THE COLD HAND AQUACULTURE

SPRING 2023

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Couturier on Aquaculture Development in NL

Grieg Seafood NL

NAIA Elects New Board of Directors Supports Local Economy and Conservation





28th Annual Conference and Trade Show Delta Hotel, St. John's, NL September 5-7, 2023

Aquaculture is a dynamic industry, well positioned to be one of the world's premier food production systems, as the need for responsibly-produced, nutritious food continues to increase. The industry has a positive story to tell in terms of sustainable development, human rights and equity and climate action.

The sector in Newfoundland and Labrador is set to grow and develop significantly over the next 10 years and is developing into an even more modern, science-based, technological industry. With significant company investment and abundant natural resources our potential is clear, and there is a global focus on our future.

On behalf of the Newfoundland and Labrador aquaculture industry, we invite you to join us for our 28th Annual Cold Harvest Conference and Trade Show; full of exciting and informative discussions related to aquaculture and its potential in our province, with world class keynote speakers and guests, sessions and panel discussions related to aquaculture innovation, technology, human resources and consumer trends. This event should not be missed.

More information will be available soon.

For enquiries, please contact: Roberta Collier at 709-538-3454 or roberta@naia.ca

www.naia.ca









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The Newfoundland and Labrador Aquaculture Industry Association (NAIA) is a member-based organization that represents the interests of seafood farmers and their suppliers in Newfoundland and Labrador. We are passionate advocates on behalf of our members to facilitate and promote the responsible development of the aquaculture industry.

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Message from President and Chair of the Board Sheldon George

Spring is the time of fresh new growth, and a time for new beginnings in the aquaculture industry. For me being involved in salmon farming, spring allows time to reflect on the past crop that is being harvested out, time to look at how we farmed our ocean with this crop and how we can improve for the new crop going in.

As well, NAIA is just coming off an AGM and election of its board, so we are also thinking about how the association can improve its journey to the next conference and AGM.

For me, having been re-elected president again for another term (thank-you fellow board members), and being a farmer, I reflect this spring on not only how I can help produce another crop of healthy salmon sustainably as we plan our smolt stocking, I also look at how I can help the NL industry have another successful year on all farms, both finfish and shellfish.

I have often been asked "Isn't it boring doing the same thing over and over again, crop after crop?"

This question and springtime reflection has given me some points to discuss in this President's Message.

In our beautiful province, where I have been involved in farming for over 15 years, I have yet to see two-year classes of production be the same, so it's never boring. Every year there are different environmental challenges, regulatory and political challenges along with supplier struggles, all having impacts on the province's aquaculture production. As much as we are stewards of our marine environment, mother nature still lets us know we do not control the environment by sending us either a warmer summer, colder winter, windier fall, or even a mixture of all three. What do we do as farmers to handle these uncertain conditions? We innovate, modify our practices, and continue to successfully produce a healthy source of protein.

This province has some of the toughest farming conditions in the world, but in its defense it has some of the most resilient farmers as well. I have the privilege of working with people from all over the globe, and some have said to me that they continue to be blown away at how we can overcome the obstacles that exist here and continue to successfully produce farmed products, whether it be salmon, trout, mussels or oysters.

I have had one person say, "I'm amazed. You guys in Newfoundland are made special! If someone peeled off your skin I'm sure there will be steel underneath. Weapons grade."

Of course, Newfoundland farmers respect the environment and can make changes to accommodate environmental challenges – but can the same be said for regulatory / political challenges?

The regulatory environment in Newfoundland can be as challenging as the weather at times, however the industry continues to adapt. Regulations and policies are needed in every industry to keep helping companies improve and become more efficient.

However, in recent years it is getting harder and harder.

The "Weapons grade" steel that we are made of is getting wore down for the people who have been in the industry for some time. I have said to many, growing fish is easy, it is everything else farmers have to deal with that makes farming on this island hard. We have seen how politics and regulations have had a negative impact on about 40 per cent of British Columbia's aquaculture industry, and we cannot lose any of Newfoundland's industry, let alone 40 per cent.

I was recently interviewed for a piece on aquaculture, and I was quoted as saying: "If this industry wasn't here, I don't know what I'd be doing," and I expect this can be said for the several hundreds that are with this industry in Newfoundland.

It is great to have regulations and policies in place, all industries need them, however we need to make sure these regulations and policies do not deflect company investment, originally set for this province, to elsewhere. I have heard regulators say we need to make sure this is done right, as there are many eyes watching us. This is true there are many eyes watching the Newfoundland and Labrador Aquaculture industry, however without the industry, there will be a lot fewer eyes in the province to watch anything, and policy makers will have less policies to make and enforce. Not only will the direct farm workers be elsewhere, there would be a lot less suppliers as well, and millions lost to our rural economies.

Local suppliers are what helps keep our Newfoundland aquaculture industry thriving in the challenging environment we work in. Hats off to our many suppliers we have on our island. These folks work long days and weekends to keep our farms in operation. All the suppliers I work with are second to none. Just like farming is a seven day a week job, our suppliers work just as hard. When we need vessels repaired, feed delivered or fish hauled, I have yet to be left stranded, and I expect this is true for all players in the finfish and shellfish industry here on the rock. I plan on devoting some of my presidential time highlighting the suppliers we have here. I believe our success and impact here in Newfoundland needs to be told louder and broader. Can this industry improve its practices? I am sure we all can, and I am just as certain we all have improved already. However, just because we can improve does not mean we do everything wrong, it means we can do things better. We should not be punished for improving, as adopting, changing and improving all practices is a part of a natural phenomenon known as natural selection.

