

## OPINION INNOVATION

# Innovation at the heart of Canadian agriculture

The government must act now to ensure that the Canadian agricultural equipment manufacturing industry remains innovative and strong.



LEAH OLSON

REGINA—Innovation, Science and Economic Development Minister Navdeep Bains says he wants to make innovation a core Canadian value because it's "the path to growth, the path that leads to a stronger middle class and higher quality jobs." Canada's agricultural equipment manufacturers have known this for years. In fact, innovation is at the heart of Canadian agriculture, shaping agricultural practices and creat-

ing opportunities since European settlement in the late 1800s.

The agricultural equipment manufacturing industry has progressively developed as an entity separate from commercial or industrial manufacturing. Central to this evolution was the need to develop agricultural machinery capable of meeting the challenges of the Canadian climate. This drive for innovation was critical to farmers who struggled with foreign equipment designed for smaller farms and less arid conditions. These same challenges have enabled Canadian agriculture equipment manufacturers to be global leaders in the development and production of high quality, durable and innovative machinery.

In 2015, agriculture equipment manufacturers exported \$1.8-billion worth of products to 154 countries; the U.S. represented 82 per cent of this. Innovation is what drives the industry to develop some of the best agriculture equipment in the world. But we can't rest on our laurels. Agricultural Manufacturers of Canada members help drive the Canadian economy and are global leaders in innovation. It's why changes to the Industrial Research As-

sistance Program (IRAP) and the Scientific Research and Experimental Development (SR&ED) programs as well as opening up international markets are integral to Canada's innovative future.

Innovation is crucial if we want to address global issues such as overpopulation, and increase food production by 60 per cent to feed more than two billion extra people on the planet by 2050. AMC members are entrepreneurs who are helping feed the world. The agriculture industry will need to produce more with less and Canadian farmers are at the forefront of meeting this challenge. AMC's members continuously develop innovative technologies and manufacture products that enable us to be leaders throughout the world.

Small and medium-sized enterprises benefit greatly from the IRAP program. Often, it is the difference between launching an innovation, leaving it on the research floor or launching without due testing, however IRAP should be expanded to cover production and marketing costs of projects in order help grow the industry and contribute to an innovative economy.

When it comes to the SR&ED tax credit, administrative costs associated with it are increasingly burdensome, resulting in research and development becoming more challenging. The process to make a submission to the program needs to be streamlined if the objectives of the program remain to reward innovation.

Often, those applying for the SR&ED credit will pay anywhere from \$30,000 to \$100,000 to get the application done. If one assumes 10 applicants hire external consultants for their submission, the combined amount could be upwards of \$1 million going into administration costs rather than innovation itself. Perhaps it is the cost of doing business but these are dollars AMC members would rather see invested into R&D.

In today's globally connected world, international trade and opening of new markets is critical to Canada's success. Bains recently said in a speech that "as a country made up primarily of small businesses, [he'd] like to see more than 10 per cent of them exporting, and to places other than the U.S." Our members agree. Ratifying the Trans-Pacific Partnership and making investments to promote international trade and to bring international buyers to Canada are essential to continued growth.

The agricultural manufacturing industry is unique not only that it's developed in Canada, but because it impacts food sources globally. Our products help feed

the world. Our environmental footprint is better today than 30 years ago because of the equipment we have developed and are using.

AMC members lead the world on intellectual property of agricultural equipment. Innovation happens every day because our members are talking directly to farmers and responding to their needs by further refining and enhancing their products. For Canadian agricultural equipment manufacturers, innovation is not just a way of being or something that happens in an isolated facility, it is in how we manufacture and manage day-to-day operations. It is what drives the industry to develop some of the best agricultural equipment in the world. As one of our members says so eloquently, "We're not putting a man on the moon, but we are helping put breakfast on the table." The government must act now to ensure that the Canadian agricultural equipment manufacturing industry remains innovative and strong.

Leah Olson, MBA, MPPPA, is president of the Agricultural Manufacturers of Canada, a national industry association fostering and promoting the growth and development of the agricultural equipment manufacturing industry in Canada. Ms. Olson recently appeared before the House of Commons Industry, Science and Technology Committee to discuss these issues.

