

Breakthrough in sustainable shrimp aquaculture

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Aquaculture is one of the world's fastest growing industries, due to an increasing need for protein to feed a growing population, and because of the need to find food sources that are secure, sustainable and traceable.

However, disease remains a persistent problem throughout the aquaculture industry. As in farm environments ranging from poultry houses to salmon farms, the high density and close proximity of fish, shrimp, and other species raised in land-based ponds, raceways, and RAS, causes stress and facilitates the transmission of disease and parasites.

Antibiotics and chemical agents have been the traditional response to disease outbreaks, but thanks to their overuse through the decades these treatments are becoming less effective, and in many cases their

use may be limited or proscribed by regulatory agencies.

While attending American Aquaculture 2019 in New Orleans, Louisiana, the editorial staff of International Aquafeed magazine met with representatives of STK Aqua. The company develops and commercialises solutions that help to increase survival rates, grow healthier animals, and enable safer, healthier and more abundant production from vaccination, transportation and stress reduction to stave off the onslaught of parasites and bacterial diseases.

Eshed®- A non-polluting, sustainable solution

Eshed is a botanical-based solution for the treatment and prevention of bacterial disease in shrimp. It is highly flexible and can be used in all aquaculture environments including land-based ponds and raceway systems.

Moreover, because it does not employ poisonous chemical solutions, it does not pollute the aquaculture environment, or surrounding fragile ecosystems.



How Eshed works

When bacteria invade a shrimp's body, the attacking bacteria protect themselves with a Biofilm in order to multiply and exchange genetic information. The shrimp's immune system is unable to protect itself due to the nature of the microbe's growth within the organism – the invading microbes create a “bio-shield” that protects it from the shrimp's immune system.

Similarly, antibacterial treatments cannot efficiently penetrate the “bio-shield.” Using Eshed helps prevent the “Bio-shield” creation, leaving the microbes exposed to the shrimp's immune system and antibacterial products such as organic acids.

And because Eshed is based on innovative formulations of natural organic compounds extracted from plants, it leaves no harmful residues in the produce destined for human consumption and causes no water pollution that damages the environment and poses health risks to humans.

It has been shown that hatcheries using Eshed on a regular basis during all stages, have increased their yield up to 20-30 percent with much healthier and bigger animals.

By using Eshed, the hatcheries save time and money, shortening the growth cycle, and reducing the use of antibiotics.

<https://stk-ag.com>

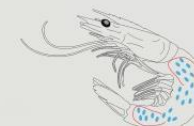


Timorex EC® Action

1. Bacteria invade the shrimp
2. Bacteria protect themselves with a Biofilm in order to multiply and exchange genetic information



3. Disease: Bacteria multiply rapidly, forming new colonies in the shrimp.



4. Antibacterial treatments cannot penetrate efficiently



Eshed® prevents the formation of the biofilm. This allows bacterial treatment to easily penetrate the bacterial colony and destroy it.



Notes:

- Harmful bacteria
- Antibacterial treatment
- Protective biofilm
- Protective biofilm after Eshed effect