HumiSyn™

SYNERGISTIC BLEND OF ORGANIC ACID SOURCES

INNOVATIVE SOLUTIONS®
A DIVISION OF KENT NUTRITION GROUP®

HumiSyn™

HumiSyn™ nutrition solutions for poultry and swine were developed over multiple years of animal nutrition research identifying the synergetic combination of naturally occurring organic compounds and short-chain fatty acids, humic and fulvic acid and butyric acid, respectively. Humisyn is available in multiple delivery methods — free-flowing granular for feed formulations and water soluble for administration in drinking water.

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 found in Menefeed® MFG 150 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 of poultry and swine.

HumiSyn™ IFC4

FREE FLOWING GRANULAR FORM

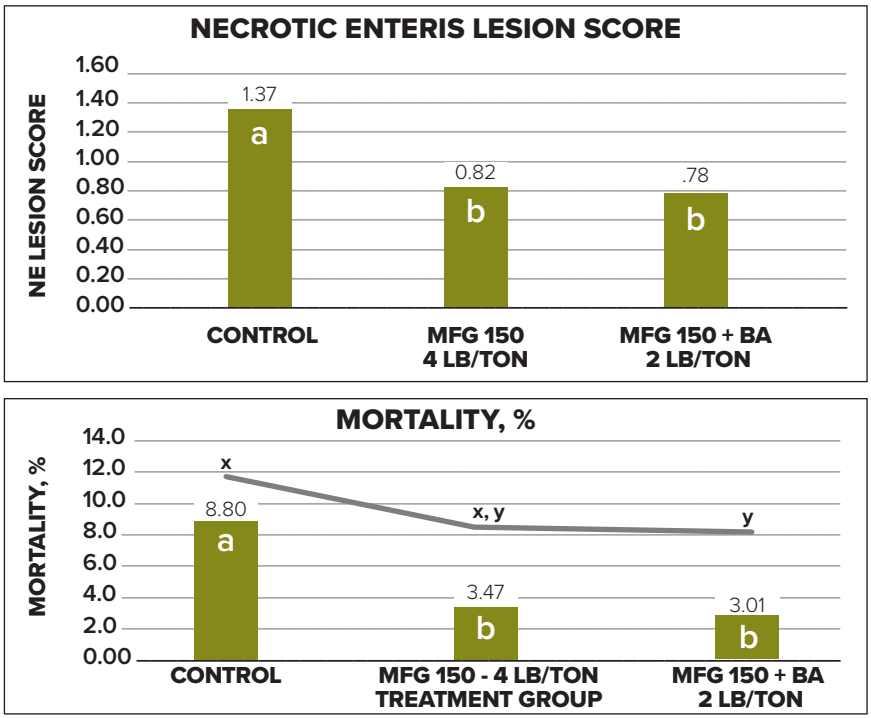
HumiSyn™ IFC4 is a free-flowing granular additive for poultry and swine feeds. HumiSyn™ IFC4 is a precise formula of a proprietary fresh water Reed-Sedge Peat source, Menefeed® MFG 150 and glycerol tributyrate. The combination of these ingredient sources have demonstrated to provide health and performance benefits particularly in the presence of a disease challenges or stress events.

BROILERS

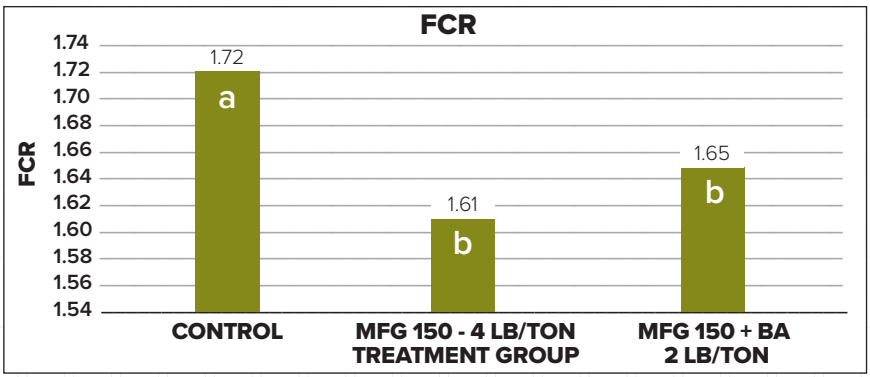
Historically, the use of in-feed antibiotics has a been a management tool to mitigate negative impacts of necrotic enteritis, a disease that causes increased mortality, decreased growth performance and poorer feed conversion rates (FCR). Regulations and consumer demand leading to reduction in antibiotic usage have led to a need for alternative strategies focused on improving intestinal health to help control the negative impacts of necrotic enteritis and other challenges.

Figure 1. The effect of feeding Menefeed® MFG 150 (MFG 150) or MFG 150 plus butyric acid (BA) on intestinal lesion scores, mortality and feed conversion rate (FCR) in broilers challenged with Clostridium perfringens.

Feeding Menefeed® MFG 150 (4lb/ton) or MFG 150 plus butyric acids may allow for greater resilience in the face of enteric challenges such as necrotic enteritis.



