

An aerial photograph of ocean waves, showing white foam and deep blue water. The image is used as a background for the presentation slide.

# AquaBounty

AEIC 2021

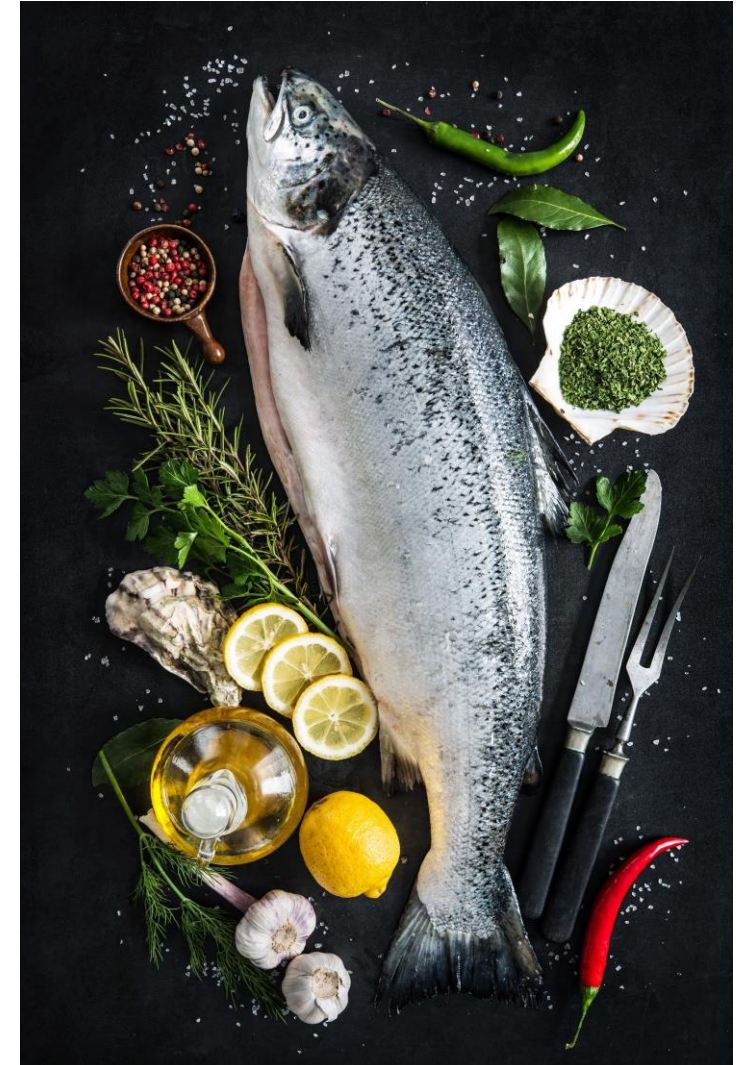
Mark Walton  
Chief Technology Officer  
October 6, 2021

# AquaBounty: Leaders in Aquaculture and Biotechnology

## Company Profile

Headquarters:	Maynard, MA
Total Employees:	61
RAS Farms:	Albany, Indiana and Prince Edward Island, Canada

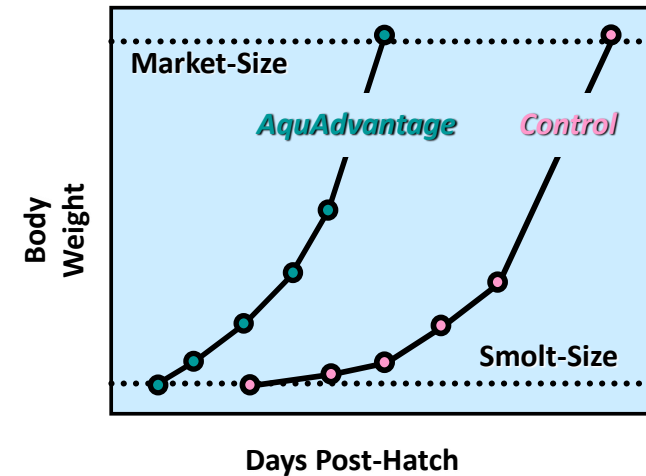
- Pioneers in on-land aquaculture, using proprietary technology to deliver game changing solutions to global problems
- Committed to feeding the world with land-based salmon farmed *efficiently, sustainably and profitably*
- Blazed the trail for genetically engineered animal protein; overcoming political and perceptual hurdles
- Significantly increasing profitability for salmon farming in land-based Recirculating Aquaculture Systems (“RAS”)
- Leveraging 25 years of operational experience with RAS to produce efficiently and ensure success of new farming methods



