Growing Our Future Together

- NAIA Cold Harvest Conference 2012
- Companies Give Back to Local Communities
- Community Based Education Initiatives
Cultivating Your Investment

The Government of Newfoundland and Labrador supports the development of the aquaculture sector to enhance economic opportunities in communities along our coasts. We are committed to the long-term economic and environmental sustainability of the industry through investment capital, infrastructure, a comprehensive aquatic animal health program, technical support, as well as, research and development.

The province has the technology, expertise, and biophysical conditions to foster the sustainable development of the salmonid and blue mussel aquaculture sectors. Our goal is to become the largest producer of quality aquaculture products in Canada. Be part of this great opportunity in Newfoundland and Labrador.

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Aquaculture.

Department of Fisheries and Aquaculture  
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Cover Photo: Pass My Can Site, Bay d'Espoir - Photo courtesy of Clyde Collier
As Canada's Minister of Fisheries and Oceans, it is a sincere pleasure to welcome you to the Newfoundland and Labrador Aquaculture Industry Association’s 19th annual conference and trade show.

Aquaculture is a rapidly growing Canadian industry. In fact, production has increased four-fold in the past 20 years as world dependence on farmed fish increases.

Aquaculture is a major economic driver creating nearly 700 full time jobs in this province. The total economic value of the province’s aquaculture industry is over $116 million dollars.

Of all the provinces and territories, Newfoundland and Labrador has the fastest growing aquaculture industry in Canada, producing both shellfish and finfish. It is also the largest producer of steelhead trout.

Blending traditional knowledge and experience in the fisheries with innovative technologies, the people of this province are building an impressive and sustainable aquaculture industry. At Fisheries and Oceans Canada, we are proud to support these efforts and the resulting economic growth and job creation in Newfoundland and Labrador.

As the aquaculture industry continues to expand across the country, our government is committed working with the provinces to grow the future of this vibrant industry so that it provides economic benefits to all Canadians.

I hope you have a productive conference and trade show.

Sincerely,
The Honourable Keith Ashfield, P.C., M.P.
Minister of Fisheries and Oceans

DID YOU KNOW ...

The Aquaculture Collaborative Research and Development Program (ACRDP) is issuing a Call for Proposals for research project funding for the 2012-2013 fiscal year. The deadline for submissions of proposals is March 1st, 2012.
The ACRDP is a Fisheries and Oceans Canada (DFO) initiative to increase the level of collaborative research and development activity between the aquaculture industry and the department. For further information on the Aquaculture Collaborative Research and Development Program, please contact ACRDP-PGRDA@dfo-mpo.gc.ca
GREETINGS FROM MINISTER DARIN KING
“Growing Our Future Together”

I am pleased to provide a message for the Cold Harvester, this being my first issue since taking over as Minister of Fisheries and Aquaculture. Aquaculture is a rapidly growing industry and an increasingly important part of the province’s seafood sector. I am looking forward to working with the members of the Newfoundland and Labrador aquaculture industry for years to come.

The theme Growing Our Future Together is appropriate given the strides being made within this industry. In 2010, production rose 12.7 per cent, from 13,627 tonnes in 2009 to 15,360 tonnes in 2010. The total market value of the industry increased from $35 million in 2005 to $116 million in 2010. Aquaculture production increased again in 2011 with further expansion of the salmonid sector.

Not surprisingly, aquaculture has experienced unprecedented growth over the last five years. Our government is please to support this growth by partnering with industry through the Aquaculture Capital Equity Program and the Aquaculture Working Capital Loan Guarantee Program. Approximately $350 million in funding has been invested by the private sector in the aquaculture industry, assisted by $21 million of equity investment by the Province of Newfoundland and Labrador. We are committed to sharing the risks in new development with industry so we may all reap the future benefits.

We also recognize our role in facilitating this growth with the appropriate infrastructure that support the sustainable development of the industry. These types of initiatives include the construction and refurbishment of new aquaculture dedicated wharves, which promotes bio-security and sustainability. A total investment of $22 million was made in aquaculture infrastructure over the last five years. In addition, this past summer, the Centre for Aquaculture Health and Development was officially opened. This $8.8 million facility provides the industry with the most modern and efficient fish health and industry development services in Canada and will enable the aquaculture industry in this province to continue to flourish and prosper.

As further support to the industry, the Provincial Government is continuing to work with our mussel sector to identify mechanisms to enable this sector to achieve further growth and ensure viability. We are committed to working towards making Newfoundland mussels the preferred product in the marketplace. We look forward to renewed partnerships with industry to see this become a reality in the coming year.

I am confident 2012 will bring great things for the aquaculture industry and all those associated with it. Through sound investments from industry and supported by Provincial Government risk capital, we can continue to cultivate this growing industry and generate even greater benefits in coastal regions.

Sincerely,
Honourable Darin King, MHA
Minister of Fisheries and Aquaculture

Minister King and Doug Caines during his visit to the Coast of Bays region in the fall.
From the desk of the Executive Director …
Growing our Future Together

Miranda Pryor, Executive Director, Newfoundland Aquaculture Industry Association

Each year as we organize our annual conference and tradeshow we ask for volunteers to help with the planning and execution of this event. A very special thank you to the many of you who volunteered your time over these past few months, we couldn’t have done it without you!

The theme chosen by the committee this year is “Growing our Future Together”. For many reasons, we felt that this reflected the current situation of farming in Newfoundland and Labrador, and what it truly means to be involved in aquaculture in this province.

To grow an industry, particularly one so heavily focused in rural communities, it takes the support and cooperation of all involved to succeed. Every individual, company, organization or department comes to the table with a view of this industry as seen through their eyes, with perceptions and ideas based upon their own personal experiences. It is this diversity that keeps the wheels of change moving and motivates us all to keep growing.

Over the past year we have seen expansion and consolidation continue to shape our industry. Our list of engaged stakeholder groups continues to grow and includes such important partners as the Fish, Food and Allied Workers union and Memorial University.

Aquaculture is a young industry, both in terms of years in operation and in terms of the average age of people in this industry. Look around the room and you will see a lot of young faces. We need young people engaged and interested in aquaculture. - A common directive from my Board of Directors and members for many years and one we are very committed to fulfilling.

We are so pleased that this year we have a record number of students attending our conference. Students will be presenting their work in our technical sessions or on posters in the Trade Show area, or simply visiting the conference to network and learn what the future may hold for them in aquaculture in Newfoundland and Labrador.

On behalf of the Board of Directors, we are delighted to announce that NAIA will be instituting a new scholarship for students enrolled in an aquaculture research program, as well as a new member scholarship that will be available to all NAIA Members (and employees thereof) who have children that are graduating high school and will be attending a post-secondary institute. More details on these will be announced soon.

When people know better, they do better. – Over the past year NAIA has been engaged with the Marine Institute to offer training to our workers on many topics ranging from basic salmon biology to marine hydraulics. We are also working together to engage young people in our school system through the development of curriculum materials that teachers can use within their existing school curriculum, related to aquaculture. To offer both programs we rely on the support of our many funders including IBRD, DFA and ACOA.

A special thank you as always to the NAIA Board of Directors (Jennifer Woodland, Jennifer Caines, Cyr Couturier, Danny Boyce, Wayne Fudge, Trenton Johanson and Frank Powell). Your time and expertise help to guide and focus the efforts of NAIA for our members and your input is greatly appreciated. And also a thank you to our staff (Darrell Green, Tammy Stewart, Roberta Collier and Kimberly Cox). Commitment, enthusiasm and dedication encompass all that you do and so a sincere thank you.

Be not afraid of growing slowly; be afraid only of standing still.

Chinese Proverb

Without continual growth and progress, such words as improvement, achievement, and success have no meaning.

Benjamin Franklin

If we don’t change, we don’t grow. If we don’t grow, we aren’t really living.

Anatole France ★★
NAIA Welcomes Kim Cox
By: Roberta Collier, Regional Coordinator, NAIA

The New Year brought with it a new Office Assistant for the NAIA satellite office in St. Alban's. NAIA hired Kim Cox through the NLWorks Program for the duration of 26 weeks which will enable her to work with us until early July. Kim will help prepare for Cold Harvest 2012, the International Boston Seafood Show, NAIA/MI Workshops, Cold Harvester magazines and any other events or day to day activities that may arise during her time with NAIA.

Kim said that she is very thrilled to have been given this opportunity, and is looking forward to all of the great experiences that this job is sure to offer. You can reach her at the NAIA office in St. Alban’s by phone at (709) 538-3454 or by email at naia@eastlink.ca.

Mary Alliston Butt Receives 4th Annual Fisheries and Aquaculture Scholarship

Mary Alliston Butt was presented the DFA scholarship from Honourable Clyde Jackman, Minister of Fisheries and Aquaculture in October 2011.

Mary Alliston Butt of Morrisville, NL was awarded the 4th Annual Department of Fisheries and Aquaculture Scholarship by Honourable Clyde Jackman, Minister of Fisheries and Aquaculture in October 2011. Mary Alliston, who is a graduate of Bay D’Espoir Academy located in Milltown, NL, focused her essay on overfishing of the province’s fish stocks and how regulations and restrictions can have an impact. She is currently pursuing a major in Biology (Ecology and Conservation) and a minor in Geography at Memorial University of NL.

The provincial Government established the Fisheries and Aquaculture Scholarship in 2008 and it represents one of a number of initiatives aimed at stimulating youth engagement in fishing and aquaculture. This scholarship was created to promote awareness of the province’s fishing and aquaculture industries among youth entering post-secondary education. It is valued at $1,000 and is for students who are graduating high school and pursuing post-secondary education.

