Regional Fish Institute, Ltd.

- Address: Kyoto City, Kyoto Pref.
- Employees: 45
- Established in 2019
- Business: (1) Breed improvement of aquatic species using genome editing, etc.
  (2) production and sales of aquatic products.

https://regional.fish/en/

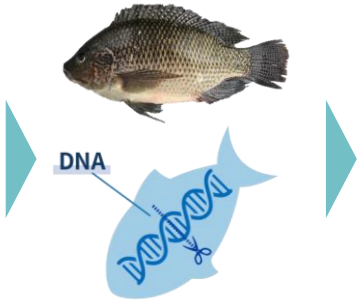
Outline of the demonstration project

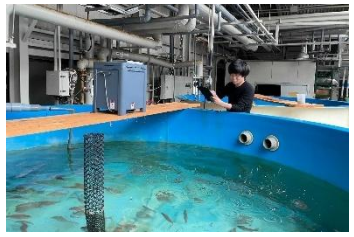
- The Project for High-Speed Breeding of Tilapia in Thailand.

***Applied for discontinuation of the project on April 22, 2025**

Cooperation with local companies/governments

- Local Partner: SPM Feedmill Co., Ltd.
- Details of cooperation and collaboration: provide facility site and infrastructure needed to conduct R&D activities, supports for material procurement and R&D operations





Targeted economic/social issues

- While the world is faced with protein shortage, the aquaculture production of tilapia (the most important protein source in Thailand) has not shown growth for the past 10 years.
- Approximately 30% of Thailand's working population is engaged in food and agriculture sector, but its contribution to GDP remains at 6.3%. To achieve "Thailand 4.0" and "BCG (Bio, Circular, Green) Economic Model", there is a need to improve productivity and add value to aquatic products.

Details of demonstration

- We aim to demonstrate "genome editing breed improvement" in Thailand which can fast forward the breeding process from 30 years to only a few years.
- We have technological capabilities based on research results of Kyoto University and Kindai University and a track record of successfully commercializing genome-edited fish for the first time in the world (currently the only one).
- We plan to develop "fast growth" tilapia in Thailand and introduce intensive cultivation system alongside.

Expected outcome of beneficiary effects

- Fast growth tilapia will improve the growth rate and feed efficiency, which may improve gross profit per unit area by 3 times with fries alone, and 6 times in combination with intensive cultivation system.
- We plan to expand the application of our technology to other fish species (seabass, shrimps, etc.) and traits (disease resistant, better taste, nutrition, etc.).
- We can contribute not only to solving protein shortage and improving profitability of aquaculture farmers, but also to strengthening export products and increasing employment in aquaculture sector and related industries.