

2017 AANS R&D Priorities

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**MAKING
WAVES**

Aquaculture's Next Chapter



General:

1. Atlantic aquaculture inshore water quality initiative – Compiling historic near shore monitoring data to better understand climate change impacts on aquaculture

Initiatives:

- Shellfish Hatcheries water pH monitoring: *partner with DAL*
- NECAN (Northeast Coastal Acidification Network): *AANS is industry representative on that new working group*



Seaweed:

1. Diversification of species available for cultivation (local kelp, other seaweed species, microalgae)
2. Development of novel seaweed products – adapting to food trends (vegan/sustainable), create value-added products

Initiatives:

- AANS Cultivable Workshop: January 2017
- AANS Project: *Advanced Planning & Evaluation of Seaweed Cultivation in Nova Scotia*
- AANS Project Submitted: *Commercialization of Value Added Products Derived from Cultivated Seaweed in Nova Scotia*
- New 3yr collaboration with Merinov: *development of research program for seaweed cultivation in Nova Scotia to support and move forward the ongoing industry development here*



Finfish:

1. Shorten seawater growout (superchill mitigation)
2. Alternative species (Striped bass, Atlantic halibut, Cleaner fish)
3. Supplemental oxygen delivery for marine pen
4. Spatial planning/area management
5. Harmful algae blooms monitoring
6. Alternative environmental monitoring techniques and development of tools to effectively monitor environmental impacts of fish farm in locations with high baseline sulfide levels.
7. Cage engineering/ Organic waste retrieval from marine finfish aquaculture sites in NS.
8. Rainbow trout broodstock program, focusing on improved saltwater performance
9. Waste stream optimization (Morts/Feed bags)
10. Improvement in the marking (genetic/external) tracking of farmed fish
11. Understanding interactions between wild and cultures fish

Initiatives:

- Overwintering Growth Trials for Under-Yearling Striped Bass: *managing project*
- Fish-i-Trends: *renewed for 2017*
- Extreme Weather Project:
 - Documents: Superchill review + Nova Scotia Mass Mortality Removal Plan
 - Rainbow trout Mission: Norway & Denmark
 - Atlantic Salmon Mission (coming up): Norway



Shellfish:

1. Oyster seed security and domestication (triploids, hatchery models, oyster genetics)
2. Research into the risk and management of *Vibrio parahaemolyticus* in Nova Scotia (aquaculture, fisheries & recreational harvest)
Sentinel testing/testing optimization
3. Control of invasive species biofouling tunicates
4. The combination of new technologies as means to identify and deter sea ducks on mussel farms
5. Development of MSX resistance strains and culture practices for the Bras d'Or lake – Phase II Oyster Hatchery Development Project.

Initiatives:

- MSX Oyster Hatchery Project:
 - Phase I: project completed, final report in progress
 - Phase II: project in discussion and development
- AANS Industry Driven *Vp* Sentinel Monitoring Project
- Efficiency of Experimental Antifouling Coating to Reduce Biofouling On Lantern Nets: *partner*
- Training for Triploid Oyster Production



AANS/NSDFA Research & Development Forum (Jan 27th 2017)

- Format was an open discussion with:
 - Industry
 - Academia
 - Government Representatives
- Results:
 - No clear determinations of barriers to implementation of a growth strategy for the SECTOR
 - Listing of species specific challenges
- Observation:
 - Group meeting (with all species) might not be the most efficient way to determine clear R&D priorities and develop a strategic plan to address them.

Recommendation:

Subgroup (by species) meetings to identify R&D priorities and determine path to move forward.



