

Eubio-NBS Aquaculture Enhancement Technology



Next Generation Natural Biological Stimulant (NBS)
Profit Performance – University Field-Proven

Industries:

- All Aquaculture
- Fish Farming
- Fresh water shrimp
- Salt water shrimp

Benefits:

- Increased shrimp larval survival
- Increased nursery fish survival
- Increased grow-out survival
- Increased feed conversion rates
- Increased average daily weight gain
- Increased stocking densities*
- Reduced off-flavor at harvest
- Increased market value

Water Quality Maintenance:

- Improved water clarity & quality
- Reduced bottom sludge
- Reduced ammonia
- Reduced nitrite
- Reduced nitrate



Improved Yield, Stock Health & Efficiency

Eubio-NBS is an aqueous based propriety technology solution that functions as a biostimulator that increases microbiological activity in water. It contains no foreign active bacteria, enzymes, nutrients or other biological components in itself, but instead, relies on stimulating these biological elements found in the locations where Eubio-NBS is applied to deliver increased activity.

As a “next generation” biological stimulant, Eubio-NBS is designed to provide increased profitability in existing aquaculture operations.

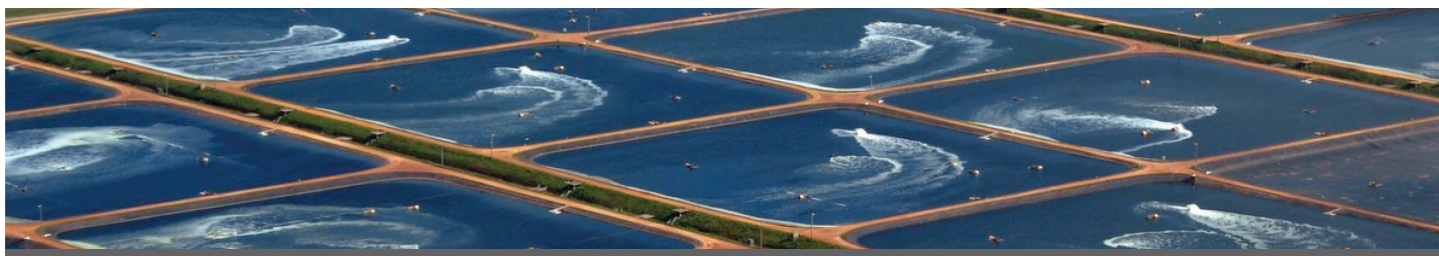
Rarely has any such technology undergone such rigorous evaluation by a Government University to quantify benefits to existing fish and shrimp farming operations (See Evaluation studies on page 2).

Eubio-NBS technology increased survival rates, feed conversion, growth rates and stocking rates while improving water quality.

One of the greatest indicators of Eubio-NBS’s ability to safely grow healthier tilapia fish, faster, is our results in “off-flavor” testing.... **“Zero off-flavor characteristics, that were detectable by smell or taste”** (Measured and validated by University controlled testing see Page 2).

Driving profitability in Aquaculture





Case Study Testing for Eubio-NBS in Aquaculture

Brazil has a large and growing Aquaculture Industry that is a major employer in rural communities. It engenders the Federal Government's encouragement to develop competitive and sustainable operations.

Eubio-NBS's independent case studies were undertaken in Brazil by the Federal Institute of Education, Science and Technology of CEARA-IFCE ARACATI CAMPUS. The testing was supervised by Professor Glacio Souza Araujo, assisted by Undergraduates in Aquaculture namely, Cicero Silva Rodrigues De Assis and Bruno Araujos Dos Santos.

Below are a number of the tests performed and summary outcomes vs control. Detailed test reports may be viewed upon arrangement with a EubioTec representative.

**Larviculture of Marine Shrimp Litopenaeus vannamei with the application of Eubio-NBS*

Summary Results: Average Final Survival Rate UP 17%, Final Weight UP 8.4%, Total Final Harvest Weight UP 27.8%

**Nursery Phase Oreochromis niloticus Cultivation in Low Salinity Water Dosed with Eubio-NBS that Stimulates Microbiological Activity in Aquatic Environments*

Summary Results: Major Reduction in Bottom Sludge
Increased Water Quality

**The Effect of Stocking Density on Tilapia Pisciculture During The Nursery Phase While Applying Eubio-NBS to Stimulate the Activity of Microorganisms that Consume Organic Matter*

Summary Results: Increased Stocking Density, Decreased Biomass,
Increased Feed Conversion

**The Effect of Stocking Density on The Zootechnical Performance of Nile Tilapia, Oreochromis niloticus, During the Fry Stage in Association with the Application of Eubio-NBS that Stimulates the Microorganisms that Consume Organic Matter in Water*

Summary Results: Increased Stocking Density, while Maintaining Increased Food Conversion with Increased Dissolved Oxygen and Water Quality

**Off-Flavor Detection in Tilapia Cultivated in Conditions in which Eubio-NBS Stimulates the Activity of Microorganisms that Reduce Organic Matter*

Summary Results: Off-Flavor scores of ZERO from Sensory Analysis

**Aquaculture Live Fish & Shrimp Transport*

Summary Results: Supports increases in freight time for live produce
Fish/Shrimp arrives in similar condition as live harvest
Ability to provide fresh harvest after transport for premium price

Test Results:

17%
INCREASED



SURVIVAL RATE WITH EUBIO-NBS

27.8%
INCREASED



FINAL HARVEST WEIGHT

LARGE
INCREASE



IN PRODUCT MARKET VALUE

Eubio-NBS
INCREASED



STOCKING DENSITY

Eubio-NBS
INCREASED



FEED CONVERSION

Eubio-NBS
INCREASED



WATER QUALITY & DISSOLVED OXYGEN

ZERO
OFF-FLAVOR



SCORE RESULT WITH EUBIO-NBS

MAJOR
DECREASE



IN BOTTOM SLUDGE & BIOMASS