

# FIELD STUDY REPORT



## **EnviroDEFENSE<sup>®</sup> PurPond Aquaculture** **Application: Tiger Prawn Aquaculture Ponds**

**Airmax**

*Safe, Simple Solutions<sup>™</sup>*



## **Product Overview**

EnviroDEFENSE® PurPond Aquaculture is a dry bacterial blend designed to remove organic matter from closed and slow-flow water systems therefore improving water clarity.

Water clarity can be compromised by excess nutrients such as nitrogen, potassium and phosphorus. A decrease in water clarity can reduce water quality and/or oxygen levels and sunlight is unable to penetrate the scum on the surface. This poses threats to organisms in the water like fish, plants and other aquatic life. In addition, poor water quality makes it increasingly difficult for treatment plants to meet effluent permit limits. Introduce EnviroDEFENSE® PurPond Aquaculture into the pond, lagoon, lake, etc. to prevent these periods of poor water quality. EnviroDEFENSE® PurPond Aquaculture uses bio-augmentation, a non-chemical and natural method, to reduce organic levels that threaten good water quality. The microbes that are introduced ingest carbon, phosphorous, potassium and nitrogen at an accelerated rate, which limits the organic loading available and improves water quality. This control increases water clarity and promotes overall better health for the aquatic environment. Use of EnviroDEFENSE® PurPond Aquaculture also aids treatment plants in meeting effluent regulations with decreased use of aerators. While proper aeration is important to enhance the effectiveness and longevity of microbial bio-augmentation and nutrient deactivation applications, treatment plants will learn that the decreased use of aerators will save on energy costs.

