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Results of Using OXY-POND™ in Shrimp Ponds Thailand – April 1999

ABSTRACT

NAKA Interbusiness Company Limited (NAKA), a Bangkok based firm, agreed to test Biofeed OXY-POND™ in a shrimp grow-out pond located in Nakorn Brathom, Thailand, a province approximately 56 kilometers north of Bangkok.

BACKGROUND

The test pond measured 40 meters x 40 meters x 1 meter, which is the equivalent in Thailand to 1 Rai (0.16 hectares or 1,600 Cubic Meters). Nakorn Brathom is a farming area that traditionally uses fresh water mixed with salt water in a closed system.

PROCESS

On November 13, 1998 the test pond was filled with fresh water to a depth of approximately 1 meter. NAKA added 4.6 liters of OXY-POND™ to the pond. This amounted to 1.2 gallons/4.6 liters each week for 18 weeks for a total usage of 21.6 gallons (82.8 liters) On the morning of November 29th, 130,000 post larvae (PL's) shrimp (*Panaeus Monodon*) were released into the pond. A water sample taken from the pond was tested and revealed the following results:

pH: 8
Salinity: 7
Alkalinity: 100

The pond was tested weekly for pH, Salinity, Alkalinity and dissolved oxygen (DO). The range of the testing was as follows:

pH: 7.5
Salinity: 1.0—7.0
Alkalinity: 68—115
DO: 9.55—14.55

Some minor problems during the grow-out cycle dictated the use of small amounts of lime, Kilreen and Zeolite. It was determined that these problems caused by excessive nutrients could have been lessened or eliminated by reducing the amounts of supplemental feed.

RESULT

On April 4, 1999 (127 days after stocking), the test pond was harvested with representatives of Biofeed Solutions, Inc. and NAKA being present. The water in the pond was completely free of any odor. The shrimp were free of mud and algae and appeared very healthy. The average weight of the shrimp was approximately 33 grams, with many around 40-50 grams. The total yield from the pond was approximately 1,000 kilograms.

CONCLUSION AND COMMENTS

The testing of the products proved to be a success as the water quality and shrimp health were as expected. However, the total yield was substantially lower for the following reason(s):

- It was discovered that a portion of the shrimp were stolen by the farmers employees prior to the official harvest date.
- The initial larval stocking rate was found to be lower than the 130,000 PL's.

The significant advantages of using OXY-POND were as follows:

- An accelerated growth rate of the shrimp due to improved environmental conditions.
- No sludge build-up on the bottom of the pond due to increased aerobic break microbial digestion.
- for supplemental feed.
- Stabilization of the pond's environmental parameters (ph, alkalinity, DO) with extremely low or undetectable levels of nitrites, ammonia and H₂S.

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