Here is to a successful 2023 crop and thank-you to all our local suppliers who keep us operating, and our regulators who keep us in check.

New NAIA Board of Directors 2023

The NAIA Annual General Meeting took place at Quality Inn in Gander on Tuesday, February 21 where our 2023 Board of Directors was voted in.



Photo: Back Row L to R: Danny Boyce (Treasurer) – MUN Dept. of Ocean Sciences/ JBARB, Jonathan Gagné (Vice President) – Enterprise Shippagan Ltd., Lesley Clark - Skretting, Terry Mills – Norlantic Processors, Sheldon George (President) – Cooke Aquaculture, Juan Roberts – Badger Bay Mussel Farms. Front row L to R: Laura Halfyard (Secretary) – Connaigre Fish Farms, Candice Way (Rep for Knut Skeidsvoll) – Grieg Seafood Newfoundland, Cathy Follett – AMAR/Marbase Marystown, Ian Roberts – Mowi Scotland, Ireland, Canada.





Message from Executive Director Jamie Baker

f I have learned one overarching lesson about the seafood farming sector in my first year at the helm of NAIA, it is this: If you want to farm seafood in Newfoundland and Labrador – or anywhere in Canada for that matter – you have to want it bad and be all-in, all the time.

And that's because, when you look at it, the deck is stacked against you in many ways.

It starts with the challenging workplace that our producers call home - the Atlantic Ocean. At the best of times this is an environment that can throw all sorts of challenges your way from weather to sea conditions to unpredictable seasons. And in 2023, we all – and by all, I mean anyone working on or around the waters of NL - face the continued challenges being presented by climate change.

Another challenge is that aquaculture is essentially caring for and raising animals – a task any farmer can tell you comes with headaches sometimes.

Beyond the farm environment, there are other key factors that have to be taken into account.

Service and supply remains a challenge because the sector in NL operates in some of the most rural areas imaginable. Plus it's important to note that the supply chains devastated by the pandemic have not yet fully recovered, so it takes time, patience, planning and sometimes sheer luck to get some of the things you need.

Being a rural sector also presents massive challenges for development of infrastructure, including everything from vessels and power to telecommunications and weather monitoring.

And of course, the sector faces regulatory challenges that crop up on an almost daily basis, which can cost producers and the sector as a whole, massive amounts of effort, time and money to wade through, with no guarantee of a resolution. And the situation in BC shows demonstrably that regulation is not always based on science or common sense, which functions as a stark reminder of how even the best regulations can be cast aside in the name of politics.

But in learning all those challenges, I have also learned another important factor this past year: NL boasts some of the most determined and capable people who are more than up to the task of tackling many of these issues head-on.

Our producers are the Rocky Balboa of the Newfoundland and Labrador economy - no matter how hard you hit them, they will get back up, and come back better and stronger.

Our service and supply sector continues to find new and innovative ways to provide the sector with the best advice, equipment, and technology.

And we continue to boast a field of experts in the marine field like few places in the world, who work with regulators and the sector to chart a sensible, sustainable course forward.

NAIA members believe deeply in the good work they are doing, and it's important to remember that work means a better province for all citizens by way of better food security, a healthier environment, and establishing careers - not just jobs - in our rural, coastal communities.

This first year has been a true learning experience about what it takes to succeed in our waters, and NAIA is proud to support the work of everyone under our umbrella from egg to table, farm to plate.

As we push forward in 2023 and beyond, we know the challenges will be there.

But so too will our resolve and dedication.







A pioneer of aquaculture in Newfoundland and long-term Cooke employee was recently recognized by his peers and colleagues for his commitment and contribution to the industry. Gary Wilton, Freshwater Hatchery Manager at Cooke's Daniel's Harbour Hatchery, received NAIA's Aquaculturist of the Year award at it's 2023 Industry Awards Luncheon in February.

"It's flattering to know that people have taken notice on what the Daniel's Harbour facility has done and how it's contributed to the evolution of the industry here, it's nice to be recognized for being part of it," says Wilton. The award honours individuals for their contributions to NAIA and the development of the sector in the province over a prolonged period of time. Past recipients have included people from industry, the

Cooke's Daniels Harbour Hatchery Manager Awarded Aquaculturist of the Year

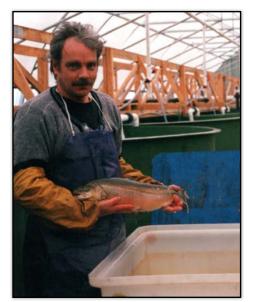
supply sector, academia, and government agencies.

Wilton, a native of St. John's, earned a Bachelor of Science from Memorial University and spent the first few years of his career working with the provincial and federal governments on contracts in the fisheries. He was part of the first cohort to earn a Graduate Diploma in Aquaculture from the University's Marine Institute in 1988. With that certificate in hand, Wilton moved to Campbell River, BC for a year before returning to Newfoundland and Labrador. He's been part of the province's aquaculture sector ever since.

The operation started as an initiative to test the viability of an artic char hatchery at time when a zinc mine – a major employer in the area – was closing down. "The concept we were trying to prove was that putting in the hatchery would work and could develop into something that would create jobs. It started as a six-month pilot project that lasted for three or four years."

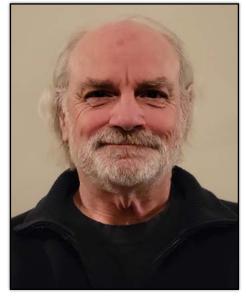
Eventually, the Daniel's Harbour facility evolved into a salmon smolt hatchery and was acquired by Cooke Aquaculture in the early 2000s. Since then, Gary has overseen many changes at the facility. He's led the team through a series of upgrades and expansions at the sites and has developed an unparalleled depth of knowledge and breadth of experience raising fish and managing a hatchery in rural Newfoundland.

