Epicore BioNetworks Inc.

EPICIN®-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 Pl 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 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	4.0E+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.

Epicore BioNetworks Inc.

American Operations:
Epicore BioNetworks Inc.
4 Lina Lane
Eastampton, New Jersey, 08060
USA
Telephone: (609) 267-9118
Fax: (609) 267-9336
information@EpicoreBioNetworks.com
www.EpicoreBioNetworks.com

Latin American Operations:
Epicore Ecuador S.A.
Km 11 vía a la Costa
Guayaquil – Ecuador
Phone: (593-4)-299-0663 / 0859
lorena.vanoni@EpicoreBioNetworks.com

La Libertad Office:
Epicore Ecuador S.A.
Calle Diez y Avenida Quinta Barrio 10 de Agosto, Diagonal al Colegio Celleri
La Libertad - Ecuador
Phone: (593-4)-278-5106
lorena.vanoni@EpicoreBioNetworks.com

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 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

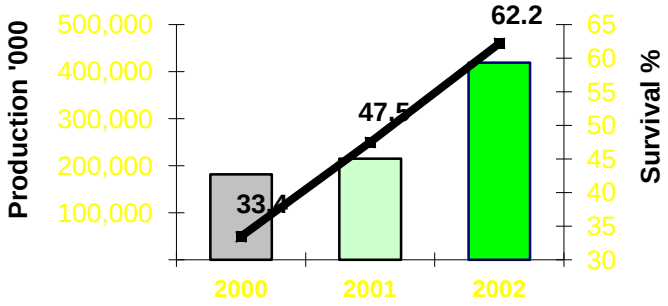
* if water exchange is necessary, use 10-ppm

- 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.