

Canadian Hog JOURNAL

Canada's national hog magazine

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Piglets nursing on a sow



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Message from the editor

The Winter 2023 edition of the Canadian Hog Journal is here!

'Innovation' and 'technology' are buzzwords that are sometimes casually thrown around in a lot of industries. Prior to my time in the hog sector, I worked in Alberta's research and development field, and I witnessed no shortage of empty promises, unfulfilled expectations and failed achievements that were once someone's great idea and passion – only to fade away before ever becoming reality.

Representing more than just thwarted ambition, these underwhelming initiatives consume a lot of time, human resources and capital, which is perhaps the most regrettable part when they don't work out. Innovation is a noble principle, and technology can be useful, but what matters most are tangible outcomes, and this edition seeks to shed light on some of the positive work being done when it comes to pigs and pork – going beyond the hype and examining the practical application.

Swine Innovation Porc (SIP) is the agency that has directed research in our sector for more than a decade, with support from nearly all provincial pork organizations, in addition to various industry partners, governments and academic institutions. SIP's Cluster 3 research has just wrapped up, and Cluster 4 has started. Find a recap in this edition and find out what's ahead.

The mission of Canada's Agri-Food Innovation Council (AIC) is to be a unifying voice to advance Canada's cross-sectoral agri-food research and innovation. AIC supports a carbon tax exemption on barn heating fuels, coupled with incentives for change, rather than unfairly punishing producers when they have no other options. Have a look at how AIC is fighting for farmers on the federal level.

When it comes to reducing greenhouse gas emissions, sequestration activities or purchasing offsets are the road-



more-travelled if you consider most corporate policies on environmental sustainability. A new advanced pig genetics project by the U.S. National Pork Board and Pig Improvement Company (PIC) is approaching it from a different angle. Learn about why that's a game-changer.

Measuring the environmental impact of animal agriculture, and communicating it, is yeoman's work. On one hand, there are plenty of trustworthy folks looking to help farmers succeed, and on the other hand, a small but vocal minority of critics who would rather see them fail. Researcher, professor and presenter Frank Mitloehner is the undisputed champion when it comes to working with the livestock sector to mitigate its environmental impact while also maintaining professional neutrality and open public dialogue. He is widely respected by many for his support of responsible livestock production but reviled by some for his collaborative approach with industry. He recently felt compelled to clarify his stance, following an unprovoked attack by none other than *The New York Times*.

Three years ago, the Canadian Hog Journal introduced readers to a com-

bined heat and power (CHP) unit that had been newly installed at a Hutterite colony in Alberta. Since then, the decision has proven nothing short of remarkable! The experience has been so encouraging, the colony just bought a second one.

Across Canada, in-person events seem to have fully returned, including the Porc Show in Quebec City and Prairie Livestock Expo in Winnipeg. Get the details here, and read about the 2023 Banff Pork Seminar in our next edition.

My family-of-four is now a family-of-five, as my wife, Kira, and I welcomed our third child and first son, Emeric, in mid-October. His older sisters, Agatha and Wilhelmina, have been enthusiastic little helpers as we learn to navigate and appreciate our new life together.

As always, I can be easily reached by email at andrew.heck@albertapork.com. You can also get my attention on social media and 'follow' the Canadian Hog Journal on Facebook and Twitter (@HogJournal) to contribute to the discussions that matter to you and the rest of the industry! ■

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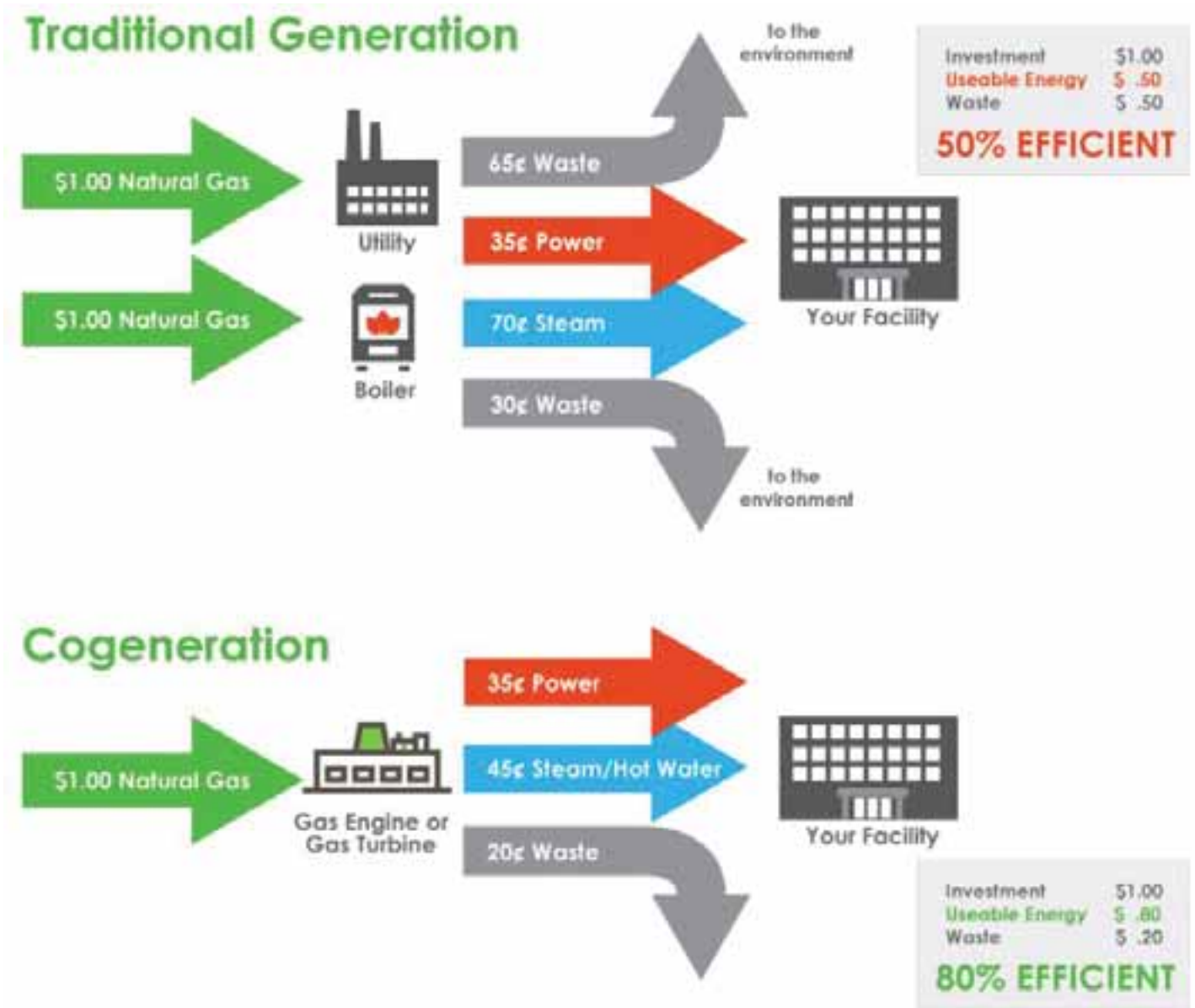
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Hog farm cogeneration lowers emissions, saves money

Andrew Heck



With traditional generation, more input energy – and money – is wasted, in addition to greater environmental impacts versus CHP.

