



KINDAI
UNIVERSITY

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Cultivate the seas!

Aquaculture Research Institute, Kindai University

Aquaculture Technology and Production Center,
Kindai University

The challenge: reverse the depletion of marine stocks caused by overfishing

As a country surrounded by the ocean, Japan has since ancient times obtained much of its food supply from marine products. Today, it consumes more seafood per capita than any other nation but also stands at a major crossroads. Marine stocks are in danger; while a rising world population adopts a growing appetite for seafood that leads to overfishing, many world regions are seeing their seas polluted as a by-product of industrial growth. The Aquaculture Research Institute of Kindai University is responding to this worrying depletion of marine stocks by conducting tireless research aimed at supplying the world with a stable supply of farmed fish.

Leading the worldwide industry with exemplary aquaculture technology

The origins of Kindai University's Aquaculture Research Institute go back to the 1948 opening of a coastal research facility (now the Shirahama Station). Since then, it has used research in cutting-edge aquaculture methods to increase production of marine stocks and contribute to further technological advancement of the industry. The institute seeks to move the industry away from the cycle of 'catching fish' to a more sustainable cycle of 'producing and raising fish'. It is gradually achieving this through aquaculture research that realizes increased production—and sustainable utilization—of marine stocks.

Aquaculture methods in harmony with nature

Utilizing aquaculture technologies to increase production of marine stocks requires that the aquaculture site be in total harmony with its natural surroundings. Besides researching aquaculture methods, the Aquaculture Research Institute funnels its efforts into improving the environment of the aquaculture site. A key part of its mission is to use the environmentally friendly aquaculture technologies built up over many years for the betterment of the worldwide aquaculture industry.

Cultivate the seas!



‘Cultivate the seas!’ This was the creed of Koichi Seko, the first president of Kindai University and the founder of what is today Kindai University’s Aquaculture Research Institute, the site of the world’s most advanced research into aquaculture technology. Since its foundation, the institute has achieved numerous world firsts and is constantly raising the technology bar for the world’s aquaculture industry.

Koichi Seko
Founder and first president of Kindai University
(honorary citizen of Shingu City, Wakayama Prefecture)

Envisioning an ocean harvest for a nation in need

Some 70 years ago, Japan was in tatters after the end of World War II. In the fishing ports of Wakayama and other prefectures around the country, fish catches had dropped substantially, and citizens faced a serious food shortage. Amidst this dire situation, Koichi Seko, the first president of Kindai University, launched Japan’s foray into aquaculture. Believing that the ocean surrounding the island nation was like a field that should feed the country, Mr. Seko’s creed was ‘Cultivate the seas!’ This marked the beginning of Kindai University’s aquaculture research. In an era when conventional wisdom said that seafood was something caught by fishermen in the open ocean, many in the industry were dubious of the idea of the ocean as a ‘field to be cultivated’. But Mr. Seko embarked on his plan, advocating fish farming as the foundation of future aquaculture and the way to advance the fishing industry and make Japan self-sufficient in marine stocks. He began with the opening of a seaside research facility in 1948 in Shirahama Town, Wakayama Prefecture.

Embodying a creed by advancing marine aquaculture

Not long after it was launched, the seaside research facility was conducting unprecedented research in a number of areas. But since establishing aquaculture technology was a totally new venture, inevitably, there were failures. On top of this, research expenses were causing the university financial difficulties, and there was even talk of closing the research facility. But Mr. Seko was fervent in his belief, and he ploughed on relentlessly in order to bring research to fruition. The tireless work of all concerned paid off eventually with the successful aquaculture of yellowtail and later with such prized fish as red sea bream and greater amberjack. These victories drew nationwide attention from Japan’s fishing industry.



Net enclosure farming—the foundation of aquaculture technology



Today, Japan produces about 150,000 tons of adult yellowtail through fish farming, but the roots of this industry go back to repeated trial and error at Kindai University’s original aquaculture research center. Because Mr. Seko knew that success in aquaculture lay in finding dependable researchers, he journeyed to the Faculty of Agriculture at Kyoto University, where he handpicked a young man named Tetsuo Harada. Mr. Harada went on to succeed Mr. Seko as the head of the Aquaculture Research Institute, and the eventual success of the facility’s aquaculture research was largely due to the application of his idea of raising fry in net enclosures. Before that, researchers had sectioned off a part of a bay as a fish pond where fry were released and fed, but Mr. Harada developed an effective aquaculture technique in which fry are cultured in net enclosures. This revolutionary method took aquaculture technology to a whole new level and went on to become the world’s primary method of fish farming!

Aquaculture Research

Research at Kindai University's Aquaculture Research Institute attracts worldwide attention

Numerous proven world-first research achievements have made the Aquaculture Research Institute a trusted name in the fishery industry. Worldwide attention has been focused on the institute's technologies, which are constantly being advanced at the network of seven experiment stations that the Aquaculture Research Institute has established around Japan.