Students who wish to apply for the scholarship must submit a 2,500 word essay that describes what he or she feels is the biggest issue facing the province’s fishing industry and provides suggestions on how that issue could be addressed. Students must also demonstrate strong academic standing and participation in extracurricular activities. To learn more about the NL DFA Scholarship, visit: http://www.fishaq.gov.nl.ca/education/scholarship.html
Donald Stewart Awarded the Herbert D. Brett Lifetime Achievement Award

By: Conrad Collier, Executive Director, Coast of Bays Corporation

The Herbert D. Brett Award is awarded by the Newfoundland and Labrador Regional Economic Development Association (NLREDA) and recognizes an individual whose work has made lasting contributions to the economic development community and has demonstrated outstanding achievement by empowering people to foster economic growth. It is presented in memory of Mr. Herb Brett, a long-time municipal leader and pioneer of the Regional Economic Development Board (REDB) process.

Mr. Don Stewart has been a stalwart of economic development in the Coast of Bays region for decades. A business man since the 1960s, Mr. Stewart has always been a visionary in his home town of Harbour Breton and the region. Not one to be distracted by the mundane, insignificant small ‘p’ politics, Mr. Stewart sees the ‘big picture’ of what needs to get done for effective economic development in the entire region. Being in business and having contact with people throughout the Coast of Bays, he has a network through which to gather information and to gauge public opinion. Realizing that not all decisions or approaches will be met with satisfaction, Mr. Stewart has a knack to explain his vision and reasoning and to achieve consensus. He is never one to be lost for words or to back down from a good debate on facts while maintaining due respect for the person he’s speaking with.

Mr. Stewart’s resume of involvement in economic development reads like a history book of the Coast of Bays region. In 1975, he founded and was the first president of the South Coast Regional Development Association, later renamed the ConHer Development Association (the second Rural Development Association in Newfoundland and Labrador). From inception to its dissolution in the 1990s, Mr. Stewart was involved in the Development Association in all positions of its executive. From 1994 – 1995, Don became a pioneer in the development of the REDBs across the province becoming involved in the provisional Board in the Coast of Bays and since its birth in 1996, he has been involved in every aspect of the zonal Board process. He is currently serving as the ConHer sub-region business seat and also as Chair of the Coast of Bays Corporation – a position he has held for five years over the history of the Corporation.

Economic development practitioners from all over Newfoundland and Labrador were in Gander from November 24 – 26 to participate in the Economic Development Summit 2011. Over 250 representatives of the Regional Economic Development Boards (REDBs), Community Business Development Corporations (CBDCs), municipalities and the Newfoundland and Labrador Federation of Cooperatives attended their respective Annual General Meetings and discussed partnership opportunities to grow the economy in all areas of the province.

During the Awards Gala, hosted by Seamus O’Regan of CTV’s Canada AM, Mr. Donald Stewart, Chair of the Coast of Bays Corporation, was awarded the Herbert D. Brett Lifetime Achievement Award in recognition of his many years of volunteer service to economic development in the Coast of Bays. Nominated by the Coast of Bays Corporation, Mr. Stewart was judged with other nominations from across the province by an impartial panel of judges comprised of representatives of development groups and academia.

Seamus O’Regan presenting Lifetime Achievement award to Donald Stewart.
As a member of the Harbour Breton Town Council in 1997 in the role of Deputy-Mayor, Mr. Stewart was directly involved in the development of Harbour Breton’s Strategic Development Plan which proved to be instrumental in addressing the challenges faced by the community as a result of the decline in the fishing industry. From 2003 to 2005, Mr. Stewart was Mayor of Harbour Breton guiding the community through arguably the most challenging period in its long history with the shutdown of the local fish plant which employed approximately 500 people.

He was re-elected as Mayor in September 2005 to 2009 and in the last municipal election decided to run as a Councillor – a position he still holds today. He has also been a member of the Coast of Bays Joint Mayors Committee since it was formed in 2002.

He is currently the Chair of the Harbour Breton Investment Corporation (HBIC), an agency formed to drive economic development in the Town of Harbour Breton. The HBIC is responsible for the development of 10 affordable housing units for seniors and various other employment programs in the community. A keen supporter of the aquaculture sector in the region, Don is the catalyst driving the development of the Poole Cove Marine Industrial Park in Harbour Breton to capitalize on opportunities associated with that industry.

Don, being entrepreneurial in his thinking, is always looking for and analyzing new opportunities for the region. He has been a Coast of Bays representative on the Central Region Rural Secretariat since it was formed and this role is very fitting to his nature – always forward thinking, analyzing and planning. He was a good friend of Mr. Herb Brett (deceased) and their paths crossed frequently as they were both very involved in their respective regions, trying to create jobs in their rural communities and achieving regional sustainability. Don is indeed an economic development asset to the Coast of Bays and is most deserving of the Herbert D. Brett Lifetime Achievement Award.

The Coast of Bays Corporation Board of Directors, Coast of Bays Joint Mayors Committee, the Newfoundland Aquaculture Industry Association Board of Directors and staff and everyone involved in economic development in the province extends Sincere Congratulations to Don on being awarded this prestigious award.

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Smart Tank Technology at the Dr. Joe Brown Aquaculture Research Building

By: Danny Boyce, Facility and Business Manager, Dr. Joe Brown Aquatic Research Building, Ocean Sciences Centre, Memorial University of Newfoundland and Labrador

The Dr. Joe Brown Aquatic Research Building (JARB) just got a lot smarter with funding from the Department of Fisheries and Aquaculture under the Aquaculture Strategic Development Program (ASDP).

Boyce states “Smart Tank Technology” will enhance our capabilities here at MUN for our researchers, students and industrial clients.

In situ behavioural recording, quality control and analysis capability within aquaculture tanks: each SRIAS enabled tank can both stream and record animal behaviour simultaneously to provide highly customizable behavioural imagery acquisition for both scientific and quality control data. Recorded data streams are instantly transferred via high capacity Ethernet to data storage arrays for post processing, archival or re-distribution. The open and modular SRIAS differs from standard DVR technology by allowing maximum programming flexibility, open codec design to allow unconstrained use of acquired imagery in any other non SRIAS associated software and emphasis on high quality imagery.

Typical standard DVR technology provides less than half the image quality when exporting video data.

Methodology:

The Issue

Typical DVR technologies borrow heavily from the commercial security camera DVR sector. Most of these systems impose adverse constraints when used for scientific, behavioural recording. Typical problems include proprietary video codecs which do not allow recorded data to be imported into and viewed in ancillary scientific morphometric quantification tools or video editing software for post-processing analysis, poor quality video when exporting a data file as well as limited capability to re-program and re-task DVR software and data storage options. Most DVR systems operate on re-branded or heavily modified Microsoft Windows (tm) systems, which present the weak link for long term recording. Data loss due to a failed Windows system despite a fully functional camera setup and acquisition system is common.

The Solution

SRIAS presents a completely different direction in behavioural video capture for the sciences. Built on open software standards, it aims to provide a rapidly deployable, highly configurable, reliable, long term video data stream recording and archival tool. Owing to its open design, integration with other data analysis and image based quality control tools becomes feasible. By centralizing control and data archival away from the edge, which is frequently in an adverse environment for electronic equipment (such as salt water), data safety and integrity is preserved while the risk of failed central control and storage equipment is reduce or eliminated. The system uses a high capacity Ethernet network to transmit data from the edge (aquaculture tanks) to the central control and archival system. A minimum of sensitive equipment needs to be deployed near the tank environment. Since the data transmission relies on the open RTSP protocol, the signal can be transmitted using standard, gigabit capacity Ethernet topology – a ubiquitously deployed means of digital communication. The system is highly scalable and allows for large numbers of cameras to be singularly or differentially controlled and data relayed to central storage units. SRIAS presents an extremely simple, flexible, scalable yet cost-effective solution to long term behavioural and quality control video acquisition.
SRIA'S Common System Components

The system is divided into three basic components edge, network- and central devices. Cameras are the only edge device category while central devices include at a minimum one storage and control unit. For smaller deployments, storage and control chassis can be collapsed into a single device. The network inter-connect consists of standard gigabit switching devices and data lines. In a small configuration, a single switch can be used. Standard category six Ethernet wiring is used to connect all devices, however fibre-optic based connections are equally feasible.

Edge Devices (Cameras)

Any RTSP, Ethernet (IP) camera is compatible, however the system has been tested using AXIS brand IP cameras and CISCO IP cameras. The best image quality and configuration options are available using the AXIS cameras. These cameras are available in fixed and variable lens varieties. Depending on the model, cameras is able to record in colour, monochrome, low light and infra red up to 45 frames per second (depending on lighting conditions). Camera types with resolutions up to 1080p (high definition) are supported. Cameras are available with separate power interconnect or “power over Ethernet” (PoE) configurations. Instant camera configuration protocols are supported for rapid mass-deployment of devices. Using the NTP protocol, all cameras can be “quasi-gen-locked” to the same time index. This can be critical for later statistical analysis when referencing behaviour between cameras and tanks. The time indexes are retained and visible superimposed in each video recording.

Central Devices (Control and Storage Units)

At a minimum, a single control and storage system is required which can be installed on a single server appliance. A typical appliance consists of a Supermicro brand rack-mount chassis with a minimum of eight hot-swappable, fully redundant data storage bays addressing four terabytes of data-space. It is generally recommended that a more expandable storage solution is used. A 24-bay version is highly recommended. These appliances operate on a Linux system which provides control software for configuration, camera/video stream timing and storage. Depending on storage availability, un-interrupted record times of several months are possible. Back-up power equipment is also highly recommended for long term recording.

Network Device

At a minimum, a single gigabit Ethernet switch is required. The number of available ports on the switch equals the number of cameras, the number of server appliances and two additional ports for attaching to another network and overhead if cascading to an additional switch for increased capacity. In a six tank deployment system, using a single storage and control appliance, a switch with a minimum of 8+1+2 =11 ports is required. Single switches up to 48 ports are available but 24-port switches are recommended. Beyond this capacity, cascading multiple switches is suggested. Si-

continued
Smart Tank at JBARB CONTINUED

multaneous recording with more than 10 cameras per storage unit is not recommended. Adding additional storage units is preferred in such a configuration.

