



A GROWING WORLD NEEDS SUSTAINABLE SOLUTIONS

Agrozyme Feed Factsheet

Jan 2018

IN THIS ISSUE

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About Agrogenics

Agrogenics supports an environmental friendly ideology and is committed to provide clean, non-toxic, sustainable bio-organic solutions and resources for our world.

We strive to create a great impact by balancing good business for our customers, and our company while leading environmental and social change and is committed at making a sustainable difference in the world by reducing dependency on toxic chemicals in our daily living through providing unique solutions.

At Agrogenics, making a difference starts with every single individual.

Agrozyme Feed

The **AGROZYME FEED** additive is a premium enzyme-based additive for animal feeds to enhance overall health, quality and achieving profitability. Finding suitable ways to improve feed efficiency and effectiveness is critical to profitability. This can be achieved with the **AGROZYME FEED** additive. Using the 100% natural non-toxic food grade **AGROZYME FEED** formulation

produces more dietary energy, improves protein digestibility and increases the availability of nutrients such as starch, amino acids, and fat.

Enzymes are scientifically proven to help improve digestion of protein and energy as well as improving phosphorous metabolism, allowing producers to decrease the use of expensive ingredients when necessary. Enzymes also allow for the incorporation of a wider variety of more cost-effective ingredients without affecting performance.

Agrozyme Feed Benefits

AGROZYME FEED optimize feed formulations to:

- Promote more efficient meat production
- Deliver feed cost savings
- Support a healthy digestive system
- Protect the environment by reducing animal waste, phosphorous and nitrogen releases into the environment



Profit and Cost Management Using Agrozyme Feed

AGROZYME FEED usage effectively produced overall higher profits and lowered operations cost while running an all organic, environmentally friendly set up.

Page 3



Growth Performance

Growth performance on using the **AGROZYME FEED**.

Page 4

Gut Health

Gut Health

The digestive tract is a vital organ in which feed is reconstituted biochemically into body growth. This is a huge metabolic effort, and only a healthy digestive tract is capable of dealing with this effort in a competitive biodiverse environment and under sometimes challenging external conditions. The fundamental objective is to keep this important organ healthy, thereby maintaining its functionality on a high and efficient level. The gut microbiota is an active participant in this digestive process, being influenced by diet, host physiology, as well as environmental factors and stress.

Pig intestinal health is critical to animal health and performance and there are many strategies to achieve this. In an antibiotic-free production system, strategies for



optimal production are likely to be multi-factorial, addressing feed intake, digestion and growth rate. Combining water and feed applied additives, such as **AGROZYME FEED**, can improve growth performance in

antibiotic-free production systems, by supporting optimal digestion and gut health.



Percentage of lean meat increased over healthy pigs after using AGROZYME FEED without the use of antibiotics.

Observations on livestock after AGROZYME FEED implementation:

- Death Rate Decreased
- Death Rate at Birth Decreased
- Diseases in livestock Decrease
- Body fat percentage Decreased
- Lean meat percentage Increased
- Duration to reach desired weight for sales Decreased

Enzyme

Enzymes are natural catalysts that are produced by living organisms to increase the rate of an immense and diverse set of chemical reactions required for life. They are involved in all processes essential for life such as DNA replication and transcription, protein synthesis, metabolism and signal transduction, etc. Enzymes possess the ability to perform very specific chemical transformations has made them increasingly useful in industrial processes. **AGROZYME FEED** can increase the ability to digest nutrients, optimizing efficiency in feed, and feed utilization, ensuring you a lower cost of operation. At the same time, these helpful enzymes can degrade unacceptable components in feed, which may be harmful or of negligible or no value. Another benefit is the positive impact on the environment by allowing better use of natural resources and reducing harmful fecal bacteria to the environment.

Type: The **AGROZYME FEED** contains a proprietary combination of enzymes and high-speed metabolites catalysts delivered in a live microbial form.

Pork

0.2- 0.5 kg/ MT of Feed*

* or per recommended by a qualified nutritionist

Nutrient Values

AGROZYME FEED is a blend of enzymes mixed with rice bran extract and soybean meal extract.

Product Characteristics

Appearance:	White to mild yellow brown powder
Moisture	7.70%
Temperature:	Melting Point: 150 Degree Celsius
pH:	6.13
Solubility:	1-25% in water
Density:	0.726/ cm ³
Packaging	25kg box (250 x 100g packs)

Shelf life: 24 months from day of manufacture

Storage Keep material and container tightly closed. Store at dry, cool conditions. Keep out of direct sunlight. Best < 44 Degrees Celsius/ 110 Degrees Fahrenheit



OBSERVATIONS



Profit and Cost Management using Agrozyme Feed

Death Rate Decrease

Death Rate of pigs decrease after farm included **AGROZYME FEED** in operations.



Effective Use of Resources

Collection of manure waste and water allowed for harvesting methane to supply power for electric generators to drive ventilation fans. The result was a clean farm with low levels of ammonia and huge savings on electricity and washing.

FAST FACTS

0.5%

Death Rate of piglets at birth reduced drastically from 5.0% to 0.5% after using the **AGROZYME FEED**.

40%

Farmers managed to save 40% on monthly electrical costs after using methane harvested from pig waste.