His willingness to share his perspective to advance both performance at the Daniel's Harbour facility, and the aquaculture industry in general, have made significant contributions to the provinces aquaculture sector. Congratulations, Gary!



Wilton in the early days of the hatchery in Daniel's Harbour.





Gary Wilton, Freshwater Hatchery Manager at Cooke's Daniel's Harbour Hatchery

Seafood Expo North America & Seafood Processing North America

Seafood Expo North America & Seafood Processing North America took place at the Boston Convention and Exhibition Centre from March 12 – 14. NAIA Executive Director Jamie Baker was in attendance and joined other seafood professionals from around the world for three days of networking, seafood master classes and business meetings. Badger Bay Mussel Farms and Merasheen Oyster Farms had a booth in the

Newfoundland and Labrador pavilion where Chef Watson did live cooking demonstrations with NL organic blue mussels for the full three days. Many other NAIA member companies were also in attendance with exhibitor spaces. The show proved to be another great success with more than 19,000 people in attendance, and 1141 exhibitors from almost 50 countries.









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BC Salmon Farmers Association Announces New Executive Director

By: Maryam Farag, Aquaculture North America



Brian Kingzett, Executive Director of the BC Salmon Farmers Association. Photo: BCSFA.

he BC Salmon Farmers Association (BCSFA) has announced the appointment of Brian Kingzett as the new executive director of the BC Salmon Farmers Association.

Kingzett has 35 years of experience in the environmental and aquaculture sectors. Kingzet received a Bachelor of Science with Honours from the University of Victoria and Master of Science from Simon Fraser University in Marine Biology.

"We are very pleased to have Brian onboard as the new Executive Director," said Diane Morrison, chair of the BCSFA and managing director of Mowi Canada West. "He's been a valuable member of the BCSFA team and in his new role, his experience and knowledge of the sector ensures the Association is in good hands."

Kingzett joined the association in July 2021 as the Director of Science and Policy. In this role, Kingzet navigated the sector through important new policy development areas, fostered new collaborative research initiatives, and enhanced the Association's science communications and public education efforts.

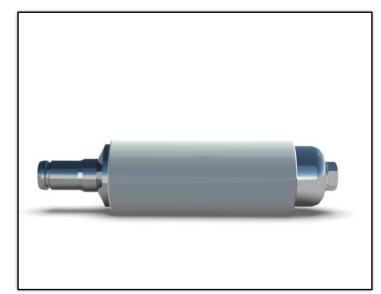
"We have a lot of work ahead as we accept the challenge of the Federal government's transition process and further reconciliation with our Indigenous partners. I have devoted my entire career to seafood sustainability, and I am looking forward to helping the sector realize its potential as part of Canada's Blue Economy," said Kingzett.

Ruth Salmon, the former Interim Executive Director for the BCSFA since February 2022, following the departure of John Paul Fraser, will be stepping away from the Association as she enters retirement. Salmon served as executive director of the Canadian Aquaculture Industry Alliance for ten years and has been a member of the BCSFA team since 2018.





New Aquaculture Pump Unit from NLB Provides More Corrosion Resistance than Ever



NLB has introduced a new high-pressure water jet unit for aquaculture net cleaning with innovative features that provide more resistance to saltwater corrosion than ever before. The NLB AQ3250 delivers flow of 400 lpm (106 gpm) at 207 bar (3,000 psi) to remove marine growth and debris, keep nets from getting weighed down, and maintain fish health.

Like NLB's other pumps for aquaculture, the AQ3250 is protected from sea air and spray by a lightweight aluminum enclosure, with roll-up doors for easy maintenance access in tight quarters. But this latest triplex plunger pump takes corrosion resistance a step further, replacing the stainlesssteel plungers with ceramic plungers. The chemical bonds in ceramics have already been oxidized, eliminating further oxidation and the corrosion that follows.

The use of ceramic might be expected to add cost, but NLB offsets this with a unique three-piece plunger design. With only one of its three pieces subject to wear, users can simply replace that piece instead of replacing an entire plunger set.

The new plungers performed extremely well in extensive testing, and are water cooled in sealed packing cartridges to keep out seawater. The ceramic and its six-micron finish provide outstanding hardness to minimize wear.

The AQ3250's footprint (2,565 mm x 1,525 mm \times 1,730 mm - 2,015 mm to the top of the exhaust) and weight (3000

kg) are relatively modest, minimizing footprint and the load on the ship's deck. The pump's seven-liter engine is powerful yet economical, consuming fuel at a rate of 39 liters per hour at full load.

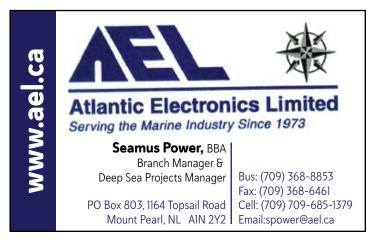
Other new features include a discharge accumulator to buffer the pressure and ensure a smooth flow of water, and a suction stabilizer to provide a smooth supply of pumped water to the pump.

The AQ3250 offers the same trouble-free performance as other NLB pumps, with the same minimal maintenance. The key is a slow-running design, proven in many applications over 50 years, that minimizes wear on key parts. The unit comes mounted on a skid made of galvanized steel to withstand the harsh ocean environment. Its marine engine features convenient external priming ports, and the aluminum enclosure is removable.

Like other NLB pumps, the AQ3250 can easily be integrated with many existing net cleaning head systems.

