



Effects of KemTRACE® Chromium on finishing pigs under thermoneutral or heat stress conditions^{1,2}

A research trial conducted at Iowa State University determined the effect of chromium supplementation during the finishing phase of pigs exposed to thermoneutral or heat stressed conditions. Pigs (n=72) were fed dietary treatments that were either the control diet (no chromium) or 200 ppb KemTRACE® Chromium for a total of 40 days. In addition to being fed different diets, the pigs were assigned to thermoneutral conditions (70.3 °F) or progressive cyclical heat stress conditions (80.6-87.8 °F) for 35 days.

Research has shown that pigs kept in the thermoneutral zone have optimal performance in growth parameters compared to pigs exposed to heat stress conditions.³ Results from this study revealed benefits from supplementing chromium under thermoneutral conditions. Figure 1 shows chromium had an impact on feed intake, final body weight, average daily gain and feed efficiency in thermoneutral pigs compared to pigs fed no chromium. Final body weights were increased by 4.19 lbs when supplemented with KemTRACE Chromium.^{1,2}

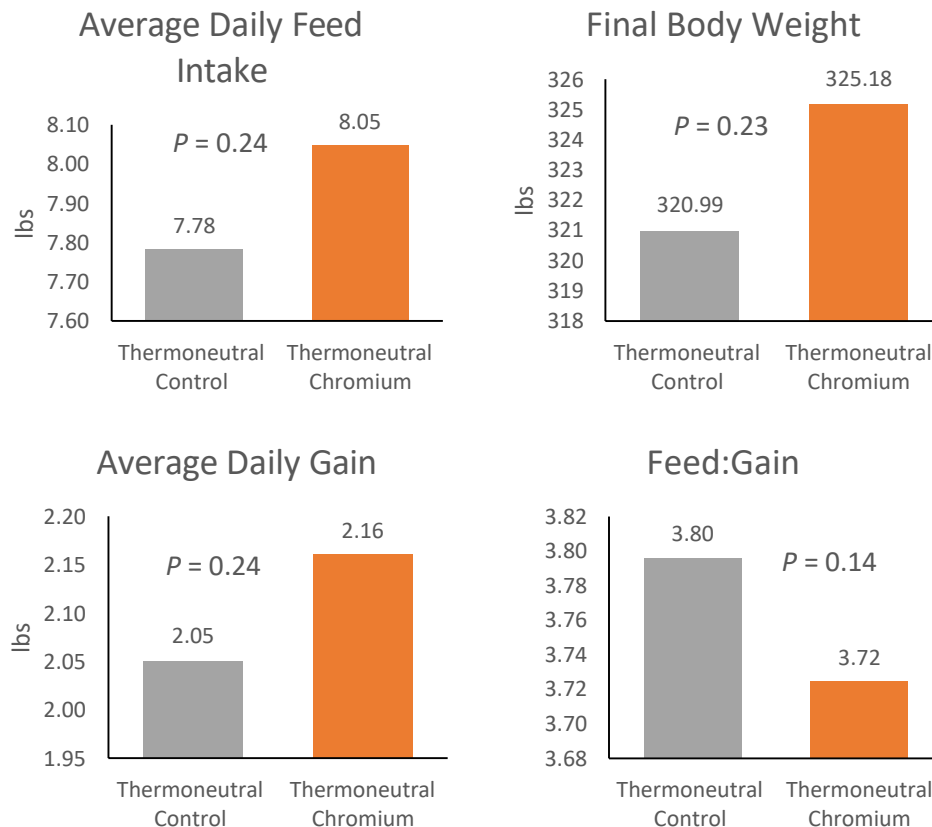


Figure 1. Effect of KemTRACE® Chromium supplementation on growth performance in pigs in thermoneutral conditions.