First-of-a-kind research successes benefit the industry worldwide

The revolutionary research successes achieved at the Aquaculture Research Institute have been promptly adopted by the aquaculture industry and have led to higher production yields of marine stocks. Let's look at some of these.

Research on net enclosure farming began in 1954 and was eventually put to use in the industry. This method is today the standard for raising marine fish in Japan and has been adopted in other parts of the world.

In 1965, the Aquaculture Research Institute achieved the world's first production of Japanese flounder fry and then expanded this success to the production of 17 other species of fish. Further success was achieved in developing high-quality broodstocks through selective breeding and crossbreeding.

In 2002, the holy grail of fish farming was realized with the world's first full-cycle aquaculture of Pacific bluefin tuna.

Similar success is predicted for other research currently underway; for example, increased yields through deep-seawater aquaculture at the Toyama Station and fry production of warm-water species at the Amami Station.

Major hub of marine stock research is the engine of aquaculture

What truly sets the Aquaculture Research Institute of Kindai University apart are the breadth and scope of the research activities that go on in addition to the raising of fish. Findings in basic research—in fields such as fish nutrition, breeding, morphology, physiology and biochemistry, and fish diseases—are applied to areas including fry production, crossbreeding, selective breeding, biotechnology, and alternative sources of protein.

Since 1989, the Aquaculture Research Institute has had academic agreements with Chulalongkorn University in Thailand, University Malaysia Sabah, and Chonnam National University in Korea, under which students and researchers travel back and forth to conduct research and undergo training.

In 2003, under the 21st Century COE (Center of Excellence) Program of Japan's Ministry of Education, Culture, Sports, Science and Technology, the Aquaculture Research Institute was selected as a Center of Aquaculture Science and Technology for Pacific Bluefin Tuna and Other Cultivated Fish. In 2008, under the Global COE Program of the same ministry, it was selected as an International Education and Research Center for Aquaculture Science of Pacific Bluefin Tuna and Other Cultivated Fish.



Expansive fishery research across academic disciplines

The Aquaculture Research Institute boasts a history of successes that have laid the foundation for advances in aquaculture. A major example was feeding and training wild seawater fish into hatchery species and raising them as egg-laying adults. This was made possible by practical research into fish production and improved aquaculture technologies. In recent years, the institute has ventured into a wider range of aquaculture applications through a focus on basic research into disciplines that include fish nutrition, breeding, morphology, physiology and biochemistry, and fish diseases. The Aquaculture Research Institute will continue to develop new and better aquaculture technologies by collaborating with other research organizations across a range of disciplines.

Major achievements by the Kindai University Aquaculture Research Institute

- 1950** Starts use of first hatchery.
- 1954** Launches research on aquaculture using net enclosures.
- 1970** Launches research on tuna farming on consignment from the Fisheries Agency of Japan.
- 1975** Patents crossbreed farming methods for Japanese parrotfish and spotted parrotfish.
- 1979** Achieves world's first success in hatching Pacific bluefin tuna larvae.
- 1980** Patents crossbreed farming methods for yellowtail and goldstriped amberjack.
- 1995** Releases farm-hatched-and-raised Pacific bluefin tuna into the ocean—a world first.
- 2002** Succeeds in full-cycle aquaculture of Pacific bluefin tuna.
- 2004** Ships first lot of Pacific bluefin tuna raised via full-cycle aquaculture.
- 2007** Produces 3rd generation of farm-hatched Pacific bluefin tuna.



First in the world to farm hatch and raise 18 species of fish

In 1965, the Aquaculture Research Institute became the first in the world to produce farm-hatched Japanese flounder fry. More world firsts followed, with the institute having successfully farm hatched and raised a total of 18 species of fish to date. These efforts help prevent the depletion of natural fish stocks caused by overfishing and also enable mass production of species in short supply, making it possible to bring prized fish to market at more reasonable prices. The Aquaculture Research Institute is achieving solid results towards its vision of harvesting the sea for resources and helping the fishing industry shift from fishing to farming in an age when food shortages are likely to occur in the future.