Net cleaning companies who operate their NLB pumps seven days a week have reported that their maintenance and repair costs are 50 percent less than they were with other pumps. The new AQ3250, with its ceramic plungers and sealed packing cartridges, should increase that competitive edge.

Fore more information, please contact: <u>nlbmktg@nlbusa.com</u> (800) 441-5059 | +44 1325 522555



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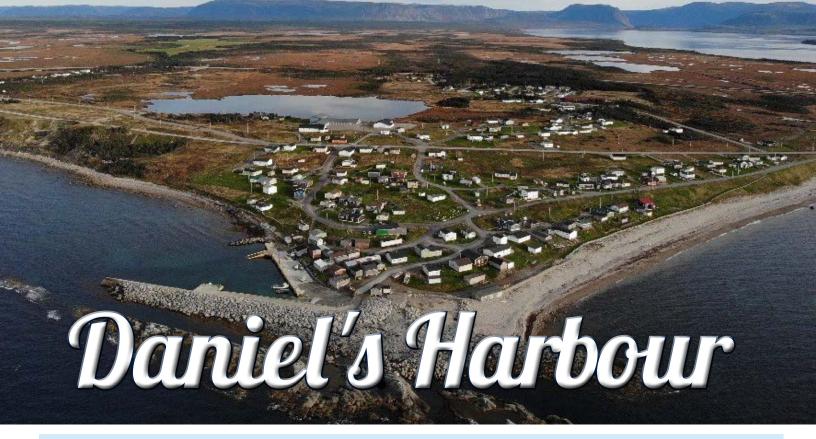




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All across Newfoundland and Labrador the aquaculture industry contributes to local rural economies by providing employment for residents and supporting infrastructure investments and service sector companies. Our towns support our sustainable industry by providing a positive and supportive environment for aquaculture development. With this in mind, the Community Profile Column, in each edition of the Cold Harvester magazine, will celebrate a community where the aquaculture industry is active and is boosting rural economic activity.

Population: 220

The community of Daniel's Harbour is located on Route 430 on the Great Northern Peninsula. It was a zinc mining town for almost twenty years until the mine's closure in 1990. It remains a traditional fishing community, with a natural rock wall protecting the small harbour.

Despite suffering several landslides over the years Daniel's Harbour has some of the most beautiful scenery in the province, with the Long Range Mountains to the southeast and the Gulf of St. Lawrence to the northwest.

Daniel's Harbour is also the former home of Nurse Myra Bennett who's extraordinary compassion and contribution to the delivery of medicine in Newfoundland and Labrador gave her national and international attention and respect. Her home and personal effects remain intact and serves as a significant tourist attraction for the area. From there, you can look out over the water and see whales, porpoises and dolphins or take a trek over the boardwalk to Portland Creek Pond where you will find beautiful sandy beaches and a breathtaking view of the mountains. At times you may see a caribou or moose which we still get on the edge of town.

Just north of the Town is the Daniel's Harbour Hatchery, owned and operated by Cooke Aquaculture with 4 local residents on staff. This hatchery is unique because of its incubation system, where the salmon eggs are received and hatched before going into tanks to grow, before being shipped off to St. Albans, NL.



All across Newfoundland and Labrador the aquaculture industry contributes to local rural economies by providing employment for residents and supporting infrastructure investments and service sector companies. Our towns support our sustainable industry by providing a positive and supportive environment for aquaculture development. With this in mind, the Community Profile Column, in each edition of the Cold Harvester magazine, will celebrate a community where the aquaculture industry is active and is boosting rural economic activity.

Population: 1539



The Town of Humber Arm South is comprised of 4 communities: Halfway Point, Benoit's Cove, John's Beach and Frenchman's Cove, with a population of 1539 and is nestled at the foot of the glorious Blow Me Down Mountains.

Allen's Fisheries Limited opened in the 1900's by George Allen and concentrated on salted and dried fish processing. Over the 100+ year history and 4 generations, the company had expanded their business/products into harvesting, processing and international marketing. The Barry Group of Companies was also founded over 100+ years ago and functioned as a fish processing facility in the neighbouring community of Curling. In 2017, the Barry Group purchased Allen's Fisheries Ltd and continues to operate as the largest employer in the Town.

Over the past 5+ years, The Barry Group has continued to

HUMBER ARM SOUTH continued

expand their fish processing, harvesting and marketing business. The species of fish that is harvested and processed has grown and includes, but not limited to, shrimp, blue mussels, oysters, crab, lobster, herring, mackerel, red fish, halibut etc. The processing plant now provides seasonal, and year-round employment.



The Barry Group has also added new facilities in the town and has upgraded existing facilities. They are continually looking for ways to improve; to make their processing more effective and efficient through updated technology and using innovative techniques to reduce waste and freshwater usage. These visual landmarks are a sign of economic growth, and give hope for a sustainable future in the fish processing industry.

The Barry Group not only employs the majority of our population but also provides employment for individuals from other areas who relocate to Humber Arm South either seasonally or permanently for work.

The economic benefits that the Barry Group offers to the Town of Humber Arm South through the Allen's Fisheries Ltd business is profound. Through their commitment to produce quality products, their innovation, and their vision, they have become an industry leader on the local, provincial, national, and international stage. Our residents benefit from having meaningful employment and job security which gives more spending power to the people and in turn directly impacts other local businesses.

"When big businesses offer competitive wages, a good working environment, and job security to make their workers feel valuable, those workers will use their skills to increase productivity in order to meet demand resulting in a successful business. One cannot exist without the other. Its a win-win for all involved, especially the local economy," said Erica Humber-Shears, Mayor of Humber Arm South.



