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Results of Using OXY-POND™ in Shrimp Ponds Zulia, Venezuela — December 2004

ABSTRACT

W-Aquatics and Supply C.A. (WAP) an independent dealer of Biofeed Solutions, Inc., conducted a series of tests in shrimp grow-out ponds located near Zulia, Venezuela. The ponds were operated under the guidance of a private shrimp growing company that owns 250 hectares of ponds. The test ponds were 2 hectares in size and were fully lined with a plastic liner. WAP selected these particular ponds because the farmer experienced 60-80% mortality (death) of the shrimp and believed that these ponds were infected beyond help and that the recurring disease would prevent the ponds from being used to any appreciable level of productivity.

BACKGROUND

Many similar ponds established in areas where sludge accumulation has led to high disease occurrence are not conducive to healthy shrimp growing conditions and therefore require intensive management and expensive chemical treatments. Pond liners tend to help as they minimize contact between soils and water thereby limiting transfer of toxic soil constituents that can kill off entire ponds.

PROCESS

On October 30, 2004, the test ponds were filled with fresh water to an average depth of 1.5 meters. WAP pretreated the pond by adding 5 PPM OXY-POND™ to the pond for 2 weeks prior to stocking. On or about December 22nd, the test ponds were stocked with 246,500 post larvae (PLs) shrimp. WAP then added 2 PPM OXY-POND™ on a weekly basis throughout the remainder of the grow-out cycle.



RESULT

On December 14, 2004, (about 15 weeks after stocking) the test pond was harvested. The water in the pond had no bad odors and ammonia levels were below .05 PPM. The shrimp appeared to be healthy with the average weight approximately 30 grams with some as big as 40-60 grams. The total yield was much higher than the untreated ponds that had no history of disease. The pond was harvested early because the shrimp were larger than normal size and because the tester was afraid he might lose his entire crop once again if he waited for the completion of the normal 18 week grow-out cycle. So, the shrimp were harvested between 2-3 weeks earlier than expected with a measurably higher rate of marketability. After draining the pond, it was discovered that there was not enough sludge to cause or contribute to further disease factors and the pond bottom had NO detectable odors. The pond was refilled immediately and a new grow out cycle was conducted with similar results.



COMMENTS

Both the farmer and WAP considered the test a huge success. This verdict was rendered when the test results were compared against normal harvest results in the general area. Farmers in the area gradually heard of the outstanding results and the market continues to show a high interest in the benefits of OXY-POND™. The principal shrimp production system is extensive with minimum nutritional and feed inputs and as a result, the average yield is low, ranging from an unpredictable 100 to 400 kg harvest per hectare per year.

The farmer discovered that by using OXY-POND™, significant results were achieved:

- Mortality was very low (10-15%) and greater than 80% of the shrimp survived to produce a substantially higher than normal yield.
- An accelerated growth rate of the shrimp due to the improved environmental conditions thereby reducing grow-out periods.
- A significant increase in phytoplankton and zooplankton resulting in a decreased amount of supplemental feed added to the pond.
- Stabilization of the ponds environmental parameters including pH, alkalinity, DO, and extremely low or undetectable levels of nitrites and ammonia.

CONCLUSIONS

This successful test of OXY-POND™ was conducted to prove that the product would clean the pond, and at minimum allow the reuse of these once contaminated ponds. But the result was even greater than expected with at least double the yield from any previous stocking of these ponds.

In addition to the increased yield, the test also demonstrated that the dissolved oxygen level could be maintained at a high enough level to keep the pond aerobic and prevent the build-up of an anaerobic sludge layer at the bottom of the pond which is also greatest cause of diseases and high mortality.



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