BiOWiSH™ TECHNOLOGIES

Aquaculture

Case Study

Pangasius Farming, Vietnam

Background

A prominent Vietnamese producer of Pangasius, a genus of shark catfishes native to Asia, initiated a trial to demonstrate the effectiveness of BiOWiSH™. After eight months, BiOWiSH™ yielded an 18.75% increase in individual fish size, a 7.5% increase in survival, and a 52% increase in production per hectare. In addition, the BiOWiSH™ treated pond produced a 3% lower Feed Conversion Ratio (FCR), indicating higher efficiency in converting feed to body mass..

The Solution

BiOWiSH™ has both a direct fed microbial (DFM) and water treament products for aquaculture operations (shrimp and finfish). BiOWiSH™ is recommended for all growth stages. For optimum results, it is recommended to commence at the hatchery stage. It is important to note that product benefits are experienced when initial applications are made in the nursery or grow out phase.

Implementation Program

The trial maintained a control pond and BiOWiSH™ treated pond, which were both approximately 1 hectare in size. Over the course of the trial, 200 grams of BiOWiSH™ were added per 1 metric tonne of feed, for a total of 137kgs during the season.

BiOWiSH™ Key Metrics

BiOWiSH Technologies recommends tracking the following metrics:

- Average Size
- Average Weight
- Total Biomass
- Daily Feed Intake (DFI)
- Average Daily Gain (ADG)
- Percent Survivability
- Feed Conversion Ratio (FCR)

Available Sizes

- 100g/3.5oz
- 1 kg/2.2lbs.
- 5 kg/11lbs.
- 10 kg/22lbs.

Results

Results of the trial confirmed the effectiveness of BiOWiSH™ in increasing production and reducing costs in aquaculture. In the BiOWiSH™ treated pond, the average daily gain (ADG) was 3.45gms versus the control ponds ADG of 3.16gms. The harvest of the BiOWiSH™ pond yielded individual fish weighing an average of 950gms, while the control pond averaged 800gms per fish. Despite having a higher initial stocking density than the control, the BiOWiSH™ pond achieved a higher survival rate (77.8% compared to 70.2%.) These factors contributed to a 52% increase in production for the BiOWiSH™ pond.

The use of BiOWiSH™ also resulted in a lower FCR. The BiOWiSH™ pond had an FCR of 1.50 versus the control pond, which had an FCR of 1.55.

Using market pricing data near the end of the trial, an economic analysis of the trial revealed a profit increase of $165,142 USD/ha, net of the cost of BiOWiSH™.

Parameter	BiOWiSH™	Control
Area (m^2)	10,449	10,000
Stocking Density (pcs)	62.40	49.00
Initial Mean Body Weight (gm/pcs)	70.00	60.00
Final Mean Body Weight (gm/pcs)	950	800
Average Daily Gain (gm/pcs)	3.45	3.16
Survival %	77.81	70.28
Productivity (kg/m^3)	11.15	7.32
Feed Conversion Ratio	1.50	1.55

Conclusion

By dosing BiOWiSH™ as an in-feed additive, the Pangasius farmer achieved a significant increase in production and profit, realizing more than a 10 times return on his investment.

BiOWiSH™ has proven to be effective in a wide range of aquaculture applications and cultivation operations, as evident from the results of this recent validation and many other validations in shrimp aquaculture.

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