Lowering emissions in animal agriculture is not only eco-conscious but potentially cost-efficient, if done strategically.

‘Cogeneration’ or ‘combined heat and power’ (CHP), is the use of a prime mover engine to generate electricity and heat at the same time, using a feedstock energy source like natural gas, methane or biogas. Such technologies are becoming increasingly popular not only for heating and powering large commercial and industrial buildings but also farms.

Alberta Hutterite colony implements CHP

In August 2019, Hartland Colony near Bashaw, Alberta – about 130 kilometres southeast of Edmonton – purchased a CHP unit in a bid to offset on-farm carbon emissions and costs, primarily aimed at the farm’s 650-sow, farrow-to-finish hog operation, crop production and canola crushing plant. Representatives from Hartland travelled to Germany to scout out potential products, then a Canadian

partner was recruited to help broker a deal.

The CHP unit – manufactured by TEDOM, in Czechia – initially cost more than \$600,000 all-in, from purchase to delivery to installation. Earlier this year, the capital cost was considered completely recovered, slightly quicker than anticipated, and well before the machine’s useful life expires. It is estimated to be running for another decade, at the bare minimum.

CONTINUED ON PAGE 8

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In August 2019, Hartland Colony installed a combined heat and power (CHP) unit in its hog barn. Since then, energy savings have allowed the unit to pay for itself, with many years of useful life still ahead. The technology was so successful that a second unit has since been purchased.

“At this point, the machine has more than paid for itself,” said Chris Waldner, Hartland’s electrician, who monitors the CHP unit. “We’re running at 100 per cent capacity, all day, all night, and we’re now even putting excess electricity back into the grid.”

Initially, the unit was operating at around 85 per cent capacity, based on need, but starting in mid-2020, the colony was offered a new contract by its utility supplier to be credited for unused electricity, particularly in winter, when demand is lower.

“We do as much maintenance on it ourselves as possible, and we’ve found that the manufacturer’s recommendations for frequency are very generous,” said

Waldner. “In fact, we’ve had no major issues with it. The first scheduled major overhaul was at 20,000 hours of operation, but we’re now close to 30,000 hours, and it hasn’t been necessary.”

While electrical generation is the primary function of CHP, the secondary benefit, recovered heat, has plenty of applications as well. In winter, while hog barn ventilation is restricted, the heat is used to maintain temperatures in the barn and on other parts of the farm using a centralized loop. Year-round, even with higher summer temperatures, recovered heat continues to be pumped into the farm’s canola crushing plant, which provides canola oil and meal for use in the hog operation but also brings in additional revenue through external sales.

“About 50 per cent of the heat generated by the machine is recovered and used,” said Waldner. “When you crush canola, it needs to be about 30 degrees-Celsius, so using the recovered heat prevents us from needing to burn gas that would otherwise generate that heat.”

By all accounts, Hartland’s CHP experience so far has been even better than anticipated. So much so that the colony has since ordered an additional unit, even larger than the previous one. The new unit is expected to come online very soon.

“It’s bigger, it’s made in North America, and we have dedicated local tech support,” said Waldner. “That was important to us, weighing against other available options.”

The plan is to run the new, higher-capacity unit at whatever level is necessary to meet the colony's needs, with the older, lower-capacity unit reserved for times of increased demand, such as harvest, since grain dryers can be a significant power drain. By running the larger unit around 90 per cent capacity most of the time, rather than both units at 40 or 50 per cent concurrently, unnecessary stops and starts can be avoided.

"The need changes based on time of day and time of year," said Waldner. "The nice thing about having two units is that we benefit even more from keeping the power on-farm versus simply getting credited when we have too much. It saves even more money and is even more environmentally friendly."

Finding the right fit for the future

Hartland's new unit was manufactured by Missouri-based Martin Energy

Group. The company supplies a range of products in addition to CHP, such as micro-grids and anaerobic digesters – commonly used to process manure for electricity. So far, in Canada, they have worked with greenhouses in Alberta and Ontario, but hogs represent a new venture north of the border.

"We typically build larger-scale units suited to industrial operations, but Hartland was ambitious and wanted to see what options we could provide," said Kevin Roher, Sales Manager, Martin Energy Group. "They were very clear on what they were looking for in terms of technology that was customized for their farm and able to be serviced and supplied easily."

The price tag on the new unit was close to \$750,000 and, like the older unit, that initial investment is expected to be recovered in a fraction of the time that the technology will be operable. At best, Hartland is expecting to pay off the unit in three to four years, and

at worst, in six to seven. While lower energy prices are generally preferable, the trend of higher prices equals bigger savings in the short-term. Whether prices stay high or drop lower, the farm is well-situated to make the most of the market rates.

"These units have served us very well so far, and we're excited to share the news with other operations," said Waldner. "To us, this makes a lot of sense, and it might make sense for them, too."

According to Roher, Hartland's pace-setting example has led to further business for Martin Energy Group, as two additional Hutterite colonies in Alberta are actively purchasing CHP units through the supplier.

"It's been great for all of us," said Roher. "Hartland has been an excellent client, and we appreciate their straightforward, honest approach."

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Hartland's new CHP unit is even bigger and more powerful than the one put into service three years ago, which has already been paying dividends for the farm.

Supporting farmers' transition to clean tech

With technologies like CHP increasingly making their way into the hog sector, emissions reductions and cost efficiencies are becoming more readily available, assuming they are affordable in the first place. For many producers, this may not be the case without additional incentives that encourage innovative practices.

While certain funding programs are in-place on various provincial and federal levels to support the transition toward the use of clean technologies in agriculture, many of these initiatives are available only for operations that have completed an Environmental Farm Plan (EFP), offered in virtually every province under the Canadian Agricultural Partnership (CAP). Creating an EFP is free and highly recommended, since it is a prerequisite for accessing most forms of government support.

As more and more producers take steps toward improving their on-farm practices, it is incumbent upon decision-makers to recognize this willingness to adapt, proactively, rather than resorting to penalties for



Across Canada, completing an Environmental Farm Plan is an important first step farmers can take to potentially receive funding for implementing technologies like CHP.

longstanding behaviours where few, if any, other options exist.