Benefits:

- Feeding Behaviour,
- Feeding Efficiency,
- Activity by measuring and observing swimming, aggression, schooling, nearest-neighbour, erratic behaviour (disease, wounding), mating behaviour,
- Security-added security by having ability to monitor smart tanks (fish or header tanks) and its fish via computers.
- This technology will enhance our overall capability to deliver on projects that are on the cutting edge in terms of fish nutrition, environmental sustainability and fish welfare.

An automatic system for analysing fish behaviour has the potential to be both financially beneficial to fish farmers and a valuable scientific tool. Such a system would make it possible to perform continuous large-scale studies of fish behaviour. Fish respond to stress with changes in behavior. One example of this is that fish exposed to a sudden frightening stressor respond with flight reactions and various changes in swimming and schooling behaviour. Behavioural stress responses are often immediate and have therefore the potential to provide early warnings of deteriorating rearing conditions. A system capable of automatically detecting the start and latency of stress-related behaviour would be a good candidate for a non-invasive system for analysing stress level and welfare in farmed fish. Another potential application of an automatic system for analysing fish behaviour is to study learning abilities and conditioning. Learning plays a major role in the behaviour of fish and may be useful as a means of controlling stress.

The design and computer set-up was completed by both Marc Boli and Ken Langdon of CREATI Network of Memorial University. Also contributing were MUN’s Technical Services, Computer Purchasing Centre and Facilities Management staff.

For more information please contact: Danny Boyce, Facility and Business Manager, Dr. Joe Brown Aquatic Research Building, Ocean Sciences Centre, Memorial University of Newfoundland, St. John’s, NL, Canada, A1C 5S7, Telephone (709) 864-8691, via Email at dboyce@mun.ca.
In Memory of Nigel Allen

Nigel Allen, a long time friend of the Newfoundland Aquaculture Industry Association and the fisheries processing sector, passed away suddenly on January 13, 2012, in Dar es Salaam, Tanzania at the age of 57 years. Nigel first came to Canada in the summer of 1981 to work as a Quality Control Manager for the Fishery Products International Plant in South Dildo. Following this, Nigel worked as a Product Development Manager for P. Janes and Sons Ltd. in Hants Harbour.

After many years in the fish processing sector, Nigel moved to the west coast of Newfoundland (Pasadena) to work as an industrial liaison officer with the National Resource Council in Corner Brook.

In 1996, Nigel moved to St. John's to become the Director of the Marine Institute's Centre for Aquaculture and Seafood Development. Nigel collaborated extensively with industry, government and funding agencies on a provincial, national and international level. Nigel will be remembered as a colourful character at many of NAIA's annual general meetings.

Nigel was considered a 'citizen of the world' and embraced every opportunity to travel and experience life. He will be particularly remembered for his fondness of warm climates and sharing a story and a pint with friends. Nigel brought humour and experience to the many fisheries and aquaculture projects he worked on in this province as well as throughout Africa and Southeast Asia.

In 2009, Nigel was seconded from the Marine Institute to the Association of Canadian Community Colleges to complete a 3-year placement in Dar es Salaam, Tanzania on an government of Canada supported Education for Employment initiative. Nigel was scheduled to complete this placement in June, 2012 and had already started planning his retirement in Thailand scheduled for March 2013. Nigel will be sadly missed by his extensive list of friends and colleagues throughout the world. He leaves behind his wife Nid, children Stephanie, Tonya, Matthew and Mike, mother Helen, brother Roger and other special family members in the UK. ✴
Couturier on Culture

Adding Value to Aquaculture – the Innovation Agenda

Cyr Couturier is an aquaculture scientist & faculty member at the Marine Institute of Memorial University. He has 30+ years experience in aquaculture R & D in Canada and abroad. He is an active member of the Boards and Executive of various industry associations including NAIA and CAIA. The views expressed herein are his own. Contact: cyr@mi.mun.ca

In past columns I have written about the necessity for innovation in fish farming to remain competitive in a shrinking global marketplace. I have also discussed utilizing processing byproducts to gain the most value out of a product, in addition to the marketing of new product forms for consumers. All of these require innovation in processing technology, in seafood product development, and even in the way we think about farmed seafood (e.g., is it sustainable etc.) The innovation “agenda” was abundantly clear to me during my visit to the recent seafood show in China in November 2011, and I will briefly present some of the recent developments I think are interesting in these regards.

Processing Technology

It is becoming increasingly difficult to obtain and maintain a well-trained workforce in the processing side of seafood, and the farmed seafood business is no different. As such companies are trying to find ways of innovating to reduce the labour requirements in processing plants by automating some processes in the line. For example, individual portion packaging can now be done by robots, saving labour, but also increasing efficiency and quality control. Similarly, gutting, deheading, filleting, deboning, and portioning can now all be done by automation resulting in much more standard quality and efficient throughput...human beings are still needed to operate and maintain the machinery, but the nature of the labour is changing and becoming much more technical. HoG salmon plants in Norway for example may do 20,000 tonnes per year throughput with fewer than 20 people working in total.

On the packaging side of things, the trend continues towards biodegradable materials and reduction of packaging materials. With the advent of cold-chain control on land delivery of fresh product can be completed in reusable, dis-infectable plastic boxes held cool with chillers and no ice, resulting in reduced transportation costs, reduced waste materials, and reduced need for ice. All of this of course contributes to reducing carbon footprint which consumers are increasingly asking for, and which essentially reduce costs to the producer as well.

Product safety and traceability is achieved by using small radio frequency identification tags (RFID) easily scanned electronically through the value chain. Small disposable time-temperature logging tags ($1.25 apiece, see photo) to accompany shipments of perishable foods are being employed for tracing shipments of seafood without the need to use more expensive temperature loggers. DNA tracing of seafood is now quite common, and can be used not only for trace back but for discerning when illegal product is entering the value chain. Ice slurry is employed for fillets and live shellfish shipments more and more. One of the advantages is that it reduces product shrinkage, and increases yield to the farmer and processor alike.

New Product Forms

Fresh is still the premium form for our farmed products from mussels to oysters and salmon. We are ideally situated to service the North American markets and no one can compete on this front from outside our range without compromising product freshness and quality. This is part of the natural advantage of Canada in terms of seafood production, both farmed and wild. There should be no frozen production coming out of our provinces. However, consumers are demanding a variety of user friendly, easily prepared products, high in nutritional content and with good value. This has led to a variety of value-added innovations for our farmed seafood products, including fresh seasoned portions, ready-to-eat meals (farmed seafood and vegetables for example), fresh
product in drip-proof modified atmosphere packaging, and so on. All of these innovations are designed to create greater access to consumers and foodservice providers for our products, and the emphasis on these new types of products seems to be increasing steadily in farmed seafood. At the world’s largest seafood show in China, one can see virtually thousands of different forms of seafood being produced for the demanding and discerning seafood markets around the world (see photo of frozen mussel products from Canada there).

Certification and Ecolabelling

The most recent trend or “innovation” I would like to mention briefly, is the trend towards certification programs for seafood. In fact there are no less than 31 certification schemes out there for seafood, some accredited to a standard, and others not. The general purpose is to provide the end consumer with an independently verified “seal of approval” that the products are safe, sustainable, and meet a set of defined standards. The problem is each of the schemes differs in their content and scope and it is difficult to discern which is the best for which product and situation. On the other hand, these schemes can be used to meet the demands of market segments requiring such independent verification in addition to the government seal of approval on food safety and animal health. For example, Wal-Mart, Costco, Sobeys and Loblaws and other large retail chains have all announced their requirements for certified seafood suppliers, and so producers will need to consider all of these issues when developing their marketing plans. The question now is not whether to become certified to a standard, but to which standard or standards should processors and farmers aspire to be certified to. Currently most of our salmonid and shellfish farming operations in NL are or will soon become certified to internationally credible standards covering food safety, environmental sus-

In closing, innovation in the farmed seafood sector is the rule, rather than the exception. This was clearly evident at the China Seafood Show in the supply and service sectors. In the fish and shellfish farming sectors, those not innovating will find it increasingly difficult to maintain adequate and profitable ventures.

NOTE: This is a revised version of the column written 4 years ago (Feb. 2008). ※

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Keynote Speaker Profile: Molly Metcalf

Responsible Growth for Aquaculture

Molly Metcalf is the North American Business Development Manager for the Global Aquaculture Alliance. She manages relationships with seafood suppliers, buyers, retailers and foodservice outlets in the United States and Canada to share the benefits of the world’s leading certification program, Best Aquaculture Practices. Metcalf has been a seafood industry professional for the last 9 years, previously working for Slade Gorton & Co. in various buying and sales positions. Before that, she taught Spanish at the high school level. Metcalf is a graduate of the National Fisheries Institute Future Leaders program as well as a graduate of Bates College in Lewiston, Maine, USA, she has a degree in Spanish, which allows her to apply bilingual skills in the marketplace.

DELEGATE LUNCHEON

With Guest Speakers: Ian Roberts, Marine Harvest Canada & Alison Stoodley, Social Media Management

Thurs., Feb. 16, 2012 – Albatross Hotel, Gander, NL Salon ABC • Time: 12:30 – 2:00 p.m.

(Please confirm your attendance at the registration desk.)

All delegates are welcome to join us for a complimentary lunch of:

Chicken Parmesan with Tomato Basil Sauce and Melted Mozzarella over a Bed of Rice.

Keynote Speaker Profile: Ian Roberts

Public Relations Strategies and Challenges of Salmon Farmers in British Columbia

Ian Roberts is a graduate of Sir Sandford Fleming College’s aquaculture technician program. Working for Marine Harvest Canada (MHC) for 19 years, Ian has spent many of those years working as Production Manager with the Kitasoo/Xai’xais First Nation in Klemtu, BC, where Nation and MHC produce and process over 5000 tonnes of Atlantic salmon annually. In 2007, Ian made the daring move to public relations and is now MHC’s Communications Manager. He lives in Campbell River, BC with his partner Lori and their two fluffy black labs Sage and Farley.
Keynote Speaker Profile: Alison Stoodley

Owner/Operator, Social Media Management

Social Media Management (SMM) is a company that emerged from an email marketing business Alison had for six years. “Social media was a natural segue, it was what my clients wanted so I took it on and taught myself how to market using social media tools”. Today, Alison has trained close to 300 small business people in St. John’s and surrounding area. She creates industry specific, hands-on workshops that empower the participant to use social media and email marketing tools immediately.