### **Advantages of EnviroDEFENSE® PurPond Aquaculture**

HELPS REDUCE FISH DISEASE BY REMOVING CONTAMINANTS

GREATLY REDUCES LABOR TIME

DEGRADES A HIGH CONCENTRATION OF WASTE

ENHANCES BOD/COD/TSS REMOVAL

REDUCES SLUDGE BUILD UP

COST-EFFECTIVE AND EASY TO USE

INCREASES SYSTEM EFFICIENCY

CONTAINS NO HARSH CHEMICALS

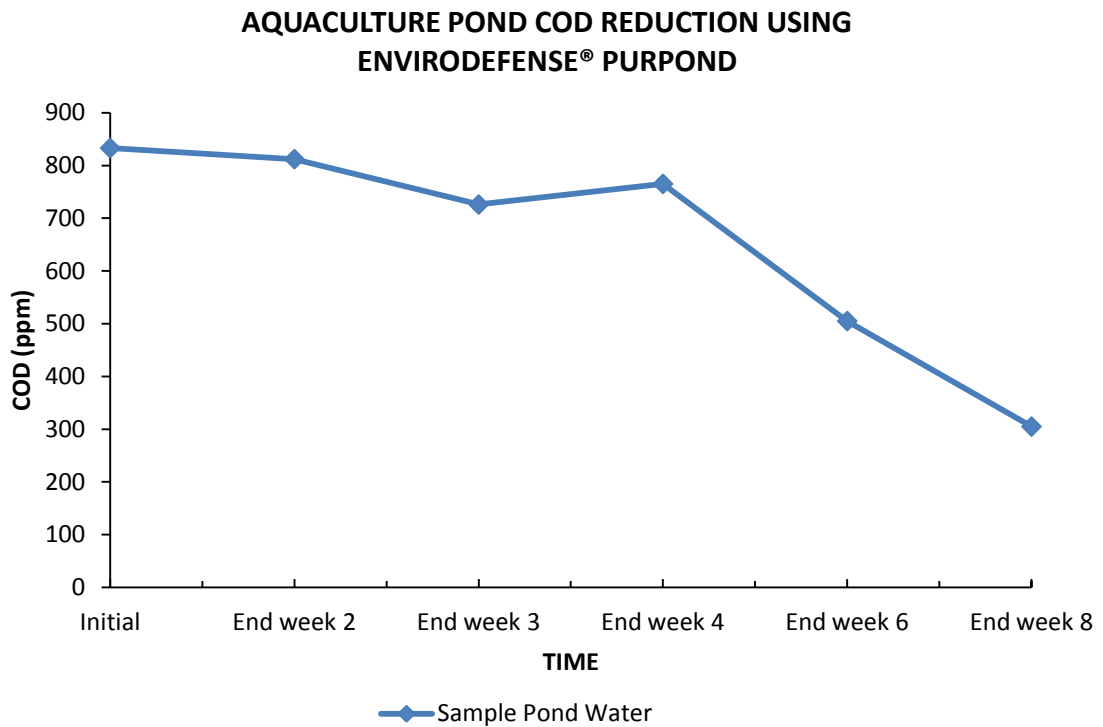
### **Applications**

Aquaculture Ponds, Lagoons,  
Waste Lagoons, Oxidation Ditches,  
Aeration Basins



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The graph below shows the reduction of a COD by strains in EnviroDEFENSE® PurPond. As the substrate is degraded the % oxygen saturation decreases.





## EnviroDEFENSE® PurPond Aquaculture

*Lab Studies*

In 1997 a comprehensive study was performed in the Philippines and Thailand at various shrimp farms to test the efficacy of EnviroDEFENSE® PurPond against regional competitors. The white paper presentation was delivered at the 1997 World Aquaculture Conference in Seattle, WA – Title: Efficacy of the Three Brands of Probiotics in Enhancing and Maintaining Optimum Physio-Chemical and Biological Parameters in Ponds Stocked with Black Tiger Shrimp at 40 OSM. The testing was overseen by an official with SEAFDEC.

### **Research Objectives**

- To determine which among the three brands of probiotics is the most effective in enhancing and maintaining optimum physico-chemical and biological parameters of shrimp rearing environment;
- To identify which of three probiotic brands is the most economical to use in culture operations;
- To develop the most appropriate method of administering probiotic materials in ponds;
- To be able to incorporate efficient use of probiotics into the research company's protocol.

### **Mindanao, Philippines Test Results (Highlights) – Full Data Set Available On Request**

#### **Results After 149 Day Grow Out Period & Weekly Treatments With Purpond**

Considerably higher survival rates than competitors – 90% Survival Rate.

Survival Rate of Competitor 1 and 2: 45% and 23% Respectively.

Ponds were not hit by “one month disease syndrome”.

Production was 2 times the amount of Competitor 1 & 3 times the amount of Competitor 2.

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### **Phuket Island, Thailand Test Results (Highlights) – Full Data Set Available On Request**

#### **Results After 149 Day Grow Out Period & Weekly Treatments With Purpond**

Considerably higher survival rates than competitors – 85% Survival Rate.

Ponds were not hit by “one month disease syndrome”.

Production: Shrimp experienced and average length of 10 cm at mid-cycle which would normally take 10-11 weeks to reach a length of 10 cm.

The photos below show the clarity achieved by using weekly doses of EnviroDEFENSE® PurPond Aquaculture in a 2 million gallon lagoon treated for 4 weeks.



## Technical Specifications For EnviroDEFENSE® PurPond Aquaculture

<b>Targeted Compounds</b>	Organic debris, sludge build up, cellulose, un-eaten food, animal waste, twigs, leaves and other earthen debris.	
<b>Bacterial Count</b>	4 Billion CFU's bacillus spores.	
<b>Bacterial Type</b>	Bacillus spore blend.	
<b>Formula Properties</b>	Tan, free flowing powder with earthy odor with dendritic salt carrier. (Available in Canadian approved (CB) formulation).	
<b>Performance Properties</b>	Effective pH Range: 4.0-11.0	Temperature Range: 45-120°F (5-50°F)
<b>Packaging</b>	50 lb Containers (Shelf life of 24 months in an original unopened container).	



For More Information Call:

866-424-7629

[www.envirodefenseproducts.com](http://www.envirodefenseproducts.com)



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