INNOVATIVE PROCESS OF INTEGRATED CULTURE OF MARINE SPECIES

DESCRIPTION OF THE TECHNOLOGY

Researchers at the University of Alicante have developed a new procedure that combines the culture of several marine species in the same place in offshore areas, as part of an integrated multi-trophic aquaculture (IMTA) system.

The main culture may be any of the species commonly used in marine aquaculture as fed fish or shellfish, and the second one involves the culture of amphipods that feeds on organic waste generated by the main culture and has an important commercial potential as food resource.

The main advantage of this technology is the cost-effectiveness of implementing this procedure in sea cages because with the same investment and infrastructure is raising an additional species reusing existing waste and diversifying production. Thus, it can be used in the industrial sectors of aquaculture.

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MARKET APPLICATION SECTORS

The present invention is mainly of interest to companies operating in marine aquaculture sector.

TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

Among the numerous advantages of this IMTA system, the most noticeable is the cost-effectiveness of the culture of several marine species in the same place. Additionally, no increase of quantity of food is necessary since amphipod species feeds on the waste of the first species.

Moreover, the culture of amphipods coupled to the main culture has the following advantages:

- Production of a new marine product with high nutritional value and low cost, which is suitable for feeding fish, domestic animals and humans.
- Higher use of the existing marine infrastructure because the new procedure can be implemented in conventional cages incorporating some minor adaptations.
- Reduction of the environmental impact as it is integrated into the marine environment in a natural way
- The species are perfectly adapted to offshore conditions because they are naturally present and the culture is carried out in the same marine environment
- Saving in energy costs, since previous pilot culture of amphipods have been made in tanks on land, which implies a considerable reduction of maintenance, oxygenation and water purification costs.
- Diversification of the production and extraction of a second product with high nutritional value and great commercial potential, developing a multi-trophic culture as is promoted by the EU.
- Diminution of the need for new licenses for aquaculture activities in the marine environment.
- Simplicity of the collection system which does not require major infrastructure or complex treatments.

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CURRENT STATE OF DEVELOPMENT

At present, this technology has been tested in marine aquaculture facilities with optimum results.

INTELLECTUAL PROPERTY RIGHTS

This technology is protected by patent:

- Application number: 201531543
- Application date: 28/10/2015

COLABORATION SOUGHT

Companies interested in acquiring this technology for commercial exploitation through licensing agreement of the patent are required.

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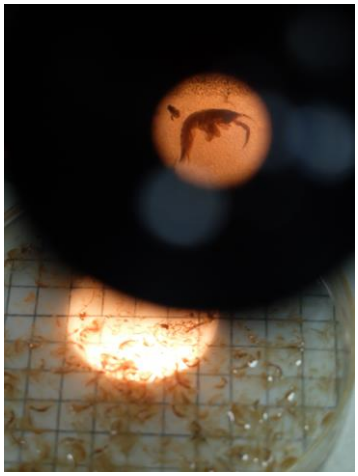

Image 1: anphipods collected by this technology

Image 2: Technology implemented in sea cages

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