# AquAdvantage Salmon (AAS)

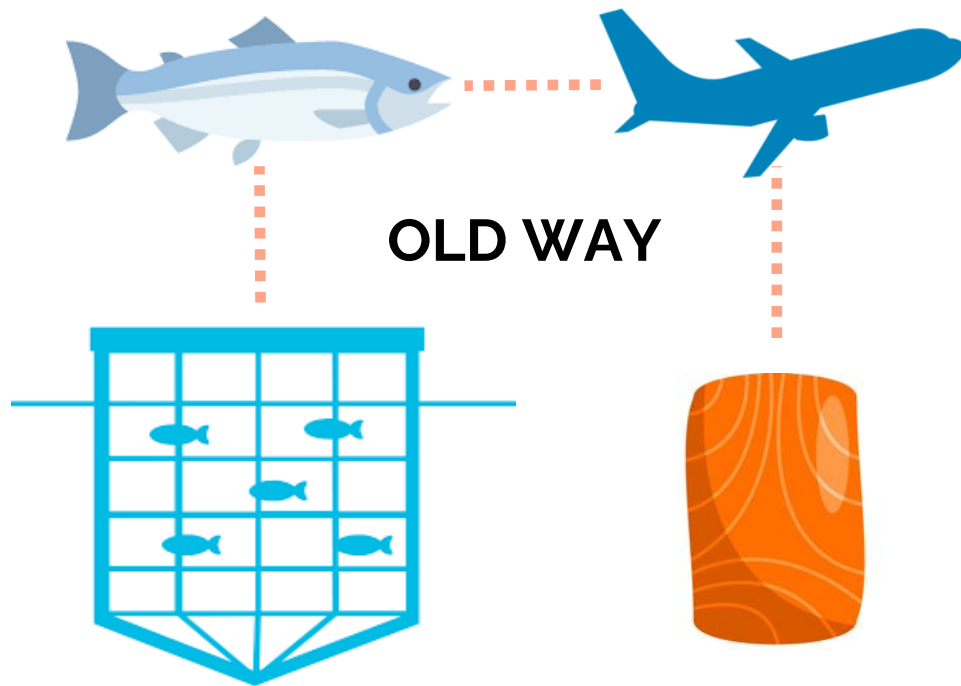


- Triploid female Atlantic salmon
- Single copy of Chinook salmon *GH-1* gene
- Promoter from Ocean Pout *AFP* gene
- Significantly more AAS grow to 100 g body weight than comparators within 2700°C-day  
**Achieve smolt- & market-size  
~5x & ~2x faster, respectively**

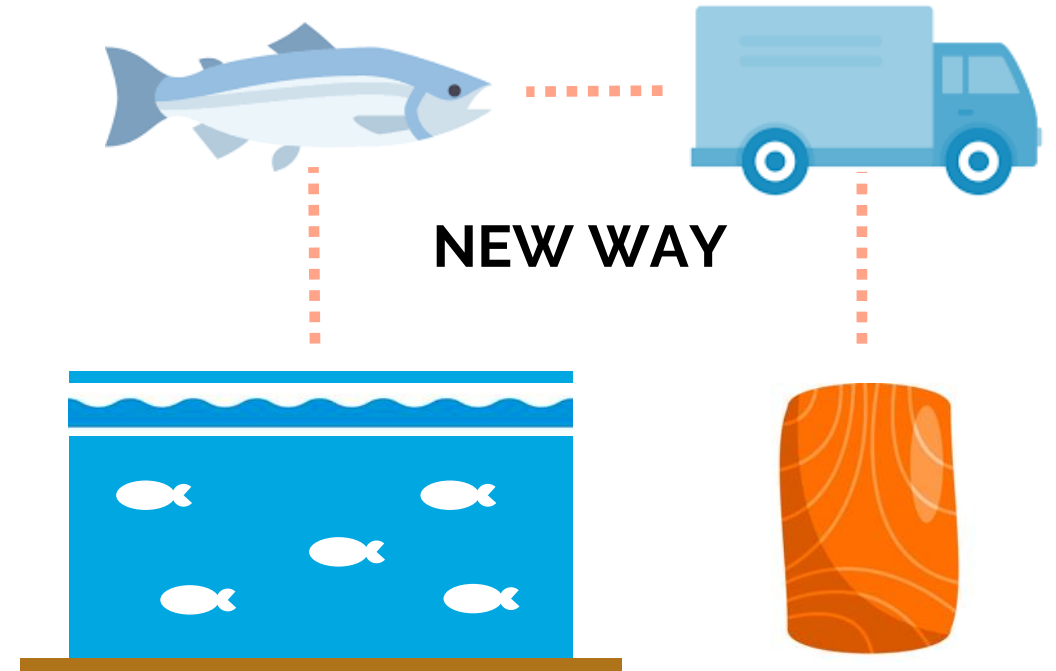


# Land-based Fish Farming is a New Way to Source Salmon

Local Market Strategy



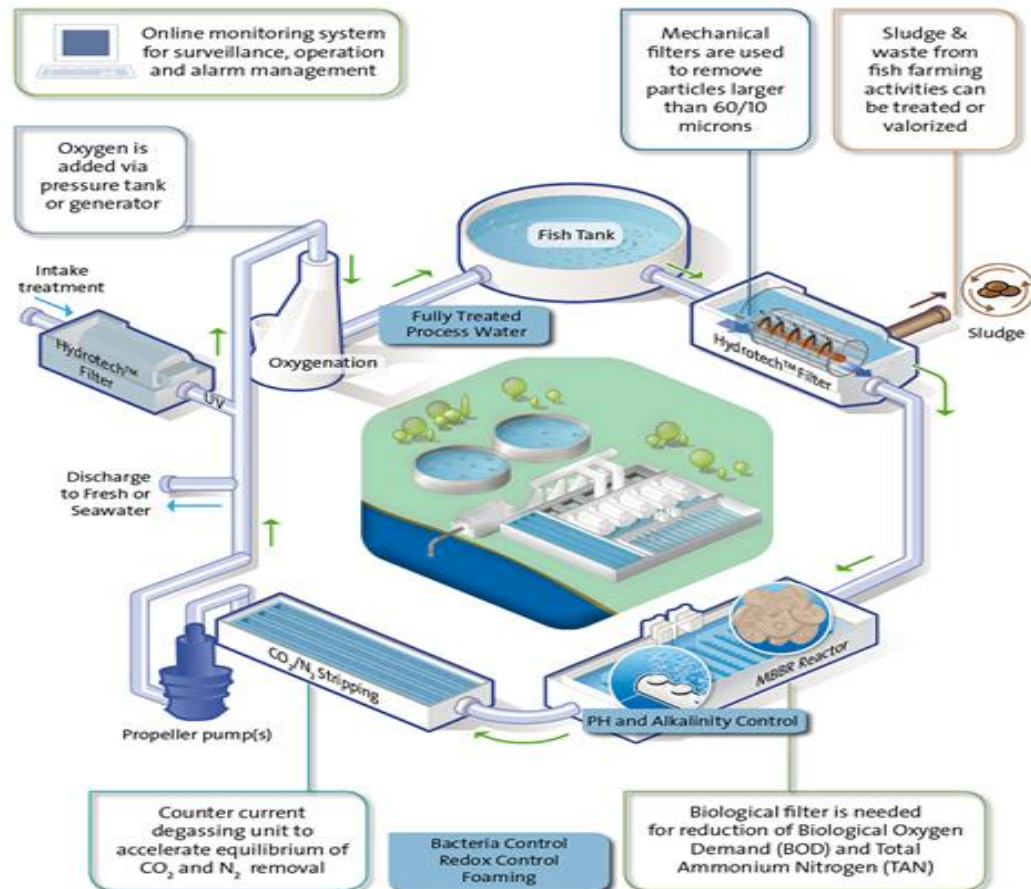
- Environmental & safety issues
- Inefficient supply chain
- Require exports & air freight
- Reduced product shelf-life



