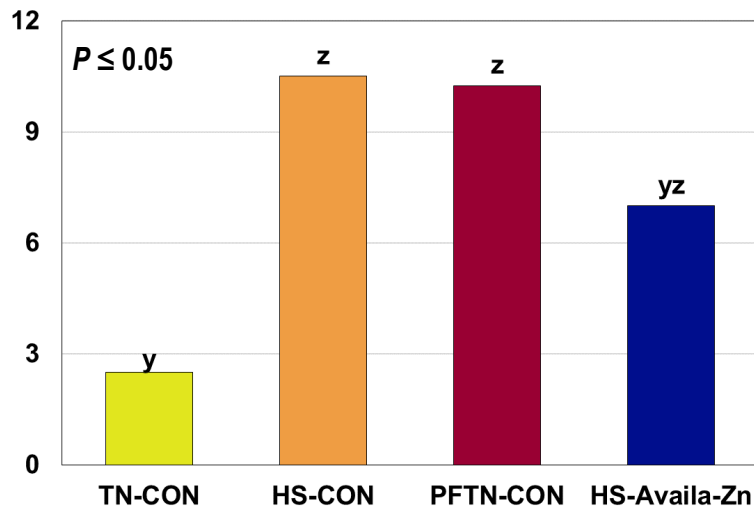


Results Summary

Availa-Zn supplemented to pigs during HS conditions helped to mitigate negative effects:

- Limited intestinal permeability and maintained transepithelial electrical resistance (TER)
- Decreased circulating serum endotoxins
- Improved pig acute phase response (LBP and lysozyme)

Availa-Zn Limits Ileal FD4 Permeability, µg/min



Serum Endotoxin Circulation was Reduced with Availa-Zn, arbitrary units