In the case of Hartland Colony, as with many other farms across Canada, producers are willing and able to make a positive difference when it comes to environmental sustainability, but it is hugely beneficial when financial burdens are lessened, so farmers can continue producing food for Canadians and the world without needing to make costly sacrifices that could jeopardize business continuity. Successful incentivizing can even lead to self-sufficiency, which

is the case with Hartland's new CHP unit, for which no outside funding was required or received.

Environmental and financial sustainability alike can and should become the goal for all farming operations in Canada, and this is certainly possible, when the conditions are tailored to farmers' needs. The future of food production and public trust in agriculture looks bright if experiences like Hartland's can become the norm, rather than the exception. ■

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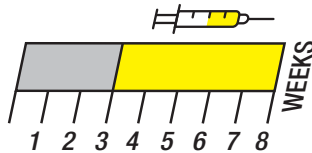
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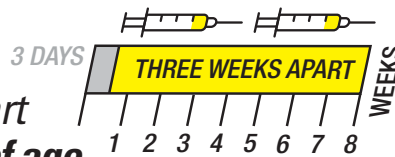
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Using the carrot, not the stick, to encourage clean tech

Serge Buy

Editor's note: Serge Buy is CEO of the Agri-Food Innovation Council. He can be contacted at sbuy@aic.ca.



The federal Standing Committee on Agriculture and Agri-Food has met on multiple occasions to hear support for and opposition to a carbon tax exemption for farms. AIC's Serge Buy is an outspoken supporter.

For more than a century, the Agri-Food Innovation Council (AIC) has been one of the key advocates for cross-sectoral agri-food research and innovation in Canada. As such, we are asked to weigh in on various issues, including some that may, initially, seem out of our scope.

Such a case took place when, in October 2022, we were asked to present in front of the House of Commons Standing Committee on Agriculture and Agri-Food to discuss Bill C-234, *An Act to amend the Greenhouse Gas Pollution Act*.

Simply put, the private member's bill seeks to protect some types of farm activity from the carbon tax. The proposed legislation is the successor of a similar bill that disappeared when the preceding legislature ended after the 2021 federal election was called.

AIC was asked to testify in front of the parliamentary committee to discuss the

advancement of innovation leading to renewable sources of energy.



The use of natural gas and propane for heating barns is still the dominant method in commercial hog production. Animal welfare depends on it, and farmers' ability to feed Canadians and the world depends on keeping input costs under control as much as possible.

The parliamentary committee's members were philosophically split on a crucial issue: will Canadians adopt renewable energies and drop fossil fuels voluntarily, or do they need to be pushed to do it?

The carbon tax is called an incentive by some. Indeed, one could assume that a tax may be seen as an incentive not to do something, such as how taxes on tobacco are raised to make it unaffordable to smoke. Others see it as a penalty.

Replacing the use of fossil fuels in farming

Innovation is indeed enabling renewable energy sources to replace fossil fuels; however, the technology is not scalable to the whole country and all types of farming.

Renewable energy sources are not available all over the country, nor is local production (when it exists) sufficient to support the requirements.

To be clear, the technology will evolve and grow, and so will its adoption rate

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throughout the country. But we're not there.

Making clean tech affordable

There is always a cost to adopt new technology. Often, early adopters undertake a cost-benefit analysis and move forward.

In the case of the carbon tax, the intent is to impose a high burden on the users of fossil fuels to encourage them to change to renewable fuels. Our concern is that large corporations involved in farming will have an unfair advantage in comparison to smaller operations. Indeed, they will be able to afford and finance the transition, while the smaller operations will not be able to.

This would mean that small operators would face increasing costs under the carbon tax, while large farm operations transition. This is not acceptable.

Is Canada prepared to abandon small farming? Is Canada prepared to move away from family farms? We don't think so. In fact, innovation and leadership in farming has often originated from small operators, and they need to be protected.

Food supply versus climate change

At a webinar AIC organized in May 2021 on agriculture and climate

change, various experts, including a representative from the United Nations' Food and Agriculture Organization (UNFAO), clearly stated that, while work to reduce carbon emissions is essential, so is ensuring a supply of food for the world. Canada indeed has a responsibility – especially in troubled times (considering inflation, the war in Ukraine, droughts in Europe and Africa) – to continue to produce food.

Pushing farmers out of the business by increasing costs is counterproductive to our national and international objectives of greater food security.

Let's be clear: the devastation from the floods and fires on the west coast in 2021, followed by the hurricane that hit Atlantic Canada and everything in between, shows that our climate is changing – it is more unpredictable and will lead to increasingly destructive weather.

Work is being done to study the impact of climate change – how it will impact humans and animals, how it will impact crops, how regions of the country will suddenly be exposed to hotter temperatures, and more.

Who would have thought a few years ago that berry producers from the U.S. would now be looking at mov-

CONTINUED ON PAGE 14



AIC hosted a webinar with international experts in food policy, agricultural technology and research, in May 2021, to discuss the global agri-food sector's role in climate change.

ing their production to Canada, due to the availability of water and expected warmer conditions?

We absolutely have to do our part – and I know that no farmer is waking up today thinking, “How can I pollute more?” However, hitting them repeatedly with a stick (in this case, the carbon tax) when they have no other option is not going to help.

The government’s role should be to create the options – enable the scalability of the technology, support its adoption by creating incentives for farmers, and explain how it can work.

When I spoke at the parliamentary committee, Ryan Turnbull, Member of Parliament (MP) for Whitby (Ontario) stated his belief that, “the price on pollution increases the rate at which industries both develop and adopt new clean tech.” What he means is that,

if you increase prices on something, people will look at other solutions, but they first need to exist. In the case of Canadian farms in rural Canada, those solutions are often non-existent.

As I stated at the same committee, if the government wants to tax the ‘urban warrior’ who wants to drive a gas-guzzling, oversized vehicle until the individual is forced to ride a bicycle... that’s great. But most farmers must drive pickup trucks. Most are obliged to use fossil fuels to heat barns where animals reside. They’re not the ones who should be taxed – at least not until there are clear, viable, scalable and affordable alternatives.

The government needs to realize that its policies must be adapted to the realities of the land we live on. What works in downtown Toronto may not work in rural Saskatchewan, and vice versa. Adapting policies will enable us

to work together on the same objectives, while respecting the diversity that our wonderful country offers. We shouldn’t pit one region against another or urban versus rural.

AIC supports increased investments in both the research for alternative fuels and technology, as well as investments in the production of these technologies. We also encourage the government to invest in extension services to support farmers and develop easy-to-access incentives for their adoption. That’s how we’ll reduce our carbon footprint.