An English major at Memorial University she coupled that distinction with an entrepreneurial history and now helps her clients embark on the journey away from traditional forms of marketing and towards emerging digital platforms. “Negotiation, Twitter, LinkedIn and blogging are proving themselves to be invaluable marketing tools for all sized businesses as we move rapidly towards a more consumer-driven marketing environment.”

SMM helps companies increase their exposure while reducing their marketing costs. They provide complete social media and email marketing campaign management, custom social media strategies, company policies, in-house training, one-on-one training and more.

Alison speaks regularly on the subjects of Using Social Media Tools for Business, Marketing with Social Media, Building a Targeted Audience Base with Social Media and Overcoming Barriers to Embracing Technology for Business. More recently her focus has been on creating industry specific systems that allow organizations (non-profits, small business, government departments, etc.) to make the most of social media and email marketing within their limited allotment of time and resources.

To contact Alison Stoodley, Ph: 709-740-4910 - Via Email: alison@socialmediamanagement.ca, Twitter: @alonstooldley, LinkedIn: Alison Stooldley http://facebook.com/AlisonStooldleyEnterprises, and my blog: http://socialmedianewfoundland.wordpress.com

EXHIBITOR PROFILES

Department of Fisheries and Aquaculture
Aquaculture Branch
56 Hardy Avenue, Grand Falls-Windsor, NL A2A 2K2
Tel: 709-292-4100 • Fax: 709-292-4113
Email: aquaculture@gov.nl.ca

Exhibitors: Rhonda Brennan and Steve Moyse

The Department of Fisheries and Agriculture, Government of Newfoundland and Labrador, offers a variety of services to the province’s aquaculture operators. The Aquaculture Branch is responsible for the development of an environmentally and economically sustainable aquaculture industry. In order to achieve this mandate, the Branch:
- Acts as the primary point of contact for the provinces
- One-Stop Shopping approach to aquaculture licensing;
- Works closely with industry to establish new operations and expand existing sites;
- Administers funding programs aimed at supporting sustainable development;
- Drop by our booth to speak to a staff member about aquaculture opportunities in Newfoundland and Labrador.
- Promotes industry growth through infrastructure and capacity building;
- Conducts environmental and biological monitoring for the finfish and shellfish sectors;
- Provides a comprehensive aquatic animal health program for the provincial aquaculture industry;

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Exhibitor: Ray Collins

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Fisheries and Marine Institute

Memorial University of Newfoundland
155 Ridge Road, P.O. Box 4920, St. John’s, NL, A1C 5S3
Tel: 709-535-6076 • Fax: 709-535-6076
Email: Alicia.Anderon@mi.mun.ca • www.mi.mun.ca

Exhibitors: Alicia Anderson and Tracy Granger

The Marine Institute (MI) is Canada’s most comprehensive education, training,
Fisheries and Marine Institute, Booth #3

CONTINUED

applied research and technology transfer resource for the ocean industries.

For the aquaculture industry, the Marine Institute’s offers a range of education programs (www.mi.mun.ca/programs) from on-site short technical courses, to the Technical Certificate in Aquaculture, the Advanced Diploma in Sustainable Aquaculture) and the new Master of Technology (Aquaculture).

Our Centre for Aquaculture and Seafood Development (www.mi.mun.ca/casd) also provides a complete range of services for seafood processing and aquaculture industries in the areas of applied research, product and process development, technology transfer, advisory services and education and training.

The Marine Institute’s new Community Based Education Delivery Unit (CBED) (www.mi.mun.ca/cbed) offers industrial response training in communities across Newfoundland and Labrador and in other areas of Canada. The unit’s main office is located in St. John’s with regional offices located in Lewisporte and Iqaluit, Nunavut. CBED supports key training priorities by organizing, facilitating, and leading training in aquaculture, environmental, fish harvesting and food processing sectors.

Fisheries and Oceans Canada Booth #4

Environmental Science Division
89 East White Hills Road, St. John’s, NL, A1C 5X1
Tel: 709-772-5446 Fax: 709-772-5315
Email: AIS-EAENL@efo-mpo.gc.ca

Exhibitors: Terri Wells and Kyle Matheson

Environmental Science at DFO provides the scientific foundation for sound decision-making on the sustainable use and the conservation/protection of fish, fish habitat and aquatic ecosystems. Such decisions are based on an understanding of how marine and freshwater ecosystems function and how they are affected by human activities. Efforts are directed towards understanding the capacity of fish habitats to sustain fish production and the effects of human activities on fish, human use of fish, fish habitat and aquatic ecosystems. We provide scientific support required for decision-making in DFO and the federal government by: Acquiring scientific knowledge through targeted research and by gathering, integrating and interpreting scientific information from internal and external sources; and providing peer-reviewed scientific advice, and science-based products and services such as publications, data and information, software, and other tools and services.

Aquatic Invasive Species Program: Aquatic invasive species (AIS) have already been responsible for significant devastation of some native fish species and fisheries in Canada. Annually, the problem is responsible for billions of dollars in lost revenue and control measures. Canada, with its huge freshwater resource and extensive coastline, is especially vulnerable to this threat. The Environmental Science knowledge base and scientific resources play an invaluable advisory role to the government’s goal to address the problem.

Department of Advanced Education and Skills Booth #5

Government of Newfoundland & Labrador
Toll Free 1-888-632-4555 Web: www.hrie.gov.nl.ca/hrie/

Exhibitors: Donna Saunders and Dave Dillon

CBDC Burin Peninsula - Marystown, Burin Peninsula Booth #9
Keith Osborne keith.osborne@cbdc.ca

CBDC Central - Grand Falls-Windsor, Central NL
Dexter Fewer: dexter.fewer@cbdc.ca

CBDC South Coast - St. Alban’s (Coast of Bays Region)
South Coast, NL - Jamie LeFou: jamie.lefou@cbdc.ca

Tel: 1-888-303-2232 (CBDC) Connects You To Your Nearest CBDC.

We are the Community Business Development Corporations, CBDCs. We are a network of independent, not-for-profit organizations that work in conjunction with all levels of government and the private sector to meet the needs of small business. In Newfoundland & Labrador, there are 15 CBDCs, each dedicated to small business development and job creation. There are 41 CBDCs in Atlantic Canada and 269 like organizations across Canada collectively known as the Community Futures Network of Canada. The CBDCs provides business loans and business services to entrepreneurs, businesses and social enterprises. CBDCs in NL have invested over $289 million into small and medium sized businesses through CBDC business loans.

Innovative Pressure Systems Inc. Booth #11

Authorized Agent for MPI - Multi Pump Innovation
Hughes Pumps - UK
731 Salisbury Road, Courtenay, BC, Canada, V9N 9M2
Tel/Cel: 250-218-3088 · Office/Fax: 250-338-8387
Email: steve@innovativepressure.com - www.mpi-norway.com

Exhibitors: Stephen Robert and Terry Drost
Multi Pump Innovation (MPI) of Norway is a leading supplier of professional net cleaning equipment to fish farmers. With over 16 cleaning systems ranging from 3 head manual net washers to 17 head remotely operated cleaning systems, MPI is a world leader in net cleaning technology. In 2009, MPI partnered with Innovative Pressure Systems (IPS) of Courtenay, British Columbia to supply net cleaning systems for North American Fish Farmers. IPS has been a mechanical contractor to both agriculture and aquaculture industries in Canada specializing in engines, pumps and hydraulics. Together, MPI and IPS provide highly specialized net washing equipment including the diesel power packs, highly specialized Hugh’s water pumps, MPI Terminator net washing heads.

Fisheries and Oceans Canada Booth #12
Aquaculture Research Section
P.O. Box 5667, St. John’s, NL A1C 5X1
Tel: 709-772-4514 · Fax: 709-772-5315
Email: sharon.kenny@dfc-mpo.gc.ca

Exhibitor: Sharon Kenny
The Aquaculture, Biotechnology and Aquatic Animal Health Section is within the Aquatic Resources Division of the Science Branch of Fisheries and Oceans Canada, Newfoundland and Labrador Region. The section has a team of scientists, biologists, technicians and graduate students who conduct research on aquaculture and biotechnology related issues. The section is stationed at the Northwest Atlantic Fisheries Centre located in St. John’s. Research conducted by the section is directed toward providing information and advice to the aquaculture industry in support of industry sustainability and developmental requirements as well as advice to Government policy makers as per DFO’s Aquaculture Policy Framework. Projects are conducted in close collaboration with major universities such as the Fisheries and Marine Institute (MI) and Memorial University (MUN), the National Research Council (NRC-IRAP), the Newfoundland Aquaculture Industry Association (NAIA), the Provincial Department of Fisheries and Aquaculture (DFA) as well as the members of the aquaculture industry throughout the Province.

Grand Bank Development Corporation (GBDC) Booth #13
P.O. Box 2000, Grand Bank, NL A0E 1W0
Tel: 709-832-3235 · Fax: 709-832-3225
Email: drichardson@gbdc.nf.ca

Exhibitors: Doug Richardson and Junior Heridge
We are the Grand Bank Development Corporation (GBDC). We work with partners in the private sector and all levels of government to improve and diversify the economy of Grand Bank, Newfoundland & Labrador, Canada. Grand Bank is a prospering and progressive community located at the tip of the Burin Peninsula. Grand Bank has a history steeped in commerce and trade, dating back to the 1800s. The community was home to a fleet of banking and foreign going ships, which earned it the moniker of “The Bank Fishing Capital” of Newfoundland.

The community is also strategically located in close proximity to both the North American and European (via Saint Pierre et Miquelon) markets.

