



Canadian Government Receiving Royalty Payments from the Sale of Genetically Modified Salmon

The world's first genetically modified (GM or genetically engineered) food animal – a GM Atlantic salmon – was sold in Canada, for the first time, in 2017. This GM fish was developed with the use of a number of government grants and loans, from the Government of Canada and the Government of Prince Edward Island, to the company AquaBounty. One federal government loan/grant (of \$2.8 million) stipulates a 10% royalty payment on sales of the GM salmon, until the funds are paid back.

The Federal Loan/Grant

In 2009, the federal government Atlantic Canada Opportunities Agency (ACOA) provided funds, through its Atlantic Innovation Fund, of \$2.8 million (\$2,871,919)¹ to the company AquaBounty (the total amount claimed by AquaBounty under the award over the five-year claim period was \$2,211,952²).

- This zero-interest loan/grant stipulates repayment to ACOA via a 10% royalty on any products commercialized from the research project, until the funds are fully repaid. There is no penalty for delayed re-payment or non-repayment.
- The federal funds relate to the “AquAdvantage” salmon which is the genetically modified (GM or genetically engineered) salmon developed and commercialized by the company AquaBounty, now a majority owned subsidiary of US biotechnology company Intrexon.
- The agreement was to support AquaBounty's “Reproductive Confinement for Safe Cultivation of Salmon Project,”³ which was also described by the Department of Fisheries and Oceans as “Reproductive confinement for the safe cultivation of genetically improved lines of Atlantic Salmon.”⁴

A LOAN OR A GRANT?

Re-payment of funds is only required, via royalties, if the product is successfully commercialized, at which time the arrangement performs more like a loan than a grant. If the GM salmon is not sold, repayment is not required.

Royalties from GM Fish Sales

In August 2017, AquaBounty announced the first-ever sale of its GM salmon.⁵ Approximately 4.5 metric tonnes of GM Atlantic salmon were sold into Canada in June 2017.⁶ AquaBounty then said, “The Company expects to make its first repayment in 2018.”⁷

Lack of Transparency

- The agreement between ACOA and AquaBounty is not publicly available.
- There is no specific government reporting of the royalty payments.
- The GM salmon is sold without labelling for Canadians.

Investing in and Regulating the GM Salmon

Future repayments to the government rely on AquaBounty expanding their production of the GM fish beyond their current pilot site in Panama. The company is currently

building two facilities, one in Prince Edward Island (PEI) at Rollo Bay and one in Indiana, USA. Repayment of the loan relies on the production of GM fish at one or both of these sites. AquaBounty does not yet have federal government approval to produce GM salmon at Rollo Bay, PEI.

- In August 2017, AquaBounty said, “We have made our first sales of AquaAdvantage Salmon from our farm site in Panama and expect modest revenues during 2017 and 2018, with more significant revenues expected once our new facilities [Rollo Bay, PEI and Albany, Indiana] are in full production⁸ in the second half of 2019.”⁹
- AquaBounty proposes to produce 250 metric tonnes of GM salmon a year in Rollo Bay, PEI at a new facility it is building with additional ACOA funding of \$259,557.¹⁰ (The current Panama site is only capable of producing 20 tonnes.¹¹)
- The Minister of Environment and Climate Change has not yet issued a Significant New Activity Notice under the Canadian Environmental Protection Act to allow production of GM salmon at Rollo Bay - the government has yet to assess the environmental risks of GM salmon production at this site.¹²

The ability of AquaBounty to make repayments to ACOA is linked to a federal government approval of GM salmon production at Rollo Bay, PEI. This assessment could already be underway.

1 Atlantic Innovation Fund. Agreement between Atlantic Canada Opportunities Agency and Aqua Bounty Canada Inc. and Aqua Bounty Technologies Inc.
 2 AquaBounty Technologies, Inc. Form 10-Q to United States Securities and Exchange Commission, August 4, 2017.
 3 Atlantic Innovation Fund. Agreement between Atlantic Canada Opportunities Agency and Aqua Bounty Canada Inc. and Aqua Bounty Technologies Inc.
 4 Fisheries and Oceans Canada, Canadian Aquaculture R&D Review 2013. <http://www.dfo-mpo.gc.ca/aquaculture/sci-res/rd2013/rdsalmon-saumon-eng.html>
 5 AquaBounty Technologies, Inc. Form 10-Q to United States Securities and Exchange Commission, August 4, 2017.
 6 Jenna Gallegos, About 4.5 tonnes of GMO salmon consumed in Canada so far, company says. The Toronto Star. August 4, 2017. <https://www.thestar.com/news/canada/2017/08/04/about-45-tonnes-of-gmo-salmon-consumed-in-canada-so-far-company-says.html>

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Questions

- 1 How much has the federal government been paid in royalties from AquaBounty so far?
- 2 Will the government report each time they receive a royalty payment?
- 3 Will the government report how much GM salmon has and is been sold in Canada from this publicly funded project, including when and where?

7 AquaBounty Technologies, Inc. Form 10-Q to United States Securities and Exchange Commission, August 4, 2017.
 8 See Canadian Biotechnology Action Network, International Bulletin – GM Salmon: Update on the Status of GM Salmon Production in Prince Edward Island, Canada. October 2, 2017. <https://cban.ca/wp-content/uploads/GM-Salmon-International-Bulletin-Oct-2017.pdf>
 9 AquaBounty Technologies, Inc. Form 10-Q to United States Securities and Exchange Commission, August 4, 2017.
 10 Ibid.
 11 BBC World Service, The New Animals, The Food Chain, BBC Radio, February 18, 2018. <http://www.bbc.co.uk/programmes/w3cvsfcf>
 12 Correspondence with the government agencies on this question is available at <https://cban.ca/ge-fish/federal-government-responses-re-scientific-assessment-of-gm-fish-production-at-rollo-bay-pei/>

For more information and details: www.cban.ca/fish

Provided by the Canadian Biotechnology Action Network (CBAN)



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The Canadian Biotechnology Action Network (CBAN) brings together 16 organizations to research, monitor and raise awareness about issues relating to genetic engineering in food and farming. CBAN members include farmer associations, environmental and social justice organizations, and regional coalitions of grassroots groups. CBAN is a project on Tides Canada’s shared platform. www.cban.ca