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## OPINION AQUACULTURE

# Eyes wide shut: Senate report on aquaculture

The Senate committee's three-volume report presents no evidence that the aquaculture industry is over-regulated compared to other resource sectors such as forestry, mining and livestock operations. According to reports from DFO and the Canadian Food Inspection Agency, federal aquaculture regulations (12 acts) are on par with regulations for other types of livestock operations (12 acts) in Canada.



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MIRAMICHI, N.B.—Recently, the Senate Committee on Fisheries and Oceans reissued its report called An Ocean of Opportunities: Aquaculture in Canada with the gushing headline "Double aquaculture and reap billions," (Sept. 19, 2016). According to the committee's press release, the Senate committee believes the industry is stymied from achieving this potential by a "hodgepodge of federal and provincial regulations," no access to chemicals to treat massive sea lice infestations and prohibitions on some unnamed chemicals euphemistically called "feed additives." Their solution? A new aquaculture act.

Having read all the transcripts from the hearings held by the Senate committee and provided testimony as well, it's easy to understand how the committee arrived at its conclusions. The committee buckled under the countless appearances and relentless complaints made by aquaculture industry and association representatives, primarily those from the open net pen salmon farming sector, that a complicated set of regulations had flatlined growth in the industry.

The Senate committee's three-volume report presents no evidence that the aquaculture industry is over-regulated compared to other resource sectors such as forestry, mining and livestock operations. According to reports from DFO and the Canadian Food Inspection Agency (CFIA), federal

aquaculture regulations (12 acts) are on par with regulations for other types of livestock operations (12 acts) in Canada.

Provincially, aquaculture in Canada is governed by far fewer acts than govern either mining or forestry. Again, reports from DFO and the CFIA show that there are three times the number of acts that govern livestock operations provincially, at least in Ontario (23 acts), than aquaculture in New Brunswick (7 acts).

None of this information appears in the Senate committee's reports.

During the Senate Committee hearings, representatives of the aquaculture industry repeatedly said that aquaculture development in Canada is important not only for creating rural employment, but globally in providing protein and feeding a hungry world. The Senate Committee bought this myth hook, line and sinker.

Statistics from the United Nations Food and Agriculture Organization show that the majority of global human protein consumption comes from plants (45 per cent) followed by meat (35 per cent). Fish is a very small percentage of the per capita protein consumption (less than 10 per cent) and most of the farmed fish is consumed in Europe, North America and Asia. Canadian farmed fish are not feeding the hungry at local foodbanks or in sub-Saharan Africa.

As for creating rural employment in Canada, from 2007 to 2012, direct employment in aquaculture dropped 18 per cent while production increased 13.7 per cent. The industry is growing more fish with less people due to technological improvement that reduce the need for labour. No country has done this better than Norway. It takes about 6,000 Norwegians, the entire Canadian aquaculture workforce, to produce six times the farmed salmon produced in Canada.

Again, none of this information appears in the Senate Committee reports despite presenters making these points.

As hard as the aquaculture industry, and now the Senate committee, are pushing for an aquaculture act, not one representative of DFO, even the minister, had proclaimed their support or even endorsed the creation of a new act during the Senate committee hearings. What then DFO minister Gail Shea said before the committee on Feb. 25, 2014 was that her department was "working hard to resolve long-standing regulatory irritants to the industry and the provinces." She did not say that an aquaculture act was the solution.

Despite the optimism expressed in the Senate committee on the future of aquaculture in Canada, the current picture of the aquaculture industry, primarily the open net pen sector, is not so rosy. The 2014 Statistics Canada report

on aquaculture stated that overall production, sales, and exports were down, on average, 25 per cent. The principal decline was in open net pen salmon farming.

The common denominator that accounts for this decline in Canada, and in fact globally, is the impacts from climate change, including disease and sea lice outbreaks, not regulations.

The disease and pest problems are unlikely to end anytime soon regardless of the regulatory regime. In fact, they are likely to get worse as the impacts of climate change on ocean temperatures evolve. Super chill events in winter have killed penned fish by the tens of thousands and heat and low oxygen stress in summer reduces the resilience of fish crowded in open net pens making them more vulnerable to a wide range of diseases and pests.

The Senate committee's vision for the future of aquaculture is to prop up a failing and unsustainable open net pen feedlot model for fish production. The alternative, put forward by many presenters, is it to transition the open net pen industry to land-based closed containment where operators can more honestly "adhere to environmentally-sound practices" prescribed by the Senate committee.

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