

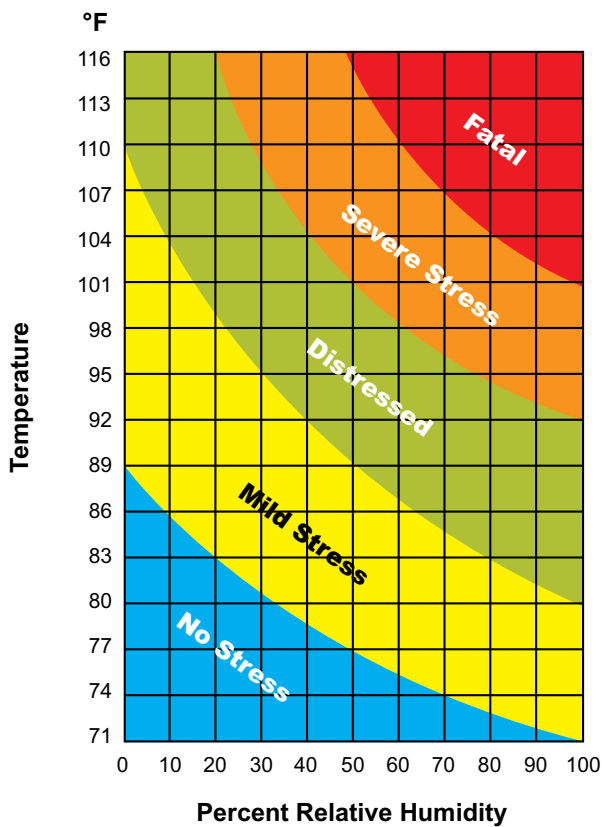
Heat Stress Impacts Cow Lameness



Heat stress can be a serious problem, with its effects being observed for months after the temperature has declined. Decreased milk production, poor reproductive performance and increased health problems are some of the effects of extended periods of heat.

Not only high temperature, but a combination of temperature and humidity impact the level of stress due to heat as illustrated in the chart below.

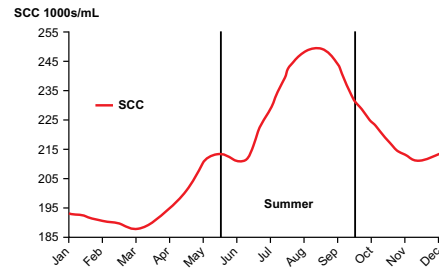
Dairy Cow – Heat Stress Chart



Source: University of Arizona

Effect of Season on SCC

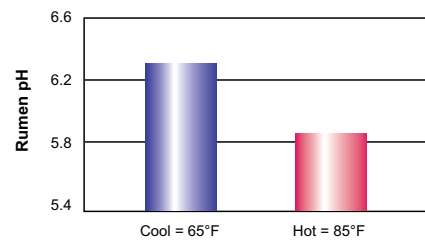
Summer heat appears to affect milk SCC. German researchers found that milk SCC varied by season, with milk SCC being highest in summer and lowest in winter.



