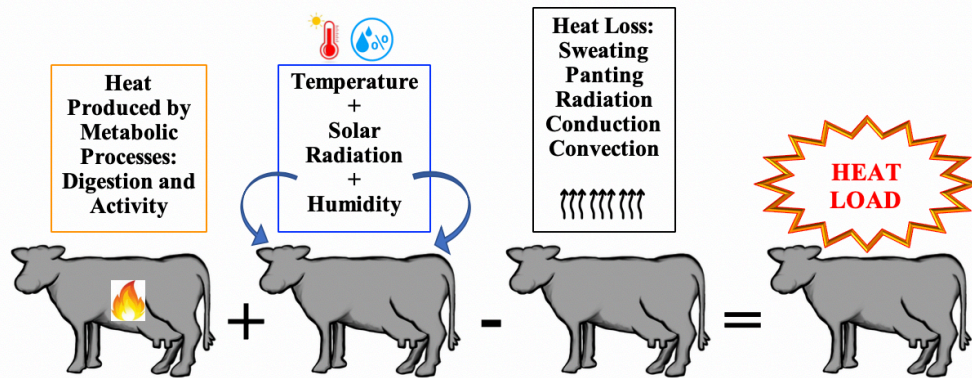


The Key to Manage Heat Stress is to Understand when Heat Stress Begins!

What is HEAT STRESS?

Heat stress occurs when the heat produced by a dairy cows' biological processes and the heat absorbed from the environment exceed the capacity of the cow to lose heat.



A common index used to evaluate heat stress in dairy cows is the **Temperature Humidity Index** or **THI**, which is calculated based on ambient temperature and relative humidity.

Relationship between THI, Heat Stress Level, Respiration Rate and Rectal Temperature

THI	Heat Stress Level	Respiration Rate (bpm)	Cow Rectal Temperature
68-71	Mild	> 60	101.3 °F (38.5° C)
72-79	Mild to Moderate	> 75	102.2° F (39 °C)
80-89	Moderate to Severe	> 85	104° F (40° C)
> 90	Severe	> 100	106° F (41° C)

In persistent **HOT**, **SUNNY** and **HUMID** conditions, the cow's cooling mechanisms are insufficient to dissipate all the heat accumulated and as a consequence, the cow's body temperature begins to rise, triggering a cascade of **physiological changes** to reduce this excessive heat load in the body.

NEGATIVE EFFECTS OF HEAT STRESS

- *Behavioral Change
- *Health Issues
- *Impaired Reproduction and Immune Performance
- *Decreased Milk Production
- *Decreased Profitability
- *By the time physical indicators of heat stress are observed, production losses have already begun!

What are the Visible Signs and Consequences of Heat Stress in Dairy Cows?