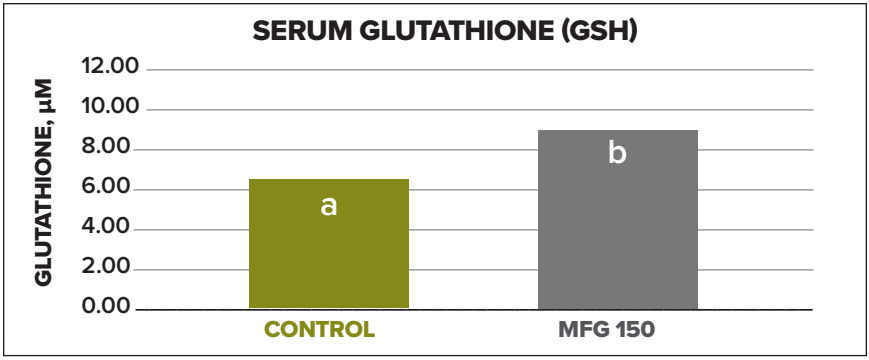
[a, b] Bars in graphs with different letters are different *(P ≤ 0.05)*.
[x, y] Treatment groups tend to differ *(P ≤ 0.10)*.

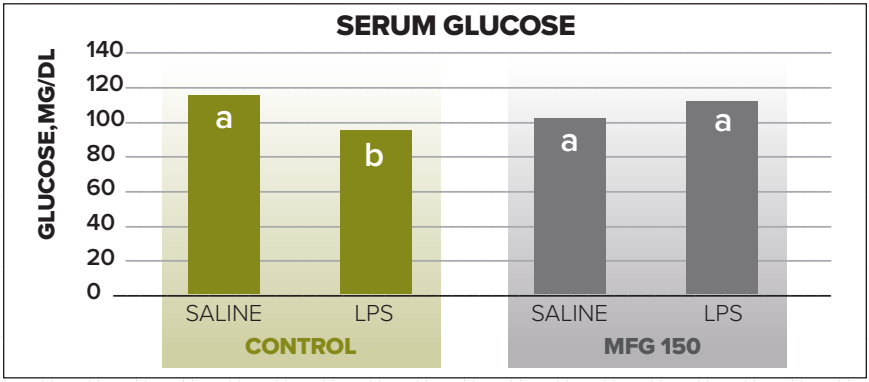


SWINE

Weber et al (2014) observed that pigs fed Menefeed® MFG 150 had increased serum glutathione levels, Figure 2. Increased levels of this important endogenous antioxidant may be indicative of an improved antioxidant status. In the same study, pigs fed MFG 150 maintained greater serum glucose levels when subjected to an inflammatory challenge model in the form of E. coli lipopolysaccharide (LPS) injection. This suggests that pig supplemented with MFG 150 maintain a more favorable energy status enabling them to better cope with challenging scenarios.

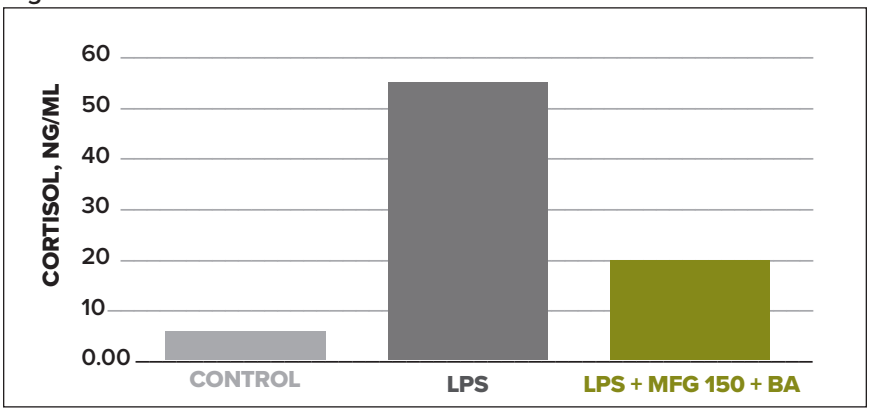
Figure 2.





In Figure 3, Weber et al (2014) also observed that when MFG 150 was fed in combination with butyric acid the increase in cortisol, a stress hormone, was substantially decreased (~62%) post LPS challenge.

Figure 3.



HumiSyn™ IFC4

Ingredients: Reed-Sedge Peet, Glycerol (glyceryl), Tributyrate (tributyrin, butyrin), Silicon Dioxide, Natural Extractives

Recommended Feeding Rates

Poultry	*lbs/ton of HumiSyn IFC4*
Broiler	2.0 - 4.0
Layer	2.0 - 4.0
Turkey	2.0 - 4.0

Swine	*lbs/ton of HumiSyn IFC4*
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 feedign directions, consult your Kent Nutrition Group feed representative.

HumiSyn™ WSC4

LIQUID CONCENTRATE FORM

HumiSyn™ WSC4 is a concentrated liquid blend of organic acid sources for poultry and 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, Water.

POULTRY

Starting Broilers and Game Birds: Shake HumiSyn WSC4 well. Thoroughly mix 4 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. per gallon of water (1:128) for 7 days post-hatch or as needed, particularly during times of stress.

Starting Turkeys: 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. of stock solution per gallon of water (1:128) for 7 days post-hatch or as needed, particularly during times of stress.

Layers (Production, Maintenance, Breeding): 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. of stock solution per gallon of water (1:128) as needed, particularly during times of stress.

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 7 days post-weaning or as needed, particularly during times of stress.

Growing-Finishing Pigs: Shake HumiSyn WSC4 well. Thoroughly mix 1 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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