RESEARCH REPORT

AQUACULTURE

INCREASED WEIGHT & SURVIVAL RATES OF PRAWNS

POST-LARVAE (PL) COMMERCIAL TRIALS

BIOCELERATOR
BIOLOGICAL MEDIUM STIMULANT

SHRIMP TRIAL MALAYSIA

The client is one of largest shrimp producers in Asia, this trial was conducted at a farm in Malaysia with poor water quality. They wanted to trial Biocelerator for improved output, improved water quality, increase survival rate and reducing organic waste.

Shrimp farm trial site. Malaysia.

Vannamei Prawns (Whiteleg)	**14 Ponds** 4 x Treated 10 x control ponds	**7 Million** Litres per pond

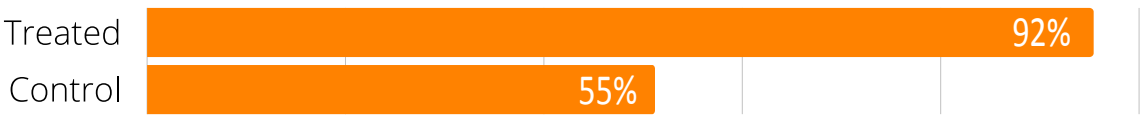
RESULTS

The client averaged out data from treated vs untreated. They observed improved iron levels in the water as well as visible improvements to the water quality in the treated ponds. Feed conversion ratio improvement was observed in the treated ponds of Treated ponds FCR of 1.54 vs Control FCR 2.58. During trial pH levels were stable between 7.2-7.8 pH.

7 Litres / day Per pond (Dose = 1ppm / day)	**80%** Reduction in organic waste	**Feed Conversion Ratio Improved** Control: FCR 2.58 vs Treated: 1.54	**Stocking Density Increase** Control: 80pcs/m^3 vs Treated: 133 pcs/m^3

SURVIVAL RATE INCREASE OF 67.2%

The client was astounded in the increased survival rate. In fact the achieved 92% is a score the farm manager has never before seen in their time in shrimp farming in Malaysia.



BENEFITS FOR FISH & SHRIMP FARMING

Biocelerator is an inert aqueous based proprietary technology solution that functions as a super charged biostimulator which 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 Biocelerator is applied to deliver increased activity. As a “next generation” biological stimulant, Biocelerator is designed to provide increased profitability and system health in existing Aquaculture operations in fresh and saltwater environments (up to 30ppt salinity).

AQUACULTURE FARMING BENEFITS:

- → Increased shrimp larval survival
- → Increased nursery fish survival
- → Increased grow-out survival
- → Improve feed conversion rates (feed cost savings)
- → Increased average daily weight gain
- → Increased stocking densities
- → Reduced off-flavour at harvest
- → Increased market value

WATER QUALITY BENEFITS:

- → Improved water clarity & quality
- → Increased Dissolved Oxygen (lower aeration costs)
- → Greatly reduced bottom sludge (sludge removal cost savings)
- → Reduced ammonia
- → Reduced nitrite
- → Reduced nitrate

Please contact us for detailed independent studies completed for Tilapia and Shrimp

PRAWN FARM TRIALS

The client operates a commercial marine prawn farming operation. They wanted to trial Biocelerator for improved output and reducing organic waste.

Vannamei
Prawns
(Whiteleg)

36 Tanks
18 x Treated
18 x control tanks

50,000 L
Volume
per tank

UNIVERSITY SUPERVISED

The client engaged a university to run on-site trials with post-larvae vannamei (whiteleg) prawns across 36 tanks, half of which were 'control tanks'. Seawater was added to the 50,000L tanks along with post-larvae (PL3) at a density of 50PL /litre. Conditions were generally windy and around 30C.