- Controlled, disease-free tanks
- Efficient production & supply chain
- Production near consumption
- Local delivery of fresh salmon

# The New Era in Salmon Farming is Happening Now!

Recirculating Aquaculture Systems (RAS) are more timely & relevant than ever before



Source: Water Solutions for the Aquaculture Industry – Veolia Water Technologies

- Land-based RAS salmon farming confines the fish to indoor tanks inside a large building, eliminating interactions between the farmed fish and the external environment.
- Land-based salmon farming eliminates many of the environmental problems associated with sea-cage farms.
- System enables optimized conditions with total control of the water, moving in and out, while recycling greater than 95% of the water used.
- Biosecurity protects against exposure to disease & parasites and the need for antibiotics, medications or chemicals used in sea-cages.
- Secure farming operations constructed to prevent escapes with multiple layers of containment redundancy

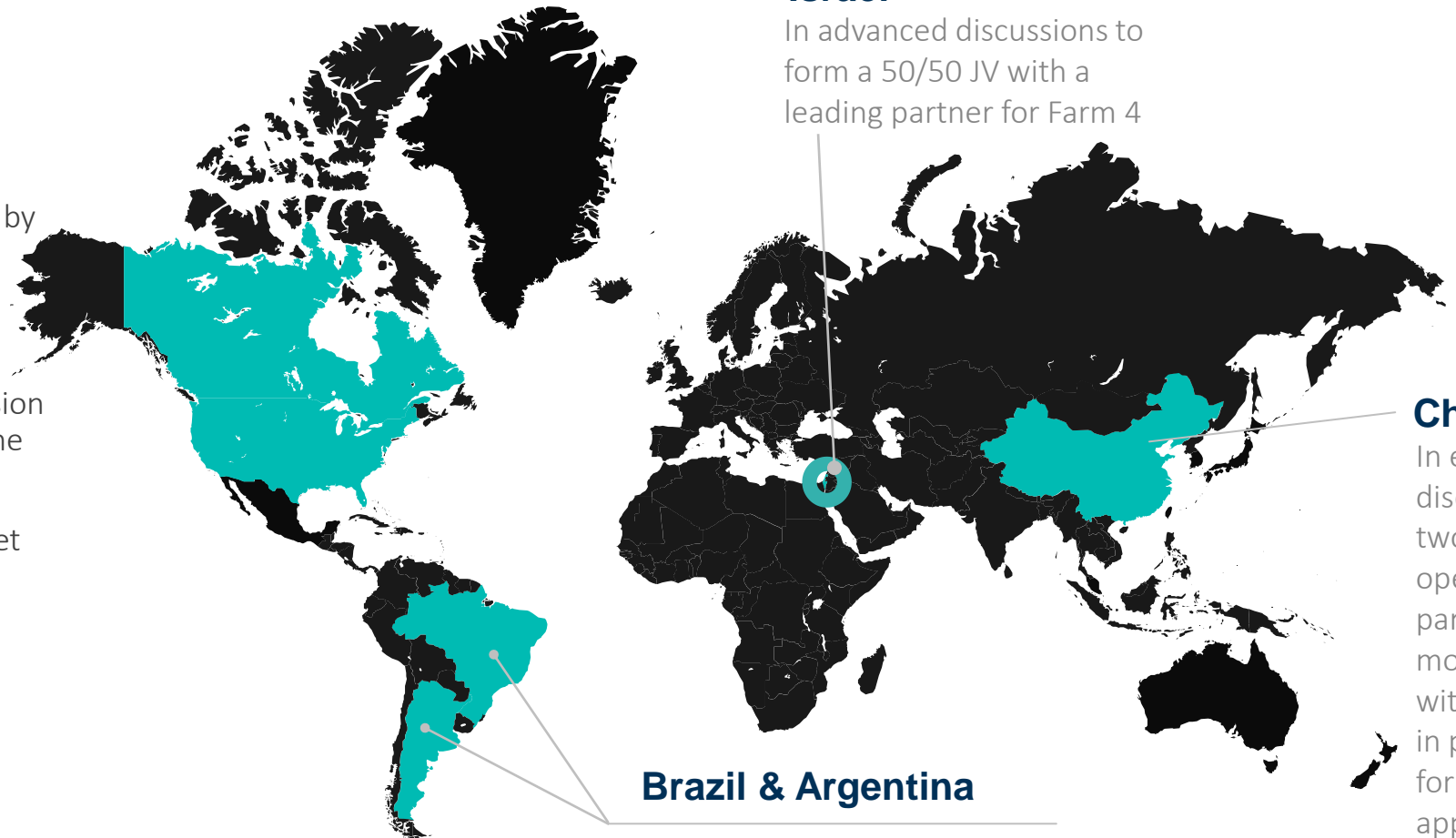
# Continued Global Expansion

## North America

- Pioneer, OH (2023)
- Continued expansion in U.S. and Canada with potential for 3-5 farms by 2025

