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Aquafeeds

# Novel omega-3-rich canola oil approved for salmon feed use in Norway

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By Responsible Seafood Advocate

## Novel omega-3-rich canola oil makes fish healthier and minimizes dark melanin spots in salmon fillets, Nofima scientists say

The Norwegian Food Safety Authority has [approved a genetically modified canola oil](https://www.mattilsynet.no/planter-og-dyrking/genmodifisert-mat-for-og-savarer/mattilsynet-godkjenner-aquaterra-rapsolje-fra-genmodifisert-raps-til-bruk-i-fiskefor) (<https://www.mattilsynet.no/planter-og-dyrking/genmodifisert-mat-for-og-savarer/mattilsynet-godkjenner-aquaterra-rapsolje-fra-genmodifisert-raps-til-bruk-i-fiskefor>) that can be used in salmon feed. The plant produces marine omega-3 fatty acids, and when used in fish feed, the fish performed better and got more omega-3, fewer dark spots and redder color in the fillet.

“The oil is extracted from the canola seeds and does not carry any of the plant’s genetic material that has been modified,” said Bente Ruyter, senior scientist at Nofima. “Research has been carried out over many years to see if this oil can be used in fish feed.”

Canola is a variant of common rapeseed. The canola that provides the oil researched by Nofima has been genetically modified and developed by the Australian research organization CSIRO in



Norway has approved a new omega-3-rich canola oil has been approved for use in salmon feed. The image shows normal rapeseed oil (left) and fish oil. Photo by Helge Skodvin, courtesy of Nofima.

collaboration with the company Nuseed. Results indicated that it contains more of the omega-3 fatty acids that salmon need to stay healthy and that humans benefit from.

“The production of genetically modified canola has great potential for growth and will probably become an important new source of omega-3 in the fish feed,” said Ruyter. “It makes the fish healthier than if they were only fed standard plant oil.”

(<https://link.chtbl.com/aquapod>).

Salmon also need a certain level of omega-3 in their feed for their muscles to develop a delicate pink color. The research shows that the omega-3-rich canola oil reduced the prevalence and severity of dark melanin spots in salmon fillets.

To document the properties of the oil in salmon, scientists carried out trials in fresh water, closed tanks and net pens at sea during all phases of the fish's life.

"It is now approved for use, but whether the industry uses it is another matter," said Ruyter. "But I think it will force its way in."

The research was funded by the Norwegians Seafood Research Fund (FHF) and conducted in collaboration with the Institute of Marine Research, Nuseed and Mowi.

**[Read more here \(https://nofima.com/results/research-on-new-oil-source/\)](https://nofima.com/results/research-on-new-oil-source/)**.

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## Author

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**RESPONSIBLE SEAFOOD ADVOCATE**

[editor@globalseafood.org](mailto:editor@globalseafood.org) (<mailto:editor@globalseafood.org>)

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