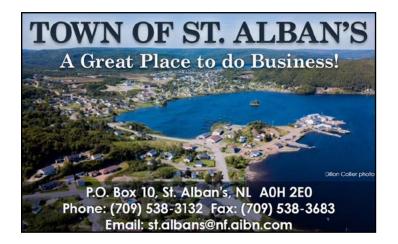
Badinotti EasyTrack





E asyTrack is a sophisticated B2B client-facing information system developed by Badinotti, which has been successfully implemented for over two years. The system is designed to store and manage essential cage maintenance data from each fish farm, providing complete traceability of the company's operations.

The EasyTrack system is a valuable resource that enables clients to monitor each stage of the network process in the service center. From the arrival of dirty operations to the dispatch of treated operations, every step is recorded and tracked.



Through the EasyTrack platform, clients can access disinfection and material validation certificates required for internal company purposes within application condition of license, as well as view low operations, all from a single, intuitive interface.

In addition to providing complete transparency and control over operation management, EasyTrack also offers clients the ability to create efficient data-driven decisions. With access to critical data points, clients can make informed decisions, mitigating receiving environment risks in terms of subsea infrastructure confidence and reliability. This feature ensures that clients can keep their operations in optimal condition, reducing downtime and environmental impact, while also improving their bottom line.

In conclusion, EasyTrack is an essential tool that provides clients with the visibility and control they need to manage their operations effectively. Its successful implementation over two years demonstrates its reliability and effectiveness. By enabling clients to make informed, data-driven decisions, EasyTrack helps them mitigate risks and reduce their environmental impact, making it an invaluable resource for companies seeking a more sustainable and efficient future.

Learn more at: www.badinotti.com

NL Seafood Farming Sector Recognizes Leaders, Innovators with Aquaculture Hall of Achievement Awards in Gander NL

The Newfoundland Aquaculture Industry Association (NAIA) is pleased to announce the winners of the 2022 Newfoundland and Labrador Aquaculture Hall of Achievement Awards, presented in Gander, NL during the awards luncheon on February 21.

Congratulations to this years award recipients:

- Aquaculturist of the Year Gary Wilton, Cooke Aquaculture, Daniel's Harbour
- Excellence in Innovation Cold Ocean Salmon, St. Alban's/ Connaigre Peninsula
- Stewardship and Sustainability Rebecca White, Badger Bay Mussel Farms, Triton/Flatrock
- Distinguished Early Career/Youth Julia Norris & Tyler Penton, Grieg Seafood NL, Marystown
- Lifetime Achievement Chris Williams, Mowi Canada East, Pool's Cove
- Aquaculture Ambassador Cyr Couturier, Marine Institute of MUN, St. John's, NL

These awards highlight the accomplishments of the best and brightest people, innovations and advances in the province's quarter-billion-dollar finfish and shellfish aquaculture sector.

"The finfish and shellfish aquaculture sectors in this province have seen some truly tremendous advances on all fronts in recent years, and these awards help recognize the contributions of the many dedicated and talented people and companies we have supporting that effort," said NAIA Executive Director Jamie



Clifford Small, Member of Parliament, Coast of Bays - Central - Notre Dame provided welcome greetings to the guests at the luncheon.

Baker. "The people recognized today have all made remarkable contributions to the establishment and growth of the sector in our province on many levels, and we look forward to their continued dedication and achievements."

Baker noted that the NL aquaculture sector is poised for positive sustainable, sensible growth in the years ahead given the province's growing environment, room to expand, availability of

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The award winners at the NAIA Hall of Acheivement Awards which took place in Gander in February. L to R: Chris Williams – Mowi (retired), Tyler Penton – Grieg Seafood NL, Julia Norris – Grieg Seafood NL, Cyr Couturier – Marine Institute, Sheldon George – Cold Ocean Salmon, Rebecca White – Badger Bay Mussel Farms. (Missing from photo: Gary Wilton – Cooke Aquaculture Hatchery Daniel's Harbour)

marine resource expertise, farming experience and clear proximity to key seafood markets.

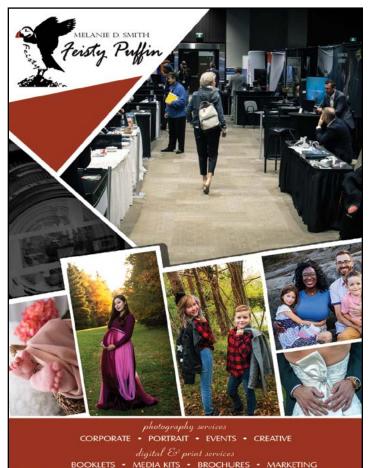
"Producers are providing critical support on food security for Newfoundlanders and Labradorians, and we are providing careers – not just jobs – for people living in rural, coastal communities," he said. "But it is also important to remember that this sector strives daily to meet and exceed stringent global environmental and sustainability standards as we play our part in the emerging Blue Economy. (Cont'd) Seafood farming is, by far, the most carbon-friendly form of protein production in the world, and we



Mayor of Gander, Percy Farwell welcomed the guests at the luncheon.

are excited to be in a province that has such potential in the years ahead."

Congratulations to all the winners and thank you for your contribution to the aquaculture industry in Newfoundland and Labrador.



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Work Safe. Home Safe. Every Day. Made Safe NL Can Help!

Ade Safe NL had an exciting 2022, and we've been working hard to get the word out about the good work we're doing in Newfoundland and Labrador's manufacturing and fish processing sectors. So, we'd like to introduce Made Safe NL to Cold Harvesters' readers and remind everyone of who we are and what we can do for you!

