

BiOWiSH™ AquaFarm

Aquaculture Applications

BiOWiSH™ is a proprietary composite biocatalyst that enhances a broad range of hydrolytic and oxidative biochemical reactions, which are useful in improving and maintaining water quality for aquaculture applications. BiOWiSH™ contains a novel consortia of metabolically cooperative microorganisms, with endogenous and exogenous enzymes, and small molecule metabolic co-factors which support both biocatalytic and metabolic activity. BiOWiSH™ products are composed of all natural materials and are non-genetically modified.

In fish and shrimp production, BiOWiSH™ AquaFarm is a revolutionary water treatment that accelerates biological removal of detrimental nutrients from the water such as ammonia, nitrites and nitrates. BiOWiSH™ AquaFarm supports optimum animal performance in all aquaculture systems. The BiOWiSH™ Aqua family of products are used in commercial production ponds, wastewater treatment, nutrient management and odor control.

How safe is BiOWiSH™ AquaFarm?

100% natural, BiOWiSH™ AquaFarm has no detrimental effects on plants or animals and is safe for everyday use. Aquatic toxicity testing has shown that BiOWiSH™ is non-toxic at recommended dosage levels.

BiOWiSH™ is safe for everyday use in a wide range of consumer and industrial products.

BiOWiSH™ AquaFarm has no adverse environmental consequences. It biodegrades into water, carbon dioxide and nitrogen gas and leaves no residual in ponds. Average activity time in a system is 2–4 weeks.



The following benefits have been observed:

Expense Reduction

- Reduced need for water exchange and aeration
- No other sludge digester required
- Reduced need for denitrifiers

Environment, Safety & Sustainability

- Reduced water discharge volume
- Optimized water discharge quality
- Reduced energy and fuel use

Production Benefits (achieved through improved water quality)

- Improved yields
- Improved feed efficiency (FCR)
- Improved growth rates
- Improved survival rates

Dosing

What dosing rates should I use?

The optimal dosing rate will depend on the following factors:

- The volume of water in the hatchery, raceway, growout pond or lagoon.
- The amount of organic matter on the bottom of the pond.
- The density (number) of fish or shrimp in the pond. The higher the animal density the more organic waste load.
- Please see specific User Guides attached for suggested dosing rates and procedures.

IMPORTANT NOTES

- High initial doses should be avoided especially with older ponds which may have a high organic load from bottom sludge buildup. In these cases please refer to Pond Preparation protocols.
- Ponds with high organic load bottom sludge should reduce the initial dosage of BiOWiSH™ AquaFarm and use a progressive increase in dosage to avoid rapid breakdown of organic matter which can cause temporary oxygen depletion in the pond.
- BiOWiSH™ AquaFarm will not operate effectively in the presence of some chemical products such as disinfectants and antibiotics. Please maintain a chlorine level at or below 3ppm and a pH range of 4.5 to 9.0.
- SAFETY: This product is classified non-hazardous and non-flammable. To download Material Safety Data Sheets, and Hazard or First Aid Information, go to www.biowishtech.com/msds.
- TECHNICAL SUPPORT: Please contact a distributor near you or email aquaculture@biowishtech.com.

General Recommendations

- Add the BiOWiSH™ AquaFarm dry concentrate to a container filled with water, provide a small amount of stirring to adequately disperse the product, and allow 15 minutes to solubilize prior to adding the solution to the tank. No activation is required.
- Fill the container with water as directed in each protocol prior to adding BiOWiSH™.
- Mix BiOWiSH™ AquaFarm in a clean separate container, free from chemicals.
- Mixing container lids should be left off during the mixing and dosing period.
- Use BiOWiSH™ mixture within 7 days of activation
- Define the amount of BiOWiSH™ AquaFarm required by reviewing the following programs.

User Guides

1. Hatchery & Maturation Tanks
2. Pond Preparation
3. Shrimp Raceways
4. Shrimp Production
5. Fish Ponds and Tanks
6. Ornamental Fish Ponds

APPENDIX A: SUGGESTED TESTING PARAMETERS

1. Standard water testing as per current practices
2. Ammonia, nitrite, nitrate (daily)
3. BGA (weekly)
4. Diatoms and microalgae—counts and species if possible (weekly)
5. Vibrio and other bacteria—species and counts if possible (weekly)
6. Total Bacterial Count (weekly)
7. Gregarines in shrimp and pond sediment (weekly)
8. BOD (weekly)
9. Class I viral pathogens as needed, e.g., Shrimp White Spot (weekly)
10. Rickettsia (weekly)
11. pH and DO (am/pm—early morning one hour after zenith, and before sunset) (daily)
12. Alkalinity (daily)
13. Salinity (daily)
14. Temperature (daily)
15. Growth rate (weekly)
16. Estimation of survivability (weekly)
17. Feed efficiency (weekly)
18. Harvest data in terms of size, percent survival, biomass harvested, FCR's, overall coloration/appearance, off-flavor rates
19. Feeding information (amount, type, supplier, etc.)
20. All other as per standard practice

Notes

It is important to constantly monitor the general health and feeding habits of the fish or shrimp. As BiOWiSH™ AquaFarm will improve water quality that will tend to result in healthier fish or shrimp, feeding rates may need to be increased to allow the fish or shrimp to attain their genetic potential for growth. Any stress, such as disease, under-feeding, and poor water quality, will decrease the animals growth and potentially lead to lower-than-full potential profitability.

Contacts

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