Fish species hatched and farm-raised by Kindai University—world firsts

Year	Species (scientific name)
1965	Japanese flounder (<i>Paralichthys olivaceus</i>)
1967	Silver bream (<i>Sparus sarba</i>), Japanese parrotfish (<i>Oplegnathus fasciatus</i>)
1968	Yellowtail (<i>Seriola quinqueradiata</i>)
1969	Greater amberjack (<i>Seriola dumerili</i>)
1970	Spotted parrotfish (<i>Oplegnathus punctatus</i>), Yellowfin tuna (<i>Thunnus albacares</i>)
1972	Goldstriped amberjack (<i>Seriola aureovittata</i>), Frigate mackerel (<i>Auxis rochei</i>), Frigate mackerel (<i>Auxis thazard</i>)
1973	Striped bonito (<i>Sarda orientalis</i>), Chicken grunt (<i>Parapristipoma trilineatum</i>), Striped jack (<i>Caranx delicatissimus</i>)
1975	Japanese whiting (<i>Sillago japonica</i>)
1979	Pacific bluefin tuna (<i>Thunnus thynnus orientalis</i>)
1980	
1988	Kelp grouper (<i>Epinephelus moara</i>)
1990	
1991	Spotlined sardine (<i>Sardinops melanostictus</i>)
1999	Chub mackerel (<i>Scomber japonicus</i>)
2000	

Aquaculture

Full-cycle aquaculture of Pacific bluefin tuna helps sustain the world's marine stock

Research into fish-farming technologies for commercially important fish contributes to the advancement of the aquaculture industry. In the spirit of the practical application of science, the Aquaculture Research Institute is carrying out full-cycle aquaculture of various fish species and, in the process, is giving birth to new technologies for the betterment of society.

Full-cycle aquaculture stems the decline of tuna stocks

The Pacific bluefin is the most prized member of the tuna family. It can reach 3 m in length and weigh 500 kg. But its good taste and high selling price have resulted in overfishing and a subsequent decline in stocks in recent years. While countries around the world have responded by imposing limits on Pacific bluefin tuna catches, another solution to this problem is aquaculture of the species.

With conventional Pacific bluefin tuna aquaculture, juvenile fish are caught in the wild and farm-raised to marketable size. Eventually, however, this leads to depletion of juveniles in the wild and subsequently to fewer adult Pacific bluefin tuna. To ensure a sustainable supply of Pacific bluefin tuna, full-cycle aquaculture—raising artificially hatched larvae to adults, collecting their eggs, and then hatching them to create subsequent egg-laying generations—is needed. By carrying out artificial control over all processes of the lifecycle, full-cycle aquaculture makes it possible to provide the market with a stable supply of fish without having to depend on fish stocks in the wild.

Development stages of Pacific bluefin tuna under full-cycle aquaculture



1 Adult fish

The tuna are raised for at least five years to adulthood. They reach 2 m in length and 200 kg in weight.

2 Fertilized eggs

The fertilized eggs are collected from the water surface. One female lays an estimated several million eggs, each about 1 mm wide.

3 Hatched larvae

In about 32 hours, the eggs hatch into larvae about 2 to 3 mm long. The larvae are initially fed plankton.



4 Fry

The larvae grow into fry in about 40 days, after which they are moved from land-based tanks to ocean net enclosures.

5 Younglings

Roughly three months after hatching, the fish are about 30 cm long and weigh about 300 g.

6 Adults

In about three years, the adult fish are more than 1 m long and weigh about 30 kg. They are then shipped to market.

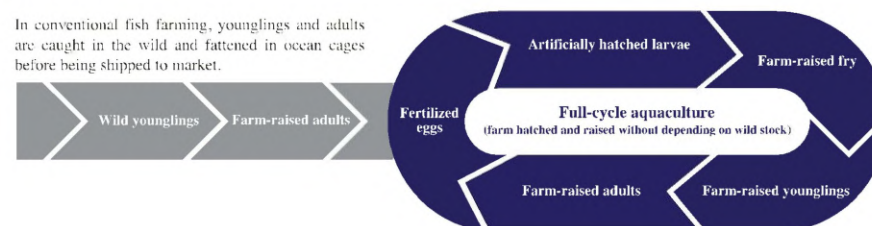
Thorough monitoring leads to success after 32 years



The Aquaculture Research Institute embarked on research into full-cycle aquaculture of Pacific bluefin tuna in 1970. Success was achieved in June 2002, 32 years later. It took that long because Pacific bluefin tuna is a delicate fish, and little was known about its habitat. The secret to success was constant monitoring of the fish. For example, after it was discovered that some of the artificially hatched fry were dying suddenly, diligent monitoring revealed that the cultivation environment was the problem, so steps were taken to improve this environment. As a result, the optimal environment was created, and the fry were thus able to reach adulthood and lay eggs that could be harvested. This completed the lifecycle and, consequently, the attainment of full-cycle aquaculture. This revolutionary development became the technological foundation of the aquaculture business in Japan and other countries. Subsequent research by the Aquaculture Research Institute was adopted for use in the 21st Century COE Program and in the Global COE Program run by the Japanese government. The Aquaculture Research Institute will continue to conduct research to improve aquaculture technology for Pacific bluefin tuna and other commercially important species.

