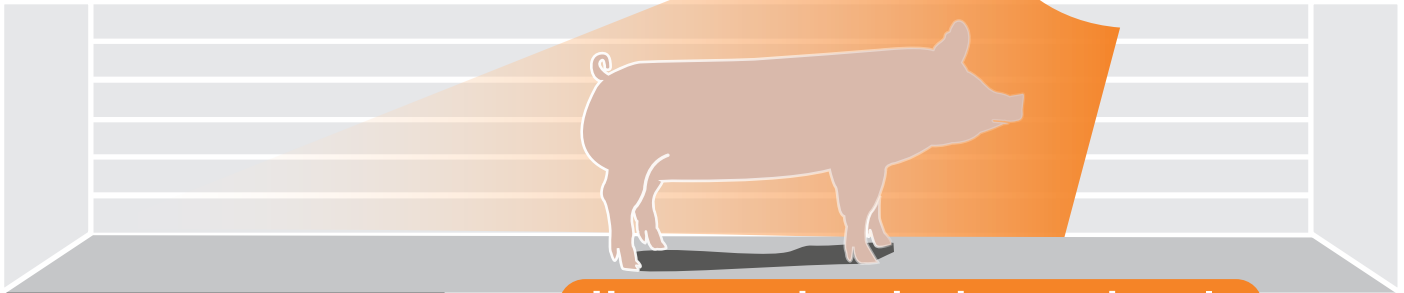


# HEAT STRESS: SWINE

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



Heat stress in swine has consistently been associated with:

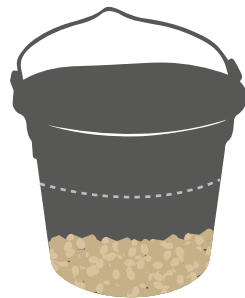
**Average Exposure to Heat Stress<sup>1</sup> (hrs/yr)**

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

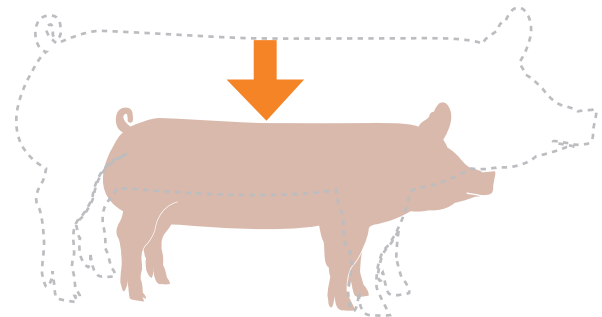
  

**Increase in Average Sow Days Open<sup>1</sup>**

North Carolina	7.2
Illinois	6.2
Iowa	5.2
Indiana	4.7
Minnesota	2.6



Reduced feed intake



Reduced growth rate



Increased sow mortality



Reduced fertility



Increased non-productive sow days

# HEAT STRESS: SWINE

Heat stress is a **costly** issue facing pork producers<sup>1</sup>.



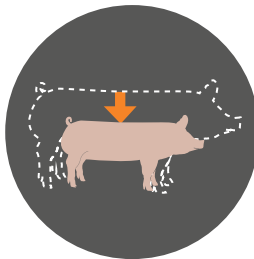
Total losses by the swine industry due to heat stress range between **\$299 million and \$316 million per year**<sup>2</sup>.



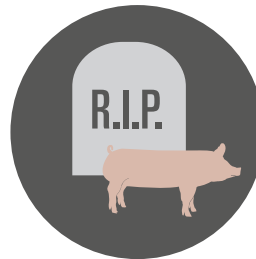
Day Open Loss (\$/d) =  
**\$3.00**  
- Price of one non-productive sow day



Reduced Average Daily Feed Intake Value (\$/lb) =  
**\$0.12**  
- Unit price of intake



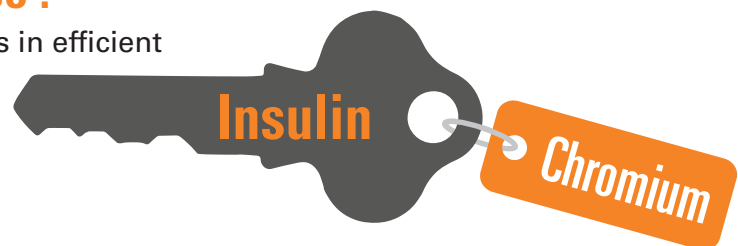
Weight Gain Loss (\$/head) =  
**\$2.50**



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 et al. Nutritional Interventions to Alleviate the Negative Consequences of Heat Stress. 2013. Adv. Nutr. 4:267-276.  
2. St-Pierre et al. Economic Losses from Heat Stress by U.S. Livestock Industries. 2003. J. Dairy Sci. 86:(E. Suppl.):E52-E77.

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