Made Safe NL is the safety sector council for manufacturing and fish processing. We are one of four safety sector councils in Newfoundland and Labrador (NL) created to improve health and safety outcomes in high-risk sectors.

Our sibling safety sector councils are:

- Forestry Safety Association of Newfoundland and Labrador (FSANL)
- Newfoundland and Labrador Construction Safety Association (NLCSA)
- Newfoundland and Labrador Fish Harvesting Safety Association (NL-FHSA)

We believe workplaces should be safe places. We're here to help.

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- <u>Health and Safety Training</u>, either free of charge or at highly reduced-price points.
- <u>Made Safe NL Safety Consortium</u> for like-minded business owners, managers, and safety professionals that meet every six weeks to share best practices, experiences, techniques, resources, tools, and technologies. Members engage in learning events, including webinars, guest speakers, lunch-n-learns, facility tours, safety talks, and workshops. The consortium is currently free to join.
- <u>Made Safe NL Annual Safety Symposium</u>, a full day of learning, networking, and engaging conversation between like-minded safety experts and



Made Safe NL launched an ongoing <u>Workplace Hearing Conservation Campaign</u> at Made Safe NL's first Annual Safety Symposium on October 28th, 2022.

decision-makers who aim to improve NL's safety culture and outcomes (Fall 2023).

• <u>Hearing Conservation Campaign</u> that includes hearing safety videos to share with your staff and a printable poster you can download from our website and post in lunchrooms and other areas of your worksite.

Our services are open to all organizations operating in the NL manufacturing and fish processing industries.

Made Safe NL is operated by <u>Canadian Manufacturers &</u> <u>Exporters</u> Newfoundland and Labrador Division (CME NL) in collaboration and partnership with WorkplaceNL. Made Safe NL is guided by an industry council with input from a fish processing subcommittee, with balanced representation from employers and workers.

Visit our website at <u>www.madesafenl.ca</u> or contact David Haire: Tel: (709) 685-5820 Email: david.haire@cme-mec.ca

and don't forget to follow us on <u>LinkedIn</u> and <u>Facebook</u> to stay up-to-date on special events and training opportunities.

IMPORTANT LINKS

- Safety Diagnostics https://www.madesafenl.ca/ wp-content/uploads/2022/11/BR0CHURE-2022-11-29-MSNL-Safety-Diagnostic-AF.pdf
- Health and Safety Training, <u>https://www.</u> madesafenl.ca/wp-content/uploads/2022/11/16-<u>11-2022-MSNL-Training-AF.pdf</u>
- Made Safe NL Safety Consortium <u>https://www.</u> madesafenl.ca/consortium/
- Made Safe NL Annual Safety Symposium <u>https://</u> www.madesafenl.ca/annual-symposium/
- Workplace Hearing Conservation
 Campaign <u>https://www.madesafenl.ca/</u> resources/#hearing-conservation

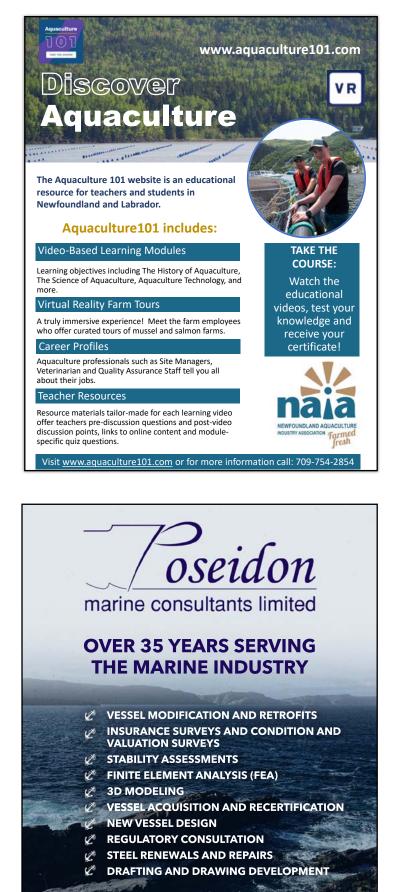


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Bryton Shang, CEO and Founder 2 Embarcadero Center, 8th Floor San Francisco, CA, USA <u>info@aquabyte.ai</u> www.aquabyte.ai

quabyte uses computer vision, machine learning, and AI to help aquaculture farms feed the world as cleanly and efficiently as possible by giving the industry unprecedented insight into the health, growth, and sustainability of their fish.

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> For more information on NAIA Membership Benefits, please contact Roberta Collier roberta@naia.ca visit www.naia.ca

technology solutions include biomass estimation, sea lice counting and nonantibiotic treatment optimization, feed optimization, welfare indicator scoring, and more. All of which helps aquaculture farms minimize waste and maximize profit while also protecting the fish, waters, and communities that depend on them.

The company now operates offices in Norway, the U.S., and Chile, and was the first technology company to be recognized for its accuracy by the Norwegian Food Safety Authority.



Atlantic Salmon Stewardship While Supporting Local in Placentia Bay



Photo Credit: Miranda Squires, Grieg Seafood NL

By: Miranda Squires, Aquaculture Environmental Technician, Grieg Seafood Newfoundland

G rieg Seafood Newfoundland strives to be good stewards in many areas, including support of the local economy and conservation of the environment through sustainable practices. One example of this is our River Monitoring Project in which we have committed to monitoring a river in Placentia Bay for each active Bay Management Area (BMA) for 10 years. Since 2018, we have worked closely with the Department of Fisheries and Oceans Canada (DFO) to develop and implement this program.