Process of full-cycle aquaculture

In conventional fish farming, younglings and adults are caught in the wild and fattened in ocean cages before being shipped to market.



At the vanguard of world aquaculture research

Adopted for research program under Japan's MEXT

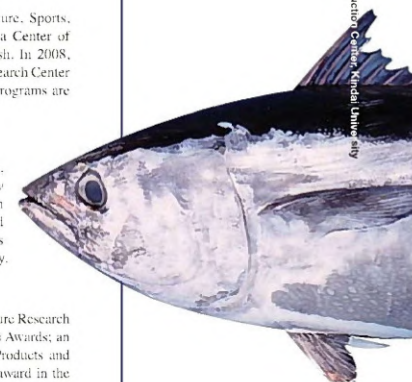
In 2003, under the 21st Century COE Program of Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Aquaculture Research Institute was selected as a Center of Aquaculture Science and Technology for Pacific Bluefin Tuna and Other Cultivated Fish. In 2008, under MEXT's Global COE Program, it was selected as an International Education and Research Center for Aquaculture Science of Pacific Bluefin Tuna and Other Cultivated Fish. These two programs are aimed at building world-class centers of education and research.

Worldwide media attention

The Aquaculture Research Institute's full-cycle aquaculture of Pacific bluefin tuna, achieved in 2002, has been featured in media outlets around the world, including the *New York Times*. The technology has received even more attention since limits were imposed on Pacific bluefin tuna catches in 2006. In 2013, the year that Kindai University opened restaurants serving the Aquaculture Research Institute's farm-raised fish, the topic was featured on over 100 television programs in such categories as news, education, and variety.

Recipient of multiple awards

For its successful development of full-cycle aquaculture of Pacific bluefin tuna, the Aquaculture Research Institute has received numerous awards: an award of excellence in the 2005 New Business Awards; an award of excellence (Nikkei Sangyo Shimbun Award) in the 2005 Nikkei Outstanding Products and Services Awards; an award in the Third National Maritime Award in 2010; and a special award in the Kansai Genki Cultural Bloc Awards in 2011. For opening restaurants in Tokyo and Osaka serving farm-raised fish, the Aquaculture Research Institute once again received an award in the 2013 Nikkei Outstanding Products and Services Awards. Kindai University and A-Marine Kindai Co., Ltd., which jointly run these restaurants, received a special award in the 2014 Kansai Business Seminar Awards.



Aquaculture

Breed Improvement

Working together with industry to make the most of our research results

“Learning for the real world,” as stated in Kindai University’s founding principles, calls for applying the fruits of research and education in the real world so as to benefit both the university and society at large. Kindai University’s worth lies not only in its research but also in academia-industry collaborations that bring value to society. In fishery research, by providing aqua-farms around Japan with our farm-hatched fry, we have enabled the stable, large-volume supply of prized fish, such as red sea bream and striped jack, at reasonable prices.

In 1970, as part of a breed-improvement project for yellowtail, the Aquaculture Research Institute succeeded in crossbreeding yellowtail with the more commercially valuable goldstriped amberjack to produce *burihira* (a coinage of the Japanese words for the two species). Though *burihira* grow at a slower pace than yellowtail, they become twice the size of goldstriped amberjack at two years of age. The university has obtained a patent for the farming technique used to produce this unique Kindai University species.

Creating better-looking farm-raised fish

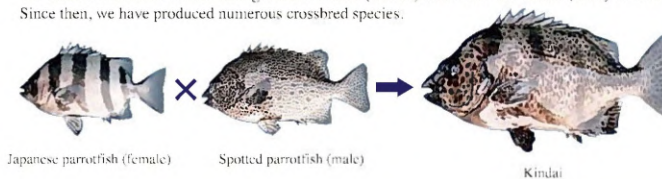
Besides *burihira*, the Aquaculture Research Institute has helped bring other crossbred species to market, including *machidai* (a crossbreed of red sea bream and crimson sea bream). Although wild red sea bream are a bright red color, exposure to UV rays makes farm-raised red sea bream take on a dull, dark, and less appealing color. Crimson sea bream, on the other hand, grow slowly but retain their bright red color even when farm-raised. By crossbreeding these two species, we were able to create *machidai*, a new species that has the bright red color of wild fish but grows faster than crimson sea bream.

But we didn’t stop there: to solve the problem of *machidai* being easily damaged on the surface, we crossbred red sea bream and *machidai*. This new species, known as *machimodoshi*, boasts even better traits than *machidai*.

Research projects like these, which take market value into consideration, are a source of pride for Kindai University and a reflection of our emphasis on research with real-world relevance.

Crossbreeding

The Aquaculture Research Institute does research in crossbreeding species that have different traits. We first succeeded in crossbreeding red sea bream (female) and black sea bream (male) in 1964. Since then, we have produced numerous crossbred species.



