

# Biological Treatment in Aquaculture

## The challenge

Modern aquaculture systems – whether RAS, ponds or hatcheries – face growing challenges with:

- Accumulation of sludge and feed residues
- Poor water quality and stress-related diseases
- Ammonia, nitrite, and geosmin formation
- High maintenance and frequent water changes

## How the technology works

### Addition of beneficial bacteria


A selected mix of natural, non-pathogenic bacteria is added to the system – compatible with both aerobic and anaerobic zones.

### Colonization and biofilm formation

Bacteria quickly colonize surfaces and substrates, forming active biofilms that stabilize microbial communities and water chemistry.

### Breakdown of organic waste

The microbes break down feces, feed, and other residues – reducing ammonia, nitrite, and sludge buildup.

 Prevention of harmful bacteria and off-flavors  
Healthy microbial dominance limits geosmin-producing bacteria and improves fish welfare – while simultaneously breaking down blue-green algae and other organic matter that would otherwise fuel off-flavor formation.

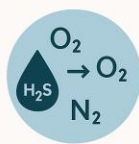
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Addition of  
bacteria



Biofilm  
formation



Breakdown

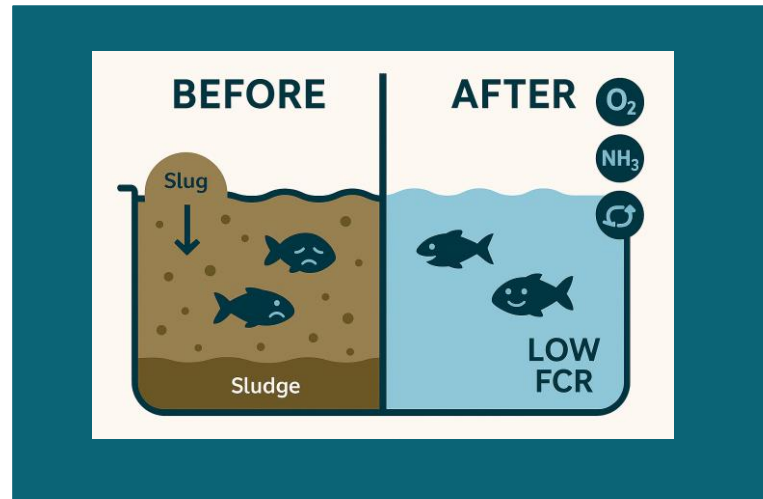


Suppression



## Documented results

- ✓ 17.4% higher biomass
- ✓ 22.4% increased average weight
- ✓ 14.4% improved FCR
- ✓ Higher oxygen, lower ammonia, and clearer water
- ✓ Double survival rate in marine hatcheries



## Key benefits

- ✓ Improved water quality and fish health
- ✓ Reduced need for cleaning and water changes
- ✓ No chemicals, safe for fish and personnel
- ✓ Easy to integrate in existing systems

## Application and flexibility

- Compatible with RAS, ponds, and fry systems
- Dosable manually or via automatic systems
- Tailored dosing plans for startup and maintenance
- Full support from MBS experts for trials and integration

MBS treatment can be scaled and adapted to fit your specific setup, regardless of size or application. Contact us for advice, pilot projects, or full implementation.