The carrot works better than the stick. There’s no need for aggravation and conflict as we strive to decarbonize our society. On the contrary, we should work together progressively and positively to adopt cleaner technologies. ■



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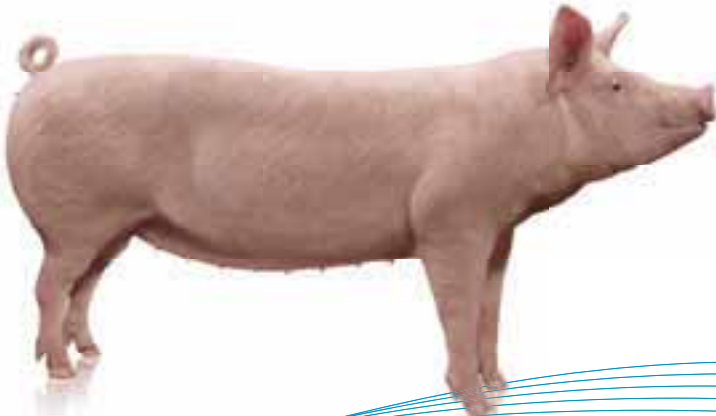
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Full disclosure: I work with animal agriculture

Frank Mitloehner

Editor's note: Frank Mitloehner is Director of the Clarity and Leadership for Environmental Awareness and Research (CLEAR) Center at the University of California, Davis. He can be contacted at fmmmitloehner@ucdavis.edu.



A steer moves outside the cattle feedlot at the University of California, Davis (UC Davis), where renowned researcher Frank Mitloehner works to reduce greenhouse gases and other emissions from livestock.

There's a shocking revelation out there, and I am at the heart of it. Are you prepared for this?

Animal scientists work with animal agriculture. That's it. That's the exposé – the conspiracy that so many activists and journalists want to share with you.

Oh, if you want more, try this on for size: agriculturists work together to be more sustainable.

If you work in agriculture, these statements probably aren't surprising. In fact, it would likely be concerning if that were not the case. Sustainability issues are too big to be tackled in in silos – metaphorically speaking, of course. One way the sector has come together to further sustainability is through the CLEAR Center.

As we've stated on our website, the CLEAR Center receives funding from IFEEDER, which is the public charity arm of the American Feed Industry Association. We also have an advisory board made up of representatives from organizations across the industry, including Elanco, Cargill

and Zoetis. It is unique to have a group such as this engaged in sustainability efforts. This board allows us to share our research and extension work directly with the companies that can use the solutions and information. It also allows the work done in my lab to go beyond journals, the classroom and academia, and actually reduce emissions. We also collaborate with individual ranchers and farmers, often conducting research directly on farms.

I am transparent about my collaboration with the livestock industry. My research lab receives grants to conduct research for the agricultural sector, as well as the public sector. If you follow me on Twitter, you know that I engage with the people I'm working to help become more sustainable. It's no secret – nor should it be.

The work I'm contracted to do by government agencies typically is centered around quantifying emissions from various sources or technologies. We recently completed a project funded by the California Air Resources Board in which we investigated how various manure man-

agement technologies on dairies can reduce methane emissions. If we are asked to look at innovative solutions such as feed additives, those projects are usually sponsored by the private sector. Funding for the CLEAR Center has largely supported our extension efforts to share science with the animal agriculture sector, government and the public. If we are unable to tell people about our work, then it will not have any impact.

I'm proud to work with farmers, ranchers and organizations that feed us, just as I'm proud to say that I have a role in bettering the environmental impact of the food they produce. I can't help but be sensitive to the fact that those in agriculture are portrayed as bad guys in many articles criticizing industry efforts aimed at sustainability. Producing food is tough work, and producing animal-sourced food is an impressive feat.

I don't think our farmers and ranchers deserve to be harassed for their efforts. They are one per cent of the population in the U.S., but they provide food for 99 per cent of the population. I also don't believe the best way to help them become more sustainable is to bash them for providing food. Maybe that is what our critics would like from us – to denounce animal agriculture as a lost cause. However, this integral part of the agricultural sector provides necessary nutrient-dense foods for most of the global population.

My job as a professor and cooperative extension air quality specialist is to work with members of the industry to improve the environmental performance of the food they grow. I don't mean that figuratively; it's written in my job description.

This past summer, I received public records requests from Greenpeace on my funding and communication with IFEEDER. We understand the perspective Greenpeace has on animal agriculture, and, regard-



Mitloehner works with gas analyzers at the UC Davis feedlot, in preparation of a research study to measure greenhouse gases and nitrogen emissions from cattle.

less, gave them what they requested without hesitation. However, I was surprised to see that *The New York Times* found out about the request and sought the same public records. Clearly, the activist organization is well-connected.

As a result, *The Times* and Greenpeace published coordinated hit pieces on me and the CLEAR Center. I can't describe it any other way. It is not surprising that the usual cast of animal agriculture and CLEAR Center naysayers are quoted. Unsurprisingly, there is a lack of agriculture researchers quoted.

Most of our harshest critics have never met me or spoken to me. They don't know the members of our small team. They know precious little – if anything – about the work we are doing. They are simply people who delight in making the assumption that cooperating with members of a sector must spell dishonesty and a breach of ethics. I wonder if the same is true of those who are invested in veganism.

While people are taking shots at us, we're pleased to be doing the work and conducting the research to reduce emissions and increase the food supply we need to sustain an exploding global population.

We're so much more than keyboard warriors shouting on social media, but we are all too often taken hostage by their attacks and their demands.

I find it disheartening to be accused of wrongdoing by working with the livestock sector. Who else is supposed to fund research to mitigate emissions from animal agriculture? If Greenpeace's leaders are interested in that, I'd love to talk about it, but I don't think it will happen. In the meantime, I'll continue to work with the sector to help reduce its environmental footprint.

We have so much good and promising news to share, and yet, our objective isn't to get good press. People want us to go on record that animal agriculture should fade away or be significantly reduced, but that's not our charge or our place. Our mission is simply to reduce animal agriculture's impact on our climate and environment, and to do that, we must work with the people who are raising the food that feeds us all.

So, while the stories are churned out, we're making progress improving the environmental impact of animal agriculture, in large part because we have many seats at our table. I'm unapologetic about that. Even more, I'm proud of it.

If I get weary, it's because I continue to answer the same questions for the story that keeps getting written. *The New York Times* is simply the latest in a long and steady stream of media outlets that think they're on to something.

To them I say: come and visit us. See the lab. Meet our students and colleagues. Talk to the farmers and try to understand – as we do – how committed they are to the important role they play in simultaneously feeding the world and safeguarding our planet.

I think you would be surprised by what you see and hear.

I think you would find a new and better story to tell. ■

The New York Times

He's an Outspoken Defender of Meat. Industry Funds His Research, Files Show.

A UC Davis professor runs an academic center that was conceived by a trade group, according to records, and gets most of its funding from farming interests.

In late October, The New York Times took issue with Mitloehner's work – or at least his character – in the absence of trying to understand what he does, from a position of goodwill.

Achieving climate goals through advanced genetics

Banks Baker

Editor's note: Banks Baker is Director, New Product Marketing, PIC. He can be contacted at banks.baker@genusplc.com.