## International

- Conversations continue with expansion partners in South America, Asia & the Middle East
- Targeting high volume/strategic Net Import markets to include:
  - China: 198,000 mt
  - Brazil: 110,000 mt
  - Israel: 40,000 mt
  - Argentina: 11,000 mt



### **Israel**

In advanced discussions to form a 50/50 JV with a leading partner for Farm 4

### **China**

In early stage discussions with two potential operating partners and moving forward with field trials in preparation for regulatory approval

### **Brazil & Argentina**

Approved for field trials in Argentina (2015). Regulatory approval granted in Brazil (Jun 2021) & exploring potential operating partners

# The Road to Market

**2003**

First regulatory study to the FDA for a New Animal Drug Application (NADA)

**1995**

FDA issues INAD # for AAS salmon

**1989**

First AquAdvantage® (AAS) line was created

**2008**

- FDA approves AquaBounty Canada's hatchery
- AquaBounty Technologies begins construction of a land-based aquaculture farm in Panama

**2009**

Submits final regulatory study to the FDA

**2010/11**

- FDA concludes AAS is indistinguishable from Atlantic salmon; safe to eat; and poses no threat to the environment

**2021**

- First harvest of AAS in the United States and Canada
- Brazil approves AAS for consumption
- 10,000 MT farm announced

**2019**

- FDA lifts the Import Alert allowing importation of AAS eggs into US
- Environment and Climate Change Canada (ECCC) approved the Rollo Bay production facility for the commercial production

**2016**

- FDA Import Alert issued prohibiting importation of AAS into USA until labeling requirements announced by FDA
- Health Canada announces approval of AAS for production, sale and human consumption in Canada

**2015**

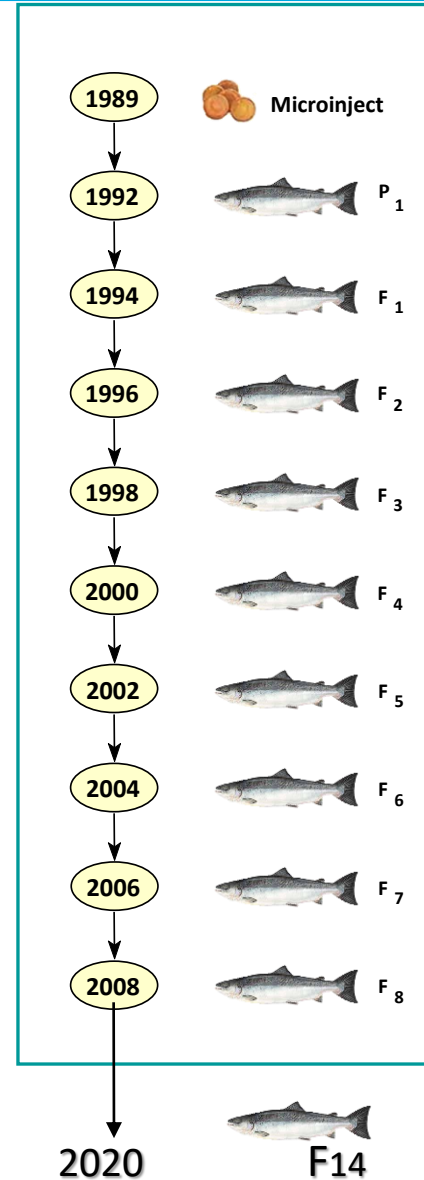
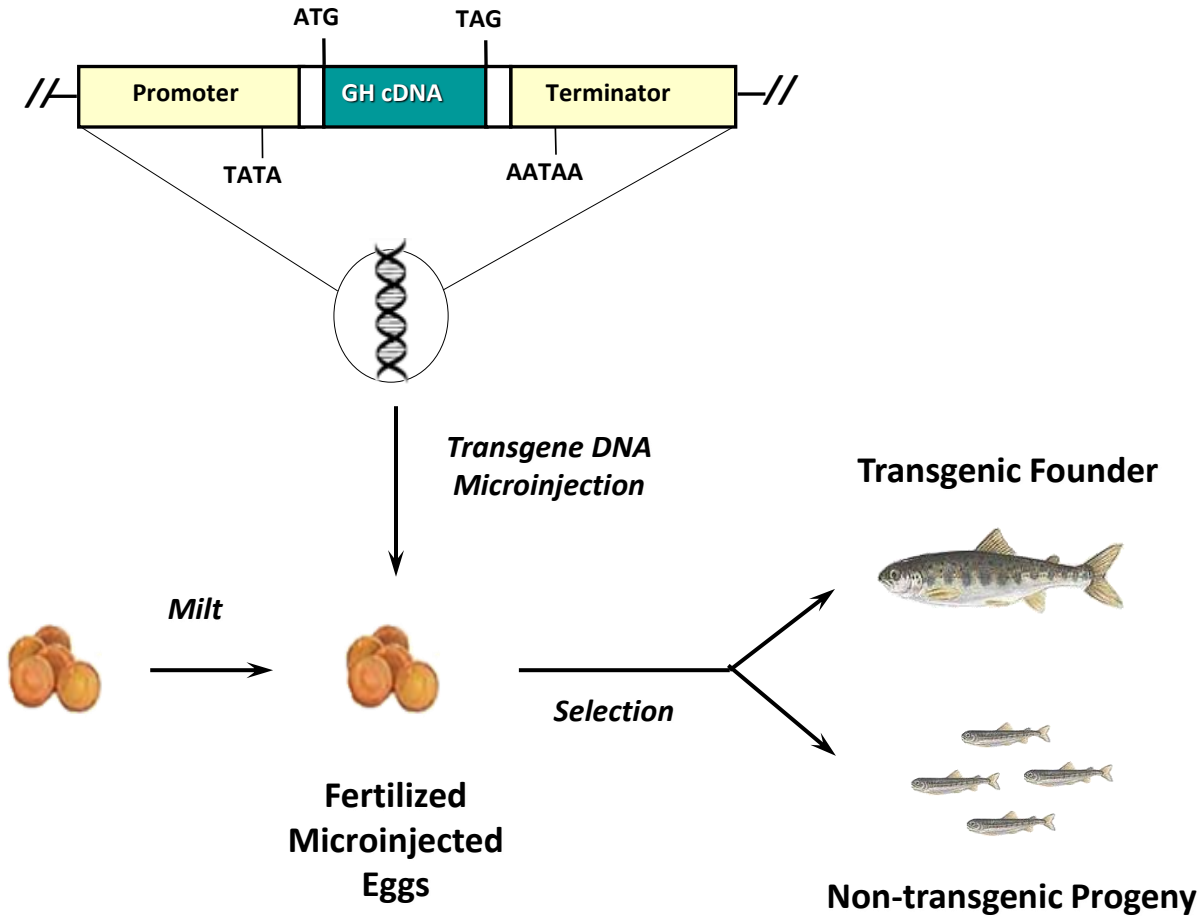
FDA approved AAS for consumption in USA