Year	Crossbred species (female × male)
1964	Red sea bream × Black sea bream
1967	Red sea bream × Silver bream
1968	Japanese parrotfish × Black sea bream
1969	Japanese parrotfish × Spotted parrotfish
1970	Yellowtail × Goldstriped amberjack
1970	Yellowtail × Greater amberjack
1970	Japanese parrotfish × Girella
1970	Black sea bream × Silver bream
1971	Greater amberjack × Goldstriped amberjack
1972	Goldstriped amberjack × Greater amberjack
1973	Red sea bream × Crimson sea bream
1973	Spotted parrotfish × Japanese parrotfish
1976	Frigate mackerel × Eastern hole tuna
1998	Barfin flounder × Spotted halibut
1998	Spotted halibut × Barfin flounder
1998	Malabar grouper × Kelp grouper
1998	Malabar grouper × Sevenspotted grouper
2011	Kelp grouper × Giant grouper

Selective breeding

This method is used to produce breeds of higher quality by selecting juvenile fish of superior traits, raising them, and then repeating this process of selection and raising for successive generations. Through selective breeding, the Aquaculture Research Institute has produced what we call Kindai *madai* (red sea bream), which has a far better growth rate than wild red sea bream. Kindai *Madai* is a registered trademark of Kindai University.

Biotechnology

The Aquaculture Research Institute has succeeded in cloning red sea bream, feminizing male Japanese flounder, and masculinizing female tiger puffer. We also do research related to DNA analysis.

Our mission is to develop the fishery industry and bring high-quality breeds to market

The Aquaculture Research Institute is applying the fruits of its full-cycle aquaculture research toward creating higher-quality breeds. Today, we are helping to bring prized fish to market at more reasonable prices, and our technology is making a positive impact on society.

Breed improvement

Aquaculture Research Institute



Leading the world in aquaculture research

A world pioneer in aquaculture research, the Aquaculture Research Institute has a network of bases around Japan.

Aquaculture Technology and Production Center

The frontline of fry production

The Aquaculture Technology and Production Center is committed to producing high-quality fry and adult fish with cooperation from the local community.



Shirahama Station (Aquaculture Research Institute headquarters)

Actively returning the results of aquaculture research to the fishery industry

The Shirahama Station in Wakayama Prefecture began in 1948 as a marine research facility of Osaka Science and Engineering University, the predecessor of Kindai University. Its first research was into the farming of yellowtail and aquaculture using net enclosures. Since then, the net enclosure method has spread rapidly around Japan and is now widely used in other parts of the world as well. The Shirahama Station has also developed aquaculture techniques for various commercially valuable fish species, including red sea bream, and is pushing forward with full-cycle aquaculture, in which fish stock are raised to adulthood, their eggs are collected and hatched, and the fry are grown into adults. This facility also researches breed improvement using such methods as selective breeding, crossbreeding, and biotechnology.



Susami Branch Supply base for fish-farm eggs

Opened in Wakayama Prefecture in 1986, the Susami Branch produces large quantities of various species of fry, taking advantage of its location in an area with clean seawater and no other fish farms nearby. Several large-capacity tanks for collecting eggs are located there, allowing the Susami Branch to fulfill its role as a supply base for fish-farm eggs.



Shingu Station Dedicated to freshwater aquaculture

Originally based in Mie Prefecture, this freshwater aquaculture laboratory was relocated to the banks of the Takada River in Wakayama Prefecture in 1934 in response to a strong request from the Takada community in Shingu. The pristine waters of the Takada River, a branch of the Kurotsu River, make it an ideal location for aquaculture research of sweetfish, satsukimaru salmon, and sturgeon.



Oshima Station Frontline of Pacific bluefin tuna research

The Oshima Station was set up in 1970 at the southernmost point of Honshu, Japan's main island, in the town of Kudamatsu. Tasked with studying the aquaculture of temperate and subtropical fish species, this laboratory has been focusing its research on Pacific bluefin tuna, achieving such outstanding results as the first shipment in 2004 of Pacific bluefin tuna produced under full-cycle aquaculture.



Toyama Station Research using deep-sea water

The Toyama Station was established in 1991 for the research of aquaculture of temperate and cold-water fish species. This Toyama Prefecture laboratory has been studying aquaculture in seawater taken from a depth of 100 meters. Research projects in recent years include aquaculture of masu salmon and whitespotted charr.



Uragami Station Early-stage fish farming and nutrition

In the Kinki region of Wakayama Prefecture, where this facility is located, a local arms in the late 1980s for the local industry to shift from pearl farming to fish farming. The Uragami Station was set up in 1980 in response to a strong request from the local community. This laboratory focuses on fry production, early-stage growth, and nutritional requirements and is contributing greatly to the development of fish farming in Kinki.