Environmental, sustainability and governance (ESG) reporting is now the expectation for major businesses, including those in agri-food, like McDonald's. Can hog farmers, working with genetics companies, be part of the solution?

Less than a year ago, I led protein sustainability at McDonald's U.S. Now, I'm spearheading new product marketing for PIC: one of the world's premier pig genetics companies.

PIC is on a mission to demonstrate how advanced breeding technologies that produce healthy, robust and efficient pigs can help stakeholders throughout the value chain reduce carbon emissions and meet ambitious greenhouse gas reduction goals.

Genetics play a significant role in a sustainable food system, and their positive impacts have been overlooked for far too long. PIC recently announced a partnership with the U.S. National Pork Board to create a framework that will provide a pathway for corporations and pork producers to claim the environmental impact of genetic improvements.

Let's start from the beginning.

McDonald's was the first global restaurant company to publicly announce a science-based target to lower greenhouse gas emissions. The company's sustainability goals were ambitious, and my role was clear: work alongside suppliers – some of the world's largest protein companies – to identify and implement strategies to reduce carbon emissions from the company's supply chain.

Investors, environmental activists and consumers are pressuring corporations to minimize their environmental footprints. Even the most climate-forward companies can only eliminate so much carbon from their operations. It requires close collaboration with partners to achieve further reductions.

That's where pork producers come in.

The role of genetics in environmental sustainability

Traditionally, pork producers have relied on strategies like manure management or changing how feed is grown to lower greenhouse gas emissions. PIC is working the other end of the equation; we've set out to quantify the environmental benefits of using advanced genetics and genetic improvements.

Choosing the right genetics produces more efficient and resilient pigs that use less water, require less feed, have less need for antibiotics and reach market weight sooner. This allows farmers to mitigate emissions before they happen

– unlike many popular carbon-reduction strategies that sequester or offset emissions. Mitigating emissions is also easier to monitor, report and verify. But, to date, corporate climate reduction strategies have overlooked genetic improvements as a viable intervention opportunity to cut emissions.

Creating a credible, quantifiable framework

PIC and the National Pork Board are teaming up to create a framework that will demonstrate how genetic improvements are an effective way to lower greenhouse gas emissions. The details are still being developed, but the final framework will define what stakeholders must do to credibly quantify and show an intervention occurred within their supply chains.

The quantifiable metrics will be based on PIC's life cycle assessment (LCA) conducted by Greg Thoma from Resilience Services PLLC. An LCA – also known as a life cycle analysis or cra-



Improving genetics means less feed and water are consumed by pigs, which lowers the carbon footprint of pig production and saves farmers money.

dle-to-grave analysis – is a method of assessing environmental impacts associated with all stages of a product's life. Thoma is the primary investigator on several LCAs and sustainability initiatives in agriculture. He will apply his expertise and key learnings from his body of work to analyze how genetic improvements – including step-changes forward in the health of a production system achieved through gene editing technology – provide environmental benefits.

As corporations continue searching for opportunities to address climate change and reduce emissions from their supply chains, we need genetic improvements, even gene editing, to meet ambitious sustainability and climate action goals.

A win across the value chain

PIC and National Pork Board's framework is an investment in the long-term success of the pork industry. The framework will create shared value for stakeholders across the food supply chain. Regardless of where companies sit, removing carbon from production systems increases efficiency and profitability. The framework's intent is for genetics companies and pork producers – big and small – who meet the criteria outlined in the final framework to be able to claim a genetic improvement as a greenhouse gas reduction, and their supply chain partners can claim this reduction in their environmental, sustainability and governance (ESG) reporting.

What does this mean for pork producers? Advanced genetics increase the overall productivity of your herd and your bottom line while helping animals consume feed and water more efficiently, which reduces waste and your overall input costs. That, in turn, helps make farms and pork production more sustainable. Furthermore, emerging technologies like gene editing will enable significant improvements in health to further accelerate these benefits.

It also presents an opportunity for pork producers to capture value from carbon markets. The end goal is to generate new revenue streams for producers based on the genetics they choose.


A framework like this takes time to develop, but the process is currently underway. PIC and National Pork Board hope the framework will be ready to share with industry partners in late 2023. We are currently searching for restaurant and food retail partners in the U.S. that are willing to join us on this journey and pilot-test the framework.

PIC recognizes the connectedness of the global pork market. The framework development is part of PIC's continued commitment to supporting pork producers around the world. The intent is to first pilot-test the framework in the U.S. and create a model that can be replicated and customized in other priority markets, including Canada, allowing more producers to capture and share the value of genetic improvements. ■



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Country music star Luke Bryan has also recently team up with the U.S. National Pork Board to spread the word about how modern hog production is defying deeply held, often incorrect stereotypes.

SIP: Where pork's bottom line is top-of-mind

Geoff Geddes

For the pork sector in Canada, research is like oxygen: if you don't see its value, try living without it.

In an industry where margins are thin and profit is never assured, the one constant is the need for cutting-edge research to aid producers. Against that backdrop, Swine Innovation Porc (SIP) has been managing pork projects since 2010 and is set to continue that effort with its Cluster 4 studies over the next five years. The Swine Cluster is a collaborative research program managed by SIP, in partnership with the Canadian pork industry and Agriculture and Agri-Food Canada (AAFC).

During the last 12 years, SIP has overseen research investments totaling \$51 million over 50 projects and counting. All told, their projects demonstrate the importance of coordination and management to leverage research dollars and make the most of producer funding.



Through Swine Innovation Porc (SIP), pork producers and industry partners in Canada have recognized the need for greater research, for more than a decade. Results of SIP projects have been published in the Canadian Hog Journal from the start, to be continued.



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“SIP brings industry and government partners together to advance research that’s aligned on key priorities,” said Daniel Ramage, who assumed the position of general manager, in August 2022. “These are large-scale projects with significant impacts. Our work ensures this research is developed and managed for the benefit of the industry and to maximize the impact of investments.”

To highlight that impact, SIP recently produced a report demonstrating the positive effects of its cluster research on the pork sector in Canada and the economy at large.

“Our report showed that the \$30 million we invested in Cluster 1 and 2 led to a three-and-a-half per cent productivity increase in the sector,” said Ramage. “We are now completing Cluster 3 and are working towards launching Cluster 4 in spring

2023, so we can look forward to keeping up this momentum in the years ahead.”

Current examples of Cluster projects help illustrate the breadth and depth of SIP-funded research and the tangible benefits flowing from those studies, from animal health and welfare, to nutrition, new technologies, sustainability improvements and more.

Animal welfare: Transport distance impacts

Animal transportation is a hot-button issue in livestock production. A project by Jennifer Brown, a research scientist with Prairie Swine Centre, assessed the response of weaner pigs under Canadian commercial transport conditions and found that weaners subjected to long-distance transportation lost more of their body weight, experienced more dehydration and spent more time feeding, drink-

ing and sitting after the journey than weaners transported short distances. However, weaners transported shorter distances had more muscle injuries and higher indicators of physiological stress.