Department of Innovation, Business and Rural Development Booth #14
P.O. Box 8700, St. John’s, NL A1B 4J6
Tel: 709-729-7000 · Fax: 709-729-0654
Email: pfarwell@gov.nl.ca or ghoskins@gov.nl.ca

Exhibitors: Percy Farwell and Gail Hoskins
The Department of Innovation, Business and Rural Development, Government of Newfoundland and Labrador, is the lead agency for stimulating economic and business development throughout the province. Working in cooperation with individuals, business, industry, academia, development groups, and all levels of government, the department continually strives to increase productivity and economic prosperity, and attract investment to the province. This collaborative approach helps shape the programs and initiatives that support the growth and diversification of strategic sectors, ensuring the province remains competitive provincially, nationally, and globally. While still focusing on traditional industries, there are tremendous economic opportunities in sectors such as ocean technology, aerospace and defence, aquaculture, agrifoods, environmental industries, information and communications technology, life

continued

Support Base for Your Success Booth #11

Toll Free 1.877.832.3235
drichardson@gbdc.nf.ca

www.gbdc.ca

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Department of IBRD, Booth #14
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To find out more about the Department of Innovation, Business and Rural Development and its programs visit www.ibrd.gov.nl.ca

EMCO – Waterworks
Booth #15
18 Bruce Street, Mount Pearl, NL, A1N 4T4
Tel: 709-747-2626 • Fax: 709-747-2623
Email: cbrown@emco-ltd.com

Exhibitors: Clarence Brown and Kirk Stokes

EMCO Corporation is one of Canada's largest integrated distributors of products for the construction industry. EMCO offers products in the distinct categories of plumbing and heating, waterworks, industrial, oilfield supply and HVAC (heating, ventilation and air conditioning). EMCO strives to satisfy the needs of its customers with a focused product assortment, transported and sold through an extensive network of branches, distribution warehouses and showrooms across Canada.

Institute for Biodiversity, Ecosystem Science & Sustainability (IBES)
Booth #16
Sustainable Development and Strategic Science Branch
NL Department of Environment and Conservation
C/O SWGC University Drive, Corner Brook, NL, A2H 6P9
Tel: 709-637-6200 ext. 7006
Email: sabrinaeisworth@gov.nl.ca

Exhibitors: Sabrina Eisworth and Robert Otto

The Institute for Biodiversity, Ecosystem Science and Sustainability (IBES) was created to address the need for a more science-based culture in Newfoundland & Labrador, and to provide support for an enhanced knowledge-based decision making process within provincial government programs. Established in 2002-03, IBES represents a formal partnership between the Government of Newfoundland and Labrador and Memorial University of Newfoundland, directed through the Sustainable Development and Strategic Science Branch of the Department of Environment and Conservation (DOEC). This relationship strives to ensure that questions and issues of importance to the Province be-

Hoskin Scientific
Booth #17
4210 Morris Drive, Burlington, ON L7L 5G6
Tel: 905-333-5510 • Fax: 905-333-4976
Email: jgouthro@hoskin.ca • www.hoskin.ca

Exhibitor: Jennie Gouthro

Ibid presents a unique opportunity for government departments and agencies to collaborate with the academic community on questions of mutual interest and importance. IBES coordinates the establishment of the collaborative partnership that drives the science effort. These partnerships can also extend to industry and non-governmental organizations. This distinctive role is enhanced by IBES' ability to offer financial support for both graduate student stipends and field efforts, and access to additional resources within universities and the broader research community. Such dedicated expertise, ability, and flexibility define a unique and exciting public-academic partnership.

Exhibitor Profiles continued on page 21

The Town of Grand Falls-Windsor
Service Centre for Central Newfoundland
Supporting the Aquaculture Sector

Newfoundland Labrador
Innovation, Business and Rural Development

Find out how we can help you explore new markets and pursue new business ideas. Visit us at booth #14.

1.800.563.2299 • www.gov.nl.ca/ibrd

Cold Harvest Program – Continued in Insert

Newfoundland Aquaculture Industry Association
Hoskin Scientific Limited has been supplying testing and monitoring instruments since 1946. Although our range is broad, we focus on three main markets including:

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Town of Grand Falls-Windsor, NL
BOOTH #18
P.O. Box 439, 5 High St., Grand Falls-Windsor, NL, A2A 2J8
Tel: 709-489-0483 • Fax: 709-489-0465
Email: ghennessey@grandfalls-windsor.com - www.grandfalls-windsor.com

Exhibitors: Gary Hennessy and Jean Buffett-Mercer

The Town of Grand Falls-Windsor is the largest community in Central Newfoundland. Because it is a major service centre, it has developed a strong relationship with the Aquaculture sector on the South Coast of our island. Local businesses in Grand Falls-Windsor are carrying on a healthy exchange of goods and services with the sector that is beneficial to both sides. These businesses include transportation, hydraulics, information technology, electronics and fabrication. Drop by our booth to explore the opportunities that exist for your company with the Town of Grand Falls-Windsor.

Salsnes Filter AS
102 Chain Lake Drive, Unit 209, Halifax, NS B3S 1A7
Tel/Cell: 902-240-5231
Email: dennis.pardy@salsnes-filter.com • www.salsnes-filter.no

Exhibitors: Dennis Pardy and Finn Elsassen

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Department of Environment and Conservation
Institute for Biodiversity, Ecosystem Science & Sustainability

Newfoundland Labrador
Aquaculturist of the Year Award Recipients

The Aquaculturist of the Year award honours individuals for outstanding contribution to NAIA and/or the development of the aquaculture sector in Newfoundland and Labrador.

Award Eligibility
Any former or current individual NAIA member engaged in aquaculture-related activities in Newfoundland and Labrador is eligible to be nominated to receive the Aquaculturist of the Year Award.

Email roberta@naia.ca for more information or visit www.naia.ca

2011
Clyde Collier
St. Alban’s, NL
Clyde has worked in the salmonid sector in the Coast of Bays region for more than 25 years. He has worked at all levels of the industry including participation in production and policy at both federal and provincial levels.

2010
Geoff Ball
Betwood, NL
As one of the first commercial-scale mussel farmers in NL, Geoff began a small mussel farming operation to earn extra income along with his sawmill business, B & B Forest Products Ltd.

2009
Boyd Pack
Milltown, NL
Boyd has been involved with the industry for well over 20 years, with his first introduction to aquaculture in the early 1980s in the Coast of Bays Region.

2008
Cyr Couturier
St. John’s, NL
As lecturer and researcher at the Marine Institute of Memorial University of Newfoundland and Labrador, Cyr is well known both locally and abroad for his involvement in aquaculture development.

2007
Jennifer & Doug Cainos
Pool’s Cove, NL
Jennifer and Doug originally started their own company Shell Fish Farms in Pool’s Cove in 1984. With over 20 years in the business, they now manage and work on site with Northern Harvest Sea Farms.

2006
Juan Roberts
Tirtoe, NL
Juan has been farming mussels for over 20 years in Green Bay, NL. His passion and dedication to the business are not easily surpassed.

2005
Job Hafnyard
La Scie, NL
After 30 years of teaching and the role of principal, Job retired and started a variety of businesses in his home town which included several mussel farms in the Green Bay and Connaigre Bay areas.

2004
Pat Dabinett
St. John’s, NL
Pat has more than 20 years of experience in Research, Development, and Commercialization of the shellfish industry in Newfoundland and Labrador.

2003
Jonathan Moir
St. John’s, NL
In the beginning of his career in the industry, Moir helped develop a fledgling cod-aquaculture culture grow-out program using commercial fishermen, aided by the Sea Forest Plantation company in St. John’s.

Good Luck to this year’s Nominees!
Hoskin's Complete Solution for Aquaculture Needs

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- **Turner Designs** - to monitor all your fluorometry needs for: In Vivo Chlorophyll a, Blue Green Algae (marine & freshwater), Rhodamine WT Dye, Fluorescein Dye, Turbidity, CDOM, Optical Brighteners (Wastewater Treatment), Crude Oil, Refined Fuels
- **GOES** - real-time satellite data, available for all above instrumentation

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Proper quality control is essential when transporting fresh fish or seafood from processor to market. To maintain your product quality use Styropack (expanded polystyrene shipping containers) manufactured by **Newfoundland Styro**.

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**Newfoundland Styro** also carries Styropack accessories including polyliners, gel packs, corrugated outer boxes and thirsty pads.
The Marine Institute will focus on community-based training and education with the addition of a new department in Community Based Education Delivery.

The Marine Institute’s Community Based Education Delivery (CBED) unit within the School of Fisheries (SOF) has been established to meet the industry response requirements of the various sectors the MI serves including: Aquaculture, Seafood Processing, Harvesting and Environmental industries. The unit specializes in bringing training and education to rural communities throughout Newfoundland and Labrador and recently, towns and villages in Nunavut. The new department presently has satellite offices in Lewisporte, Iqaluit, Nunavut and will look to add to this in the near future.

One of the major components of CBED’s mandate is training for the Aquaculture sector. This training has commenced as the Marine Institute works in partnership with the Newfoundland Aquaculture Industry Association (NAIA) to deliver training for the salmonid and mussel sectors. With funding assistance provided by IBRD, DFA and ACOA, the Marine Institute has worked closely with NAIA and industry to develop a Technical Certificate in Aquaculture (TCA). This certificate has courses designed for workers in both sectors with courses that are specific to each industry.

Courses developed for the program include:
- Salmonid Biology and Husbandry
- Salmonid Feeds and Feeding
- Salmonid Health and Biosecurity
- Basic Farm Safety
- Mussel Farm Stocking Capacity
- Mussel Harvesting, Handling and Processing
- Mussel Marketing and Management
- Mussel Site Maintenance
- Marine Hydraulics
- Oil Spill Response Awareness
- Outboard Motor Maintenance
- Small Diesel Repair and Maintenance
- Marine Basic First Aid
- Small Vessel Operator Proficiency
- Marine Emergency Duties A3
- Radio Operator’s Certificate

Each of the courses is designed with industry’s needs in mind as they are less than five days duration and can be offered in any of the communities that the industry may require. (Pending sufficient enrollment) Many of the courses are also externally certified with students able to receive certification from various government agencies such as Transport Canada as well as Industry Canada.

