



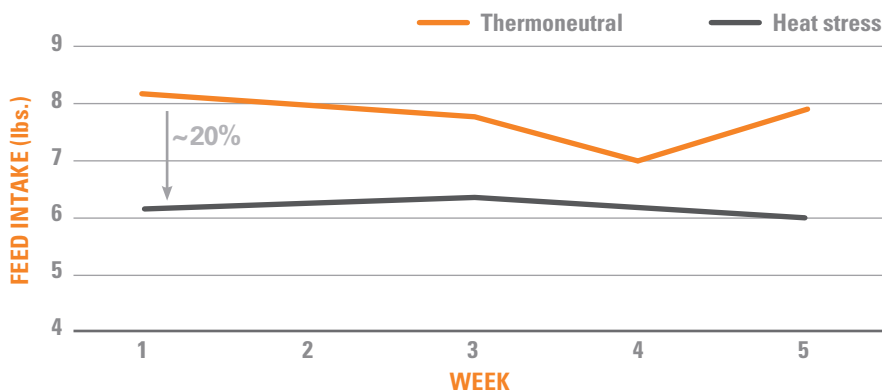
KemTRACE[®]
CHROMIUM

KemTRACE[®] Chromium for Show Pigs

KemTRACE[®] Chromium — the first product of its kind on the market — is a safe, proven trace mineral for use in swine. This highly bioavailable, organic source of chromium propionate increases mobilization of blood glucose into tissue, allowing for improved performance in the pig's hierarchy of needs. Key uses of cellular energy for swine include reproduction, maintenance, and muscle or fat deposition. The net benefit allows your pig to reach spend more energy working towards performance goals to reach their full genetic potential.

ROLE OF CHROMIUM IN ENERGY UTILIZATION

When an animal is experiencing stress conditions, cortisol (a stress hormone) is released — resulting in behavioral, metabolic, and immunological changes. These changes may have an impact on feed intake, which reduces the amount of glucose available to the animal.¹ In this way, stressors like environment, health challenges, trailering and shows, and more are often contributing factors to reduced feed intake and lead to energy loss.



Chromium has been shown to increase glucose uptake, allowing for better energy utilization under stress conditions.



KemTRACE[®] Chromium

ACTIVATES INSULIN RECEPTORS



MORE GLUCOSE ENTERS CELLS



MORE ENERGY AVAILABLE

KEMIN[®]
Compelled by Curiosity[™]

INSULIN IS THE KEY

The primary energy source for cells is glucose. As carbohydrates break down to flood the circulatory system with glucose, insulin is required to transport glucose into the cell. Chromium has been shown to enhance glucose clearance from blood.²

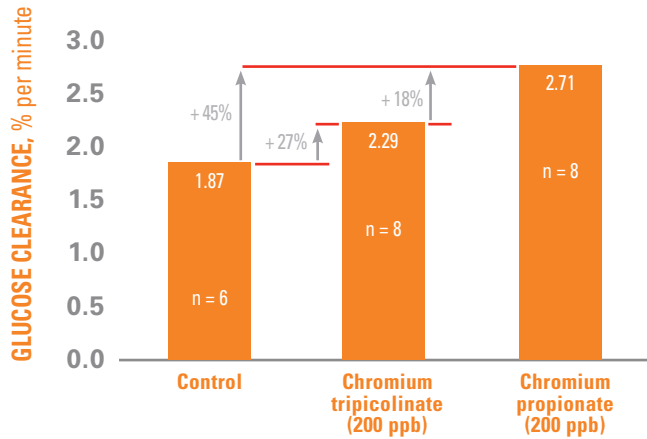


Figure 1: Pigs supplemented 200 ppb of KemTRACE Chromium (chromium propionate) cleared glucose 45% faster per minute than pigs not fed chromium.²

WHAT CAN THE ANIMAL DO WITH MORE GLUCOSE?

- Improve immune function
- Withstand the effects of stress
- Optimize performance during periods of high metabolic demand
- Increase protein accretion
- Improve feed efficiency

THE BOTTOM LINE

Chromium supplementation results in increased glucose uptake to support immune function, muscle and fat deposition, and maintenance.

GLUCOSE CLEARANCE IN PIGS FED CHROMIUM PROPIONATE¹

45% increase compared to control
18% increase compared to chromium picolinate

Chromium propionate is **3x MORE SOLUBLE** than chromium picolinate³

ABSORPTION VALUE³

Chromium propionate: **51-78%**
Chromium picolinate: **0.4-2%**

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CHROMIUM

kemin.com/show

REFERENCES

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2. Matthews, J.O., L. L. Southern, J. M. Fernandez, J. E. Pontif, T. D. Bidner, and R. L. Odgaard. (2001). Effect of chromium picolinate and chromium propionate on glucose and insulin kinetics of growing barrows and on growth and carcass traits of growing-finishing barrows. *Journal of Animal Science*. 79:2172-2178.
3. Unpublished data on file at Kemin Industries, 2007.