Result of this study have the potential to impact the timing of weaning and transportation events at the farm level, along with trailer design, which could include climate control mechanisms. More work needs to be done to refine this understanding, but the results are an important part of better addressing animal welfare concerns.

Animal health: Truck washing

As porcine epidemic diarrhea (PED) and other diseases have sparked a greater interest in biosecurity, a prime target for SIP research has been the trucking sector, where the risk of disease transfer is ever-present. To address

CONTINUED ON PAGE 22

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Animal welfare in agriculture is a growing public trust issue. Research into best management practices for pigs can help reinforce how the sector is positively addressing concerns.

this challenge, a comprehensive study was undertaken by Terry Fonstad, who is the associate dean for research and partnerships for the College of Engineering at the University of Saskatchewan.

One of the study's key findings was that, while dry heating of pathogens for 15 minutes at 70 degrees-Celsius could inactivate most of them, greater intensity was needed to address PED. As a result, researchers now recommend heating trucks to 75 degrees-Celsius for 20 minutes in every section of the trailer.

At a time when disease threats are being closely monitored by the Canadian industry and global trading partners, this project will mean fewer losses for producers and greater wel-

fare for their animals – truly a win-win.

Nutrition: Preventing diarrhea

Can pigs fed a less-expensive, low-complexity nursery diet stay healthy and grow well? Vahab Farzan, a research scientist with the University of Guelph, has found that pigs fed low-complexity diets for five weeks post-weaning experienced diarrhea more frequently.

While low-complexity diets are cheaper, this research has shown they may cause problems, but the underlying factor that warrants further investigation on-farm is whether pathogens like *Streptococcus suis* or *E. coli* could factor into the diarrhea equation.

As diarrhea may be symptomatic of various diseases of note – potentially creating problems for growth performance or even trade, farther along – understanding what causes it has received a lot of interest.

Quality: Classifying Canadian pork

New ways to assess pork quality are being closely considered in the highly competitive global pork marketplace, to build on Canada's reputation and leadership in exports.

Manuel Juarez, a research scientist with Agriculture and Agri-Food Canada's (AAFC) Lacombe Research and Development Centre, has been tasked with creating and commercially testing the viability of an updated pork

quality classification system. This project is investigating cost estimates of different technologies and the development of new tools and approaches, in addition to the modification of existing technologies to support the development of quality classifications.

Looking ahead

As these projects underline, SIP's partnerships with the pork sector and stakeholders in government and academia enable innovation that unlocks progress around core priorities like production efficiency and animal health and welfare, along with food safety, product quality and environmental sustainability.

"Canada is a leader in pork research, thanks to the investments that have been made jointly by our collaborators over the years," said Ramage. "Research has never been more important to the pork sector than it is today, as the industry responds to changing consumer and regulatory demands and navigates emerging issues."

Just as producers must adapt to a fresh industry landscape, so too must organizations like SIP, to remain relevant and effective when needed most. Today, the funding appetite for research is shifting significantly. Government funding ratios for Cluster research have become less generous than they were when the program was first start-



Research and innovation are key ingredients in the recipe for growing pork supply and demand, through initiatives like the Canadian Pork Promotion and Research Agency (PPRA).

ed, and the emphasis on sustainability has grown enormously.

"Looking forward, this means industry must play an even greater role in advancing its research interests, and it will take even stronger value chain collaboration to drive progress through research," said Ramage. "This is a key role that SIP plays by bringing partners together and mobilizing resources around shared priorities."

The recent creation of the Canadian Pork Promotion and Research Agency (PPRA) is seen as a prime example of value chain alignment to build new

opportunities for advancing research that benefits business. It was created to support the development and implementation of the promotion and research necessary to increase the demand for pork.

"By leveraging these types of partnerships and coordinating to maximize impact, we can position the value chain to make the most of innovation," said Ramage. "For SIP, this means forging research that builds on Canada's competitiveness and brand as a global pork leader over the long term." ■

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Porc Show focuses on environment, AMU, feed

Andrew Heck



Quebec City's 'Petit Champlain' quarter in the old town – named for founder Samuel de Champlain – is one of many perks for guests at the Porc Show, which was back in-person this year.

Following a three-year hiatus due to COVID-19, the Porc Show returned in-person for more than 800 guests at the Quebec City Convention Centre on Dec. 6 & 7.

Without a doubt, producers and industry partners from coast-to-coast have had their calendars marked since

2019, eagerly awaiting this pilgrimage to Canada's second-oldest city and the country's largest pork-specific conference.

From an exploration of supply chain issues in meatpacking and the environmental impact of pork, to improving the

judicious use of antimicrobials and better management of feed, the Porc Show this year featured a full slate of engaging speakers and timely topics.

Supply chain issues continue to hamper meatpacking

On the first afternoon of the conference, a panel discussion took place with Paul Beauchamp, Vice President, Olymel; Arnold Drung, President, Conestoga Meats; and Stéphanie Poitras, Executive Director, Aliments Asta, covering a range of issues that have created obstacles for packers, including political tensions, labour shortages and consumer demands.

Uninterrupted market access for Canadian pork continues to be a barrier. For Drung, the often-rocky but usually reliable trade relationship between Canada and China has been more unpredictable in recent times.

"You can't build a business plan on China," he said.

While high-quality cuts of meat earn a premium in markets like Japan, price-conscious markets like China favour offal, which has few other outlets, almost none of which are domestic. Despite that



Executives from federally inspected meatpackers spoke frankly about the challenges they have faced in the past few years, during an on-stage chat to kick off the first day of the event.

favourable situation, certain high-level decisions still prevent some Canadian packers from sending pork to China, without much hope of change anytime soon.

For Beauchamp, filling shifts at Olymel's plants in Quebec has proven harder than he would like. For years, his company has targeted foreign workers from Francophone countries in the Caribbean and North Africa, but even that has proven to be not enough. Thankfully, an update to federal legislation is now making it easier for families of Temporary Foreign Workers (TFWs) to come to Canada. Drung concurred, citing the example of two Filipino workers who joined Conestoga nearly two decades ago as TFWs and remain with plant today, as a result of eventually having established permanent roots in Canada.

"The meat industry has always been an industry of immigrants," he said. "Look back 100 years. We have a good track record with them, and a lot of them want to stay."

In addition to politics and labour, new considerations have emerged when it comes to the preferences of international pork buyers.

"We've had enormous pressure in the last five years on animal welfare," said Poitras. "We need to watch everything we do."

Despite this, members of the panel agreed that, between Canadian Food Inspection Agency (CFIA) requirements and voluntary quality assurance programming, the Canadian pork industry has a better handle on animal welfare than some other major producers globally, which should be an encouraging prospect.

