

WHEN DOES HEAT STRESS OCCUR?

Heat stress occurs when heat and humidity reach temperatures that are beyond a bird's ability to thermally regulate heat. Heat stress is due to an imbalance between the energy being produced by the bird versus the energy (heat) leaving the bird's body.¹ If not properly managed, heat stress causes significant production losses, discomfort and high mortality rates.

WHAT TO LOOK FOR

When temperature levels reach above 85 F with high humidity, birds begin to experience signs of heat stress.² Without sweat glands, birds are unable to cool themselves down properly and begin to pant and increase blood flow to the surface of their bodies in effort to regulate thermal temperature.

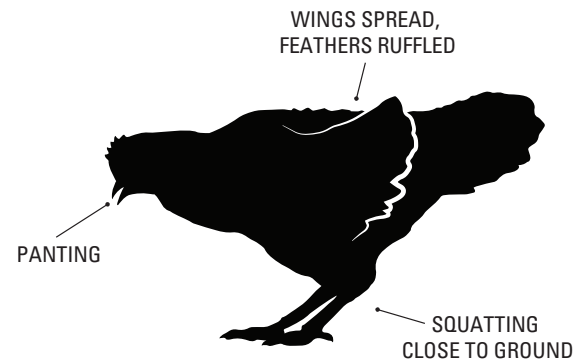
HOW DOES HEAT STRESS IMPACT PRODUCTIVITY?

Broilers and laying hens are particularly sensitive to heat stress causing detrimental impacts to productivity. These birds experience significant reduction in growth rates and other unforeseen challenges including¹:

- Decreased feed efficiency
- Decreased breast meat quality with less protein content and increased fat deposition
- Reduced egg production, egg weight, eggshell thickness and strength
- Increased levels of oxidative stress in the bird's body, impacting the immune system, performance and meat quality
- Negative effects on intestinal development and functions
- Negative effects on immune system efficiency

All of these combined heat stress factors contribute to an estimated economic loss to the poultry industry of \$128-\$165 million annually.¹

SIGNS OF A HEAT STRESSED CHICKEN



HOW TO MANAGE HEAT STRESS

To manage heat stress, keep temperature ranges between 60-75° F with low humidity.² To help keep birds cool provide proper:

- Ventilation and air circulation
- Feed management
- Water management
- Electrolyte and vitamin supplementation

REDUCE THE EFFECTS OF HEAT STRESS WITH AVI-LYTE™ & PROSPERO™

Ralco formulated **Avi-Lyte™** and **ProsperEO™** to help birds during times of stress and provide natural solutions that do not require a VFD and are easily administered through water.

AVI-LYTE™: RESTORE NUTRIENTS & REHYDRATE

Avi-Lyte™ helps reduce the effects of heat stress by:

- Restoring vital nutrients and electrolytes
- Boosting energy
- Preventing dehydration by encouraging water intake
- Boosting immunity with beneficial gut bacteria

PROSPERO™: COMBAT HEAT STRESS

ProsperEO™ - Liquid is specially formulated with **Microfused® Essential Oils®** and **Actifibe®** to help combat heat stress by:

- Stimulating appetite and getting birds back on feed
- Strengthening and restoring immunity after times of stress
- Promoting gut health and helping to reduce pathogen load
- Feeding beneficial bacteria in the gut and promoting competitive exclusion to further remove harmful pathogens
- Reducing the effects of oxidative stress

PROTOCOL: HEAT STRESS

Administer **Avi-Lyte™** to get birds rehydrated and **ProsperEO™ - Liquid** to maintain health long-term.

- **Avi-Lyte™** - Mix 8 oz. (0.5 lbs.) with 1 gallon of water to make stock solution.
 - **Tip:** When you know the birds will be coming under heat stress begin using **Avi-Lyte™** the day before.
- **ProsperEO™ - Liquid** – Mix 3 oz. with 1 gallon of water to make stock solution.

See label for full details.



References:

- 1.) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4494392>
- 2.) <https://extension.umn.edu/poultry-care-and-management/preventing-heat-stress-poultry>