

Water quality management system



■ What are the features of the product?

The system is designed to manage the water quality in land-based shrimp aquaculture.

There are growing risks related to stable supply of marine products due to global population growth, a rapid increase in consumption of marine products, microplastics, and red tide, among other factors. Thus, there are high expectations for sustainable aquaculture of safe marine products.

There are mainly three types of aquaculture of marine products: marine aquaculture, land-based free-flowing aquaculture, and closed-loop aquaculture. Marine aquaculture and free-flowing aquaculture pose food safety problems, such as polluted seawater and use of chemicals and risks of unstable supply due to red tide and typhoons.

Against this backdrop, we have developed a water quality management system to support closed-loop land-based shrimp aquaculture, which uses tap water, whose culture period is short, and which poses less business risks.

■ Why was the product certified as one of the Nittoku Green Products?

Resource saving

Energy saving

Substance of Concern

In closed-loop land-based shrimp aquaculture, the system constantly monitors and stabilizes the water quality by properly feeding shrimp and changing water. This has achieved stable shrimp aquaculture.

- The system achieves stable supply of safe shrimp free from artificial chemical substances.
- Discharged water is also free from artificial chemical substances. Thus, the environmental impact is low.
- The water quality management system controls the frequency of changing water to minimize water consumption. Under study
- The water quality management system optimizes the feeding amount and maximizes the stocking density and growth speed. This helps maximize the resource input efficiency. Under study
- Nitrides contained in discharged water serve as nutrients for hydroponics. Thus, a resource-recycling aquaculture system can be built. To be studied

■ Comment from the developers

We support the sustainable closed-loop land-based aquaculture business from the viewpoint of producers. This helps achieve our ultimate goals of protecting marine resources, preventing marine pollution, conserving mangrove forests, and sustainably offering safe marine products to people around the world. We remain committed to identifying and resolving new issues as a close partner of the land-based aquaculture business.

[Project plan under study]

