

Gene editing could revolutionize fish breeding

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Genome editing technology looks set to revolutionize the way scientists develop genetically modified foods and discover new drugs. Japanese scientists are using this new technology to manipulate genes to produce better fish and agricultural products.

Yasutoshi Yoshiura, a senior researcher at the National Research Institute of Fisheries and Environment of Inland Sea, an arm of Japan's Fisheries Research Agency, has been trying to find ways to breed easier-to-grow tiger puffer fish over the past 7-8 years.

In general, it takes about two years to farm-raise tiger puffers. Yoshiura has been seeking to cut this period by half to one year, which would help lower prices.

His research made little headway, until advances in genetic analysis technology enabled him and his fellow researchers to identify the puffer fish's appetite-regulating genes.

His research partner institutions, Kyoto University and Kinki University, have been studying ways to help stimulate the growth of red sea bream. "We can put that research onto a commercial basis in 3-5 years," he said.

But there are still various hurdles along the way.

Akihiko Kondo, a professor at Kobe University, has been calling for research grants from the education, science and technology ministry. He thinks Japan should develop its own genome-editing technology to avoid paying exorbitant license fees for overseas intellectual property rights.

Kondo described a case in which a foreign company demanded 10% of sales as a license fee for using its genome editing-related patent. In other words, profits would flow out of Japan to other countries even if Japanese researchers created improved agricultural products or developed new drugs using foreign-patented genome-editing methods.

Read full, original post: [New tech allows scientists to develop better fishery, agricultural products](#)