

Fast-growing GM salmon 'safe to be farmed and eaten'

Genetically modified salmon which grow at twice the speed of their natural counterparts are safe to be farmed and eaten, US regulators have ruled.

By Murray Wardrop (<http://www.telegraph.co.uk/journalists/murray-wardrop/>)

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The decision by scientists from the Food and Drug Administration (FDA) paves the way for the first GM animal to be sold as food.

The fish, called AquAdvantage salmon, could be on American plates within two to three years, raising fears among environmental and food-safety campaigners.



A size comparison of an AquAdvantage salmon (background) vs. a non-transgenic Atlantic salmon sibling (foreground) of the same age. Photo: AFP

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However, shares in Aqua Bounty Technologies Inc, the company which created the fish, leapt by 26 per cent on the London Stock Exchange on Friday, indicating that analysts see GM as the future of fish production.

The FDA is to hold a public meeting later this month on the DNA-altered fish, which could also open the door to producing genetically engineered trout and tilapia.

In a report prior to the talks, FDA experts said the altered salmon were "as safe to eat as food from other Atlantic salmon" and that they saw "no biologically relevant differences" in vitamins, minerals or fatty acids.

The fish are "highly unlikely" to cause significant harm to the environment, the report added.

However, critics of the technology have voiced concerns that it could lead to the creation of mutant misshapen fish and could harm wild fish populations if they escape.

Research on GM trout in Canada found that while they grew faster and were much bigger, a number developed misshapen heads and bloated bodies.

A coalition of 31 US consumer, animal welfare, environmental and fisheries groups is opposing approval of the salmon for food production.

They claim tests used to show the safety of the GM salmon were based on very small samples and point out that some of the fish had higher levels of growth hormone in their bloodstream, which is claimed to create a cancer risk.

While the GM fish are supposed to be sterile, critics said up to 5 per cent might be able to conceive and breed if they got into the wild.

"The FDA is basically just assuming these fish are OK to eat," said Jaydee Hanson, a policy analyst for food campaigners the Center for Food Safety.

Pete Riley, director of campaign group GM Freeze, added: "We are extremely concerned about the potential for these fish to escape."

However, the FDA said the chances of the salmon escaping from production or growing facilities and reproducing are "extremely small" due to the Aqua Bounty's containment measures.

Aqua Bounty claims the technology could boost the US fish sector and reduce pressure on the environment from overfishing.

The firm's chief executive Ronald Stotish added that the salmon taste "great".

The salmon reach a market weight of around 6.6lbs in 16-18 months instead of the three years for farmed fish.

The growth is speeded up by the insertion of two genes, one linked to the production of growth hormone and a second to ensure growth continues even in very cold temperatures.

The technology allows fish farmers to produce many more salmon at much lower cost, so boosting output and profits.

At the three-day meeting starting on September 19, the FDA will seek input from a panel of outside advisers before making a final decision on whether to allow production of the salmon.

The FDA will also listen to views from the public on whether the bio-engineered salmon should be labelled differently to natural fish.

20 comments

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Today 07:43 PM

If the US government says it's safe to eat you know it's poison.

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dax (<http://my.telegraph.co.uk/members/dax>)
Today 06:10 PM

There is obviously room for a lot of serious discussion on this and similar "GM issues". The selective breeding of certain animal and plant species for human consumption, based on instinct, a bit of intuition and some practical experience, has been known long before the term "GM" was ever coined for popular reasons as "a controversial issue".

Reference to the FDA's scheduled meeting to hear the views of the general public is topical, always providing the views and concerns of all sectors are given fair consideration. I certainly share the worries of those who fear this product (or any other) could be mislabelled in a misguided fashion for sale to the consumers, and would propose the following basic guidelines as far as "salmon" are concerned: (a) label all fresh, filleted, frozen, canned and otherwise processed products with the popular and the scientific names of the corresponding species (e.g. Atlantic salmon - *Salmo salar*; chum salmon - *Oncorhynchus keta*; sockeye salmon - *O. nerka*, etc.) to avoid any mix ups or confusion between the various popular and the correct scientific names; (b) label the corresponding product as having been wild-caught or farmed, and indicate the corresponding country of capture/farming; (c) clearly label the "GM" product as such. Consumers could then make their own choice as to whether to purchase, or not, the product on offer.