In May 2023, the project will begin it's third year and be operational in two rivers in Placentia Bay. The salmon rivers were chosen by DFO based on proximity to designated BMAs in Placentia Bay and are monitored while the respective BMA is active. Counting fences are deployed in the rivers from May to September with the goal of monitoring for potential escaped farmed Atlantic salmon, while collecting biological data from the wild stocks and ecological data from the rivers. All data gathered is submitted to DFO for their analysis and is publicly available. The first counting fence was installed in 2021, one year prior to the initial stocking of the respective BMA, to gather a season of baseline data. A second fence will be erected in 2023 and will be the baseline year for the BMA that will be stocked in 2024.

Grieg counts on the communities in the immediate vicinity of each river for this project. Every year, five local residents are hired for the assembly, monitoring and dismantling of the fences. As the fences are in slightly remote areas, we work with the communities to help obtain resources such as power and space for storage areas. Likewise, local companies are employed to train the river monitors in courses such as Standard First Aid and other Newfoundland companies are called upon to source and manufacture the materials and supplies for each fence.

To date, the Project has proven successful in obtaining valuable environmental and biological information for the wild salmon stocks of Placentia Bay to share with DFO and the public. DNA samples are collected from our broodstock and we continue to maintain this DNA of our farmed fish as a commitment to monitor for introgression. It is an excellent way to monitor the health of the rivers surrounding Placentia Bay and their wild Atlantic salmon stocks while also focusing on our goals of stewardship and supporting local.



Cooking with Chef Steve Watson *Cheesy Grilled Mussels with*

Prosciutto and Pot Liquor





INGREDIENTS:

- 3 lbs. Mussels
- 1 cup White Wine
- 3 oz. Melted butter
- 2 oz. Thinly sliced prosciutto, chopped finely
- 3 Cloves garlic, crushed
- 2 Green onions (scallions), chopped finely
- 1 tsp. Breadcrumbs
- 3 oz Old white cheddar cheese

METHOD:

Bring the white wine to a boil in a large saucepan. Add the mussels, cover and boil about 3 minutes or until mussels open. Remove mussels and keep the pot liquor liquid, set aside. Break open the mussel shells and discard the top shell. Loosen the mussels from shells with a spoon. Return the mussel meat to the shells, place in single layer on oven tray or serving dish.

Preheat grill (broiler). Combine butter, prosciutto, garlic, old cheddar, bread crumbs and onion in a small bowl. Divide butter mixture over mussels, grill about 3 minutes or until browned lightly. Serve accompanied with a warmed shot of the pot liquor.



SEAFOOD TIPS:

- Newfoundland organic blue mussels contain above average levels of Omega-3, are low in fat and high in protein.
- Broiled mussels are amazing to work with and may be prepared a day ahead of time.
- Mussels are excellent served as an appetizer or as an Hors D'oeuvre accompanied with a charcuterie platter.



Couturier on Culture

Twenty-Years of Aquaculture Development in Newfoundland and Labrador

By: Cyr Couturier, Fisheries and Marine Institute of Memorial University

Cyr Couturier is marine biologist, aquaculture scientist and chair of the MSc Sustainable Aquaculture program at the Fisheries and Marine Institute of Memorial University. He has 35+ years of experience in applied research and development, training and education in aquaculture and fisheries. He is a Board and Executive member of several farming & development associations, including CAIA, CFA, CAHRC, HORIZON TNL, and is a past president of AAC, CAIA, and NAIA on multiple occasions. He has worked in aquaculture and fisheries development in over 18 countries The views expressed herein are his own. Contact: <u>cyr@mi.mun.ca</u> or follow on Twitter <u>@aquacanada</u>

AQUACULTURE DEVELOPMENT IN NEWFOUNDLAND AND LABRADOR

We have come a long way baby, as the saying goes! Aquaculture development efforts have been ongoing with salmonids and marine finfish for ranching and enhancement in Newfoundland and Labrador since the 1800s (detailed in Couturier and Rideout 2018^{*} - PDF available via email

CONTINUED NEXT PAGE



CFA staff and Executive Officers meet with AAFC Minister Bibeau at the end of October 2022. On behalf of CAIA, Couturier briefed Minister Bibeau on the need for increased support for the CSSP program for shellfish farmers, and Business Risk Management (BRM) access for aquaculture, just a few short weeks after Hurricane Fiona devastated the PEI shellfish industry. Photo Credit: Mary Robinson, President CFA.

COUTURIER ON CULTURE continued

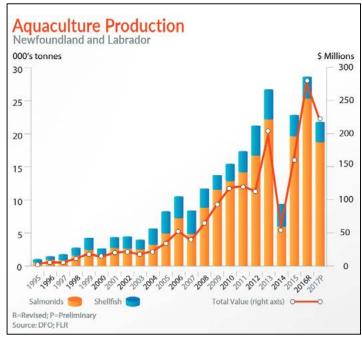


Figure 1: Fisheries Year in Review 2017, Gov't NL

from the author). The most recent efforts at aquaculture development commenced in the late 1970s with pioneering development work on shellfish and finfish farming in Newfoundland and Labrador undertaken mostly during the 1980s and 1990s including salmon, trout, scallops, mussels, eels, cod, halibut, yellowtail flounder, oysters, to name a few. Most of this work was done in collaboration with Memorial University and its development departments, namely the School of Fisheries, Marine Institute and the Dept. of Ocean Sciences (formerly the Marine Sciences Research Laboratory in the 1980s).