According to the Labour Market Outlook 2020...

Newfoundland and Labrador has the largest share of workers employed in full-time jobs in the country. On average, workers in this province also tend to work more hours per week than workers elsewhere in Canada.

In the first year of the program, 2010/11 there were 12 courses offered to more than 200 students in various communities throughout the province. Courses included: Salmonid Biology and Husbandry, Salmonid Feeds and Feeding, Salmonid Health and Biosecurity, Radio Operator Certification, Marine Basic First Aid and Small Vessel Operators Proficiency (SVOP).

During this present season, 2011/12 the following workshops have been offered in Pools Cove, Hermitage, Hr. Breton, St. Alban’s and Milltown with 114 course participants: Salmonid Feeds and Feeding, Salmonid Biology and Husbandry, Oil Spill Response Awareness, Outboard Motor Maintenance, Marine Hydraulics, Marine Basic First Aid, Small Vessel Operators Proficiency (SVOP) and Marine Emergency Duties A3. Based on the needs assessment done with Marine Institute and NAIA in 2011 a number of courses are scheduled for delivery during January – March, 2012.

“This training has been well received and bringing training to our clients is very important to us, since not all can come into the Marine Institute’s main campus in St. John’s,” said Craig Parsons, Director of Community Based Education. “Some of them would like to train in their communities, so we’re bringing training to the client, whether that’s in a company boardroom or in a local facility in their town. Our clientele likes this approach; it’s effective for them in a number of ways, including cost reduction.” The addition of this new department will help take community-based training to another level.

The Centre has also taken on a ‘virtual’ component, recognizing the importance of reaching out to students and clients who may want to take a training course from their home or workplace. The SOF has developed and delivered online training in both the harvesting and processing sectors and have proposals submitted for the development on an online program in Aquaculture farm safety.

For further information on Aquaculture training in your community you can contact NAIA or the Marine Institute’s Community Based Education Delivery department at the following coordinates: Community Based Education Delivery, Fisheries and Marine Institute of Memorial University of Newfoundland, P.O. Box 4920, St. John’s, NL, Canada, AI5R3, Telephone: 1-709-778-0623, Fax: 1-709-778-0535, Email: cbed@mi.mun.ca, Website: www.mi.mun.ca/cbed. ✪

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Feeding your passion for fish
Aquaculture Companies Show Major Support for School Initiative

By: Jennifer Woodland, NL Environmental Compliance and Regulatory Affairs Manager, Cooke Aquaculture

L to R: Doreen Vallis - School Council, Damon Woodland - Cold Ocean Salmon, Lauren Carter - Student Council, Heather Blackmore - Student Council, Jennifer Caines – Northern Harvest Sea Farms and Terry Baker – Principal of St. Joseph’s Elementary

St. Joseph’s Elementary school in Harbour Breton takes the health of their students very seriously. Their healthy eating initiative was a major success and plans were then developed to design a “Green and Fit” area outside for the students Grades K - 6. The plans include a walking trail, a field for sports and activities, an outdoor classroom and an area for plants. This space will provide a hands-on outdoor learning experience and an area for physical fitness. A project of this nature requires a lot of money, and a plan to fundraise $10,000/year for 3 years was put into effect.

A representative of the school council brought the project plans to the two local aquaculture companies. Cold Ocean Salmon Inc, the NL division of Cooke Aquaculture, and Northern Harvest Sea Farms in hopes of some type of donation. Neither company hesitated. That same day both had agreed to donate $5000 each for a total of $10,000. The first year goal was achieved in one day, giving an enormous boost to the fundraising efforts.

Terry Baker, St. Joseph’s Elementary School’s principal said “I was thrilled with the news of the aquaculture companies’ donation. The students and staff appreciate their generosity towards this wonderful project”.

Jennifer Caines, Project Manager for Northern Harvest Sea Farms said, “This project is a perfect fit for the aquaculture industry’s support. We believe in healthy children and a healthy environment - both are important to our future and to the future of our communities.”

Jennifer Woodland, Environmental Compliance and Regulatory Affairs Manager with Cold Ocean Salmon and parent representative on the school’s council, stated, “I am so proud of the school and the companies for supporting the health of our youth with a unique initiative like this Green and Fit area. Aquaculture provides healthy food for families and donations like this falls in line with our commitment to healthy living and giving back to the communities in which we operate”.

If you are interested in contributing to these fundraising efforts, please contact Mr. Terry Baker at St. Joseph’s Elementary via email at terrybaker@ncsd.ca.

SNOWMOBILING / ICE SAFETY TIPS PROVIDED BY THE LIFESAVING SOCIETY

A snowmobile flotation suit is designed to keep a person afloat and helps protect against the effects of Hypothermia. It has equal floatation all around and is designed to keep a person’s head out of the water. Regular snowmobile suits are fine if you do not travel on ice covered bodies of water. However if you go through ice, regular suits can become water logged and add up to 70 pounds of extra weight. Statistics show that out of all of the snowmobile related drownings in Newfoundland and Labrador the majority of victims were not wearing snowmobile flotation suits.
Cooking with Chef Steve Watson - Central Dairies
Lemon Bread French Toast with Smoked Salmon & Maple Syrup

by Chef Steve Watson

Ingredients:
- 10 Thin Slices of Smoked Salmon
- 4 Eggs
- 1 Teaspoon of Sugar (optional)
- Dash of Salt
- 1 Cup of Milk
- 10 - 12 Slices of Lemon Bread
- Spy Glass Butter
- Canadian Maple Syrup

Preparation:
Break the eggs into a wide, shallow bowl or pie plate and beat lightly with a fork. Stir in sugar, salt, and milk. Over medium-low heat, heat griddle or skillet coated with a thin layer of Spy Glass Butter. Place the bread slices, one at a time, into the bowl or plate, letting slices soak up egg mixture for a few seconds, then carefully turn to coat the other side. Soak/coat only as many slices as you will be cooking at one time. Transfer bread slices to griddle or skillet, heating slowly until bottom is golden brown. Turn and brown the other side. Serve Lemon Bread French toast hot Topped with Rosettes of Smoked Salmon and drizzled with Canadian Maple Syrup. Recipe for French toast serves 4. For the recipe for homemade Lemon Bread, please email us or visit our website at www.naia.ca

Chef Steve Watson first came to Canada from London, England in 1977 to study North American cooking. Before arriving in Canada the native of Scunthorpe, England after serving as an apprentice in May Fair London then working in Scotland, Belgium, France and Germany. His first culinary foray in Canada began at the Digby Pines Hotel in Nova Scotia where he received landed immigrant status. From there, Chef Watson continued to work and teach his passion. He taught culinary arts at the Cambrian college in Sudbury, Ontario before joining the Canadian Pacific Hotels chain in 1988. His association with Canadian Pacific Hotels began at the Algonquin Hotel at St Andrews by the sea in New Brunswick. However, by years-end Steve had moved again. In what was potentially his last move Steve accepted a position with the Hotel Newfoundland in St. John’s. Twenty years has passed since Steve first came to Newfoundland. He is currently a sales representative and executive chef for Central Dairies. He is a devoted family man, a dedicated employee, and a prominent member of the local community. He epitomizes the definition of a volunteer, and spends countless hours giving back to the people of a province he now calls home.
A Closer Look at Student Research

This section of the Cold Harvester is dedicated to featuring some of the aquaculture research being conducted by students in the province. We hope to highlight these projects in each edition of the magazine and showcase our students.

The Use of ω3 Rich Camelina Oil to Replace Fish Oil in Diets for Atlantic Cod and Rainbow Trout

By: Stephanie Hixon, Ph.D. Biology Candidate, Ocean Sciences Centre, Memorial University of Newfoundland
Supervisor: Dr. Chris C. Parrish

Cod and salmonid aquaculture is highly dependent on fish oil in feeds which is costly, and undesirable. More responsible alternatives to fish oil must be investigated. The false flax, camelina (Camelina sativa) holds significant potential for aquaculture. Camelina is a member of the Brassicaceae family which includes mustards, rapes, and canola. It is an ancient oilseed crop, but has recently been reintroduced to Canadian agriculture. The high lipid content in camelina (30-40%) makes it an attractive candidate for aquaculture feed. Its most unique feature is the high content of polyunsaturated fatty acids (PUFA), particularly alpha-linolenic acid (ALA), a shorter-chain ω3 fatty acid that constitutes up to 40% of the fatty acids. This is similar to the long-chain ω3 fatty acids that are essential for growth and development in fish and must be included in diets.

The purpose of the project was to determine the overall effectiveness of camelina oil as a potential lipid source to replace fish oil in diets for biologically diverse fish species. The specific goal was to conduct feeding trials using camelina oil diets to determine growth, lipid and fatty acid metabolism of liver and muscle tissue in Atlantic cod and rainbow trout.

Three growth trials have been conducted: one study with larger sized Atlantic cod (Gadus morhua), one study with small sized Atlantic cod, and one rainbow trout study. The first Atlantic cod study (130 g) tested a control fish oil based diet compared to two camelina oil diets which replaced 40% and 80% of fish oil in the diet. There was no significant difference in weight gain, growth rate, condition factor, and hepatosomatic index of cod fed a fish oil diet compared to the two camelina oil diets after 6 weeks of growth. Fatty acid composition of muscle tissue showed no significant difference in total ω3 and PUFA content between cod fed fish oil and camelina oil. The proportions of the long-chain ω3 fatty acids docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) was the same among the dietary groups; however, cod fed 80% camelina oil showed significantly higher amounts of ALA and linoleic acid (LA) in their muscle tissue compared to cod fed the fish oil diet. Lipid class composition revealed higher amounts of membrane phospholipid in livers of cod fed 80% camelina compared to those fed the fish oil diet; however, they showed similar amounts of storage triacylglycerol. The second Atlantic cod study gave similar results in terms of growth. The rainbow trout trial also tested a fish oil control diet and two camelina oil diets that replaced 50% and 100% of fish oil. Over the 12 week growth trial, there were no significant differences in weight gain, growth rate, condition factor and visceral-somatic index between dietary groups.

