

# **CHROMIUM FOR DAIRY**

KemTRACE® Chromium is a water soluble, highly bioavailable, organic source of chromium propionate that helps improve glucose utilization and reduce the negative impacts of stress for improved health and performance. This results in better animal maintenance, reproduction, growth and immunity. KemTRACE Chromium is supported by more than 20 years of Kemin research and is the only U.S. Food and Drug Administration-reviewed form of chromium propionate.



Insulin plays a key role in optimum cell function by acting as a "key" in the lock to the door that allows glucose into the cell. Once insulin has "unlocked the door," blood glucose can enter the cell and be used as an energy source. Chromium improves insulin function and results in efficient clearance of glucose from the bloodstream.



### Reproduction

Chromium supplementation has been shown to reduce insulin resistance in dairy cows in early lactation.<sup>2</sup> Studies with chromium have also shown its ability to reduce subclinical metritis,<sup>3</sup> improve conception rates and pregnancy rates,<sup>4</sup> reduce days to first service, and increase the number of viable oocytes in cows supplemented with high-energy diets.<sup>5</sup>



#### **Immune function**

Upon activation, immune cells become obligate glucose utilizers.<sup>6</sup> Increased glucose uptake may help animals mount an immune response even under a severe immune challenge — such as heat stress.



# **Heat stress**

Research studies, designed to test the effect of chromium on milk yield under heat stress conditions, have shown cows supplemented with chromium have increased dry matter intake and yield more milk than control cows.<sup>7</sup>



# **Feed efficiency**

Chromium has been shown to alter insulin action and either increase dry matter intake or minimize a drop in feed intake among animals subjected to stress.<sup>8,9,10</sup>

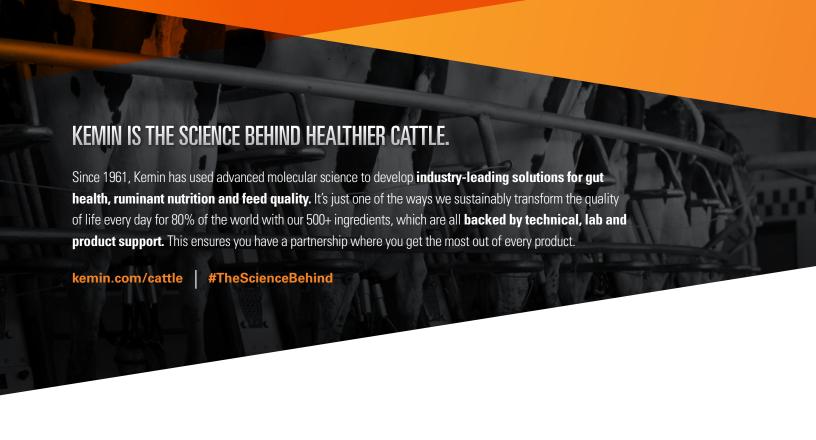
# What can cows do with more energy?

Chromium supplementation has been shown to improve energy utilization and reduce the impact of negative energy balance in early lactation.<sup>2</sup>

## **Key benefits:**

- Reduce negative energy balance
- ► Improve immune function
- Improve reproductive efficiency
- Increase milk yield
- Increase feed efficiency
- Withstand effects of heat stress







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