

SAS²

INDUSTRY PRIORITIES

STEVEN SUMMERFELT | CHAIR, TECHNICAL ADVISORY COMMITTEE, SAS² | CHIEF SCIENCE OFFICER, SUPERIOR FRESH



1st Land-Based Atlantic Salmon Producer in USA Largest Aquaponic Producer in the World

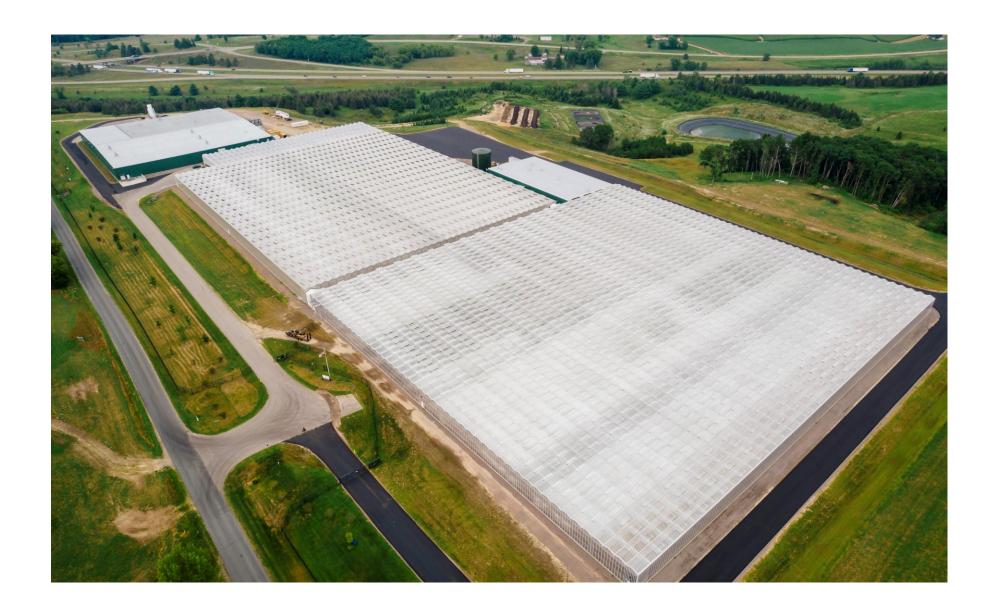




Superior Fresh Designed RAS & Effluent

OVER 40 COHORTS OF ATLANTIC SALMON REARED & SOLD EVERY WEEK FOR 7 YRS AT PREMIUM PRICE

- Never antibiotics, pesticides, injection vaccines, or formalin
- Never catastrophic fish die off in a RAS or single tank
- Often exceed production goals
- Zero discharge of production water to surface water
- Many Regenerative Farming Practices on 800-Acre Farm in Wisconsin
- Q3 2024 purchased former Aquabounty farm in Indiana (40-Acre), will triple production (beginning Q3 2026)



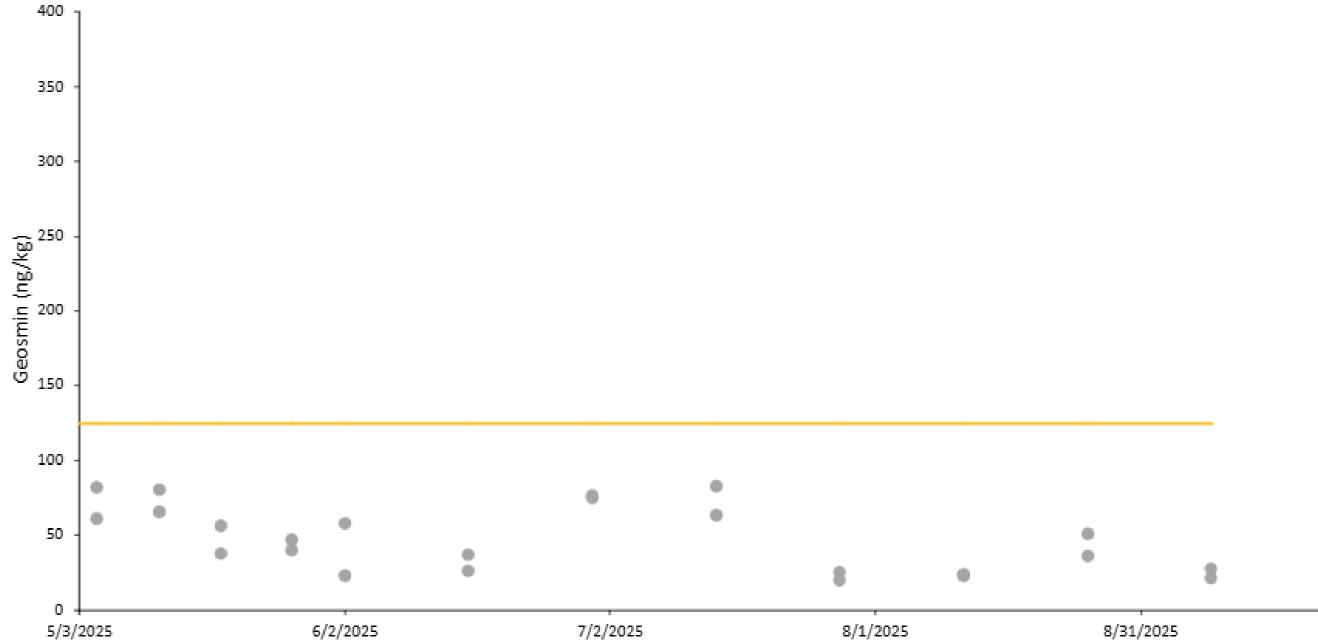




Priority #1

GEOSMIN CONTROL

- > Farms must know the geosmin levels in harvested salmon
 - ✓ Ensure levels are below super-taster consumers detection
- ✓ Researchable Objectives
 - ✓ Identify levels of geosmin super-tasters can detect
 - ✓ Develop cost-effective method to measure geosmin at farm
 - ✓ Develop methods to control geosmin in grow out and purge





9/30/2025



Priority #2

IMPROVE OUT OF SEASON SPAWNING

- > Support domestic producers
- **✓** Researchable Objectives (currently in SAS²)
 - ✓ Optimize photothermal manipulations
 - ✓ Develop predictive tools to identify optimally performing broodstock
 - ✓ Develop methods that improve embryo and alevin quality







Priority #3

BETTER ENVIRONMENTAL STEWARDS – SOCIAL LICENSE

- > Status quo is not acceptable
 - ✓ Farms must capture & reclaim more waste (C, N, P) with nutrient upcycling and regenerative farming
 - Landfilling biosolids is wasting resources
 - Whenever possible, build soil and give back to the land with regenerative farming
 - ✓ Researchable objectives:
 - Overcome challenge of saltwater toxicity to terrestrial crops
 - Produce human & animal food by repurposing waste nutrients
 - Generate biogas from wastes
 - Optimize technologies & practices to minimize water use and discharge





RECIRCULATING AQUACULTURE SALMON NETWORK

Sustainable • Innovative



Funded by:



USDA

National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

Award # 2021-68012-35922

Award # NA18OAR4170070