Adapted from: LKV S.-H Leistungsergebnisse des Kontrolljahres 2001

Ruminal Response to Heat Stress

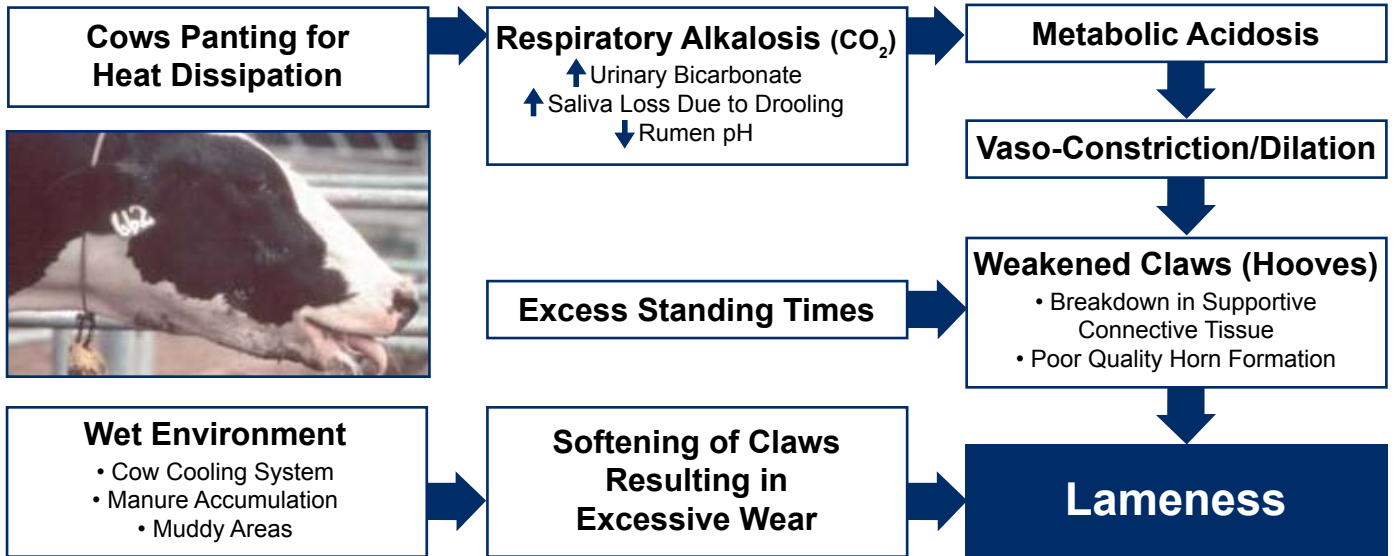
University of Missouri research indicates that cows exposed to heat stress conditions have lower rumen pH than cows exposed to more moderate temperatures, predisposing cows to claw lesions.



Adapted from: Mishra et al., 1970. J. Anim. Sci. 30:1023

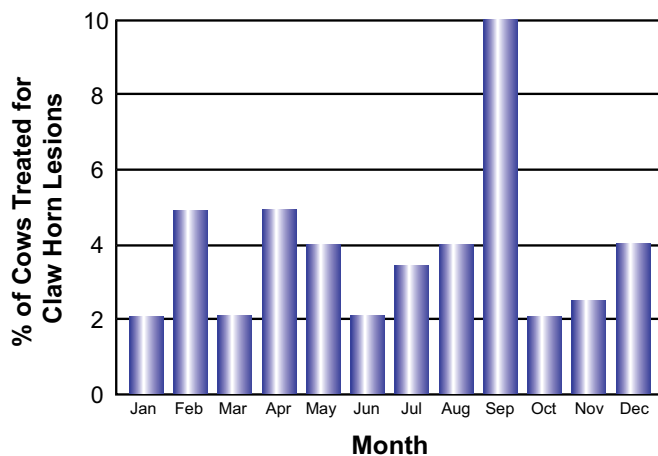


Impact from Heat Stress on Claw Health



Adapted from: J.K. Shearer, University of Florida

Lameness Incidence Peaks at the End of Summer



Adapted from: N.B. Cook, 2004. Proc. 13th Int'l. Symp. Lameness in Ruminants, p. 51.

If your dairy operation is experiencing high incidence of claw horn lesions following the summer heat, consider the following recommendations:

- Use locomotion scoring to identify cows in early stages
- Have suspected cows examined by a competent hoof trimmer
- If not currently part of the feeding ration, add 4-Plex to the diet

Role of 4-Plex®

A summary of university and controlled field studies indicates that feeding trace minerals in the form of 4-Plex benefits your dairy operation in several key areas.

Improved Udder Health

- 12.2% decrease in somatic cell count

Improved Feet

- 34.2% decrease in white line separation
- 10.8% decrease in sole ulcers
- 33.1% decrease in digital dermatitis

In addition, research indicates that cows fed trace minerals from 4-Plex have:

Improved Reproduction

- 7 fewer days to first service
- 16 fewer days open

Improved Lactation Performance

- 3.3% more milk
- 3.5% more fat
- 3.2% more protein

The minerals found in 4-Plex are essential nutritional components to the health and productivity of the dairy cow. Ask your nutritionist to include 4-Plex as a foundational component of your dairy ration.