In a rapidly overpopulating and increasingly hungry world, it is doubtful whether most people would be too concerned as to whether the source of their fish (e.g. salmon, tilapias, trout) came from stocks with misshapen heads and so forth, as long as the edible parts themselves are suitably abundant, affordable, available and healthy to eat.

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alfredo (<http://my.telegraph.co.uk/members/alfredo>)
Today 05:29 PM


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2 people
US regulators would rule excrement safe to eat if Monsanto requested such a ruling. The food safety establishment in the US is even worse than DEFRA.

Here: Ask the animals.

<http://www.rense.com/general92/avoid.htm> (<http://www.rense.com/general92/avoid.htm>)

They know more than either our politicians or our scientists.


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shaun9528 (<http://my.telegraph.co.uk/members/shaun9528>)
Today 05:23 PM

The Americans, have been doing crap to their food for decades.

The results are clear to see @ people of Walmart.

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kingorry
Today 04:11 PM
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Excellent, let's hope we see salmon come down in cost soon then.


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nellie (<http://my.telegraph.co.uk/members/nellie>)
Today 04:00 PM

Since President Obama appointed former Monsanto executive Michael Taylor as the new Head of the Food & Drug Administration which approves all these things, like putting the fox in charge of the henhouse, I'm sure we can all have complete faith in anything the FDA recommends. You remember Monsanto, the ones who want to control the whole world's food supply through "patenting" every food animal & plant, inventors of the "terminator seeds" causing Indian farmers to commit suicide in droves?

"The FDA have promised to listen carefully to the views of the public..." etc., etc. Yes, yes, I'm sure they will---don't they always? Just like our own politicians.

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Mark Russell
Today 03:55 PM
Well thats alright then! Trebles all round for the GM industry suits.
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anyoldiron (<http://my.telegraph.co.uk/members/anyoldiron>)
Today 02:51 PM
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1 person

And what if after eating it regularly, the GM modification continues to have effect on the person that has eaten it?

Haven't they been eating GM Meat for years? GM Corn?

Wow! Boy it sure is tasty Babe! Just buy a size bigger shirt Honey.


Will their President eat it?

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wanderingone (<http://my.telegraph.co.uk/members/wanderingone>)
Today 02:39 PM
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July good. When all the "scientists from the Food and Drug Administration" have been eating it, at least once per week for three generations, call me and I'll consider it.

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Pollik (<http://twitter.com/Pollik>)
Today 03:51 PM
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2 people

Odds on that it will 'accidentally' slip through without labels and you will eat unwittingly.

The "oops sorry" ploy is one of the most widely used in business.

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 ryeatley (<http://my.telegraph.co.uk/members/ryeatley>)
Today 01:00 PM

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It may possibly be safe to eat, but:

"highly unlikely to cause significant harm to the environment"

is just not good enough. I sincerely hope that the Americans do not allow this.

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 bluebell (<http://my.telegraph.co.uk/members/bluebell>)
Today 12:52 PM

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'No biologically relevant differences'.....whatever that might mean.

"Highly unlikely" 'to cause SIGNIFICANT harm to the environment'....oh yeah? What some weasel words.

FDA claim that 'the chances of the salmon escaping and reproducing are "extremely small"....oh yeah? But not 100% absent eh? More weasel words.

Don't experiment on ME, FDA, or muck up my environment.

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 aragonitesputnik
Today 12:22 PM

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6 people

And what happens when these larger fish escape? They'll easily out compete smaller non GM varieties. Just like the voracious American signal crayfish which is larger than the native white claw crayfish.

Who's going to pay the eradication costs? No doubt it'll be left to the tax payers. Farmers and scientists will put their hands up and say it's not our problem now.

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 bluebell (<http://my.telegraph.co.uk/members/bluebell>)
Today 12:45 PM

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How on earth can escaped rogue genes ever be eradicated once they have escaped?

