

NitriZyme™

6-0-0

Commercial liquid fertilizer

Statement of Composition:

Total Nitrogen (N).....	6.0 %
4.20 % Ammoniacal Nitrogen	
0.10% Nitrate Nitrogen	
1.50 % Water soluble organic Nitrogen	
0.20 % Water insoluble organic nitrogen	

CA Approved
Cert. Pending

Derivation:

Enzymatically digested ocean going fish, hydrolyzed fish meal, and blood meal.

Net Weight: 10.2 lb./gal (1.22 kg/l)

DIRECTIONS FOR USE

General Information: NitriZyme™ is a naturally derived liquid Nitrogen fertilizer designed to provide growers with a safe, stable and easy to apply fish-based fertilizer for soil or foliar use. This product complies with organic certification standards for use in conventional and certified organic growing.

Stability: NitriZyme™ is stable over a broad range of storage conditions. However, maintenance of a solution pH of 4.0 or lower will ensure proper shelf life and ease of use. Where warranted adjust pH with sulfuric acid. Do not introduce foreign materials (fertilizer) or water into NitriZyme, unless previous experience or a jar test indicates compatibility.

Compatibilities: Do not dilute stored material with water or fertilizers. Do not add microbes, from any source, to stored product.

Handling: Follow appropriate general safety procedures. In case of accidental exposure, flush with plenty of water. Refer to Material Safety Data Sheet (MSDS) for additional information.

SHAKE, STIR OR AGITATE BEFORE USE. When handled in bulk quantities, storage in a cone bottomed tank is recommended to facilitate agitation. When stored in a cone bottomed tank, agitate 10 minutes prior to use. When stored in a flat-bottomed tank, agitate 20 minutes before use. Avoid air blast agitation as foaming may result. If foaming does occur through normal agitation, use an approved food grade defoamer. Agitation is recommended once every month.

APPLYING NITRIZYME™

NitriZyme™ is a suspended fish based Nitrogen fertilizer. NitriZyme™ can be applied via seedline, side-dress shank injection, sprinkler, drip fertigation, subsoil drip line fertigation, drenching, mixing in the transplant water, using a soil covering method or as a foliar.

General application guidelines: Use 5-50 gallons per broadcast acre equivalent early in the growing season, or as needed. See the placement specific guidelines below (Table 1) for further placement efficiency guidelines. This product is of most benefit to plants when applied in advance of rapid growth and development.

Environmental factors:

Note: Utilize soil and tissue testing to determine nutrient needs. Where warranted, adjust fertilizer rates to determined crop need.

General Rates For Application:

Broadcast rates for NitriZyme™ can be reduced in field grown crops in the following ways: Foliar, shank injection, banded, in furrow sprays, soil covering methods, layby, drench, in the transplant water, sprinkler or by drip fertigation. Means to calculate rates will be elaborated on below. The following table gives approximate recommendation of rates that are usually applied per total acre equivalent. **However, actual rates should be determined by crop demand, soil and tissue testing.**

Table 1.

Soil Application: Use diluted NitriZyme™ at a rate of 2 parts water to 1 part NitriZyme™. Use a minimum of five gallons per acre and up-to a maximum of established crop demand.

Foliar Application: * Dilute NitriZyme™ at a rate of 10 parts water to 1 part NitriZyme™. Recommended applications rate is 2 to six gallons of NitriZyme™ per acre.

**= To avoid potential leaf burn, apply foliar sprays in the early morning, evening or at night*

General Guidelines Application:

Banding: For banded (shank injection, band drench or seedline dribble) applications to the treatment area is actually the area covered by the band, not the total cropland planted. Some application recommendations are based on treating in-the-row and these rates are generally specified as liquid amounts of product per certain row length. Others express rates as amount per treated acre, which means the total area treated with the product. If rates are expressed as amount per treated acre and banded applications are used, the amount of product used will be proportionately less. The following formula can be used to calculate the amount of NitriZyme™ needed per acre of crop when banded applications are made:

Band width in inches

----- X Broadcast rate/Acre = Total amount needed per acre.

