



Epicore BioNetworks Inc.

EPICIN[®]-Ponds Biological Aquaculture Treatment

PRODUCT DESCRIPTION

EPICIN-Ponds is a natural microbial ecosystem with added stabilizers and growth stimulants for detoxifying aquaculture grow-out ponds. It eliminates water-fouling waste products such as ammonia, nitrites and hydrogen sulfide, thereby lowering stress and providing a healthier environment for aquatic animal growth. It also improves animal health and disease resistance by creating a probiotic environment.

BENEFITS TO AQUACULTURE

- Effectively and rapidly reduces from pond water dangerous levels of ammonia, nitrite, and sulfide pollutants.
- Establishes a strong natural bacteria culture in the pond that suppresses the growth of harmful bacteria such as *Vibrio sp.*
- Increases animal survival and yields.
- Allows higher stocking densities.
- Promotes animal weight gain for either faster growth cycles or heavier and more valuable animals.
- Reduces need for water exchanges providing a more bio-secure environment.
- Leaves behind cleaner pond soil reducing pond renovation costs and downtime.

MODE OF ACTION

Treatment of aquaculture grow-out ponds with specially formulated products based on carefully selected, natural bacteria provides a natural way to eliminate pollution and to create a beneficial microbial environment that inhibits the development of harmful organisms. Bacteria have a powerful capacity to utilize pollutants such as ammonia, nitrates and nitrites in their normal metabolism. Additionally, a thriving culture of the right natural bacteria provide a “probiotic” environment which suppresses the growth of harmful organisms. Through these two mechanisms, a healthier aquatic creature is raised that has greater vitality and immunity to disease.

INGREDIENTS

Contains non-toxic, natural microbial cultures and enzymes with added stabilizers and growth stimulants on an inert carbohydrate carrier.

PRODUCT DATA

| | |
|---------------------|--|
| Form | Granules |
| Color | Non-uniform tan |
| Bulk Density | Approximately 0.5 gm/ml (32 lbs./cubic foot) |
| Total Aerobic Count | 2.0E+09 cfu/gm, minimum |

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IMPORTANT NOTICE TO PURCHASER

"Epicore BioNetworks, Inc. ("Epicore") warrants that the product conforms to its compositional description and is reasonably fit for the purpose stated on the label when used in accordance with the label instructions under normal conditions of use. There are no other express or implied warranties, whether as to merchantability, fitness for any use, or otherwise, given in respect of the product. Neither Epicore nor its agents shall be liable for any damage, loss, or injury, whether the same arises directly or consequentially, by reason of any matter whatsoever relating to the use of the product, and any buyer's or user's exclusive remedy in any instance shall be limited to a refund of the purchase price paid."

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TREATMENT SUGGESTIONS

- A preventative program is strongly recommended over a remedial one. Applying EPICIN before problems develop consistently protects animal health and minimizes the impact of problems on survival and pond yield.
- In high stocking density, intensive ponds pollutants are the main problem - usually late in the grow-out cycle - EPICIN usage should be concentrated later in the cycle. Where mortality early in the grow-out cycle is the main problem, concentrate EPICIN treatment in the first sixty days to achieve the strongest probiotic effect.
- As supplied, EPICIN is a dry, granular product with microbes in a dormant state. Activate the EPICIN bacteria by hydrating in fresh water or clean pond water for 20 minutes (use approximately 1 kg EPICIN per 20 liters water). Broadcast hydrated mixture evenly over pond surface.
- Alternatively, hydrate EPICIN for 3 to 6 hours with a grow-up medium like EPIZYM®-BGM. Cells will multiply on-site to provide a more powerful treatment.
- The following treatment rates are suggested as starting points:

| Timing - Days | EPICIN Rate (kg/ha) | |
|---------------|---------------------|----------------|
| | From Stocking | Semi-Intensive |
| -2 | 5 | 5 |
| +30 | 5 | 5 |
| +60 | 5 | 3 |
| +75 | 5 | 3 |
| +90 | 5 | 2 |
| +105 | 5 | 2 |
| +120 | 5 | 2 |
| +135 | 5 | 2 |

- After adding EPICIN to an intensive pond, aerate for 48 hours.
- When EPICIN is added, add 10 kg/ha molasses to feed the microbes.
- If the unionized ammonia level rises above 0.4 ppm, immediately apply a 5-kg/ha EPICIN treatment.
- For a heavy *Vibrio sp.* infestation, add twice the normal dose of EPICIN when infestation is first noticed and again each day for three days in a row.

PRODUCT PERFORMANCE

The following pond trial results were obtained in a multi-year study in Ecuador. EPICIN-Ponds plus BGM gave a 20% increase in yield and better feed utilization.

| | # Ponds | Avg ha | Stock Density | Days Culture | Survival Rate | Avg Grams | Kg/ha/Year | FCR |
|------------|---------|--------|---------------|--------------|---------------|-----------|------------|------|
| Control | 66 | 9.4 | 16.8 | 125 | 38.8 | 11.5 | 1786 | 2.26 |
| Epicin+BGM | 38 | 8.3 | 18.0 | 129 | 39.5 | 13.0 | 2149 | 1.97 |

PRODUCT STORAGE

- Keep dry.
- Do not store continuously at temperatures above 40°C.
- Store out of direct sunlight in a well ventilated area.
- Do not pre-mix with other products not recommended by Epicore especially biocides and harsh chemicals.

SHELF LIFE: Shelf life is two years if stored as recommended.

PACKAGING: Supplied in 40-kg fiber drums with polyethylene liners, in 10-kg (5 U.S. gallon) open head polyethylene pails and in 1-kg resealable plastic bags.