



## **EPICIN<sup>®</sup>-Hatchery** **Biological Aquaculture Treatment**

### **PRODUCT DESCRIPTION**

**EPICIN-Hatchery** is a natural microbial ecosystem with added stabilizers and growth stimulants for detoxifying aquaculture hatchery water. 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 reduces dangerous levels of ammonia, nitrite and sulfide pollutants from hatchery water.
- Establishes a strong natural bacteria culture in the water that suppresses the growth of harmful bacteria such as *Vibrio sp.*
- Significantly reduces Zoea Syndrome problems.
- Increases PI survival and yields.
- Allows higher stocking densities.
- Reduces need for water exchanges providing a more bio-secure environment.
- Reduces waste accumulation on tank bottoms.

### **MODE OF ACTION**

Treatment of aquaculture hatchery water 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 of organic carbon. 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

### **PRODUCTS FOR HATCHERIES**

Epicore offers several EPICIN grades for hatchery use. Regular grade EPICIN-Hatchery is a natural microbial ecosystem with a bran carrier. EPICIN-3W is a mixture of EPICIN microbes and an optimized growth medium.

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### IMPORTANT NOTICE TO PURCHASER

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## TREATMENT SUGGESTIONS - Continued

- 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 yield.
- The bran carrier in EPICIN-Hatchery may cause water cloudiness. To avoid this hydrate 100 gm EPICIN-Hatchery in at least 1 liter of fresh water that is free of chlorine or disinfectants for 20 minutes. Filter away the bran using a 65-mesh (210 micron) screen. Immediately broadcast filtrate water evenly over hatchery tank surface. Do not let hydration mixture stand more than 4 hours.
- Activate the EPICIN-3W bacteria by hydrating 100 gm in at least 1 liter of fresh water that is free of chlorine or disinfectants for 24 hours with continual agitation or air injected through an air stone. Filter away the bran using a 65-mesh (210 micron) screen. Broadcast filtrate water and microbe mixture evenly over hatchery tank surface.
- When adequate organic carbon is present, EPICIN-Hatchery will digest ammonia in 24-48 hours. If in doubt about carbon levels use 10-ppm molasses or sugar each day of larval culture until ammonia is under control.
- The following preventative treatment rates are suggested as starting points:

Timing	Product	Application Rate
3 hours after passing N5/Z1	EPICIN-3W	5 ppm
12 hours after passing Z1	EPICIN-3W	5 ppm
After passing Z2	EPICIN-3W	5 ppm/10 ppm*
Z3	EPICIN-H	2 ppm
Z3/M1	EPICIN-H	2 ppm
M2 and M3	EPICIN-H	3 ppm per day
PL1 to PL5	EPICIN-H	4 ppm per day
PL6 to PL10	EPICIN-H	5 ppm per day

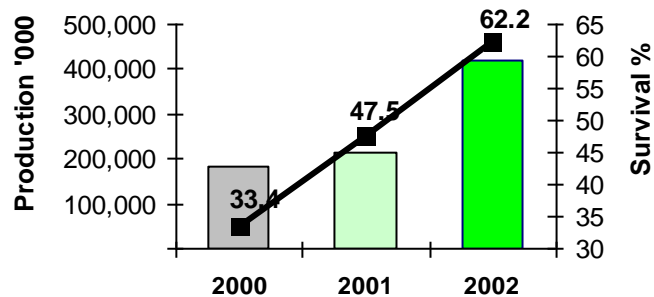
\* if water exchange is necessary, use 10-ppm

- For a heavy *Vibrio sp.* infestation, add 20-ppm EPICIN (Hatchery or 3W depending on stage of growth) per day until eliminated.
- For high ammonia, add 10 ppm EPICIN (Hatchery or 3W depending on stage of growth) per day until reduced to normal.

## PRODUCT PERFORMANCE

The following hatchery trial results were obtained in a multi-year study in Honduras. In 2000 Epicore products were not used. In mid-2001 the hatchery switched to EPICIN-Hatchery and Epicore's liquid feeds.

### Commercial Shrimp Hatchery



**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.