

Japanese scientists unveil innovative fish breeding technique

Japanese scientists have introduced the latest aeration device developed by them at a shrimp farm in Thailand.

The feature of the new developed aeration device is to feed oxygen bubbles in the form of foams. The device generates fine bubbles, which is called micro-nano bubbles.

The small buoyancy of the micro-nano bubbles drift in the water for a long time which effects easily to dissolve oxygen into the water.

"The oxygen concentration rate of the fish farms and shrimp farms falls down in the evening. When the phytoplankton consumes more and more oxygen in the night, then fish or shrimp becomes suffocated. If we can help somehow with this issue, the survival rate and growth rate will increase. We have developed this aeration device as a very innovative device for the aquaculture industry which can improve the production efficiency," said Hiroaki Tsutsumi, Phd scholar of Prefectural University of Kumamoto.

Shrimp farming requires larger facility area compared to fish farming. While developing aeration device, it was required to treat large volume of water at low power consumption.

Inquiry about this device is coming not only from Thailand, but also Vietnam, Indonesia and Malaysia. Professor Tsutsumi wishes to introduce the technology in Southeast Asia.

"Asia, especially in the tropical regions have large food production base. Once we can improve the production efficiency by using the Japanese technology, it can increase the production and also helps people in Asia. It will be beneficial to both farmers and consumers. Vegetables, especially fruits contain a lot of moisture. Since 95 percent or more are the moisture contents, it needs to absorb more and more water when it comes to increase the production volume. But overdo of the water can damage the crops. But, the crop will grow active when we use high oxygen concentration water, because oxygen is absorbed together with water. I think this method is especially good for hydroponics," said Hiroaki Tsutsumi, Phd scholar of Prefectural University of Kumamoto.

The micro-nano bubble generating device also can make a healthy hydrogen water by mixing hydrogen gas to the apparatus.

Source : <http://fis.com/fis/worldnews/worldnews.asp?monthyear=3-2016&day=1&id=82694&l=e&country=0&special=&ndb=1&df=0>