Amami Station Mass production of tuna fry

The Amami Station in Kagoshima Prefecture was established in 2001 in response to a request from the local community. Its earliest experiments involved the farming of juvenile Pacific bluefin tuna shipped from the Oshima Station in Wakayama. Other research includes the land-based production of Pacific bluefin tuna fry. The Amami Station has also set up the Amami Aquaculture and Science Center in a joint effort with the local fishery cooperative to raise red sea bream, kelp grouper, and Japanese parrotfish.

Established as the Aquaculture and Science Center in 1970 in Shirahama, Wakayama Prefecture, the Aquaculture Technology and Production Center has since expanded its facilities around Japan. The center was started in cooperation with the local fishery cooperative to produce commercially valuable fish species fry. Along with working to commercialize the aquaculture technologies developed by the Kindai University Aquaculture Research Institute, the Aquaculture Technology and Production Center is tasked with the production of various species of juvenile and adult fish—work that is contributing to the development of the fishery industry and to a stable food supply in Japan.



Shirahama Hatchery (Aquaculture Technology and Production Center headquarters)

Main fish species: Red sea bream, Tiger puffer, Striped jack, Japanese flounder

Susami Hatchery

Main fish species: Red sea bream, Yellowtail, Greater amberjack, Tiger puffer

Uragami Hatchery

Main fish species: Red sea bream, Striped jack, Greater amberjack, Japanese parrotfish

Oshima Hatchery

Main fish species: Pacific bluefin tuna, Red sea bream, Striped jack, Japanese flounder

Amami Hatchery

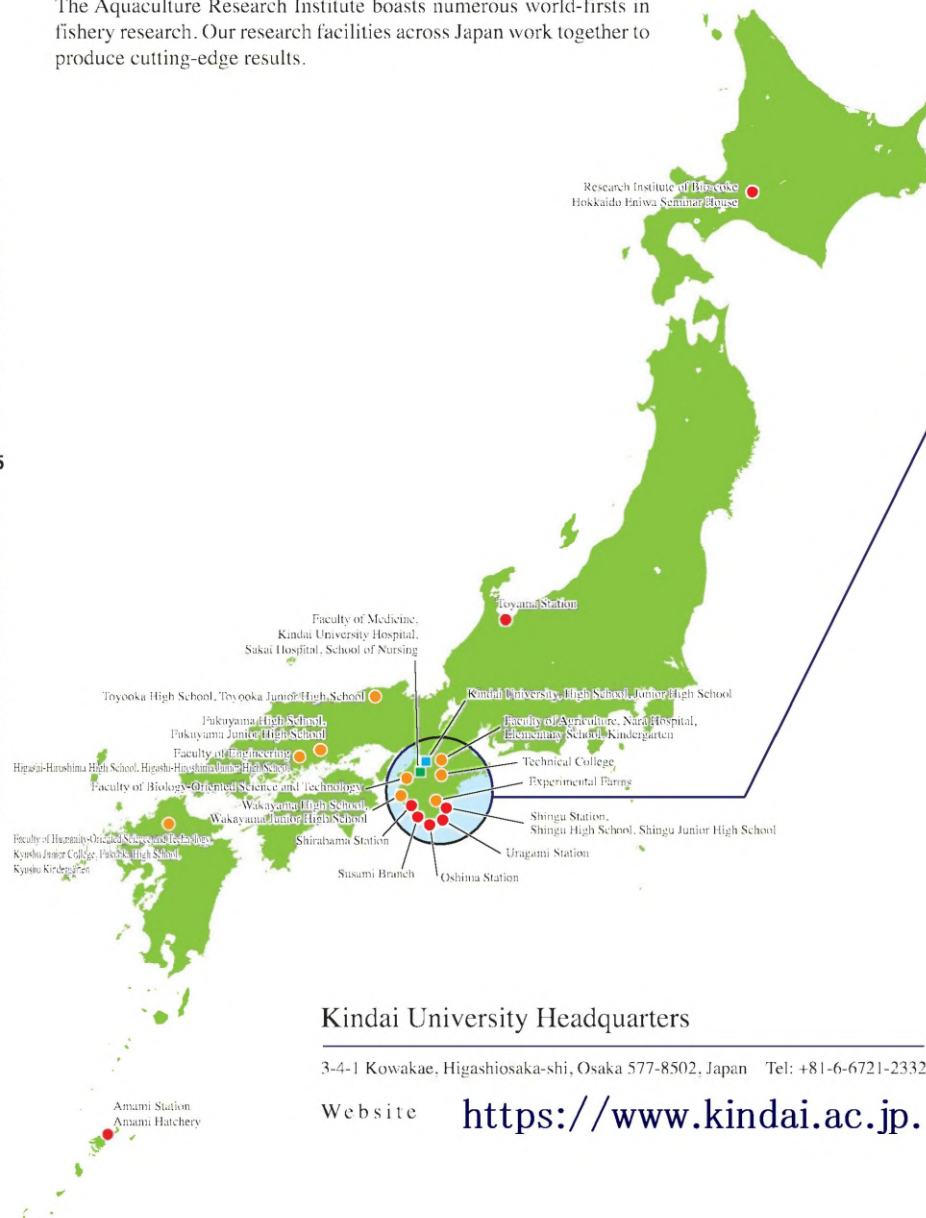
Main fish species: Pacific bluefin tuna, Kelp grouper, Greater amberjack, Striped jack