The future of pork's environmental impact

Mia Lafontaine is a consultant and speaker in sustainable development for

the agri-food sector. She has previously worked as a feed company representative. Originally from France, she currently lives in the Netherlands, which is at the centre of a bitter dispute between farmers trying to protect their livelihoods and a government that is hostile toward agricultural land use.

However, based on data out of Quebec and Ontario, pork's increasingly smaller land use in our country is already very competitive globally. But when it comes

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When it comes to climate concerns, threats to the agriculture industry are inevitable and ongoing. Turning those threats into opportunities is key.

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to measuring environmental impacts on-farm, we have some work to do. In order to fully understand the sector's carbon footprint, we first need baseline data to measure improvements over time, which is beginning to happen.

Not only in Europe, but also in Canada, packers and retailers are starting to set ambitious climate targets. She cited Maple Leaf Foods and Loblaw as two examples of companies looking to become 'carbon-neutral.'

"Despite the environmental crisis being a global problem, we have to start working locally," said Lafontaine. "As an industry, we have to stop thinking this isn't a priority – it is."

Lafontaine believes some important steps for producers include environmental farm planning and responsibly applying hog manure to crops, offsetting the use of chemical fertilizers. Both practices align with federal government priorities and represent a huge opportunity to demonstrate success, which could translate into financial support.

Threats also continue to linger. Despite varying degrees of government support in Canada, myths regarding the use of water and plastics in agriculture continue to eat away at public trust. While some elected officials here are working toward a carbon tax exemption on farm fuels, in New Zealand, producers will soon be taxed on total farm emissions, starting in 2025. Avoiding such unreasonable legislative steps will be a massive task for all of Canadian agriculture.

Progress sought on antimicrobial use

Around 700,000 people die every year across the planet due to antimicrobial resistance (AMR), which disproportionately affects those in the developing world. At the current rate, that number is predicted to climb to 10 million annually by 2050, according to Laurie Pfleiderer, a veterinarian with Triple-V Inc. The culprit? Depending on which source you consult, animal agriculture has a lot to do with it.

While there is a tangible yet fairly weak link between AMR that impacts animals and AMR that impacts humans, the issue is not so black-and-white. Between 2016 and 2020, global antimicrobial usage (AMU) declined by 20 per cent, but there is still much room for improvement. Data presented by Pfleiderer suggests median AMU in Canadian livestock production is slightly higher than in the U.S. and about three times higher than in Europe, with hog production composing the greatest single proportion of that usage.

Many different and often valid reasons exist for administering antimicrobials, and 'judicious use' means they may continue to be used to ensure animal welfare. But where alternatives exist, Pfleiderer believes those should be explored.

"Why are you giving antibiotics? Is it treatment or prevention?" she asked. "You need to have a conversation with your veterinarian to address the problem in the best way."

Vaccine protocols are one alternative, along with options like water acidification and even the use of essential oils. Favouring individual treatments for smaller numbers of animals can help

prevent bacterial spread to an entire herd and the need for mass treatment.

Feed management makes the difference

Misuse of feed can equate to tens of thousands of dollars of losses annually for a producer, depending on barn size. Feed represents not only the largest chunk of production costs but also contributes significantly to pork's ecological impact. As such, managing feed effectively and efficiently makes a great deal of sense.

Aurélie Moulin is a nutrition consultant with Agri-Marché Inc. Her main recommendation is to use 'feed budgets' containing specific phases to optimize rations. The better the phases are defined, the more controlled the process can be.

As sow feed composition changes, so does density, and so should volume, accordingly. Particle size is a factor, whether the feed is pre-mixed or made on-farm. Feed wasted in gestation can range from nearly \$10 per sow to upwards of \$40 per sow, and during lactation, heat stress can have negative impact on performance. The hotter a sow is, the less she will eat.



'Teamwork makes the dream work.' Or, when it comes to feed management, producers and nutritionists finding solutions together.

Starting from farrowing, nurse feed management is critical. It is the costliest stage and has the greatest impact on future performance. Understanding proper feed composition in weaning helps prevent diarrhea and lost energy. Lighter piglets are especially vulnerable in this regard.

Feed that goes uneaten is also part of the problem not only on a cost basis but in terms of performance as well.

“Any feed that isn’t consumed is made up from body reserves,” said Moulin. “Having access to enough feed early on is important for growth.”

However, feed intake levels and performance are not always correlated. Finding the sweet spot for your operation is what matters most. Maintaining feeders is an important task for producers to help themselves manage feed better and control costs.

As an overarching message, Moulin believes that this area is not only the responsibility of a nutritionist; producers must work closely with their partners to ensure that feed is being put to best use from day one all the way to shipping out of the barn.

Porc Show highlights the industry’s best

The gathering of minds at the Porc Show is special and different from most other North American pork conferences. Not only the predominant use of the French language and the wonderful setting, but

also the level of expressed government commitment to the province’s pork sector.

“We want the industry to be profitable, and the industry is only as strong as the weakest link in the value chain,” said André Lamontagne, Minister, Quebec Agriculture, Fisheries and Food. “We need to focus on each part. Is it working for everyone in the long term? We need to find solutions.”

Canada’s ag minister, likewise, echoed the sentiment of strengthening the sector through continued collaboration.

“I know the situation is not easy, but the federal government wants to support

producers as much as possible,” said Marie-Claude Bibeau, Minister, Agriculture and Agri-Food Canada (AAFC). “Our ASF funding is designed to support biosecurity and wild boar management, and new market development opportunities are meant to support trade.”

With another Porc Show in the books, participants are reminded of the beauty, diversity and history of Canada and our industry, which are stronger united – in-person – than divided along boundaries we impose ourselves. Together, we can continue to do great things across the value chain and across our country. ■



This year’s meal included braised pork shank; potato and parsnip purée; winter veggies with bacon; and a pan sauce of beer, mushroom and maple. The dish was the winning creation of culinary students from Quebec’s Institute of Tourism and Hotel Management – an annual tradition for the Porc Show.

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Prairie Livestock Expo features pork quality, PED

Anne Cote



Prairie Livestock Expo's carcass quality competition is a unique and highly anticipated attraction at the event, which was just held for the first time, since 2019.

Following a three-year hiatus due to COVID-19, Prairie Livestock Expo returned to Winnipeg on Dec. 14, with University of Manitoba researchers headlining the information sessions. The show was opened this year with remarks from Cam Dahl, General Manager, Manitoba Pork.

Prairie Livestock Expo is a multi-species livestock show featuring hogs, beef and dairy cattle, sheep, poultry, bison and goats, with nearly 140 exhibitors on-hand. The event is free to attend and includes a full day of presentations and networking.

But it was the hog carcass competition that generated the most excitement among producers and exhibitors in attendance.