**2018**

- Received approval from the FDA to raise AAS Salmon at the Company's Indiana farm
- Completed a second harvest of AAS Salmon in Panama farm and sold in Canada
- Commenced production operations at the Indiana farm with traditional Atlantic salmon eggs

# AquaAdvantage All-Fish Construct

Coding domain from Chinook salmon *GH-1*  
Promoter sequences from Ocean Pout *AFP*



# AquAdvantage Phenotype

---

**Atlantic salmon for commercial aquaculture**  
**Genetically modified to grow faster, not larger**



**Non-transgenic salmon**

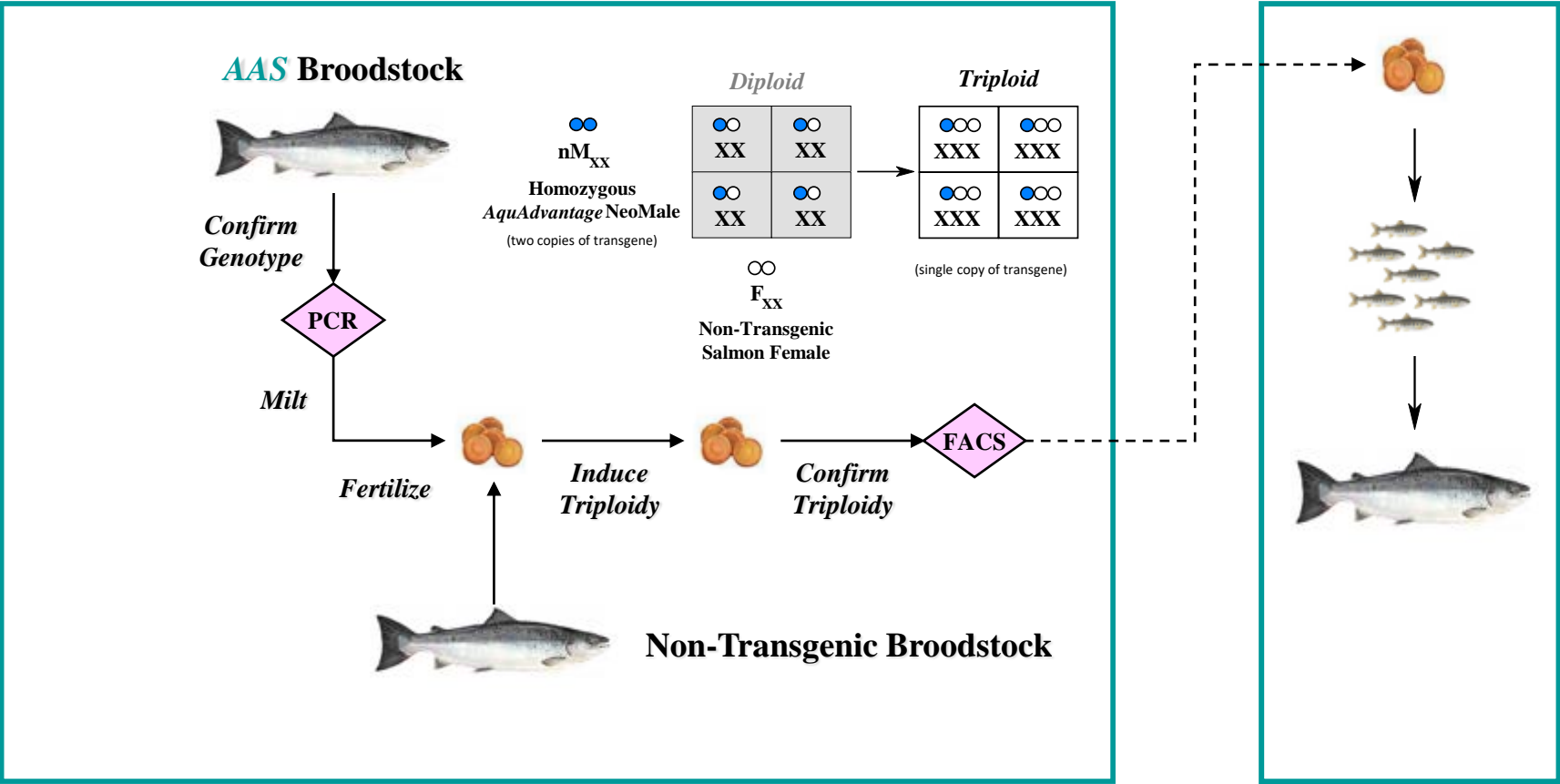
**Age-matched**

**AquAdvantage Salmon**

# Production of sterile, all-female, transgenic salmon

Triploid, Monosex, Eyed-eggs produced at PEI Facility

Egg to Harvest in AquaBounty farms



# First Regulatory Approvals



## United States

- FDA - CVM
- New Animal Drug paradigm
- Risk Assessment
  - Human food safety
  - Animal health and welfare
  - Environmental risk
- Risk assessment approach defined during review
  - AquaBounty was first GM animal reviewed by FDA
  - AquaBounty had no previous regulatory experience