Kindai University Network

A wealth of intellectual properties supports our world-class fishery research

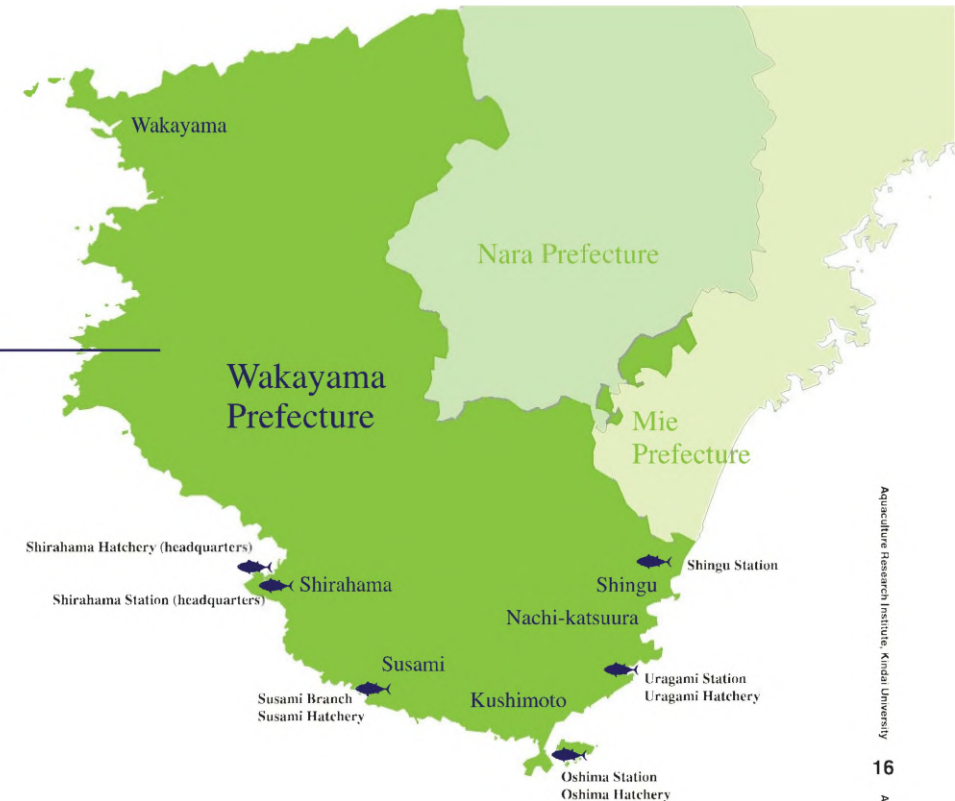
The Aquaculture Research Institute boasts numerous world-firsts in fishery research. Our research facilities across Japan work together to produce cutting-edge results.



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The Susami, Oshima, and Amami Hatcheries are located in the same place as the Susami, Oshima, and Amami Stations.

A-Marine Kindai Co., Ltd.

Offering safe, delicious food

A-Marine Kindai was established in 2003 to offer consumers safe and delicious farm-raised fish from the Kindai University Aquaculture Research Institute. With over 60 years of experience in aquaculture, the Aquaculture Research Institute can provide high-quality fish produced under an integrated quality control system that covers the entire lifespan of fish, from eggs to adults. What's more, the fish are raised in a stress-free environment that reduces the need for chemicals.

The company sells juvenile and adult red sea bream, striped jack, greater amberjack, Pacific bluefin tuna, and other species of fish. Other products include processed seafood, such as a kelp grouper hotpot set and Kindai caviar.

The "A" in the name "A-Marine Kindai" is the first letter of the Roman alphabet and represents the company's commitment to be a pioneer in the fishery and aquaculture industries. The "A" also stands for the Japanese words of *anzen* ("safety") and *anshin* ("peace of mind"), while "Marine" refers to the ocean, and "Kindai" is the nickname for the university.



