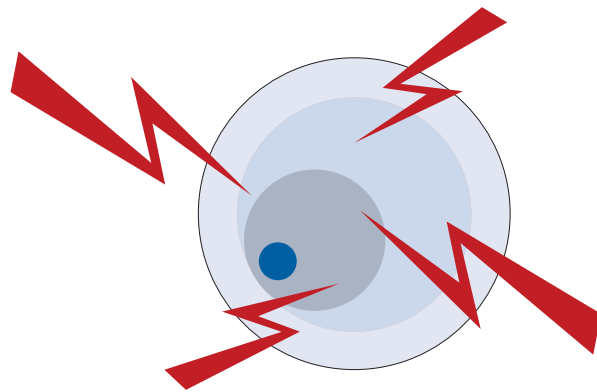


# Oh Oh Oocyte!



## Heat Stress damages reproductive cells.

**Early embryonic death during heat stress is a leading cause of open cows.** Commonly, pregnancy failure occurs during the days immediately following conception.

Elevated core body temperature is detrimental to oocyte cells that are required for reproduction (Putney et al., 1989).

1. Estrus intensity lessens during heat stress, making heat detection more difficult
2. Fertility is reduced
3. Survival of early embryos is compromised

Call **877-466-6455** or visit **TechMixGlobal.com**

**TechMix, LLC**  
740 Bowman St, PO Box 221  
Stewart, MN 55385

**TechMix** Redefining hydration  
to keep animals  
drinking, eating &  
producing.

  @techmixglobal

# Proven to cool heat-stressed cows.

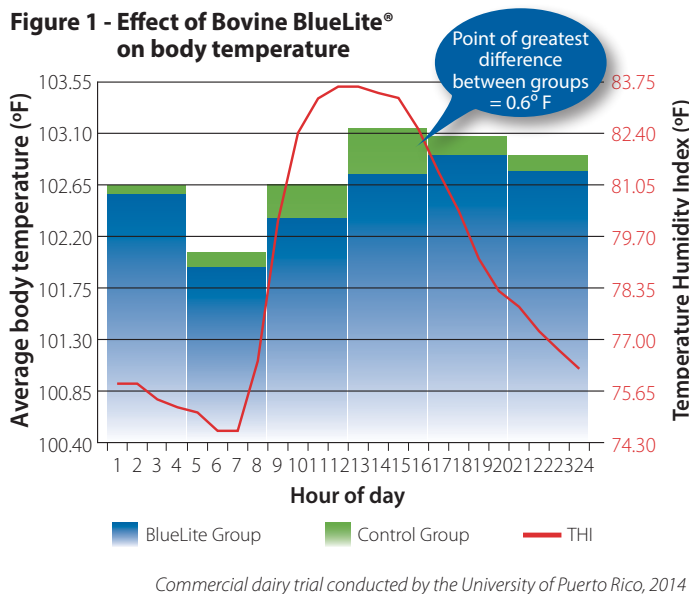
## TRIAL: University of Puerto Rico

Results from a research study conducted at the University of Puerto Rico demonstrate cows supplemented with Bovine BlueLite<sup>®</sup> have an increase in milk production (2.3 lbs./d) and reduced body temperature (0.6°F, P<0.01) when the Temperature Humidity Index (THI) was the highest (Figure 1). Rations were formulated to target feeding 4 oz. Bovine BlueLite/h/d.

## TRIAL: Iowa State University

A recent study by M. Al-Qaisi, et.al. (2018)\*\*, at Iowa State University, was conducted to determine the effects of Bovine BlueLite on body temperature in heat-stressed lactating Holstein cows. Results of this study demonstrated that heat-stressed cows supplemented with 4oz/h/d of Bovine BlueLite Pellets had increased skin temperature versus non-supplemented. This indicates that the *cows supplemented with Bovine BlueLite Pellets, are better able to dissipate excess heat through increased sweating and evaporation.*

Figure 1 - Effect of Bovine BlueLite<sup>®</sup> on body temperature



Commercial dairy trial conducted by the University of Puerto Rico, 2014

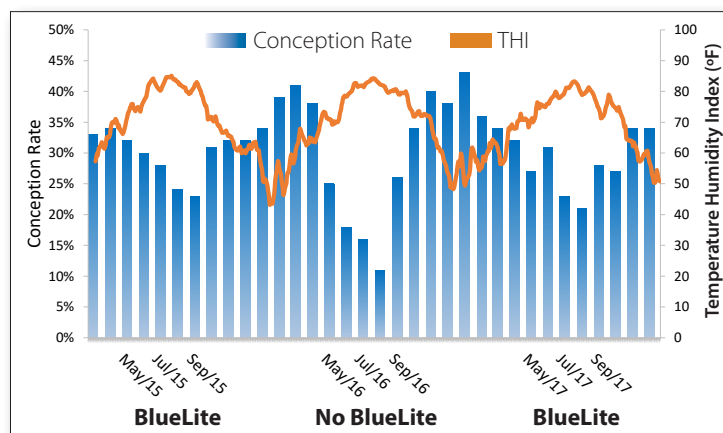
## In or Out? Reproductive success during heat stress.

### DEMONSTRATION: Southeast U.S. Evaluation

Reproductive performance was examined retrospectively on a 2,000-cow dairy supplemented with Bovine BlueLite during heat stress periods (4oz./h/d) during the summers of 2015 and 2017, but did not use Bovine BlueLite during 2016.

During 2015 and 2017, conception rate dropped to about 21-22% while in 2016 a conception rate as low as 11% was witnessed. THI was quite similar during all three periods and the only known change was the inclusion/exclusion of Bovine BlueLite. (Figure 2)

Figure 2 - Impact of THI & Bovine BlueLite on Conception Rates



\*\*Validating a "heat stress" model: The effects of an electric heat blanket and nutritional plane on lactating dairy cows. M. Al-Qaisi\*, E. J. Mayorga, E. A. Horst, S. K. Kvidera, A. J. Kramer, C. S. McCarthy, M. A. Abeyta, S. L. Potner, B. M. Goetz, H. A. Ramirez-Ramirez, J. A. D. R. N. Appuhamy, L. L. Timms, and L. H. Baumgard, Department of Animal Science, Iowa State University, Ames, IA. 2018 ADSA Abstract



Benefits during heat stress.

- Ability to maintain lower body temperature
- Better water retention efficiency
- Improved dissipation of excess heat
- Increased pregnancy rates
- Fewer days open
- Save money on abatement and reproduction



TechMixGlobal.com

Redefining hydration  
to keep animals  
drinking, eating & producing.

