



SWINE GUT HEALTH TRIPLE CHECK

Establish the intestinal integrity and protection your pigs need, using our Gut Health Triple Check program.

The Gut Health Triple Check program serves as a support system to **CLEAN UP** contaminants in feed and water prior to animal exposure, **BUILD UP** intestinal strength to reduce leaky gut and **KNOCK OUT** harmful pathogens for healthier pigs.



CLEAN UP

Target specific profit-robbing contaminants in fat, grain, water and finished feed.

- ✓ ENDOX®
- ✓ Grain SHIELD®
- ✓ KALLSIL™
- ✓ KEM SAN®
- ✓ Myco CURB®
- ✓ RENDOX®
- ✓ Sal CURB®

BUILD UP

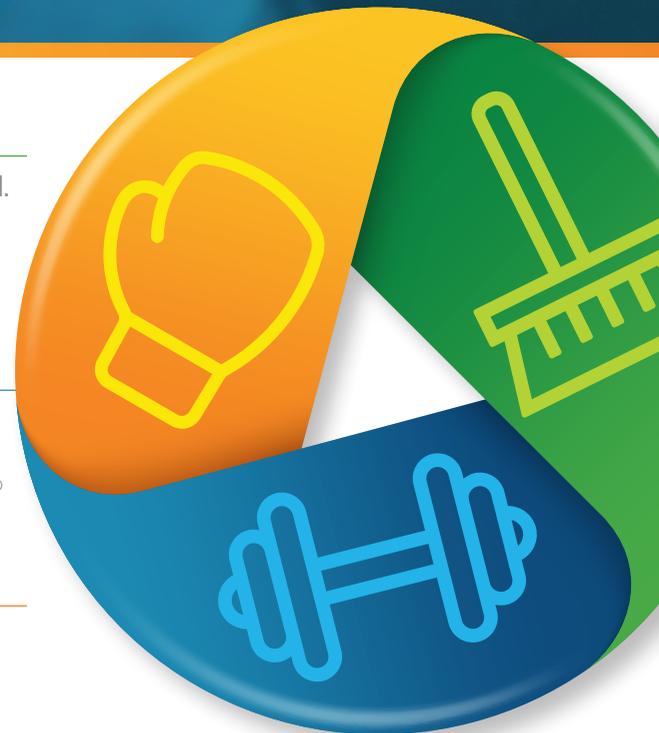
Strengthen the intestinal barrier and immune system to maximize nutrient absorption and inhibit harmful pathogens or toxins.

- ✓ Aleta™
- ✓ ButiPEARL™
- ✓ ButiPEARL™ Z
- ✓ KemTRACE® Chromium

KNOCK OUT

Support intestinal balance to inhibit or eliminate harmful pathogens from infiltrating the body.

- ✓ CLOSTAT®
- ✓ CLOSTAT® WS
- ✓ KEM-GEST™
- ✓ KEM SAN®



SOLUTIONS FOR SWINE

Help each pig reach its full production potential. Establish the intestinal integrity and protection your pigs need using our Gut Health Triple Check program.

Aleta™

Aleta offers a concentration greater than 50 percent of 1,3-beta glucans. Beta glucans have been used in humans and livestock as a way to enhance host protective immunity. Minimizing the impact of disease challenges early on in an animal's life can have an effect on their ability to gain weight faster, convert feed more efficiently and may be less likely to spread disease.

ButiPEARL™

ButiPEARL is the leading source of encapsulated butyric acid for providing targeted delivery along the GI tract. Butyric acid is an integral, short-chain fatty acid acting as an energy source for epithelial cells. Butyric acid also increases the expression of tight junction proteins in the intestines and increases antioxidant levels to promote healing in the GI tract.^{1,2}

ButiPEARL Z

ButiPEARL Z uses proprietary MicroPEARLS® spray freezing technology to encapsulate two synergistic nutrients, butyric acid and zinc. Butyric acid and zinc play an important role in key biological processes affecting the health and performance of livestock.

CLOSTAT® AND CLOSTAT® WS

CLOSTAT and CLOSTAT WS contain a proprietary, patented strain of *Bacillus subtilis* PB6. PB6 is a unique, naturally occurring, spore-forming microorganism. Kemin internal research has shown PB6 can inhibit *C. difficile* as well as other pathogens.³ CLOSTAT WS utilizes the same technology with water-soluble ingredients.

ENDOX®

ENDOX was formulated specifically to protect finished feeds by safeguarding fat-soluble vitamins against degradation, protecting complete feeds from fat oxidation, vitamin loss and more.

Grain SHIELD®

Grain SHIELD is a high-moisture grain preservative used to control molds and fungi in stored grains such as oats, corn, barley, wheat and sorghum. It contains a minimum of 72 percent propionic acid combined with acetic, benzoic and sorbic acids to work as a broad-spectrum mold inhibitor.

KALLSIL™

KALLSIL reduces caking in feed by absorbing moisture. This results in improved flow in feed ingredients to prevent feed from hanging to the sides of the bins.

KEM-GEST™

KEM-GEST is a blend of organic and inorganic acids designed to provide an economical means to acidify swine feed. This multi-acid approach helps protect a pig's GI tract from growth-limiting pathogens. Inhibition of pathogens promotes better gut health and production efficiency.

KemTRACE® CHROMIUM

KemTRACE Chromium – the first product of its kind on the market – is a safe, proven trace mineral. This highly bioavailable, organic source of chromium propionate helps to reduce the negative effects of stress and improve glucose utilization.

KEM SAN®

KEM SAN is a unique combination of effective organic acids. It has been proven to inhibit and kill a broad spectrum of pathogenic bacteria in drinking water. By reducing the pathogen load in the water, there are fewer challenges presented to the pig, which helps maintain gut health.

Myco CURB®

Myco CURB is a mold inhibitor for feed, formulated to inhibit mold growth in processed feed ingredients, complete feed and total mixed rations (TMR). Myco CURB contains propionic acid blended with sorbic and benzoic acids and is buffered for improved equipment and employee safety.

RENDOX®

Rendox stabilizes animal fats and protein meals during the rendering process with antioxidants to maintain product freshness, protect product quality, and increase product shelf life.

Sal CURB®

Sal CURB is an antimicrobial agent made from a blend of aqueous formaldehyde and organic acids. It is used as a *Salmonella* control in feed or feed ingredients to keep products *Salmonella*-negative for up to 21 days.

CHECK OUT OUR LINEUP AT **Kemin.com/GutHealth**

1-800-752-2864

REFERENCES

1. Peng, L. et al. 2009. Butyrate Enhances the Intestinal Barrier by Facilitating Tight Junction Assembly via Activation of AMP-Activated Protein Kinase in Caco-2 Cell Monolayers. *J. Nutr.* 139:1619-1625.
2. Ma, X. et al. 2012. Butyrate promotes the recovering of intestinal wound healing through its positive effect on the tight junctions. *J. Anim. Sci.* 90:266-268.
3. Kemin Internal Document, 09-00010.