The U.S. pork industry suffers economic losses of approximately \$1 billion each year due to decreased or inconsistent growth, inefficient feed utilization and other negative effects attributed to heat stress.^{4,5} Figure 2 demonstrates chromium fed pigs had improved feed intake, average daily gain and feed efficiency compared to pigs fed the control diet. Final body weights were increased by 5.95 lbs when supplemented with KemTRACE Chromium.^{1,2}

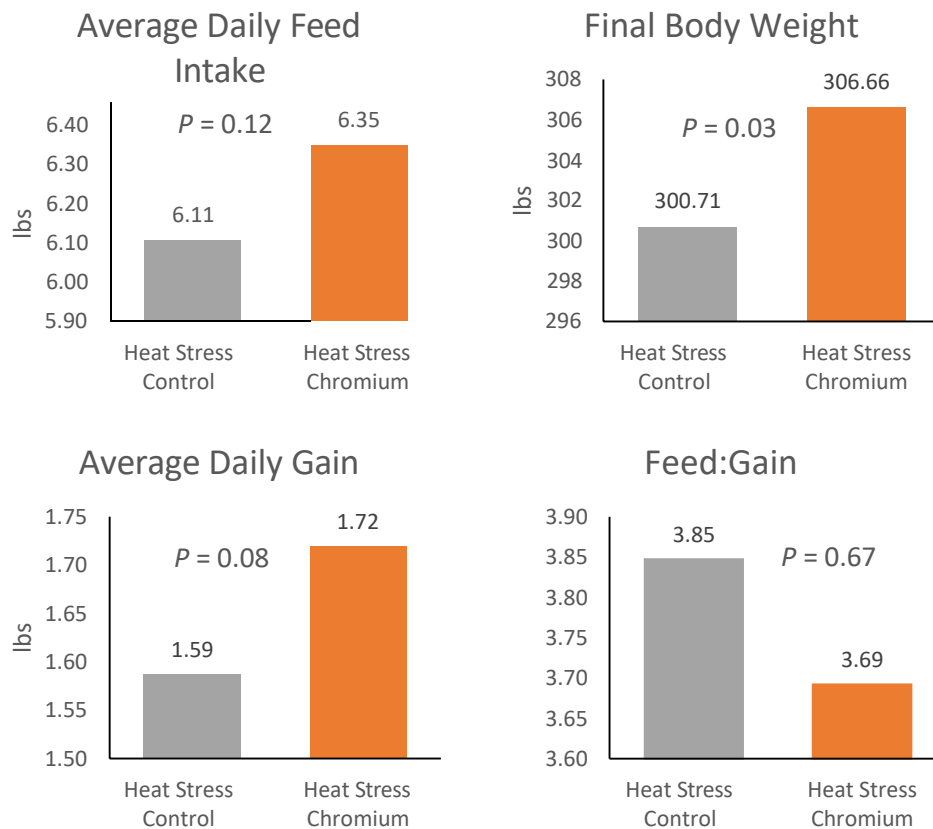


Figure 2. Effect of KemTRACE[®] Chromium supplementation on growth performance in pigs in heat stress conditions.

KemTRACE Chromium continues to demonstrate consistent growth improvements when fed to pigs in both thermoneutral and heat stress conditions.^{1,2}

References

1. Kemin Internal Document, 16-00070.
2. Mayorga, E.J., S. K. Stoakes, J.T. Seibert, E. A. Horst, M. Abuajamieh, S. Lei, L. Ochoa, B. Kremer, and L. H. Baumgard. 2016. Effects of dietary chromium propionate during heat stress on finishing pigs. *J. Anim. Sci.* 94 (sup 2): 139.
3. Miller, T.G. 2012. Swine Feed Efficiency: Influence of temperature. IPIC 25f.
4. St-Pierre et al. 2003. Economic Losses from Heat Stress by U.S. Livestock Industries. *J. Dairy Sci.* 86:(E. Suppl.):E52-E77.
5. Pollmann, D.S. 2010. Seasonal effects on sow herds: Industry experience and management strategies. *J. Anim. Sci.* 88(Suppl. 3): 9.