

## **STATUS QUO OF BLUEFIN TUNA BROODSTOCK MANAGEMENT, BREEDING, AND SEEDLING PRODUCTION IN JAPAN**

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The bluefin tuna *Thunnus orientalis*, which is the largest tuna, has a high market price because it is used for expensive sashimi and sushi dishes in Japan. It is an important marine fish for the Japanese people.

Technological development for farming bluefin tuna began in Japan about 30 years ago, primarily proceeding under the leadership of the Fisheries Agency. Operations for farming bluefin in captivity, annual collection of yearling tuna, held in pens for 2–3 years, and harvesting them have recently been assured. Such operations have spread to western and mainly southern Japan. However, consideration of what provides farmers a stable amount of young, naturally caught tuna and harmful impacts of over-fishing of yearling tuna led us to examine artificial production of seedlings.

Kinki University first succeeded in breeding and rearing of larval bluefin. Its success has encouraged other projects, along with those of some private farmers and a prefecture. In addition, a project for recovery and enhancement of international fisheries resources through sea ranching was conducted with bluefin beginning in 1985. Several species have been raised under the leadership of the Fisheries Agency of Japan since 1962. This project has been carried out at the Amami Station of Fisheries Research Agency (F.R.A.) since 1994.

Regarding seedling production of bluefin, these projects have been performed as one set of each technology: brood stock management, breeding, and rearing larvae. Consequently, annual spawning of 3–5 year old tuna in captivity was performed and eggs from tens of thousands to hundreds of millions have been collected. Seedlings from hundreds to tens of thousands have been produced annually in Japan.

Development of technologies for bluefin in captivity in Japan have been performed through the cooperation of the government, universities, and the private sector, with positive information exchanges at an annual gathering with the F.R.A. Secretariat.

This presentation reviews the status quo of bluefin broodstock management, breeding, and seedling production in Japan.