Row spacing in inches

Drenching Method: Apply NitriZyme™ in sufficient water or fertilizer to move NitriZyme™ off the soil surface and into the root zone, but not beyond. See band application calculations for instructions on calculating the amount of product to apply.

Soil Coverage Method: At planting time apply a minimum of 5 gallons of NitriZyme™ per acre. Please reference the banding application notes listed above concerning band application calculations. Apply the specified dosage to the soil around the seed and to the covering soil as it fills in the furrow. The product should be below the seed as much as possible, with the exception of potatoes where it should generally be above the seed piece.

Sprinkler: Apply 10 gallons per acre or up to established crop demand in sufficient amounts of water to percolate the material to the rootzone and not beyond. Applications in the middle third of the irrigation set tend to give the best results. Continue irrigation after the injection to clean out the irrigation lines and to facilitate product movement.

MICRO SPRINKLER OR DRIP IRRIGATION SYSTEMS

(CAUTION: NitriZyme™ is fine filtered to 150 mesh to ensure trouble-free and safe applications through most brands of micro-irrigation systems. Please refer to your systems manufacture's guidelines or personal experience for appropriate screening size safety. When in doubt inject NitriZyme™ ahead of media filters or screens.)

Fertigation Application Guidelines: Broadcast rate should be dependent on the crop, depth of application, water holding capacity of the soil, and soil or tissue testing. For proper application:

1. Determine the area (length x width) to be treated, divide by the number of acres and multiply by the rate per the number of acres to be treated. This number is the total gallons of NitriZyme™ needed to treat the field or irrigation block.

2. NitriZyme™ can be safely metered into drip systems. Determine the amount of water needed to saturate the root zone (0.5" to 1.25" of water), divide this by the time needed to apply the necessary water. This number is the time required to make the application of NitriZyme™.

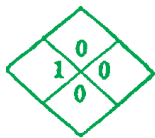
3. Divide the number of gallons from Step 1 by the treatment time in Step 2. This number is the application rate of NitriZyme™ per unit of time. Apply NitriZyme™ at this treatment rate until desired application rate has been reached.

Drip Fertigation Calibration Instructions: During pre-irrigation check drip line for uniform distribution (See calibration information below) and repair if necessary. Once the system is calibrated add the amount of NitriZyme™ required for treatment as calculated above, to the middle third of the irrigation set. Follow these guidelines:

Step-by-Step Instructions

- Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters are putting out the same amount of water.
- Before starting to calibrate, operate the system until all emitters are putting out equal flow rates or until the system is operating at full pressure.
- Only pressure injection or venturi equipment is recommended.
- Determine the area to be treated in each irrigation run.
- For calibration, substitute a concentrated detergent or a soluble fertilizer in the injection tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If a soluble fertilizer is used, measure the time intervals with a salt bridge.
- If the period of detection of the indicator solution between the emitters are within two minutes of each other, comparable coverage will be obtained.
- Once the system is calibrated, dilute the needed amount of NitriZyme™ with water using a minimum of 5 parts water/fertilizer solution to 1 part NitriZyme™.
- Do not begin to inject NitriZyme™ into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
- Inject NitriZyme™ into the system in the middle of the irrigation set of a 1/2 - 1 inch of irrigation water. With at least 1/4" of additional water to move product off of the surface.

Manufactured by:
Bio Scientific, Inc.
4405 S. Litchfield Rd., Avondale, AZ 85323
1-800-USA-BIO1



Net Contents _____ BULK _____ gal (_____ l)

Lot No. _____

Revision Date: 2/3/04
Version CA5

1 "NitriZyme™ is the trademark of BioScientific, Inc.

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions. Seller makes no other warranty of representation of any kind, expressed or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of the seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. The exclusive remedy against seller shall be a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort. Any controversy of claim arising out of, or relating to this contract, or breach thereof, shall be settled by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgement upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.