



**HumiSyn**<sup>™</sup>

SYNERGISTIC BLEND OF ORGANIC ACID SOURCES

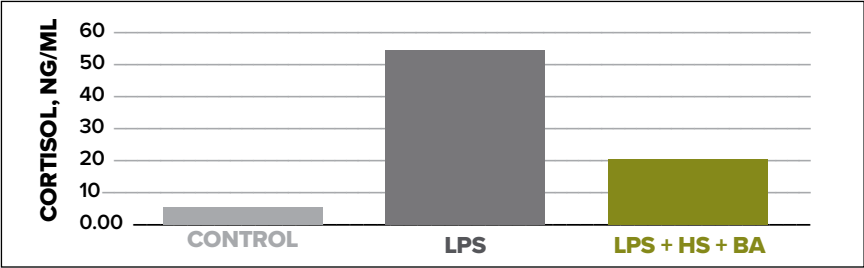
**FOR SWINE**



**innovative  
SOLUTIONS**<sup>®</sup>  
A DIVISION OF KENT NUTRITION GROUP<sup>®</sup>

In Figure 1, Weber et al (2014) observed that when a humic substance was fed in combination with butyric acid the increase in cortisol, a stress hormone, was substantially decreased (~62%) post LPS challenge.

Figure 1.



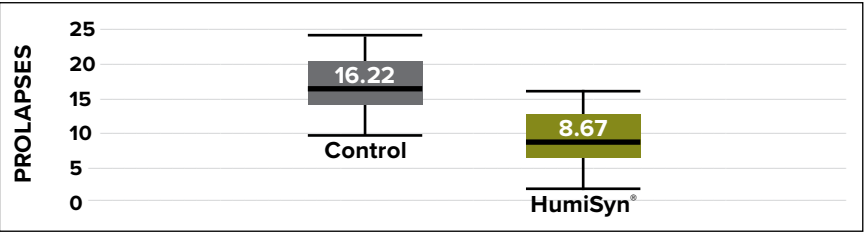
In Figure 2, an evaluation of the effects of HumiSyn IFC4 in nursery pig performance and mortality was conducted at a commercial scale research facility in Iowa. A total of 840 pigs were used in a 42-d study with 21 pigs per pen and 20 pens per treatment group. HumiSyn IFC4 was added at 4lb/ton for phase 1 and 2lb/ton for phase 2 and 3 diets. The results of this study were a significant improvement in ADG and livability. FCR was also numerically better in the HumiSyn IFC4 treatment.

Figure 2.

DAY 0-42				
	CONTROL	HUMISYN IFC4	SEM	P-VALUE
ADG (lb)	1.033	1.065	0.011	0.05
F/G	1.310	1.297	0.005	0.07
MORTALITY (%)	2.6	1.0	0.6	0.04

Sow mortality and attrition continues to be a significant cause of decreased revenue and concern for animal welfare. In a field observation to help improve, sow reproductive performance, HumiSyn WSC4 was delivered via the water in a gestation barn for a minimum of ten days prior to loading sows in farrowing. The HumiSyn WSC4 was mixed at 2oz. per gallon of stock solution and administered at a delivery rate of 1:128. The 9,500 sow farm observed a 53% reduction in prolapse incidences as compared to typical herd performance (Figure 3.)

Figure 3.





**HumiSyn™** nutrition solutions for swine were developed over multiple years of animal nutrition research identifying the synergetic combination of naturally occurring organic compounds and short-chain fatty acids.

Naturally occurring organic acids such as humic and fulvic acid are the two main bioactive ingredients found in humic substance. Humic substances are the result of decomposition of plant, animal and microbial residues over many thousands of years. Humic substances are the main constituents of soil but there are recognized geological formations around the world that are particularly rich in humic substances and are commercially mined for agronomy and for human and animal nutrition.

Scientific observations have shown these known benefits of feeding humic substance to animals:

- Can help improve intestinal health
- Can improve the level of endogenous antioxidant
- Can influence a more favorable energy status
- Can help mitigate the negative effects of stress
- Can bind some mycotoxins present in feed



Butyric acid is a short-chain fatty acid that plays a key role as an energy source for digestive cells. When added to animal feed butyric acid can help improve the gut barrier function and villus height to crypt depth ratio, which can facilitate better nutrient absorption. Additionally butyric acid can help support immune function and help decrease the colonization of pathogenic bacteria in the gut.

*HumiSyn is available in two different delivery methods to pigs of all life stages- free flowing granular for feed formulation and a liquid concentrate for administration in drinking water.*

# **HumiSyn™ IFC4**

HumiSyn™ IFC4 is a free-flowing granular additive for swine feeds. HumiSyn™ IFC4 is a precise formula of a proprietary fresh water Reed-Sedge Peat source, and glycerol tributyrates. The combination of these ingredient sources have demonstrated to provide health and performance benefits particularly in the presence of a disease challenges or stress events.



## **HumiSyn™ IFC4**

**Ingredients:** Reed-Sedge Peet, Glycerol (glyceryl), Tributyrates (tributyryn, butyryn), Silicon Dioxide, Natural Extractives

<i>Swine</i>	<i>lbs/ton of HumiSyn IFC4</i>
Nursery.....	4.0
Grow & Finish .....	2.0
Sow Gestation.....	4.0
Sow Lactation.....	2.0

Feed continuously per animal life stage or as needed particularly during times of stress.

For detailed mixing and feeding directions, consult your Kent Nutrition Group feed representative.



## LIQUID CONCENTRATE FORM

HumiSyn™ WSC4 is a concentrated liquid blend of organic acid sources for swine that can be easily administered via drinking water. A scientifically researched and proven formulation of naturally occurring organic acids and short chain fatty acids.



## HumiSyn™ WSC4

**Ingredients:** Reed-Sedge Peat, Mono and Diglycerides of Butyric Acid, Artificial Flavors, Dried bacillus amyloliquefaciens Fermentation Product, Water.

### SWINE

**Starting Pigs:** Shake HumiSyn WSC4 well. Thoroughly mix 8 oz. of HumiSyn WSC4 into one gallon of stock solution. Administer stock solution via a water proportioner set to deliver a rate of 1 oz. stock solution per gallon of water (1:128) for a minimum of 7 days post-weaning or as needed, particularly during times of stress.

**Sow and Growing-Finishing Pigs:** Shake HumiSyn WSC4 well. Thoroughly mix 2 oz. of HumiSyn WSC4 into one gallon of stock solution. Administer stock solution via a water proportioner set to deliver a rate of 1 oz. stock solution per gallon of water (1:128) as needed, particularly during times of stress.



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