200mL / day
Per tank
(Dose = 4ppm / day)

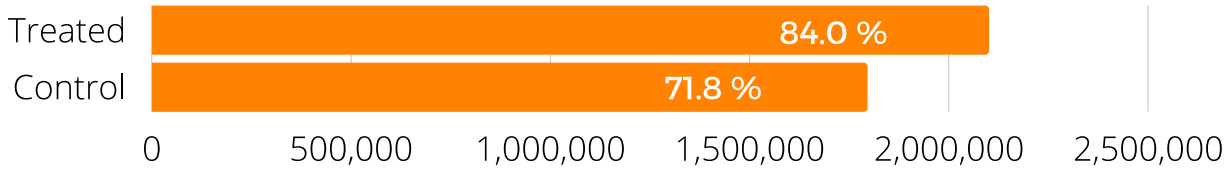
2,5000,000
Post-Larvae / tank
starting quantity

28 - 31°C
Post-Larvae / tank
starting quantity

71% vs 84%
Survival rate
comparison

SURVIVAL RATE UP 17%

The 36 tanks started with an average 2,500,000 PL/ tank. The survival rates were 2,100,000 (treated) vs 1,795,000 (control), which is a 17% increase using Biocelerator.



PL TOTAL WEIGHT UP 8.4%

Diatom microalgae was added 8 times per day. Blowers and aero-tubes were used. Tank water was renewed at 20% every 2 days. Several trials were run using 18 tanks for 8 to 12 days and results averaged.

20%
Water renewal rate every 48 hours

ZERO
Probiotics used

8 x per day
Diatom commercial feed

LARGE SCALE POND FARMING

The client was primarily seeking to reduce organic matter and increase water quality and Dissolved Oxygen (DO). By adding Biocelerator at 4ppm, the organics improved the DO and the feed conversion increased. This resulted in increased survival rates and weight. Product is now used throughout the ponds.

PL 3
Starting stage of Prawns

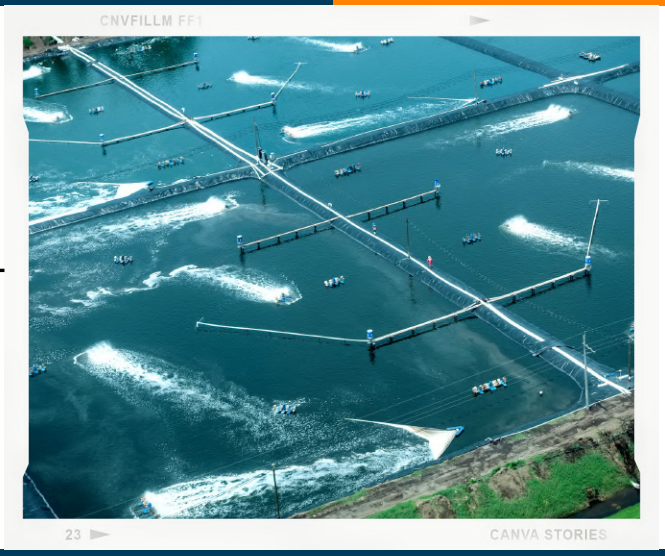
8-12 days
Duration for each round of trials

50PL / L
Starting density

8.4%
Total weight increase

Prawn farm operator:

South American prawn farm



RESEARCH INSTITUTE

Dr. Marcus Roberto Goes Ferreira Costa (PhD in Ruminant Nutrition)
Federal Institute of Education, Science and Technology of Ceará, Crato campus, Brazil

This commercial prawn farm trial follows similar trials by the same federal university in aquaculture with fish which shows improved stocking density, growth and survival rates as well as ruminant trials with lambs that show increased weight gain and a reduction of gut parasites. In addition, commercial feed trails are ongoing with beef, chickens and pigs as well as other agricultural applications with similar positive results.

OUR TECHNOLOGY

Our water conditioner is produced via cutting-edge molecular processing technology which naturally stimulates the microbiological activity of the environment in which it is applied.

With a chemical composition similar to that of drinking water, our water conditioners consists of an aqueous solution of inorganic nanoparticles, which change the speed at which substances dispersed in the aqueous medium (oxygen, nutrients, organic material, etc.) pass through the cell and intracellular walls, resulting in greater energy and metabolic conversion in bacteria, creating an ideal environment for fish and shrimp to thrive.

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