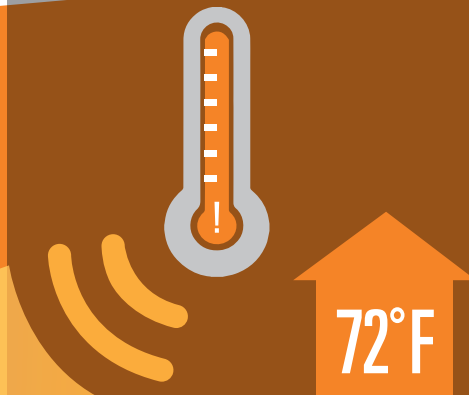
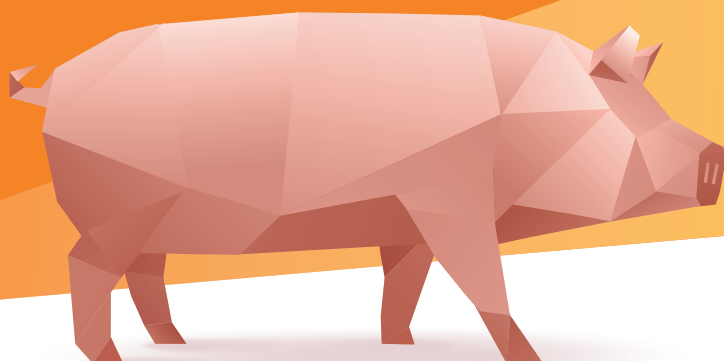


HEAT STRESS: SWINE

KemTRACE®
CHROMIUM
Essential to you and your operation.

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



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

Heat stress in swine has consistently been associated with:¹



Reduced feed intake



Reduced growth rate



Increased sow mortality

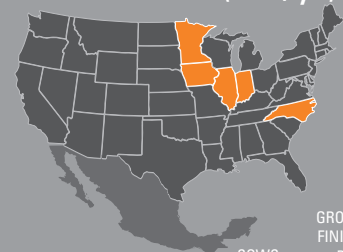


Reduced fertility



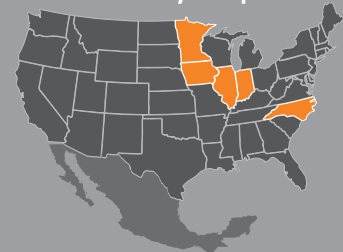
Increased non-productive sow days

Average exposure to heat stress² (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 open²



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.²



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.²

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.