

GE salmon, diseases, open cage aquaculture – February 2012

Protection of the integrity of the US food system and health of consumers is more than ever dependent on actions of concerned citizens and courageous elected officials.

Despite more than a decade of opposition, the U.S. Food and Drug Administration (FDA) may approve the first genetically engineered (GE) animal for our dinner plates – salmon! Recent polls found that 91% of Americans believe the FDA should not introduce GE fish and meat into the market place and 95% of respondents said that food from GE animals should be labeled.

The announcement to approve GE salmon came just before the first Livestock Biotech Summit in South Dakota in September, 2010. Applications on four other GE animals are expected to come in soon after GE salmon are approved.

This process began decades ago, when the FDA asserted jurisdiction over genetically engineered animals using the **New Animal Drug Application (NADA)** regulatory process. **Companies have been allowed to keep important information secret under NADA, excluding the public from being involved in the decision-making process.**

There is no data on two identified potential hazards in the flesh of the triploid GE salmon - growth hormones and another insulin-like hormone IGF-1 linked to a number of cancers - because only inappropriate and insensitive tests were used to try and detect them. These genetic changes could lead to increased allergy risks and lower levels of Omega-3 fatty acids – the ‘good’ fat which has important health benefits.

Hundreds of thousands of letters have been sent to the FDA demanding, at least, labeling of GE fish. Members of the U.S. House and Senate have urged the FDA to address serious flaws in its approval process and incorporate more public input and scientific data. They argued that GE fish would put wild fish in jeopardy and “recklessly and needlessly endanger human health” (*Senate Letter to FDA Commissioner Margaret Hamburg.*)

Many scientists, food and health advocates believe adding DNA from other species constitutes new food ingredients which should appear on the label, just like other ingredient or food additive. On Feb. 7, 2012, Food & Water Watch, Consumers Union, and the Center for Food Safety submitted a formal petition asking FDA to BAN GE SALMON AS AN UNSAFE FOOD ADDITIVE

GE salmon, transgenic/frankenfish?

GE Atlantic salmon are created with growth hormone genes from Pacific Chinook and anti-freeze genes of an eel-like Ocean Pout, creating a novel fish that grows twice as fast as wild salmon.

Ocean Pout



AquaBounty, a transnational corporation, claims that fish grown from AquAdvantage eggs are all sterile females, making it impossible for them to breed. Despite their previous assurance that GE fish could not reproduce, in Sept. 2011, Aquabounty received a USDA Biotechnology Research Assessment Grant (BRAG) of \$494,162 for sterility research.

The company’s own data show their sterilization techniques are not effective in up to 5% of all eggs treated. Initial plans are for eggs to be produced in Canada, shipped to Panama for grow out, and fish shipped back to US and international markets. The company states growers want to rear fish closer to population centers and consumers. If production is allowed in open cages, at 5% nonsterility, upwards of 750,000 fertile, GE salmon could escape, competing for food, territory and mates.

GE fish are reproductively dominant because of their quicker growth, but genetically weaker. They would be more susceptible to diseases and parasites, increasing the likelihood that sick fish would infect native fish populations. The Fish and Wildlife Service's geneticists in Oct. 2010 wrote to FDA about the inadequate FDA review and concluded "approval of AquaBounty Technologies' request for commercial rearing of [GE] AquAdvantage salmon is premature."

LEGISLATION IS NEEDED: Bills in the **US Senate (S. 230) and House (H.R. 521)** amend the Federal Food, Drug, and Cosmetic Act to **prevent the approval** of GE fish. **S. 229 and H.R. 520 requires labeling** of GE fish if the FDA goes ahead with approval. Sen. Begich introduced "Prevention of the Escapement of Genetically Altered Salmon in the United States" Act (PEGASUS, S. 1717), to prevent transport and sale of GE fish. **Two bills introduced into Washington Legislature** in 2012 but did not come out of committee. SB 6298 and HB 2637 would require labeling of foods that contain genetically engineered material.

Marine Feedlots in state and federal waters

The Department of Commerce/National Oceanic and Atmospheric Administration (NOAA) promotes privately owned, industrial aquaculture operations in our nation's Exclusive Economic Zone (EEZ), three to 200 miles offshore.

NOAA also promotes expansion in Washington waters of black cod, more salmon and steelhead, shellfish and other (sometimes nonnative) species. Open ocean aquaculture in the Strait of Juan de Fuca is listed in NOAA's "Washington Aquaculture Opportunities for Growth". Plans to grow 10 million pounds of fish in open cages west of Port Angeles has been announced by Pacific Aquaculture, a division of Pacific Seafood, doubling the size of Washington's fish farm industry.

Open cages have proven incapable of confining fish, pathogens or parasites. **In four years, more than 613,000 nonnative Atlantic salmon escaped into Puget Sound waters.** Millions of pounds of fish waste annually flush from salmon farms and **Viral hemorrhagic septicemia** infected Washington's penned salmon several winters ago.

The virulent pathogen ***Infectious Salmon Anemia (ISA)*** has been found in BC and AquaBounty's production site. An amendment to H.R. 2112 requests the National Aquatic Animal Health task force to review the risk that ISA will have on wild salmon in Washington and Alaska and create a plan to address this emerging danger.

The World Organization for Animal Health lists ISA along with Anthrax, Bovine spongiform encephalopathy (BSE), Foot and mouth disease, rabies, swine fever, avian influenza, West Nile fever. **The risk to wild fish from diseases and parasites from industrial aquaculture should keep feedlots from our marine environment.**



NOAA photo, Gulf of Mexico
NOAA promotes industrial scale aquaculture: habitat altering geoduck clam production and salmon farming locally, and as a gift to the energy industry, allowing decommissioned oil rigs to remain in place if used for fish farming.

Agencies must complete full Environmental Impact Statements (EIS) on potential harm that GE fish and open cage fish farming could inflict on the environment, biodiversity, and human health. GE fish should not be approved without independent assessments and if approved, must be labeled. **Contact elected officials to voice your concerns.**

More info at: www.ge-fish.org

www.foodandwaterwatch.org/fish/fish-farming/

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