

Welcome to TimesPeople
Get Started

TimesPeople recommended: **The 36 Hours That Shook Washington**

4:29 AM

Recommend

HOME PAGE TODAY'S PAPER VIDEO MOST POPULAR TIMES TOPICS

Get Home Delivery-Bay Area | Welcome, 75200 | Log Out | Help

The New York Times

Business Day

Search All NYTimes.com

Go

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL JOBS REAL ESTATE

AUTOS

Search

Global DealBook Markets Economy Energy Media Personal Tech Small Business Your Money

World Cup Coverage [Search Now](#) Replay

Get scores, schedules, news, and videos right at the top of the page.

YAHOO!

Genetically Altered Salmon Get Closer to the Table

By ANDREW POLLACK
Published: June 25, 2010

The [Food and Drug Administration](#) is seriously considering whether to approve the first genetically engineered animal that people would eat — salmon that can grow at twice the normal rate.

[Enlarge This Image](#)



AquaBounty

A gene-engineered fish, top, and a natural one of the same age.

The developer of the salmon has been trying to get approval for a decade. But the company now seems to have submitted most or all of the data the F.D.A. needs to analyze whether the salmon are safe to eat, nutritionally equivalent to other salmon and safe for the environment, according to government and biotechnology industry officials. A public meeting to discuss the salmon may be held as early as this fall.



Henry Clifford

AquaBounty, developer of the AquaAdvantage Atlantic salmon, would sell fish eggs to fish farms, not salmon to supermarkets.

Some consumer and environmental groups are likely to raise objections to approval. Even within the F.D.A., there has been a debate about whether the salmon should be labeled as genetically engineered ([genetically engineered crops](#) are not labeled).

The salmon's approval would help open a path for companies and academic scientists developing other genetically engineered animals, like cattle resistant to [mad cow disease](#) or pigs that could supply healthier bacon. Next in line behind the salmon for possible approval would probably be the "enviropig," developed at a Canadian university, which has less phosphorus pollution in its manure.

The salmon was developed by a company called AquaBounty Technologies and would be raised in fish farms. It is an Atlantic salmon that contains a growth

hormone gene from a Chinook salmon as well as a genetic on-switch from the ocean pout, a distant relative of the salmon.

Normally, salmon do not make growth hormone in cold weather. But the pout's on-switch keeps production of the hormone going year round. The result is salmon that can grow to market size in 16 to 18 months instead of three years, though the company says the

FACEBOOK

COMMENTS
(252)

E-MAIL

SEND TO PHONE

PRINT

SINGLE PAGE

REPRINTS

SHARE

CAREY MULLIGAN

Readers' Comments

Readers shared their thoughts on this article.

[Read All Comments \(252\)](#) »

Have you joined? It's free.

modified salmon will not end up any bigger than a conventional fish.

"You don't get salmon the size of the Hindenburg," said Ronald L. Stotish, the chief executive of AquaBounty. "You can get to those target weights in a shorter time."

AquaBounty, which is based in Waltham, Mass., and publicly traded in London, said last week that the F.D.A. had signed off on five of the seven sets of data required to demonstrate that the fish was safe for consumption and for the environment. It said it demonstrated, for instance, that the inserted gene did not change through multiple generations and that the genetic engineering did not harm the animals.

"Perhaps in the next few months, we expect to see a final approval," Mr. Stotish said.

But the company has been overly optimistic before.

He said it would take two or three years after approval for the salmon to reach supermarkets.

The F.D.A. confirmed it was reviewing the salmon but, because of confidentiality rules, would not comment further.

Under a policy announced in 2008, the F.D.A. is regulating genetically engineered animals as if they were veterinary drugs and using the rules for those drugs. And applications for approval of new drugs must be kept confidential by the agency.

E-MAILED BLOGGED VIEWED

Critics say the drug evaluation process does not allow full assessment of the possible environmental impacts of genetically altered animals and also blocks public input.

"There is no opportunity for anyone from the outside to see the data or criticize it," said Margaret Mellon, director of the food and environment program at the [Union of Concerned Scientists](#). When consumer groups were invited to discuss biotechnology policy with top F.D.A. officials last month, Ms. Mellon said she warned the officials that approval of the salmon would generate "a firestorm of negative response."

How consumers will react is not entirely clear. Some public opinion surveys have shown that Americans are more wary about genetically engineered animals than about the genetically engineered crops now used in a huge number of foods. But other polls suggest that many Americans would accept the animals if they offered environmental or nutritional benefits.

Mr. Stotish said the benefit of the fast-growing salmon would be to help supply the world's food needs using fewer resources.

Government officials and industry executives say the F.D.A. is moving cautiously on the salmon. "It's going to be a P. R. issue," said one government official, who spoke on the condition of anonymity because he was not authorized to speak about the issue.

Some of these government officials and executives said that F.D.A. officials had discussed internally whether the salmon could be labeled to give consumers the choice of avoiding them.

1 | 2 | [NEXT PAGE »](#)

A version of this article appeared in print on June 26, 2010, on page A1 of the New York edition.

COMMENTS

E-MAIL

PRINT

SINGLE PAGE



Broadway Bares 20

ALSO IN THEATER »

REPRINTS



The Times & the Bay Area - now at 50% off when you subscribe for the convenience of home delivery.

Ads by Google

what's this?

Bay Area Discount Deals

Sign up for huge discounts on local food, fun & shopping. Save 50-90%!
www.Groupon.com/San-Francisco

Past Coverage

- [E.U. Push on Animal Welfare May Open New Trade Front With U.S. \(April 27, 2010\)](#)
- [I.H.T. SPECIAL REPORT: BUSINESS OF FOOD; Dutch Cooperative Blurs Food Prejudices in Effort to Improve Agriculture \(November 17, 2009\)](#)
- [Biotech-Free, Mostly \(August 29, 2009\)](#)
- [A CONVERSATION WITH NINA V. FEDOROFF; An Advocate for Science Diplomacy \(August 19, 2008\)](#)

Related Searches

- [Genetic Engineering](#) [Get E-Mail Alerts](#)
- [Food](#) [Get E-Mail Alerts](#)
- [Fish Farming](#) [Get E-Mail Alerts](#)
- [Salmon](#) [Get E-Mail Alerts](#)

INSIDE NYTIMES.COM



OPINION »



James Stevenson: Lost and Found New York

MUSIC »



Dirty Fun: Band's Midnight Evolution

MAGAZINE »



Tuna's End

FASHION & STYLE »



Weddings and Celebrations

OPINION »

Op-Ed: 10 under 10
A humorous alternative to The New Yorker's recent "20 Under 40" article celebrates the literary talents of an even younger set.

BOOKS »



Bret Easton Ellis, Back to Zero