NUTRITION NOTES
Innovation + Research from Kent Nutrition Group APRIL 2025

IS YOUR CALF PROGRAM PREPARED FOR SUMMER HEAT STRESS?
DON'T LET HEAT STRESS SNEAK UP ON YOUR CALF PROGRAM

During the heat-stress season, it is important to remember that young animals also suffer from the heat. Dairy calves grow best when temperatures are between 55-77°F. When temperatures go above 77°F, calves may not be able to adequately cool themselves, and feed intake and growth decrease. Heat stress is further exacerbated when humidity is also high. Since feed intake can be decreased during heat stress it is important to feed highly fortified milk replacer and calf starter to ensure adequate nutrition and avoid reduced growth rates as much as possible.

What happens to calves during heat stress?

- Body temperature increases, resulting in sluggish behavior
- Respiration rate increases, using extra energy as the calf attempts to cool itself
- Appetite decreases and feed intake will decrease
- Water loss increases through evaporation
- Negative changes occur in metabolic rate and hormones levels, leading to impaired calf development
- The immune system is suppressed, reducing the ability to fight off pathogens

The important signs of heat stress are:

- Reduced movement
- Increased respiration rates
- Open-mouthed panting
- Decreased feed intake, especially starter
- Increased water consumption

The three things that most affect the heat load on the calf are:

- Air temperature
- Relative humidity of the air
- Air movement

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Management practices to reduce the effects of heat stress:

- Provide clean, cool water on a free-choice basis at all times. Generally, water intake increases when the temperature exceeds 77°F. Young calves need 3-6 gallons of fluids (water) per day to allow cooling and avoid further reduction in feed intake.
- Provide shade to avoid direct exposure to sunlight.
- Promote good air exchange. Naturally ventilated structures should have all vents completely opened. Hutches should have doors and vents opened and the back end may be elevated using wooden or concrete blocks to improve ventilation. There should also be enough space between hutches to allow good air circulation.
- Perform stressful activities such as dehorning, vaccinations, pen moves, or transportation in the morning when environmental and calf body temperatures are at their lowest point for the day.

Feeding management practices that should accompany the above steps to reduce the effects of heat stress:

- Feed an excellent-quality milk replacer like Milk Formula 1™ or Precision® Formula Premium to ensure nutrient intake. Consider feeding more milk replacer as calf starter intake may decrease or stall.
  - Kent/Blue Seal milk replacers with BioEnvigor8 also contain Kent/Blue Seal's proprietary NutriVantage product that has been shown to support the immune system, improve weight gains and intakes, and reduce the impact of stress.
- Offer fresh calf starter that is highly fortified/palatable, such as Sweet Flakes, free choice to provide adequate nutrients and to stimulate rumen development.