



SAS²: A National Public-Private-Federal Partnership "Stakeholder-Driven"



















Institute of Marine and Environmental Technology









Government/NonProfit





FRESHWATER INSTITUTE Shepherdstown, WV



Industry Partners

UNIVERSITY of MARYLAND









KENNEBEC RIVER



MINNOVASEA

Industry Supporters





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Research Universities



Gover

USI













- 17 specific objectives (research, education, extension)
- 32 co-Project Investigators
- 12 partnering institutions (1 international)
- 11 industry collaborators (2 international)









SAS² Inaugural Meeting- September 15, 2021

\$10M Awarded by the USDA-NIFA SAS Program



Thank you and Congratulations!!!!

Sustainable Aquaculture Systems Supporting Atlantic Salmon Major Highlights and Achievements

Research • Education • Extension

Research

Breakthrough technologies in broodstock, early maturation, feeds, off-flavor, waste management, and market analysis

Education

Training the next generation through curriculum, internships, and pathways to careers

Extension

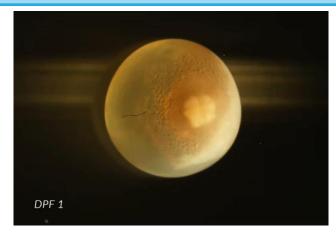
Engaging communities, transferring technology, and building public awareness

\$11.4M in Additional Funding Leveraged

Research Theme Accomplishments

Research at a Glance:

6 Research Objectives Advanced • \$8.0M Leveraged • 23 Manuscripts • 42+ Presentations



Novel broodstock/egg quality biomarkers; off-season spawning





Innovative reproductive sterility technologies





Advanced understanding of off flavor sources and improved mitigation



Research Theme Accomplishments

Research at a Glance:

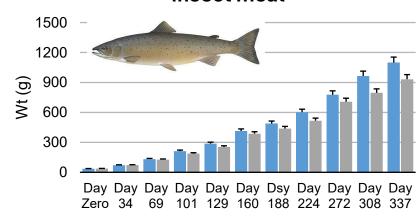
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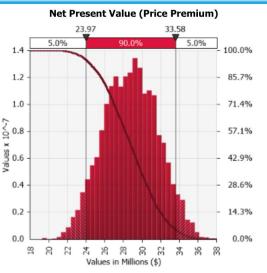


Solid waste to biogas; Biochar to reduce hydrogen sulfide;
Lettuce grown with desalinated sludge

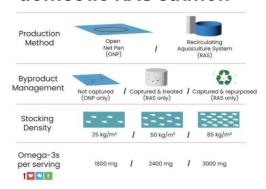


Alternative fish feeds: insect meal





Consumers willing to pay premium prices for domestic RAS salmon



Education Theme Accomplishments

Education at a Glance:

193+ Educators Trained • 64+ Internships • \$3.4M Leveraged • 4,000+ Youth
Participants • 104+ Learners Enrolled

- Paid Internships with 40% Job Placement
- Curriculum and workforce programs to train youth
- On-site, mobile, and virtual educational opportunities for all learners (K-Gray)
- Micro-credential programs, courses, and modules



Extension Theme Accomplishments

Extension at a Glance:

6,200+ Youth Served • 734+ Educator Participants • 9,300+ Stakeholders Engaged • 37,000+ Video Views

- Tours and site visits to raise public awareness and support transfer of technology
- Public engagement through open houses, science festivals, field days and public hearings
- Workshops for farmers and educators interested in 4-H programming
- 65-100% of youth participants want to learn more about aquaculture and RAS









Acknowledgments & Gratitude

We thank this year's conference sponsors for their generosity:







We're also grateful to this year's supporters for their contributions:











