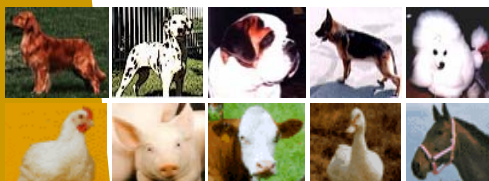


Recommended Dosage

	DINASE 30%	Grams / M.T.
Broilers		
Broilers		125
Layers		125
Turkeys		125
Cattle		
Meat type	2.2 mg/kg of weight to max. 845 mg/head/day.	
Dairy	2.2 mg/kg of weight to max. 845 mg/head/day.	
Horses	2.2 mg/kg of weight to max. 750 mg/head/day.	
Pigs		
Pre Starter		125
Starter		125
Lactating Sows		125
Grower		62.5
Finisher		62.5
Gestating sows		62.5
Rabbits		125
Cats		112
Dogs		224
Aquatic Species		125



Composition

	D
Pure Yucca Schidigera extract total dissolved solids	30%
Free flowing silicon dioxide carrier, calcium carbonate & mineral oil.	70%
Total	100%

Product Specifications

Color	Medium to light tan powder.
Guaranteed Analysis	30 % Natural Yucca Schidigera extract supplement.
Storage	Dry and cool environment. Keep container closed. This product is hygroscopic.
For Use in	Poultry, pigs, dairy cattle, aquatic, equines and pet feeds.
Directions	Use up to 125 grams per metric ton.
Bulk density	22 lbs. per cubic ft.
Particle size	60 mesh
Listed as	GRAS (<i>Generally Recognized As Safe</i>).



DIVERSIFIED NUTRI-AGRI TECHNOLOGIES INC.
 130 C. JOHN MORROW PARKWAY #220
 GAINESVILLE, GA. 30501-1247
 TEL 770 531 1309, FAX 770 234 6283
 e-mail "info@dinatec.com"
 Visit our web site at <http://www.dinatec.com>

"A Dynamic Approach to Nutri-Agri Product Research and Technology Development"



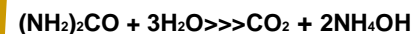
DINASE 30 RY S.D.

Advanced Urease Inhibition Technology

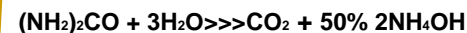


Dinase is a 100% natural extract of the Yucca Schidigera plant.

Without **DINASE**...



With **DINASE** ...



DINASE Q & A

What is DINASE?

DINASE is a high technology feed additive that inhibits urease activity and therefore reduces ammonia gas levels and other odors in the organic waste of the animal, and the environment.

How does the enzyme urease produce ammonia?

The urease enzyme converts urea and other nitrogenous compounds into ammonia and carbon dioxide. Increased dietary protein will also increase ammonia excretion.

What is the active ingredient of DINASE?

DINASE is a naturally concentrated extract of the *Yucca Schidigera* plant, obtained through a low temperature pressing process that assures retention of natural ingredients and efficacy. Other brands may use heat-extraction which destroys the active ingredient.

How does DINASE work?

By:

- Inhibiting urease activity in the intestines,
- Reducing ammonia concentration in intestines,
- Decreasing PVDO (*Portal Vein Drained Organs*) mucousal tissue turn-over rate
- Reducing oxygen and nutrient demand of PVDO (*Portal Vein Drained Organs*), making these available for improved growth and feed conversion.

Why is ammonia gas dangerous to animal health?

Ammonia is an irritating and toxic gas that is excreted in the feces and urine of animals. This gas is detoxified in the liver, using up energy normally conserved by the animal for muscle building and other productive purposes. As a result of continued exposure to ammonia, feed intake, sexual maturity and rate of lay will be affected negatively. Aerial ammonia increases the incidence of respiratory infections due to irritation in the respiratory tract. Higher Feed conversion economically affects the producer. It is therefore important for the producer to be aware of the potential performance loss of animals exposed to prolonged high levels of ammonia.



How are we going to detect ammonia in the animal house?

The rule of thumb is: if there is a burning sensation to the human eye, atmospheric ammonia is 50 ppm or above. There are other objective methods of measurement.



What is the advantage of DINASE as a urease inhibitor against an ammonia binding product?

DINASE as a urease inhibitor is much more effective than binding ammonia. Investigations show a direct inhibitory effect over the urease enzyme, which diminishes ammonia and carbon dioxide emanations.

DINASE not only diminishes ammonia emanations, but decreases urease activity as well. The effect is not that of ammonia binding, but inhibition of the urease enzyme. This is the technological advantage of a urease inhibitor like **DINASE** over ammonia-binding products.

DINASE inhibits urease as much as 50%

DINASE inhibits the urease enzyme by approximately 50%, the most effective treatment option. The result is a 50% reduction of ammonia levels in the intestine and the environment.

Aside from ammonia, can DINASE also inhibit other gases or odor? Yes. Studies with dogs fed **DINASE** showed a 50% reduction of skatole and indole in the feces. (*Skatole and indole are the by-products of bacterial degradation of amino acids. These are the compounds responsible for the boar odor in swine.*) It was concluded the reduction was due to an altered bacterial population in the animals' intestinal lumen.

Economic advantages by using DINASE

Results from swine and poultry experiments abroad revealed the following:

In swine, DINASE

- Reduces environmental ammonia by 50 %.
- Reduces intestinal ammonia by 50 - 60 %.
- Improves Feed Conversion (FCR) by 4.5%.
- 1.3 more weaned pigs/sow/year.
- Improves weight gain by 4.9%.

In Dairy cattle

- Dairy Cattle, 3½ lbs more milk/ cow/ day

In broilers

- 40% reduction in ascitis mortality.
- Weight gain increases by 2 %.
- Improves Feed Conversion 2%.
- Layers 4-6, more eggs.
- Pets show a reduction of 50% plus in environmental odors, better health and overall disposition.

