



HEAT STRESS MANAGEMENT

BEAT THE HEAT WITH NUTRITION

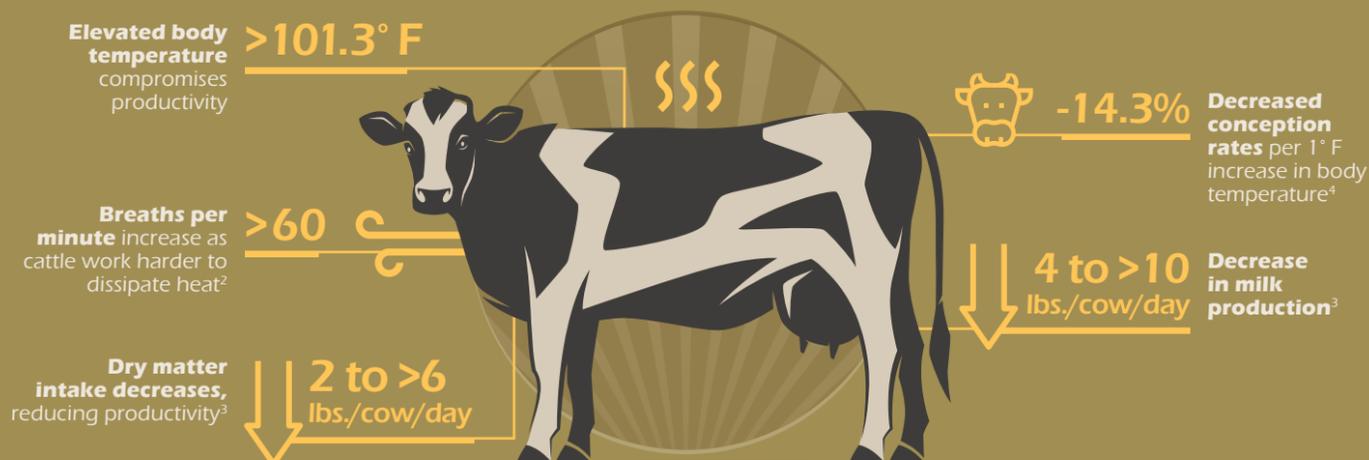
Conditions of heat stress arise in cattle when the Temperature-Humidity Index (THI) reaches levels high enough to overwhelm animals' adaptive mechanisms. While there are many on-farm and environmental practices that help mitigate the effects of heat stress on cattle, nutritional solutions also exist to help improve an animal's metabolic response when susceptible to heat stress conditions.



Staggering Annual Costs

\$897 million¹ in annual production losses for the U.S. dairy industry

How Heat Stress Hurts



Know Signs of Heat Stress

Heat stress symptoms progress from mild to extreme.

- Mild:** Low activity levels, ↑ respiration rate, cattle seek shade, some sweat may be visible
- Moderate:** ↑ water intake, ↓ feed intake, sweating visible, panting
- Severe:** Cattle stick tongue out/drool
- Extreme:** Cattle cannot physically respond to heat conditions; death possible

Different nutritional solutions for heat stress mitigation work to:



Improve absorption of water across tissues, including the intestinal wall



Maintain cell volume and hydration at the cellular level



Beat the heat by incorporating heat stress mitigation feed additives in your rations prior to an upcoming heat event or season

- 1 Monitor current and historic weather patterns to know when heat is expected
- 2 Introduce feed-based solutions for heat stress mitigation in diets 10 to 14 days prior to anticipated heat event
- 3 Continue feeding diets with heat stress mitigation solutions through duration of hot season
- 4 Discontinue use when cooler weather arrives to stay and begin planning for next hot period



Don't let the heat be an excuse for productivity and profit losses. Visit with your local representative about Promote[®] heat stress mitigation products today.

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Promote[®] is a line of dependable feed additives that are designed to help animal producers enhance performance, uphold animal welfare, and better adapt for tomorrow's consumers.

¹St. Pierre, et al. Economic losses from heat stress by US livestock industries. (2003) Journal of Dairy Science, 86 (SUPPL. 1), pp. E52-E77

²Collier, R.J. & Zimelman, R. B. (2011). Revisiting the Temperature Humidity Index. https://www.agweb.com/assets/1/6/revisiting_the_temperature_humidity_index2.pdf

³Collier, et al. Heat stress: physiology of acclimation and adaptation. (2019) Animal Frontiers, 9:1, pp. 12-19

⁴Gwazdauskas, C.J., et al. Environmental and management factors affecting conception rate in a subtropical climate. (1975) Journal of Dairy Science, 58, pp. 88-92.