

# Sustainable solution for tuna



Farmed bluefin tuna

OCEANIC Tuna Limited (OTL), a Scottish based company, believes it has the solution to the successful commercial propagation of tuna. It has spent the past four years developing a system aimed at mitigating the detrimental impacts of tuna juveniles 'spooking' when they are alarmed that leads to them damaging themselves against solid surfaces (walling) in captivity.

Alex Muhlholz, managing director of OTL explains: "Those few that have successfully hatched tuna, have had to deal with devastating mortality rates caused when the juvenile tuna are spooked for any reason and take flight at high speed. In the open ocean this is not an issue, but in a tank or ocean cage it often results in a fatal, high impact collision with the wall or net."

## Research links

The project was originally based in Australia but was relocated to Scotland to allow OTL to work more closely with the University of Stirling's Institute of Aquaculture.

Alex continues: "The move to Scotland was the transition point for us, funding from investors was easier to acquire, and people had the foresight to see where the project and our methodologies could go. We have also received support from Scottish Enterprise, which has allowed us to run feasibility studies on some 'outside the box' ideas."

The Institute of Aquaculture and OTL are developing a long term research plan covering aspects such as nutrition, reproductive physiology, health and welfare and genomics.

OTL is presently in discussions with a research organisation based in Panama, for a research project at their facility. This research project will be based on technology designed and developed by OTL and will draw on the facility's significant successes with spawning and hatching of tuna eggs over the past 15 years.

"For Oceanic Tuna this is a huge

opportunity," says Alex. "While most groups around the world are struggling to get tuna to spawn in captivity, let alone get the eggs to hatch, this facility has developed a programme of daily spawning. Working with them will give us access to juvenile tuna on an almost daily basis. It will allow us to develop our technology and methodologies at an incredible rate."

OTL has also been working with Pisces Engineering Limited, a Scottish based company who have been instrumental in the design of the system and its supporting technologies and also on a modular transportable hatchery system designed for the specific needs of tuna. This type of hatchery design means that operations can be expanded quickly by adding in another module, or moving to another location if pollution or algae affect water quality.

To date the system has been tested in computer simulations and prototyping, with work being undertaken by University of Strathclyde's Department of Design, Manufacture and Engineering Management on a robotic crash test tuna. This allows OTL to run replicable tests on equipment and systems to test for impacts as they would occur on live fish. This, in conjunction with the planned research project in Panama, has OTL on track for its first operational facility in Q3/Q4 2009.

"Talks are underway with several groups in the Mediterranean as well as South America and the Caribbean region, so there is significant interest in this technology", comments Alex. "We have plans for two or three hatcheries and grow-out facilities over the next 5 years, producing upwards of 50,000 MT per annum, so there is a lot of interest, not only for the financial rewards but also the export dollars that this type of project injects into a region."

For more information on Oceanic Tuna Limited visit [www.oceanictuna.com](http://www.oceanictuna.com)

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