By the mid-1990s, commercial production was barely 1,000 tonnes combined finfish and shellfish production. In the late 1990s production had started to increase in both sectors with the advent of research and development efforts



by the Province and the Federal Gov't under the auspices of the Canada/Newfoundland and Labrador Comprehensive Economic Development Agreement, or ACERA for short. At the beginning of the new millennium, it was decided by the province to focus on the species that had the greatest likelihood of success from a commercial standpoint, and to provide ongoing support in development by the Province: blue mussels, salmon, and cod. By the mid-2000s the sector had grown to about 5,000 tonnes per annum and there was a general feeling that things had reached commercial and competitive scale in terms of both finfish and shellfish production.

The sector grew quite rapidly thereafter to peak in 2016, as industry tried to learn how to cope with the cold and warm and stormy conditions prevailing in this Province – it is not the easiest place to farm fish, for a variety of reasons. A couple of mass mortality events in the past decade, in addition to a pandemic, saw the sector reach a low in 2019 before rebounding in 2021. (See Figs. 1 and 2) Industry seems poised to overcome the production challenges with enhanced technology, and should continue to grow sustainably in this next decade.

TWO DECADES OF DEVELOPMENT NEWS

The Aquaculture Association of Newfoundland (AANF) was created in 1987 to advocate for sector development. They published a short newsletter/bulletin until 1994 when the association was reorganized into the Newfoundland and Labrador Aquaculture Industry Association (NAIA) and hired its first Executive Director. Development work continued with the University for over a decade, as noted above, and the industry began to produce farmed seafood at commercial scales in a regular fashion from 2005 onwards. The NAIA decided then to chronicle the industry's development, innovation and commercialization by publishing its first Cold-Harvester magazine in the summer of 2003. The magazine is now in its 20th year and still going strong congratulations to the NAIA for providing this voice to and for the sector! Perhaps a future edition could do a pictorial review of technology back into the 1980s and up to the 2020s to see how far the industry has actually developed. "There are surely great images showing the progression in farming practices that could be posted from both the AANF bulletin and the Cold-Harvester magazine.

LABOUR FORCE ISSUES

The labour force has changed tremendously in the past decades in NL aquaculture, from mom and pop type operations to more professional operations in the millions of

AQUACULTURE SNAPSHOT 19,635 19,635 189 VALUED AT MILLION





Figure 2: 2021 Production statistics for NL aquaculture. Source: FFA YIR 2022.

dollars per year, with international markets for our products. The sector is highly technical and science-based, now uses more IT and AI for operations, and so new entrants should have some of these skills to begin with. Fortunately, the Marine Institute of Memorial University has been providing some of these skills to the sector in NL but also elsewhere since 1987. The MI will continue to provide the training as requested by industry, not only in farming but also mariner skills, or on specific topics of interest to the sector. There is some good news on this front related to microcredentials to be announced soon, so keep an eye out for this in the near future!

As there is more mechanization, and use of remote technology in farming for feeding, animal health, and environmental health, most of the industry will need to be upskilled and specialized to keep pace with these developments. The Canadian Agricultural Human Resource Council (CAHRC) is currently developing a workforce strategic plan for Ag and Agrifoods, including seafood farming to address the skills gaps, future needs, including recruitment and retention, and options for addressing chronic labour shortages (Figure 3). We look forward to this plan being finalized by September 2023, and perhaps being part of the upcoming NAIA conference? It will contain a variety of proposed solutions for governments and industry to take in addressing the skills and labour shortages that continue to plague aquaculture as well as the much larger farming operations representing 190,000 farming households.

*Couturier, C., Rideout, K. 2018. Chapter 11, Sustainable Aquaculture Production, p. 303-346. In. Food Futures – Growing a Sustainable Food System for Newfoundland and Labrador, C. Keske (Ed.), ISER Books, Memorial University, St. John's, NL.



Figure 3: Pillars of a national workforce strategy for short-, mediumand long-term skills and labour needs for Ag and Agrifoods, including aquaculture.



Remembering Industry Associate and Friend, **Betty House**

The Newfoundland Aquaculture Industry Association and our members were deeply saddened to hear that our friend, Betty House, passed away in January after a lengthy illness.

After receiving a Bachelor of Science (Biology) degree from Memorial University and the Fisheries and Marine Institute's Advanced Diploma in Aquaculture program, Betty started a career in aquaculture which spanned three decades.

Betty proved to be very versatile in here career. She began by working on R&D projects on salmon, trout and eel farms in Newfoundland and Labrador before moving to New Brunswick to work as a marine site technician and then as a fish health technician, before taking on the role of Saltwater Certification Coordinator at Cooke Aquaculture. In 2009, Betty joined what was then the New Brunswick Salmon Growers' Association (now the Atlantic Canada Fish Farmers Association) as their Research & Development Coordinator (later renamed as their Science and Technology Coordinator). In this role she worked closely with NAIA's Research and Development Coordinator for many years, as part of a network of Atlantic Canadian R&D Coordinators. Darrell Green said, "I always enjoyed working with Betty and appreciated her collaborative nature and her great passion for, and dedication to, the salmon aquaculture industry in Atlantic Canada. I'll remember her as a respected and trusted colleague, and as a sincere and good-hearted friend."

Over her time at ACFFA, Betty led the New Brunswick salmon farming sector's participation in some major initiatives, most notably a well-boat technology pilot project and the collaborative Fundy wild salmon restoration project. In 2022 she received the Atlantic Canada Fish Farmers Association (ACFFA) 2021 Atlantic Canada Aquaculture Award as an industry professional who had dedicated over 25 years in support of the sustainable development of salmon aquaculture in our region.

Betty will be missed and remembered as an important industry colleague and as a good friend.



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