

# SWINE TRIPLE CHECK

Help support your pigs' health and performance with the Kemin Triple Check program.

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



## CLEAN UP

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

- ✓ **ENDOX<sup>®</sup>**
- ✓ **KALLSIL<sup>®</sup>**
- ✓ **KEM SAN<sup>®</sup>**
- ✓ **Myco CURB<sup>®</sup>**
- ✓ **OXINE<sup>™</sup> AH**
- ✓ **PRO-OXINE<sup>™</sup> AH**
- ✓ **RENDOX<sup>®</sup>**
- ✓ **Sal CURB<sup>®</sup>**



## BUILD UP

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

- ✓ **Aleta<sup>™</sup>**
- ✓ **ButiPEARL<sup>®</sup>**
- ✓ **ButiPEARL<sup>®</sup> Z**
- ✓ **KemTRACE<sup>®</sup> Chromium**
- ✓ **LYSOFORTE<sup>®</sup> Extend**



## KNOCK OUT

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

- ✓ **CLOSTAT<sup>®</sup>**
- ✓ **CLOSTAT<sup>®</sup> WS**
- ✓ **ENTEROSURE<sup>™</sup>**
- ✓ **FORMYL<sup>™</sup>**
- ✓ **KEM-GEST<sup>™</sup>**

# SOLUTIONS FOR SWINE

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

## Aleta™

Aleta offers a concentration greater than 50% 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 and convert feed more efficiently, and they may be less likely to spread disease.

## ButiPEARL®

ButiPEARL is the leading source of encapsulated butyric acid for providing targeted delivery along the gastrointestinal (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.<sup>1,2</sup>

## 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 pigs.

## CLOSTAT® AND CLOSTAT® WS

CLOSTAT and CLOSTAT WS contain a proprietary strain of *Bacillus subtilis* PB6. PB6 is a unique, naturally occurring, spore-forming microorganism. Published Kemin research has shown PB6 can inhibit *Clostridium difficile* as well as other pathogens.<sup>3</sup> 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.

## ENTEROSURE™

ENTEROSURE is a novel, multi-strain active microbial solution developed through many years of research. ENTEROSURE drives the intestinal resilience of livestock and poultry by directly inhibiting and managing the growth of specific pathogenic bacteria and promoting, restoring, and maintaining a healthy microbiome.

## FORMYL™

The unique encapsulation of FORMYL allows for a targeted release in the digestive tract, resulting in optimal performance. This robust acidifier provides a source of citric acid and calcium formate for use in pig feeds.



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Check out our lineup at [kemin.com/swine](https://kemin.com/swine)



KALLSIL is an enhanced zeolite flow agent for broad-spectrum fungal metabolite control to improve feed quality and support performance. By absorbing moisture from feed, KALLSIL also reduces caking, resulting in improved flow in feed and feed ingredients.

## 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 — 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 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.

## LYSOFORTE® Extend

LYSOFORTE Extend is a unique nutrient absorption enhancer containing a synergistic combination of lysophospholipids, monoglycerides, and a synthetic emulsifier to improve feed efficiency and profitability. It is the next generation of LYSOFORTE, a nutritional emulsifier designed to enhance digestion and absorption of energy-rich feed ingredients, including fats, oils, and fat-soluble nutrients in swine feeds.

## 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.

## OXINE® AH AND PRO-OXINE® AH

OXINE AH and PRO-OXINE AH are effective, fast-acting, broad-spectrum antimicrobial solutions for food processing, equipment, water, and animal health applications.

## 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 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.

#### REFERENCES

- 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.
- 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.
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