Osaka restaurant

Kindai University Aquaculture Research Institute Restaurants



Putting "learning for the real world" into practice for future research

Aquaculture Research Institute, Kindai University

Company name A-Marine Kindai Co., Ltd.
Established February 19, 2003
Capitalization 52.5 million yen
Business domain

- ① Seedling production and fish farming business.
- ② Commercial sales of seedlings, farmed fish and processed products.
- ③ Management of restaurants specialized in farmed fish.

Representative Hiroyasu Tsuji, President
Head office location
 1-5 Shirahama-cho, Nishimuro-gun,
 Wakayama 649-2211
 Tel: +81-739-42-4116

Sales of juvenile fish

To help in the development of Japan's aqua-farming industry, A-Marine Kindai ships high-quality juvenile fish spawned at the Aquaculture Research Institute to aqua-farms across the country. These Kindai-horn fish are receiving high marks for their outstanding quality.

Sales of adult fish

The farm-raised adult fish shipped by A-Marine Kindai are grown using aquaculture technologies developed over the years by Kindai University. To satisfy the university's own high standards for quality, the fish are carefully taken care of and raised in an optimal growth environment. Rated highly for quality and safety, Kindai University-raised fish are seeing increasing demand from around the world.

Corporate history

February	2003	Established as a venture company of Kindai University with initial capital of 50,000 yen as the first approval company under the minimum capitalization exemption system in Tanabe Legal Affairs Bureau.
September	2004	First shipment of Pacific bluefin tuna raised via full-cycle aquaculture.
March	2006	Obtained trademark registrations for "Kindai Tuna", "Kindai Red sea bream", "Kindai Kelp grouper".
January	2007	Increased capital to 10 million yen through issuance of new shares.
April	2007	First shipment of Kindai tuna to the United States.
December	2007	First shipment of Pacific bluefin tuna to fish farms.
September	2010	Started collaborative tuna farming project with Toyota Tsusho Corporation.
April	2011	Acquired fishery right in Sugari area (Owase city, Mie).
February	2013	Increased capital to 52.5 million yen through issuance of new shares.
April	2013	Opened the first restaurant "Kindai University aquaculture research institute restaurant" in Grand Front Osaka.
September	2013	Acquired fishery rights in Oshima area (Kushimoto, Wakayama) and Keten area (Amami island, Kagoshima).
December	2013	Opened the second restaurant "Kindai University aquaculture research institute restaurant" in Ginza, Tokyo.
April	2014	Acquired fishery right in Uragami Area (Nachi-Katsuura, Wakayama).
November	2014	Provided "Kindai Tuna" certification to the tuna raised by Tuna Dream Goto (Toyota Tsusho Co.).
February	2015	Obtained trademark registration for "Kindai Yellowtail".
April	2015	Acquired fishery right in Itozumi Area (Yura, Wakayama).
February	2018	Acquired SCSA certifications for red seabream, white trevally, Yellowtail, and Pacific bluefin tuna.
September	2018	Acquired fishery right in Shirahama Area (Shirahama, Wakayama).
March	2019	Provided "Kindai Tuna" certification to the tuna raised by Tuna Dream Okinawa (Toyota Tsusho Co.).

With natural resources such as Pacific bluefin tuna increasingly at risk of depletion, Kindai University has been leading the industry in aquaculture as a way to help solve this problem. The university has taken the initiative in raising the value of farm-raised fish by opening restaurants in Osaka and Ginza (Tokyo). The restaurants serve safe and delicious fish—the fruits of the university's research—and give customers the opportunity to appreciate the value of farm-raised fish. Both restaurants have been extremely popular since opening.

The university uses the eating establishments for educational purposes as well. By featuring tableware and menus made and developed by students, the restaurants are a means of putting "learning for the real world"—one of the university's founding principles—into practice. The restaurants also gather customer feedback and relay that valuable information back to the research facilities for future research projects.

Osaka restaurant

6F Knowledge Capital, Grand Front Osaka,
 3-1 Ofuka-cho, Kita-ku, Osaka 530-0011
 Tel: +81-6-6485-7103

Seating 93 (floor area 219 m²)

Hours Lunch: 11:00–15:00 (last order 14:00)
 Dinner: 17:00–23:00 (last order 22:00)

Note: May close earlier depending on the amount of ingredients available.

Closed Same as Grand Front Osaka

Ginza restaurant

2F Yamashita Bldg., Ginza Corridor, 6-2 Ginza,
 Chuo-ku, Tokyo 104-0061
 Tel: +81-3-6228-5863

Seating 57 (floor area 190 m²)

Hours Lunch: 11:00–15:00 (last order 14:00)
 Dinner: 17:00–23:00 (last order 22:00)

Note: May close earlier depending on the amount of ingredients available.

Closed Open daily unless otherwise announced
 (closed for year-end and New Year holidays)



Ginza restaurant