How do the FDA claim the salmon is safe to eat without years of testing on large populations? Are we all the experimental animals these days? Leave me out of these experiments...I'll stop buying salmon altogether if this goes ahead.

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 iambitbit (<http://my.telegraph.co.uk/members/iambitbit>)
Today 05:23 PM


One great thing about the EU - oh I know, I praised them on the DT website - is that they are very anti-GM. I doubt that they'll let them in to the EU, not without a long protracted battle at the WTO where the Americans cry about their products not being let into the EU while having quotas of their own.

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 diman (<http://my.telegraph.co.uk/members/diman>)
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all soft cheapsoft4u.com/?rid=3260 (<http://cheapsoft4u.com/?rid=3260>)

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 Oflife (<http://visionaforethought.wordpress.com/>)
Today 12:00 PM

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10 people

I confess to finding this very disturbing, even if it is proven the fish are safe for us. Whilst religion is not popular with everyone, some of the fundamental messages that occur within most major faiths relating to tampering with nature are full of common sense. Else why would they exist? Wisdom of ages perhaps?

With regards to our freedom to choose, this is similar to the difference between being a passenger in a car and an airplane. In the former, if you sense danger, you can ask the driver to slow down, stop or even grab the wheel yourself. Whilst in an aircraft, if something goes wrong, there is nothing you can do but, well, pray!

I sense that the general public are losing control of their destiny. Not to mention any effects all this genetic manipulation is going to have on the 'feelings' of animals, even if they appear physically intact. Just look at the monstrosity that is the English Bull Dog, a breed that suffers eternally from breathing difficulties.

A lifetime in hell, thanks to our tinkering.

Bring on lab 'grown' fish and meat, where there is no soul to suffer in silence.

(Edited by author 9 hours ago)

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 Pollik (<http://twitter.com/Pollik>)
Today 03:54 PM

"I sense that the general public are losing control of their destiny. "


In a nutshell...and not just in connection with GM.

Great comment.


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 davidrj54


Today 11:49 AM
Recommended by
3 people
Well, we will know the results of this experiment 30 years later, in 2040.
Report (#) Recommend (#)



bluebell (<http://my.telegraph.co.uk/members/bluebell>)
Today 12:41 PM
Recommended by
8 people
Yes; when it is far too late to remove the genes from the environment.
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i feel the exact opposite



eri2001
Today 02:04 PM
From twitter (<http://twitter.com/eri2001/status/23142866477>) via BackType (<http://www.backtype.com/search?q=http%3A//www.telegraph.co.uk/foodanddrink/foodanddrinknews/7983700/Fast-growing-GM-salmon-safe-to-be-farmed-and-eaten-claim-US-authorities.html>)
RT @TelegraphNews Fast-growing GM salmon 'safe to be farmed and eaten' - Telegraph <http://bit.ly/b4SGLc> ★NO,I DO NOT BELIEVE YOU.



nargi
Today 01:59 PM
From reddit (http://www.reddit.com/r/food/comments/da5ew/fastgrowing_gm_salmon_safe_to_be_farmed_and_eaten/c0yoogs) via BackType (<http://www.backtype.com/search?q=http%3A//www.telegraph.co.uk/foodanddrink/foodanddrinknews/7983700/Fast-growing-GM-salmon-safe-to-be-farmed-and-eaten-claim-US-authorities.html>)
Other than proteins, I've yet to taste/feel/see a significant difference between organic and conventionally-grown foods.



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Today 01:51 PM
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Fast-growing GM salmon 'safe to be farmed and eaten' - Telegraph <http://bit.ly/bU7qxc>


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FDA: genetisch gemodificeerde zalm veilig voor consumptie <http://ow.ly/2A2E6>


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gm salmon is a baaad idea <http://bit.ly/aBWCzX>


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borez
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I think that we've managed to ward off Monsanto in the UK and Europe but I'm sure it'll only take one of their cronies to come over here and throw some of their crap into our fields to start the process, then the lawsuits. Hopefully though the EU will go and tell them to shove it.


w33z
Today 01:06 PM
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Fast-growing GM salmon 'safe to be farmed and eaten' <http://tinyurl.com/26rwf8s> |And we as a society, just took a turn for the worse [contd]