## Canada

### Three Regulatory Frameworks

- New Substances
- Novel Food
- Novel Feed

### Three Agencies

- Environment and Climate Change Canada
- Health Canada
- Canada Food Inspection

### New Substances (ECCC)

- Environmental Risk
- Animal Health and Welfare
- Department of Fisheries & Oceans (DFO)
- Enables production in Canada

### Novel Foods & Feeds (Health Canada & CFIA)

- Separate Process from New Substance
- Required for use as food and feed
- Simultaneous evaluations

# Risk Assessment

---

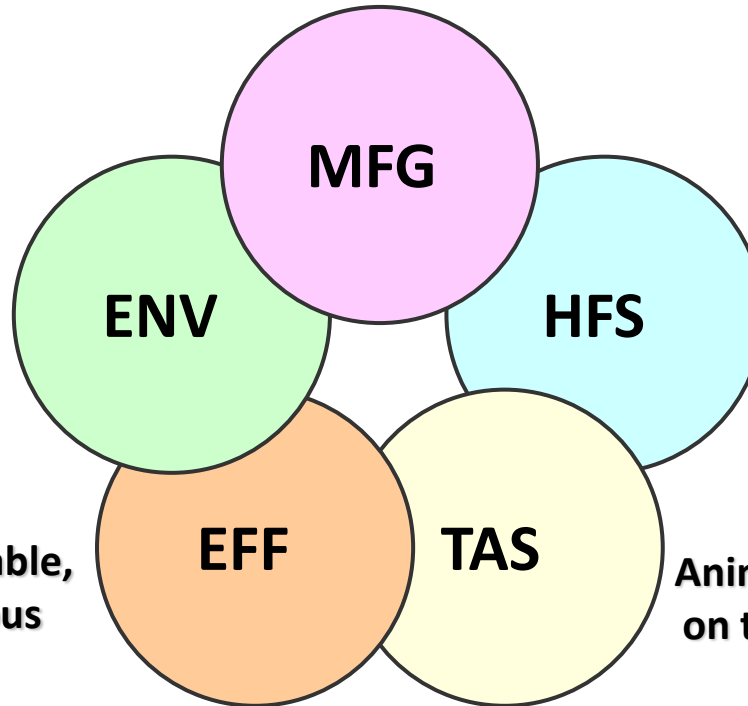
**Manufacture (production): safe materials and methods, and process-controls ensure product identity, integrity & performance**

**Environmental Risk: production poses acceptable environmental risks, including risks to endangered species**

**Human Food Safety: equivalent to standard salmon**

**Predictable, replicable, durable, efficacious phenotype**

**Animal Safety: no adverse impact on the health & natural behavior of the salmon**



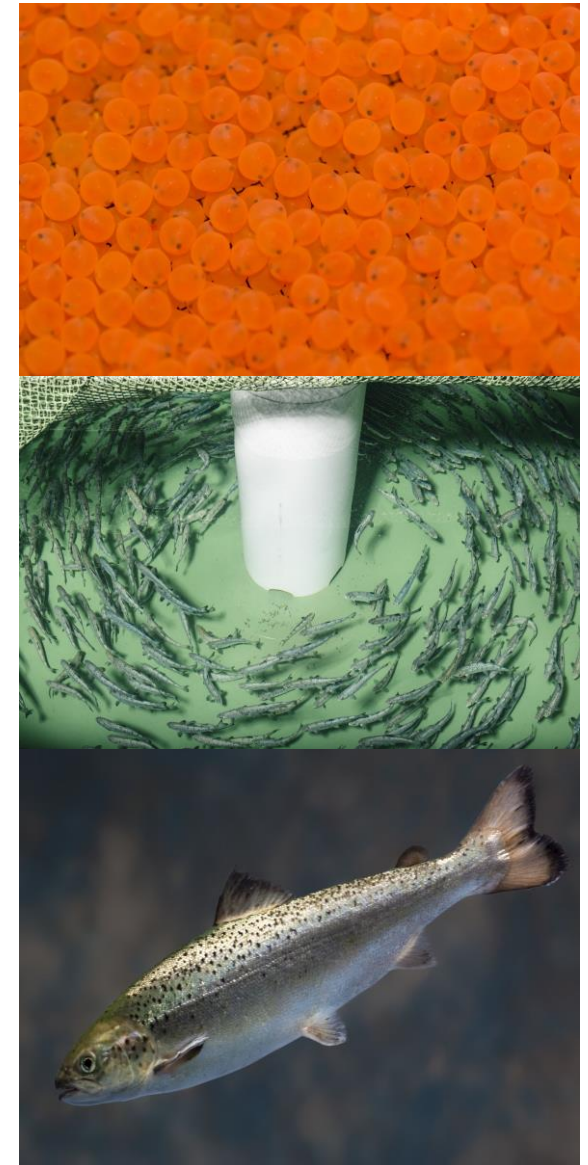
# Target Animal Safety & Genotype/Phenotype Durability