The results obtained so far suggest cod and rainbow trout are tolerant of partial and full substitutions of fish oil with camelina oil and grow as well as fish fed a typical fish oil diet. However, there are many unanswered questions and there is much work to be done to understand how the fish are metabolising this new lipid source to grow efficiently. Analyses are currently in progress to assess lipid and fatty acid metabolism. *

continued
Extensive populations of the colonial ascidian tunicate, *Botryllus schlosseri*, were first reported along the south coast of insular Newfoundland in 2006.

Economically, this was of immediate concern to industry, management, and policymakers because ascidian tunicates have been a costly nuisance for bivalve aquaculture in Atlantic Canada. Ecologically, this represents an expansion of the global range of the temperate-adapted *B. schlosseri* into subarctic waters, especially since reproduction may be limited by seasonal water temperature.

With these problems in mind, the purpose of this study was to determine the seasonal pattern of larval settlement and colonial abundance in Arnold’s Cove. A total of 18 contiguous, short-term deployments of artificial substrates in 2010 and 2011 assayed settlement rates among 3 sites (within the harbour), depths (1.0, 2.5, and 4.0 m from the water surface), and substrate types (aluminum, PVC, and wood).

Concurrently, density of colonies and percent cover were determined from the analysis of high-definition video surveys of a subtidal transect of wharf pilings (length = ca. 50 m), made by SCUBA divers. Overall, the seasonal window for larval settlement was from early August to mid-October.

Maximum settlement rates were 29.3 and 43.5 m⁻²d⁻¹ in September of 2010 and 2011, respectively, which were coincident with maximum seasonal water temperatures. Settlement was greater near the water surface than at greater depths, and on PVC in preference to aluminum and wood substrates. Mean colonial cover ranged from 0.6% in May to 2.8% in October. The continued use of PVC plate to track settlement of non-indigenous ascidian tunicates within the Atlantic Zone Monitoring Program is recommended.

Future management of *B. schlosseri* can target mitigation efforts before the estimated annual onset of sexual reproduction in July, and near the surface layer (e.g., the upper 3 m of the water column).
A good understanding of the parameters affecting egg quality and larval survival is of importance for the development of the aquaculture of any new species. To promote cod aquaculture development, an ACRDP funded project was set-up by industry and DFO to contribute to the improvement of cod broodstock nutrition and husbandry in order to ensure production of high quality eggs and sustained health of broodstock fish. As part of this project, this study was aimed at determining the effects of broodstock diets on egg lipid composition and larval growth rates. The ACRDP project was initiated in 2008, at the Joe Brown Aquatic Research Building (Memorial University of Newfoundland), by testing three diets on farmed broodstock hatched in 2006, one group was fed a commercial on-growing pellet, a second group a commercial pellet formulated for marine finish broodstock (which is not currently available in Canada), and a third group was fed a diet of baitfish supplemented with vitamins. Results to date suggest that the gold standard remains the baitfish diet but that the broodstock experimental diet may contribute to a better reproductive performance than the regular on-growing diet. Egg samples were taken from the female broodstock during the third spawning season, November 12th, 2009 to December 10th, 2009, and stored for lipid analyses. The lipid extracts were separated into 9 lipid classes: hydrocarbons, steryl esters, ketones, triacylglycerols, alcohols, free fatty acids, sterols, acetone mobile polar lipids, as well as phospholipids and lipid concentrations were measured using an Iatroscan Mark V TLC/FID.

Results appear to yield smaller amounts of lipids than what has been described by other authors on eggs from wild experienced cod spawners. This may be due to the fact that the broodstock used in this project were young spawners and of farmed origin. When comparing lipid concentrations between broodstock fed the different diets, the results show that the eggs obtained from females fed the three diets had no differences in lipid classes other than in fatty alcohols. The lipid classes of the feeds were also analyzed and significant differences between diets were found in 4 of the lipid classes. Analyses examining fatty acid composition in feed and eggs are being completed to shed more light on the effect of the lipid differences observed in the diets on egg lipid composition. Furthermore, growth rates of the larval fish over a period of 56 days post hatch are being analyzed. Preliminary results show differences between larvae fed the three different diets, but also between families. Statistical analyses are being completed on differences in growth rates in order to conclude on the role of genetic factors versus parental nutrition on larval performance. While broodstock nutrition does play an important role in egg quality and early larval development, we have yet to find any clear evidence that one of the studied diets produces more robust larvae. It is important to determine what biochemical parameters are essential in egg production and early larval rearing, as aquaculture research continues to aim at improving hatch rates and growth rates for cultured fish.

Funding is provided by the Aquaculture Collaborative Research Development Program (ACRDP).

Project Industry Partner: Newfoundland Cod Broodstock Company 🌟
$16.3 Million Dollar Investment for Ocean Research and Infrastructure at the Ocean Sciences Centre (OSC)

By: Danny Boyce, Facility and Business Manager, Dr. Joe Brown Aquatic Research Building, Ocean Sciences Centre, Memorial University of Newfoundland

The Ocean Sciences Centre (OSC) has received major financial investments to support infrastructure for cold-water and deep-sea research. The Research & Development Corporation of Newfoundland and Labrador announced a $8.3 million Landmark Infrastructure Investment in the fall of 2010. Equally, important was the Federal Government’s $6.5 million contribution through its Leading Edge Fund of the Canada Foundation for Innovation (CFI). The CFI is an independent corporation created by the Government of Canada to fund research infrastructure. The CFI’s mandate is to strengthen the capacity of Canadian universities, colleges, research hospitals and not-for-profit research institutions to carry out world-class research and technology development that benefits Canadians. Others contributing funding to the project include the NL Department of Education ($1.0 million), the Canadian Hydrographic Institute and Memorial University of Newfoundland.

These funds are being used to construct new state-of-the-art facilities for the study of cold-water and deep-sea organisms and ecosystems, including a new stable cold water intake for the OSC, a bio-containment facility for studies on fish/shellfish diseases and aquatic invasive species, a deep-sea research facility with chambers that can simulate pressures in the deep sea, the improvement and expansion of tank facilities and water treatment equipment for aquaculture research, and the acquisition of state-of-the art equipment in support of research at the OSC (including a scanning electron microscope, confocal and fluorescent microscopes, a flow cytometer, laminar flow hoods for disease research, and a full histological suite).

“This major investment is truly exciting for the OSC, allowing for the creation of new state-of-the-art facilities for the study of cold-water and deep-sea organisms and ecosystems,” “It opens new horizons for research and innovation, allowing significant advances in the knowledge of how organisms inhabiting the North Atlantic and Arctic respond to changes in their environment, as well as the risks posed by infectious diseases and invasive organisms. Given the growing recognition of the critical importance of the world’s oceans and its biodiversity during this period of rapid global change, the investment is very timely.

The project is being completed in 3 stages, and is expect-

continued
Infrastructure at the Ocean Sciences Centre CONTINUED

ed to be finished in late 2012-early 2013. Below are photos showing various on-going stages of developments.

Pump House:

Preparation for the precision blasting of the wet well which thereafter will house the construction of an overlying pump house that will deliver the cold water into the OSC’s research facilities.

Wet well for new pump house which is 18 meters deep and will receive water from the 355 cm HDPE pipe that extends 225 meters out the bay and at a depth of 37 meters.

We are a family based business who have invested in the prosperous South Coast of Newfoundland. Sustainable Aquaculture practices are something that we, as an entire company, take extreme pride in. It is also a passion of ours to promote the sustainability of the South Coast itself; it is important that youth recognize the great potential for careers in this area. We would encourage youth to choose aquaculture based post secondary programs, and bring your skills to the aquaculture industry in this province.

As a proud member of NAIA we would like to extend our gratitude for the hard work and dedication which the staff exhibited during the year. Congratulations on your 19th annual NAIA Conference.

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Belleoram Opens Cold Ocean Salmon Playground

A grand opening was held on November 9th for the opening of the “Cold Ocean Salmon Playground” in Belleoram. The playground is a much-needed facility for the community and the children are thrilled with the new addition. Cooke Aquaculture’s Newfoundland division, Cold Ocean Salmon, donated $1,500 and the fencing to the project and provided each child at the opening with a gift pack. This donation is consistent with Cooke Aquaculture Inc.’s dedication to the health and wellness of communities and projects that support youth.

CONGRATULATIONS!

Congratulations to Jonathan and Vicki Kawaja on the birth of their son Aaron who was born on December 3, 2011.

Congratulations to Gary and Lorraine Taylor who became grandparents to Little Ms. Julia Marcelle Moffitt, (daughter of Andrew and Laura Moffitt) in October 2011.

Congratulations to Allison Stagg and Duane Kendell who were married in Varadero, Cuba in April of 2011.

Frank Handigan, Account Manager with Atlantic Canada Opportunities Agency will retire in March 2012. Congratulations Frank! We’ll miss you!

ACCORDING TO THE LABOUR MARKET OUTLOOK 2020...

According to the Labour Market Outlook 2020, an increasing number of retirements among the baby-boom generation are anticipated over the next decade. Over 25% of working-age people not in the labour force today are retirees.

Cold Water Can Kill - Wearing a Lifejacket and Thermal Protection Could Save Your Life

Many people think that a fall into the water is no big deal. They can climb back onto the dock or swim the short distance to shore, or they can right their overturned boat and get back in. If the boat can’t be righted, they can put on their lifejacket and hold onto the boat until help arrives. The reality is when dealing with cold water those goals often can’t be reached.