Agrogenics has developed solutions built around challenges and needs such as gut health, structural integrity, pathogen control and feed cost optimization. We focus on ways to help producers better manage their animal's nutritional needs and maximize their return on feed cost investment for healthier, more productive livestock.

The implementation cost for **AGROZYME FEED** is a small fraction to the overall benefits and returns for its effectiveness:

Items	Results	Profit Increased
Mortality		
Death Rate	Decreased	YES
Death at Birth	Decreased	YES
Morbidity		
Deformity	Decreased	YES
% Illness	Decreased	YES
Growth/ Quality		
Time taken to reach desired weight	Decreased	YES
Body fat %	Decreased	YES
Sales Price	Increased	YES
Operations		
Operations Cost	Decreased	YES
Environmental Cleanliness	Increased	YES

Overall positive impact on the total farm operations way surpassed the fractional cost invested on **AGROZYME FEED**.

The **AGROZYME FEED** enzymes reduces feed cost by \$5.00 to \$9.00 per metric ton (Depending on ratio and use). This promotes the effective use of limited resources.

Outstanding results using the AGROZYME FEED:

More piglets born per cycle and Death Rate lowered as the constitution of the sow were greatly improved with the use of **AGROZYME FEED**.

Death Rate at Birth lowered from a median 5% to as low as 0.5% over observation.

It was observed that livestock that were put on the **AGROZYME FEED** had lesser illnesses and had increased vitality overall. This was due to the increased ability of digestion and excellent gut health.

All these favorable results potentially directed to increased profits for you.

FOR MORE INFORMATION

Visit www.agrogenics.com

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Growth Performance

Growth Performance

Poor piglet growth, high sow replacement rates, and high feed ingredient prices are realities the pork industry faces every day. There also are varying qualities of feed ingredients, animal health challenges and changes in livestock policies and regulations like the reduction of antibiotics in pork production that pose consistent challenges to producers.

When feed enzymes were first used more than a decade ago, their acceptance was limited to phytase applications for reduced phosphorus excretion. Although feed enzymes have been utilized for many years, we have only scratched the surface as research on feed enzyme technology.

The greater understanding of feed enzyme use comes at an ideal time as the demand for high-quality protein globally continues to rise. With advancements in management and technology, animals are in production for a relatively short time. Producers need to maximize that time efficiently in order to meet increased protein requirements, including getting the most out of the feed.

Producers need to get smarter about optimizing animal production in a sustainable manner — and **AGROZYME FEED** offers an opportunity to do that. Agrozyme Feed can be introduced into the feeds from the **Starter Stage**.

Combating indigestible ingredients

Swine diets traditionally contain highly digestible corn and soybean meal as base ingredients. A corn-soybean meal diet is about 85 percent digestible, leaving approximately 15 percent of the diet unavailable to the animal. The indigestible portion is increased in young animals that have minimal endogenous enzymes production within their digestive tracts.

Not only are these costly ingredients not being utilized, they are also causing detrimental effects in the gut. Undigested nutrients cause gut irritation and possibly diarrhea creating suboptimal conditions affecting nutrient absorption. This is another situation where enzymes can play a part.

In addition, nutritionists are seeing more alternative ingredients due to commodity price fluctuations. This creates a challenge as these ingredients have low digestibility and contain an increased amount of anti-nutritional factors.

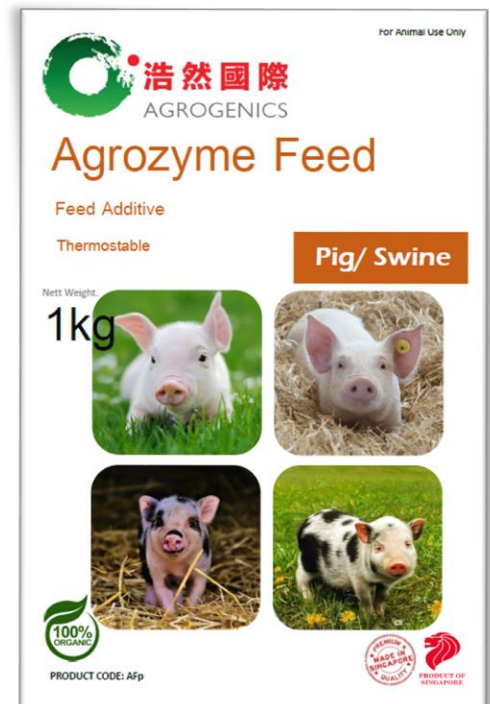
Benefits and Growth Performance using **AGROZYME FEED**:

- Reduction in diet costs when the ingredient price matrix allows.
- Growth or feed efficiency is improved as a result of nutrient release, resulting in a decreased cost per pound of meat.
- Agrozyme Feed plays a role in enteric health management.

FAST FACTS



Ammonia levels in the air greatly reduced after using AGROZYME FEED. Washing was reduced as a result. Using Agrozyme Feed has brought about many indirect cost savings on operations.



AGROZYME FEED Packaging:

- *Thermostable (Waterproof, Heatproof)*
- *Shelf Life of 2 years*
- *Most suitable for Swine, Cattle, Lamb, Horses*

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