## Target Animal Safety

- Direct or indirect toxicity to the animal
- Hazardous phenotype
- Risks to the user
- Risks to the animal from biological containment strategy

## Durability

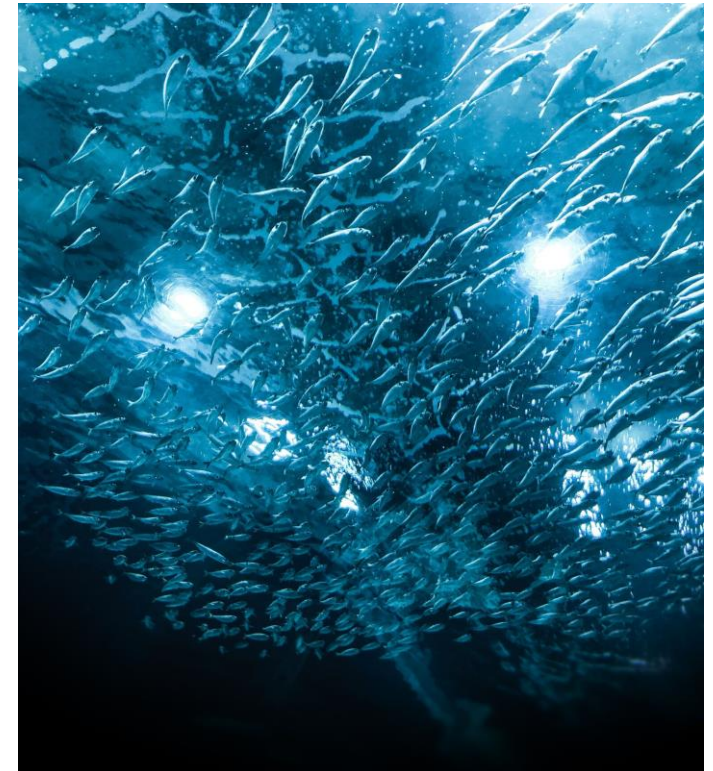
- Are the genotype and phenotype stable
  - Over the lifespan of the animal
  - Over generations
- Plan to ensure phenotype and genotype do not change
- Procedures to remedy changes or assess risk of new animal



# Risk to Human Health or the Environment

---

- Is AquaAdvantage salmon an Atlantic salmon
- Direct effects that could affect human health
  - Changes due to the gene expression product
  - Alterations in levels of hormones
  - Allergenicity of products of gene expression
- Indirect effects on human health
  - Changes to the composition of edible tissues
  - Changes to the endogenous allergenicity of edible tissues
- Likelihood that AAS or AAS Broodstock will
  - Escape confinement
  - Survive and disperse if they escape
  - Reproduce and establish if they escape
  - Environmental consequences if they escape



# Regulatory Findings

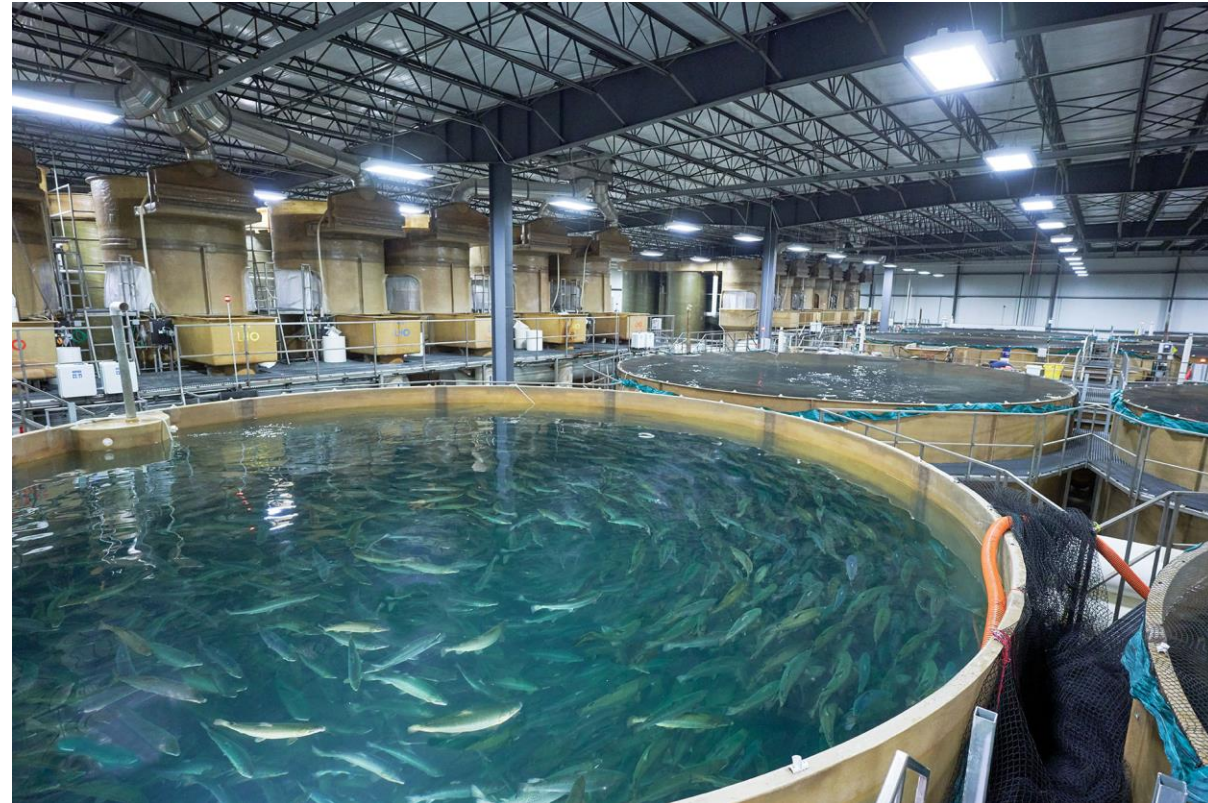
- AquAdvantage Salmon are Atlantic salmon
- No risk to health or well-being of AquAdvantage due to transgene
- Genotype & resulting phenotype stable over generations
- Composition, hormones, allergens not different than Atlantic salmon
- Poses no unique or significantly higher risks than Atlantic salmon
- Risk of escape is very low
- Risk to populations of wild Atlantic salmon or habitat is low



