

The Costly Effects of Heat Stress on Dairy Productivity

Heat stress is an expensive challenge that dairies face year after year. The effects of heat stress are estimated to cost the dairy industry \$897 million to \$1.5 billion¹ annually, with losses due to lowered milk production, increased metabolic disorders, reduced reproductive performance, reduced dry matter intake and impaired immune function.

For the average dairy farmer, unmitigated heat stress can cost an average of \$264 per cow per year². While certain management measures must always be considered (e.g., fans, misters), the role of dairy cattle nutrition in combating the effects of heat stress on dairy cattle is an increasingly prevalent topic of discussion. Nutritional specialty products like OmniGen[®] are designed to offer additional support to help cows maintain cow comfort, productivity and reproductive performance throughout periods of increased temperature and humidity.

Immune Function in Cattle During Heat Stress

Cows experience heat stress when the Temperature-Humidity Index, or THI, reaches 68 – and recent research suggests that acute exposure to high THI can cause damage to a cow's digestive tract, allowing pathogens and endotoxins to enter the blood stream. This activates a strong immune response, requiring energy that could otherwise be expended to produce milk.

By supporting healthy immune function (as shown by elevated expression of the IL-8R mRNA gene indicating immune responsiveness), nutritional specialty products like OmniGen not only help protect healthy dairy cattle from the effects of heat stress, but also help support the intake of dry matter during

the heat stress period and increase productivity in challenging heat stress conditions.



Visit TheOmniGenDifference.com or contact your local Phibro representative to learn more.

¹ St-Pierre et al., 2003 J. Dairy Sci. E52-E77

² Key, N. et al., 2014. Climate Change, Heat Stress, and U.S. Dairy Production, Rep. No. 175.