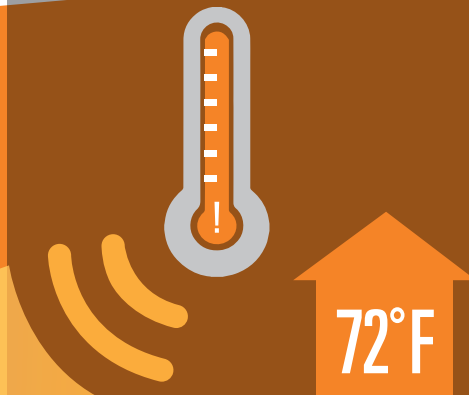
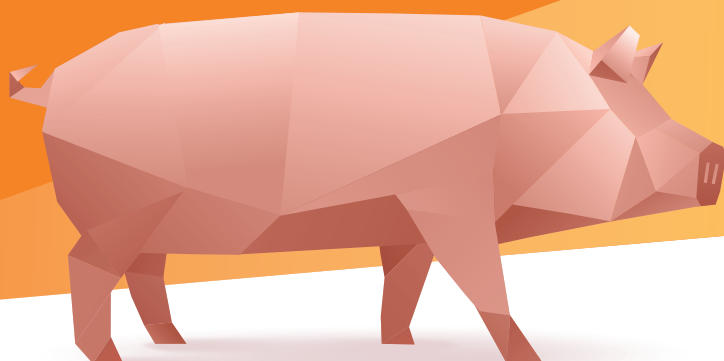


# HEAT STRESS: SWINE

KemTRACE®  
**CHROMIUM**  
Essential to you and your operation.

Heat stress significantly reduces feed intake, therefore directly impacting growth performance of pigs and profitability.<sup>1</sup>



Temperatures as low as 72 degrees can cause stress on pigs.

Heat stress in swine has consistently been associated with:<sup>1</sup>



Reduced feed intake



Reduced growth rate



Increased sow mortality

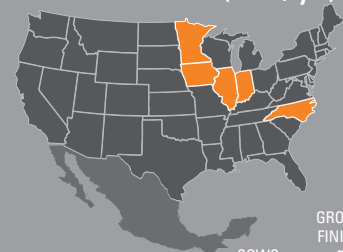


Reduced fertility



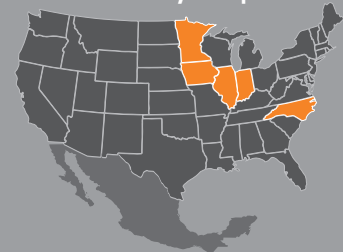
Increased non-productive sow days

Average exposure to heat stress<sup>2</sup> (hrs/yr)



	SOWS	GROWING-FINISHING PIGS
North Carolina .....	1,126	1,461
Illinois.....	938	1,204
Indiana .....	792	1,052
Iowa .....	789	1,010
Minnesota .....	455	623

Increase in average sow days open<sup>2</sup>



North Carolina .....	7.2
Illinois.....	6.2
Iowa .....	5.2
Indiana .....	4.7
Minnesota .....	2.6

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# HEAT STRESS: SWINE

Heat stress is one of the **costliest issues** facing pork producers!

Total losses by the swine industry due to heat stress range between

**\$299 million and \$316 million** per year.<sup>2</sup>



Day open loss (\$/d) =  
**\$3.00+**  
Price of one non-productive sow day



Reduced average daily feed intake value (\$/lb) =  
**\$0.12+**  
Unit price of intake



Weight gain loss (\$/head) =  
**\$2.50+**



Death due to heat stress  
**1 in 1,000 pigs**

## Evidence suggests insulin action is a key component of heat stress response.<sup>2</sup>

Chromium improves insulin function and results in efficient clearance of glucose from the bloodstream. Increased glucose uptake may improve thermal tolerance in heat-stressed animals.



1. Rhoads. 2013. Nutritional Interventions to Alleviate the Negative Consequences of Heat Stress. Adv. Nutr. 4: 267-276.

2. St-Pierre, N.R., B. Cobanov, and G. Schnitkey. 2003. Economic Losses from Heat Stress by US Livestock Industries. Journal of Dairy Science. 86: E52-E77.