# Conditions for Use (FDA)

---

- Sterile (3n), all female fish
- Land-based culture only
- Cultured from egg to harvest in fresh water
- New commercial farms require approval
  - FDA in the U.S. & Internationally if product intended for sale in the U.S.
  - ECCC in Canada
- Continual monitoring of broodstock and AAS eggs using FDA-approved processes
- Durability assessments at defined life stages



# Current and Ongoing Regulatory Activities

---

- Novel Foods Application
  - Health Canada
  - Head On Gutted (whole fish)
- Manufacturing Approval, FDA
  - 10,000 MT Farm, Pioneer, Ohio
  - Expanded broodstock operations, PEI
- Broodstock and Egg QC, 3x per year, PEI
- Durability assessments
  - Every production lot
  - All farms
- FDA Update of 2015 EA
  - AquaBounty assisting





# Regulatory Team

**Chantal March, Director of Compliance**

**Dawn Runighan, Canada Operations Director**

**Matt Bryenton, Broodstock & Egg QC**

**Laura Braden, Fish Health**

**Guy Perry, Genetics and Statistics**

**Mark Walton, Regulatory Affairs**

*AquaBounty uses next-generation land-based aquaculture technology that supports ocean conservation and provides consumers with regional access to nutritious, fresh and affordable salmon with no added chemicals or antibiotics.*

# Thank you!

**AquaBounty**

Mark Walton

Chief Technology Officer

[mwalton@aquabounty.com](mailto:mwalton@aquabounty.com)

# Forward-Looking Statements

---

## Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact contained in this presentation are forward-looking statements, including, but not limited to, statements regarding the size and timing of the offering, the economic viability of land-based production facilities, the economic and operational benefits of AquaAdvantage® salmon (“AAS”); and the potential for increases in EBITDA and the profitability of AquaBounty; the timing of future harvests; projected growth in seafood consumption and market size, expansion of the aquaculture industry, and increasing demand for salmon; continuing supply constraints and their impact on pricing; the impacts of future environmental conditions; market interest in land-based aquaculture; the anticipated benefits of AAS and land-based production to consumers and the environment; non-exposure to pathogens, parasites, or environmental contaminants; continued operational performance against targets; the potential for consumer acceptance of AAS; AquaBounty’s commercial strategy, including demonstration of commercial viability, successful positioning and messaging of AAS, the establishment and types of sales channels, agreements with distributors and industrial producers, and progress against commercial launch timelines; the potential for the development of additional products, product traits, operational efficiencies, nutritional enhancements, and production sites; and the completion of field trials, approval of AAS, and potential relationships with local partners in other markets. Although management believes that the plans, objectives, and expectations reflected in or suggested by these forward-looking statements are reasonable, all forward-looking statements involve risks and uncertainties, and actual future results may be materially different from the plans, objectives, and expectations expressed in this presentation. These risks and uncertainties include, but are not limited to: (i) our limited operating history and track record of operating losses; (ii) our cash position and ability to raise additional capital to finance our activities; (iii) the anticipated benefits and characteristics of AAS; (iv) the ability to secure any necessary regulatory approvals to commercialize any products; (v) our ability to adapt to changes in laws or regulations and policies; (vi) the uncertainty of achieving the business plan, future revenue, and operating results; (vii) developments concerning our research projects; (viii) our ability to successfully enter new markets or develop additional products; (ix) competition from existing technologies and products or new technologies and products that may emerge; (x) actual or anticipated variations in our operating results; (xi) market conditions in our industry; (xii) our ability to protect our intellectual property and other proprietary rights and technologies; (xiii) the rate and degree of market acceptance of any products developed through the application of bioengineering, including bioengineered fish; (xiv) our ability to retain and recruit key personnel; (xv) the success of any of our future acquisitions or investments; (xvi) international business risks and exchange rate fluctuations; (xvii) the possible volatility of our stock price; and (xviii) our estimates regarding expenses, future revenue, capital requirements, and needs for additional financing. We caution you that the foregoing list may not contain all of the risks to which the forward-looking statements made in this presentation are subject. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see AquaBounty’s public filings with the Securities and Exchange Commission (“SEC”), available on the “Investors” section of our website at [www.aquabounty.com](http://www.aquabounty.com) and on the SEC’s website at [www.sec.gov](http://www.sec.gov). Forward-looking statements are not promises or guarantees of future performance, and we may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make, and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments that we may make. All information in this presentation is as of the date of its release, and AquaBounty undertakes no duty to update or revise this information unless required by law.

