Creation of innovative food production technologies in response to environmental changes in the future

Development of the next generation land-based closed recirculating aquaculture system utilizing microbial abilities

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Summary :

As increasing demand on seafood in the world, improving the productivity of aquaculture has become an important issue for stable food supply. To this purpose, the land-based closed recirculating aquaculture systems have been taken attentions, because they can control the growth environments without depending from surroundings.

On the other hand, the sustainable production of fishes in aquaculture requires the improvement of juvenile culture, disease control, development of feed independent of natural fish resources, water treatment and control, and so on.

Microorganisms in environment have a wide variety of abilities and potentialities; bacteria degrade harmful wastes in water, some microorganisms may produce nutrients for fishes, and symbiotic microbes may improve fish health.

The purpose of our project is to develop the land-based closed recirculating aquaculture system utilizing 'the power of microbes'.

Land-based closed recirculating aquaculture system