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# Researchers say sparing fishmeal and fish oil in farmed salmon diets can foster long-term growth

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By Responsible Seafood Advocate

## Reducing fishmeal and fish oil in salmon diets could permit 2 percent production growth annually until 2100

A new study by Deakin University researchers has found that reducing the amount of marine-derived natural resources – such as fishmeal and fish oil – in the diet of farmed Atlantic salmon will safeguard the future of a rapidly growing aquaculture industry into the next century.

The study, published in *Nature Food* (<https://www.nature.com/articles/s43016-022-00561-4>), outlines how consumer demand for salmon across the globe is driving rapid growth in the Atlantic salmon aquaculture industry, but that future expansion may be determined by how wisely fishmeal and fish oil are used in the coming decades.

The research team used predictive modeling to forecast industry growth based on different dietary formulations in feeds for Atlantic salmon. They also evaluated the impact this would have on the nutritional value of the fish, particularly on levels of omega-3 fatty acids.

Incorporating 3 percent fish oil and 3 percent fishmeal in aquaculture feeds could permit 2 percent per year production growth until 2100 – independent of novel aquaculture feeds currently being utilized.



Deakin University study finds reducing the amount of fishmeal and fish oil in farmed salmon diets will lead to long-term growth for the industry.

The image shows a banner for "ALGAE IN A BOX" by "OCAN ON LAND TECHNOLOGY". On the left, the OCAN logo is displayed in white on a blue background, with "ON LAND TECHNOLOGY" written below it. The background of the banner features a stylized representation of a water column with three vertical columns of different colors (green, brown, yellow) and a blue and orange wave pattern on the right. The text "ALGAE IN A BOX" is in large, bold, blue letters, with "Grow multiple algal species simultaneously" in smaller blue text below it.

(<https://oceanonland.com/our-systems/?>

[utm\\_source=gsa&utm\\_medium=landscapebanner+&utm\\_campaign=algae\\_in\\_a\\_box&utm\\_id=AIB+&utm\\_content=gif](https://oceanonland.com/our-systems/?utm_source=gsa&utm_medium=landscapebanner+&utm_campaign=algae_in_a_box&utm_id=AIB+&utm_content=gif))

According to the lead researcher, Associate Professor David Francis, the modeling presents a positive outlook for sustainable fish production. However, there's still a need for ongoing refinement of feed formulations.

"The continued development and adoption of novel raw materials will further decrease the current reliance on finite marine resources – specifically fish oil and fishmeal," said Francis. "We envisage that this study will progress the conversation on balancing the development of the aquaculture industry with the conservation of fisheries."

**[Read the full study \(https://www.nature.com/articles/s43016-022-00561-4\).](https://www.nature.com/articles/s43016-022-00561-4)**

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