

# Inclusion of BMC™ (Buffered Mineral Complex) in Horse Feeds Provides Multiple Benefits

**Inclusion of BMC™ (Buffered Mineral Complex) in horse feeds provides three key research-proven benefits to horses: (1) improved gastric health; (2) improved hindgut health; and (3) improved bone density.** BMC™ has been shown in research studies conducted by Kentucky Equine Research (KER) to serve as a potent buffer in both the stomach and large intestine and is also a key component of a new supplement shown to increase bone density.

Reducing acid load in both regions of the gut is important to maintain a healthy GI tract. Limestone (calcium carbonate) is a feed ingredient commonly used as a source of calcium and which has some ability to buffer acid. BMC contains several bioavailable minerals and, when included in horse feed, serves as an alternative to limestone as a calcium source while providing greater buffering capacity throughout the digestive tract.

## Gastric Buffer

Laboratory studies at KER have shown that BMC in horse feed increases buffering capacity by 2.7-fold in acid conditions typically seen in the stomach (Figure 1). Excessive gastric acidity in the stomach has been implicated as a major factor in the development of gastric ulcers in horses.

## Hindgut Buffer

Excessive acid production in the large intestine can lead to hindgut acidosis. Hindgut acidosis often occurs in horses with high grain intakes or in horses grazing rich pasture. Symptoms of hindgut acidosis include poor appetite, loose manure, chronic colic and stereotypic behaviors such as wood-chewing and stall walking. Acute hindgut acidosis can lead to intestinal damage and even laminitis. Research at KER has shown that feeds fortified with BMC have a 54% better capacity to buffer acids produced in the horse's hindgut compared to the same unfortified feed (Figure 2).

## Bone Density

Triacton™, a supplement recently developed by KER, includes BMC and has demonstrated efficacy in increasing bone density in Thoroughbred racehorses (Figure 3). Horses receiving Triacton had a 3-fold greater increase in bone density in the dorsal cortex of the cannon bone (shin) compared to horses receiving a placebo.

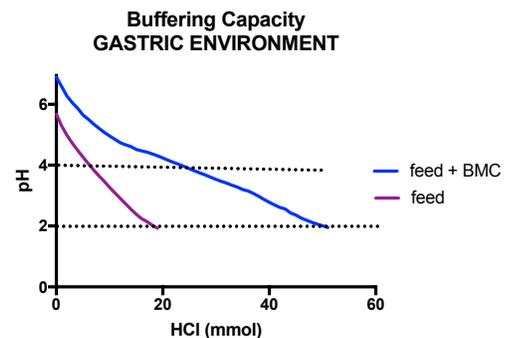


Figure 1. Buffering capacity of feed fortified with or without BMC within typical gastric pH ranges

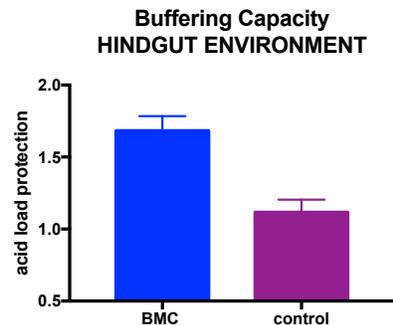


Figure 2. Buffering capacity of feces from horses fed feeds fortified with or without BMC

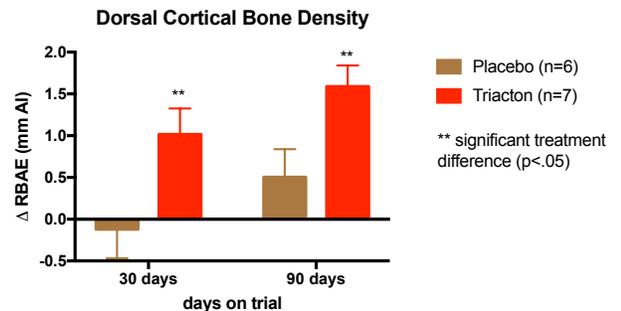


Figure 3. Dorsal cannon bone density in racehorses