It’s hard to imagine what happens should you unexpectedly find yourself in cold water. Dr. Gordon Giesbrecht, Professor of Thermophysiology at the University of Manitoba, has experienced first-hand the effects of cold water. He developed what he calls the 1-10-1 principle to help you understand how your body will react. You will have One minute to get your breathing under control, as there is an initial gasp response followed by extreme hyperventilation. Ten minutes of meaningful movement before the muscles in your extremities lose their effectiveness, and up to One hour before you lose consciousness due to hypothermia. If you’re not wearing a lifejacket and survive the initial shock and gasp, you have very little time before your arms and legs begin to stop functioning, preventing you from staying afloat.

Studies have shown that our bodies lose heat approximately 25 times faster in water than in air of the same temperature. If you are wearing thermal protection such as a neoprene wet-suit, paddling dry suit or a floater coat/suit, it will help keep you warmer for a greater length of time.

Should your boat capsize and you find yourself in the water, try to reduce the rate of heat loss by climbing onto the overturned hull or any other floating object such as a cooler. If none are immediately available, remain as motionless as possible to allow your skin to warm a thin layer of water around your body. Thrashing in the water not only disturbs this layer of warmer water but also accelerates heat loss. If you are alone, tuck your legs and fold your arms across your chest in the HELP (Heat Escape Lessening Position) to protect your vital organs. If you are with others, huddle together interlacing your arms and legs and pressing your torsos together to preserve body heat.

One of the big questions is whether to stay with the boat or swim to shore. You should only consider swimming for shore if you are wearing a lifejacket, your chances for rescue are very slim and the distance to shore is manageable. (Be aware that the effort involved in swimming will increase heat loss and adversely affect muscle movement.)

Keeping these considerations in mind and taking proactive steps to protect against the dangers of a fall into Cold Water will go far towards making your boating activities safer and more enjoyable. Remember too that, in Canada, many of our larger bodies of water remain cold throughout the summer.

Whether you use a power boat, sailboat, personal watercraft, canoe, kayak or fishing boat, find more information on a variety of boating safety tips by visiting www.SmartBoater.ca.

DID YOU KNOW??
The Employment Assistance Services (EAS) offices delivered by the CBDC South Coast have produced a local career and employment resource website that is now available at SouthCoastWorks.com. This site is a local resource for both job seekers and employers with a south coast region focus (South Coast of NL – Coast of Bays). The website provides a significant amount of career information resources as well as many useful links to other sources of career and employment information regionally, provincially, and nationally. Visit southcoastworks.com for more information.
Newfoundland’s Cold Ocean Salmon team takes
Platinum Scale 2011

By: Chuck Brown, Communications Manager, Cooke Aquaculture

The Robin Hood Cove crew accepting their award from the staff and management of Cooke Aquaculture.

The Platinum Scale – an award honouring Cooke Aquaculture’s top saltwater crew – has a new home in the Coast of Bays. The Robin Hood Cove crew earned the award for 2011 and they were presented the trophy during a company Christmas dinner at the Milltown Lions Club on Nov. 23. It’s the first time the Platinum Scale has been won by a Newfoundland farm crew.

“This award to the Robin Hood Cove team proves beyond any doubt that Newfoundland has great growing conditions that are right up there with the rest of Atlantic Canada and Newfoundland has what it takes to succeed - the people, their dedication and the will to excel,” said Kris Nicholls, Chief Operating Officer for Cooke, who presented the award.

The Robin Hood Cove crew is: Damon Woodland (Newfoundland Saltwater Production Manager), Sheldon George (Newfoundland Feed and Fish Health Manager), Paul Herritt (Area Manager), Mitchell Skinner (Manager), Wilfred Morris, Jeff Herritt, Rod Feaver, Jeremy Maye, Adam McDon-aid, Rod Forsey and Earle Greene.

The prize includes each site crew member’s name on the Platinum Scale Trophy – just like the Stanley Cup. Each winning crew member also receives a personalized commemorative pewter disc and a personalized leather jacket.

Michael Cooke, co-owner of the company, and Dr. Keng Pee Ang, VP Research and Development, Feed and Nutrition, were among those on hand in Milltown, NL in December to congratulate the winning crew. The prestigious Platinum Scale trophy recognizes excellence and dedication. It recognizes exceptional farming for both the fish and the environment.

It is the highest award Cooke Aquaculture bestows on its saltwater division to recognize and acknowledge the dedication and expertise of the manager and crew. The winning site crew is selected based on how well they took care of the precious fish that were entrusted to them and how they rose to meet challenges. The Platinum Scale Award also recognizes the work the site workers do every single day as they take the salmon from stocking to harvest.

This year’s winners met all these criteria and more. They did it with the lowest cost of production. “Each year we assess and analyze the performance of all our marine farms to see how each farm fared during their grow-out season and to determine how we can improve. In the process, we identify one team that not only took great care and pride in bringing their fish from smolts to harvest in the most efficient manner but also those who met challenges (and believe me there were a couple), head on with a “can do” attitude,” Nicholls said during the presentation.

“One behalf of the Cooke family and the entire Cooke Aquaculture Family, congratulations to the winning team from Robin Hood Cove.” From the birth of this trophy four years ago, there has now been a winner in every region of the Atlantic Coast where Cooke Aquaculture has farming operations – starting with the winning team from South Bay in Maine (US) in 2008, Andy’s Ledge (Grand Manan, NB) in 2009, McNutt’s Island (Nova Scotia) in 2010 and now (2011) Robin Hood Cove in Newfoundland. The award also came with some sad news. One member of this winning team, Corwin Meade, passed away suddenly at his home before the award had been announced. ✿
Greetings from Ruth Salmon

Executive Director
Canadian Aquaculture Industry Alliance (CAIA)

‘It’s Time to Act’

It is time to identify a serious, coordinated national strategy to advance this industry, including the achievement of an Aquaculture Act. This was the consensus from the participant members of the CAIA Annual General Meeting (AGM) hosted in Ottawa, Ontario on November 24, 2011.

CAIA recently commissioned a report entitled A Policy and Business Case for a Federal Aquaculture Act. The results of which were presented at the CAIA AGM – fueling industry enthusiasm for creation of a federal Aquaculture Act. The findings of the report present a robust picture of the opportunities for Canadian industry as well as the challenges.

We in the industry well know of the enormous potential for sustainable growth in Canada. Extensive coastlines and productive and untapped resources, a reputation for quality products, proximity to established and growing markets; and world-class scientists and a skilled workforce are but a few of our strengths.

Despite our numerous advantages, growth in the Canadian aquaculture industry has stagnated for ten years. While aquaculture production in Canada has grown from 7.7 kilotons to over 154 kilotons in the past 25 years, production has “flat-lined” since 2000. As a result, Canada’s share of the world market has fallen by 40 per cent. Canada is also falling behind our main competitors, such as Norway, Scotland, Australia, Chile, New Zealand and Ireland.

Among the impediments to growth identified were the lack of definition of “aquaculture” under current federal legislation and jurisdictional issues creating overlap and duplication. Overall, the report reveals the need for an efficient and effective regulatory framework for aquaculture in Canada, and the significant benefits that could accrue to Canadians from taking action – and take action we will.

Early in 2012, CAIA and its members will develop and execute a national strategic plan to impel federal, provincial, and regional stakeholders to recognize the need for the aquaculture industry to have a modern legal and policy framework and to deliver it through an Aquaculture Act.

I look forward to sharing further details of the report and strategy in my talk at the Cold Harvest 2012 Conference in February. With an aptly fitting theme, “Growing Our Future Together”, the conference is sure to provide an excellent forum for discussion and idea sharing on this important initiative. See you in Gander.

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Message from Jennifer Woodland
President, Newfoundland Aquaculture Industry Association

Jennifer Woodland graduated with an Advanced Diploma in Aquaculture from Marine Institute of Memorial University in 1998 after completion of a Biology Degree. With experience as a site worker and Environmental Manager for Heritage Salmon Inc. in BC and volunteer with the BC Salmon Farmer’s Association she returned to NL with her family in 2008. Jennifer is currently employed as a NL Environmental Compliance and Regulatory Affairs Manager with Cold Ocean Salmon Inc, the NL subsidiary of Cooke Aquaculture Inc.

On behalf of the Newfoundland Aquaculture Industry Association’s Board of Directors, welcome to our 19th annual conference and trade show!

Our theme this year is “Growing Our Future Together” and it is very fitting. We are growing. We are growing in terms of employment. Our role as an important part of our communities is growing. And we are growing economically in the rural areas of Newfoundland where we operate. Aquaculture is a great Newfoundland story that we can all take pride in.

This year please take time to participate in the many interesting workshops and discussions. New Developments & Challenges in the Industry will highlight some of the challenges of a growing industry. Biosecurity Zone Management will provide an update on developments made with industry and government on biosecurity. Waste Management will explore the challenges and solutions that exist for an industry operating in rural Newfoundland.

This is also an excellent time to visit the booths and see what services and supplies exist to support you and your company.

The conference kick off is February 14, Valentine’s Day – a day that’s good for the heart – not unlike the products we grow. So we hope you also enjoy the many “tastes” of the events – especially the reception dinner where you can do your heart some good and load up on our healthy, omega 3-packed delights. It is always a delicious event and we hope to see you there.

With advancements happening in our finfish and shellfish sectors, we are truly growing our futures together and proud to be doing so. We are creating opportunities for the next generation: steady employment, a prosperous life in rural Newfoundland and a healthy, environmentally-sustainable product. Here’s to the future!

Enjoy! ✨
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Newfoundland and Labrador cultured seafood products are highly regarded for their delicious flavour and fresh quality. Our cold water products are processed immediately after harvesting according to strict Canadian standards, ensuring top-quality results for you each and every time!

Newfoundland and Labrador is one of very few places in Canada with plenty of aquaculture space available. It also offers an excellent investment environment. Various international investors have already recognized this and are currently partnering with local companies to grow the industry... and their return on investment.

The Newfoundland Aquaculture Industry Association (NAIA) offers a constructive and personalized approach to help you develop positive relationships with experienced, reputable local partners. Please contact NAIA to learn how we can help.

For more information contact: Miranda Pryor, Executive Director
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