

Published: 2 July 2012

Improving the sustainability of fish food

Australian researchers working on improving the sustainability of feed sources for farmed fish have been given a big thumbs up at the first Australian Aquaculture 'Blue Thumb' Awards.



Credit: Copyright [Audrey Bendus and Arthur Chapman](#).

Rights: Licensed under a [Creative Commons Attribution Non-Commercial Share Alike License](#).

Fish oil, particularly omega-3 long-chain polyunsaturated fatty acids, is a significant component of the diet of carnivorous and omnivorous farmed fish. The oil is derived from wild fish stocks.

Depletion of wild fish stocks is of concern given the rapid growth of aquaculture over the past four decades – an average of 8.4 per cent annually. The rising demand for farmed fish is driven partly by population growth, but also by rising standards of living and prosperity in developing countries.

The main source of the fish oil component of aquafeed is small low-value species such as anchovies.

The award-winning team of scientists, which includes researchers from CSIRO's Food Futures Flagship, has been investigating fish-oil replacement in aquafeed for farmed Atlantic salmon and barramundi.

They have conducted some of the first research into the effects of elevated temperature on salmon omega-3 fatty acid and the use of novel marine microorganisms with high omega 3 levels in feeds. The Food Futures Omega-3 project has been working on developing new land plant sources of [omega-3 oil](#).

'The award represents the culmination of a wider effort including that of our Food Futures Omega-3 project team, which has so strongly supported aquaculture research since the project began', says [Dr Peter Nichols](#) of CSIRO.

The Blue Thumb Award judges stated that the team's achievements have made it possible to foresee a future where the aquaculture industry will be readily able to access tools to engineer and tailor aquafeeds without relying on fish oil from wild fish stocks.

The Fish Oil Replacement in Australian Aquafeed project is a collaboration between CSIRO's Food Futures Flagship, the Australian Institute of Marine Science, Deakin University and the University of Tasmania.

Source: CSIRO

More information

[Marine oils for healthy diets and environments](#), CSIRO

[Managing aquaculture's net benefits](#), *ECOS*

From **ECOS** online <http://www.ecosmagazine.com/?paper=EC12294>