

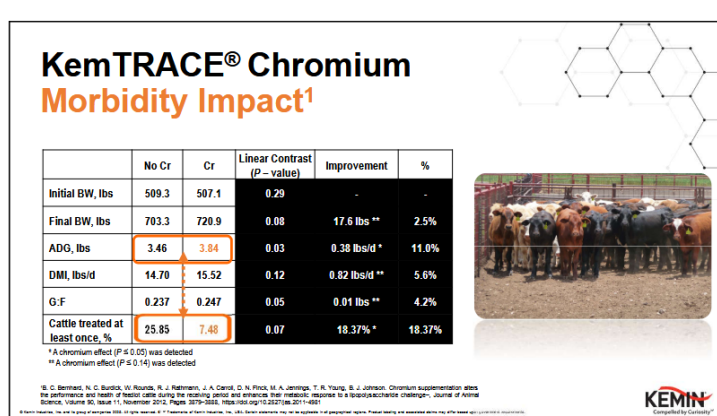
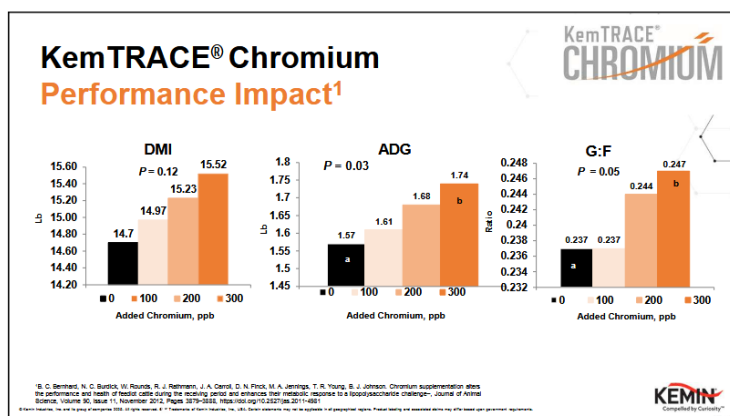


A Look at Chromium Supplementation for Feeder Cattle

Sara Trojan, Technical Services representative from Kemin Industries shared with the crowd at the Beef Stocker Field Day event held in Manhattan a presentation titled: Fueling Performance from the Inside Out: Gut Integrity and Micro-nutrient Support. She set the stage by reminding us about the role the Chromium plays in both human and animal nutrition. Chromium is an essential nutrient and trace element. It aids in lipid and sugar metabolism, diabetic supplementation and is a major commodity in dietary supplements for humans. In the 1990's scientist began to study Chromium supplementation in animals and in July of 2009 Cr propionate was permitted by the FDA as the only source of Chromium in cattle diets.

Concerning dietary availability and storage, small quantities of Cr are stored in soft tissue, is unavailable within plant molecules, contamination occurs from feedstuff harvest, processing and feed delivery. Chromium stabilizes insulin receptors thus increases glucose transport into muscle cells, maximizing glucose uptake for energy requirements. Urinary chromium excretion increases 10 to 300 times during stressful conditions or feeding carbohydrate rich diets.

In feedlot scenarios we know there are a variety of stresses affecting cattle resulting in increased energy demand. These stressors are environmental (heat, humidity, mud, mold and mycotoxins), nutritional (ration changes, new feed and water sources, fiber content, and antinutritional factors), management (transportation exhaustion, processing feed delivery, and stocking density), metabolic (increasing adiposity), social (auctions, comingling, and sorting), and disease (BRD, pathogen, and metabolic related). Chromium becomes essential during the receiving period to help with the immune system's demand for glucose and optimizes the animal's ability to counter disease challenges.



Throughout the feeding period Chromium is available to optimize stress when needed and insulin resistance builds as adipose tissue grows. Chromium helps to continue transfer more glucose into the muscle.