Carcass quality impresses guests

Along the rear wall of the exhibition space, 10 carcasses hung in a cooler. None had competitors' names on them, but three sported ribbons indicating they were the top-three carcasses.

Throughout the day, producers and exhibitors alike wandered past the windowed refrigeration unit discussing the merits of each and guessing which breeder would take top honours. The judging was done by Jason Care, Man-

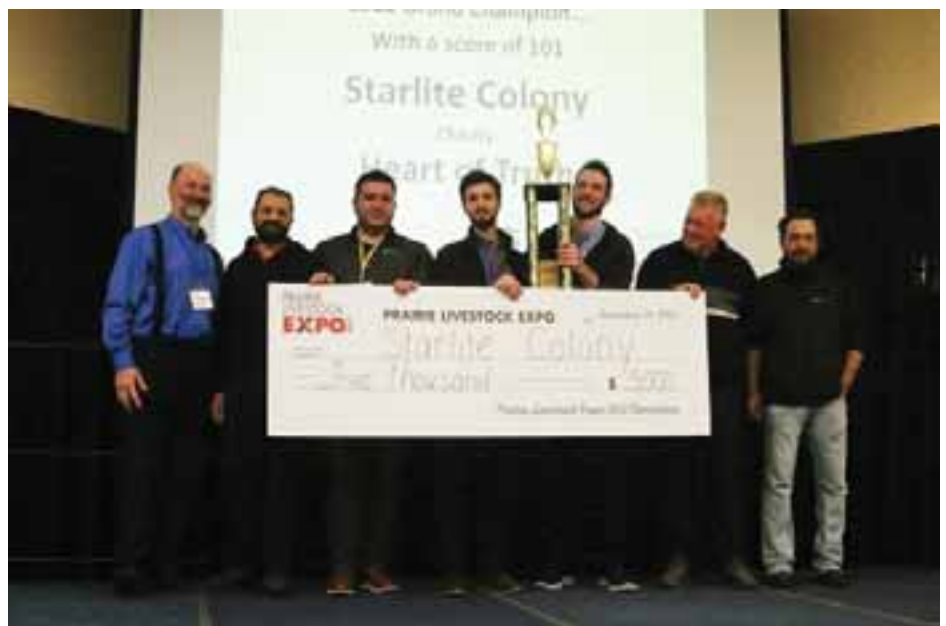
ager & Auditor, Manitoba Hog Grading, Manitoba Pork.

"We consider it to be the largest pork quality competition in Canada, maybe North America, maybe the world," said Dennis Stevenson, General Manager, Premier SHP Veterinary Corporation, who served as emcee.

Stevenson said the hog carcass competition began in 1996 and, since then, has raised over \$442,000 from sponsors. The money is awarded to the winners of the competition. They, in turn, donate it to charities of their choice across Manitoba and around Canada.

"We can't thank the colonies enough for their cash donations to charity and generous donations of over 152,000 pounds of pork to Siloam Mission, Winnipeg Harvest and other food distribution entities, just in time for Christmas, when many families are most in need," said Stevenson.

This year, 12 farms submitted 24 carcasses to be judged. Ten of them received cash prizes ranging from \$1,000 to \$2,000 for the charity of their choice.



Starlight Colony's 101-point hog – the highest score ever received in the competition – won first place and \$5,000 for the colony's preferred charity.

In third place, Boundary Lanes Colony earned \$3,000, while Woodlands Colony followed in second place, winning the title of 2022 Reserve Grand Champion and \$4,000 for their charity, Portage Hospital Foundation.

Top honours and the title of 2022 Grand Champion, with a \$5,000 prize donated to Heart of Truth, went to Starlight Colony for a carcass that weighed in at 96.8 kilograms and garnered 101 points on the quality rating scale. Stevenson said this was the highest score ever achieved on the 111-point scale, beating the previous record of 100 points.

The winning pig was chosen by Trevor Hofer. He said he picked the pig out of the herd in November, when it was about 115 days old. When asked why he chose that particular pig to groom for the hog competition: “It had the widest back, and it was the perfect weight.”

And, just to be clear, Hofer isn’t about to sit on his laurels; he’s already planning to enter the competition again next year.



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**Disease concerns continue to
linger in Manitoba**

While excitement and voices in the exhibition area were rising as attendees squeezed between displays covering everything from animal nutrition to retractable doors and slotted flooring, there was a quieter space up the hall and around the corner where Jenelle Hamblin, Manager, Swine Health, Manitoba Pork, and researchers from the Department of Agriculture at the

University of Manitoba, were sharing their stories.

Hamblin began the morning session with an overview of porcine epidemic diarrhea (PED) in Manitoba. She said there were 128 confirmed cases of PED in the past year, with the majority of cases found in finisher hogs.

Even more important than the numbers she presented were the coping mechanisms she suggested. Producers can be

CONTINUED ON PAGE 30



While presentations focused on disease issues, processors Maple Leaf Foods and HyLife Foods collaborated with Family Foods to demonstrate ways to display pork at retail. About 120 kilograms of meat were used and donated to local food banks, following the event.

active participants in the prevention of disease spread.

According to Hamblin, Manitoba Pork commissioned the Western College of Veterinary Medicine (WCVN) at the University of Saskatchewan to come up with recommendations for farmers facing swine disease in their barns or on neighbouring farms.

They suggested the first step in disease prevention is to minimize or eliminate gilt exposure to disease by avoiding over-crowding or too much handling, and making sure the animals receive vaccines that are available.

The long-term goal is to eliminate 96 per cent of PED outbreaks by 2027. It's a realistic goal, Hamblin said, because, knowing the disease won't be completely eradicated, there's a margin for outbreaks on up to 10 Manitoba farms per year.

So, the way to achieve this goal is to manage the ongoing risk by employing a rapid and aggressive response by limiting the interactions with infected animals and surfaces. But keeping animals safe has proven to be a challenge during COVID-19, Hamblin admitted, with labour shortages being especially problematic.



Researcher Qiang Zhang talked swine disease, which has been a problem in Manitoba this year, related to PED and SVA.

Hamblin suggested every barn should have its own biosecurity plan based on the risk of disease spread for that particular building. Space plays an important role in this plan, as the more crowded the barn is, the more likely disease will spread rapidly.

Presently, the Canadian Pork Council (CPC) is working on a national strategy for disease prevention. A national strategy for the control of swine diseases such as Seneca Valley Virus (SVA) and African Swine Fever (ASF) will be helpful for existing and future trade deals between countries, as evidenced by an outbreak of SVA in Manitoba this past summer, prompting the U.S. Department of Agriculture (USDA) to express concerns about shipments of Canadian pigs arriving at the international border.

“The USDA didn't want SVA-diagnosed hogs in the U.S. system, especially in slaughter facilities and assembly yards,” said Hamblin.

In the case of an outbreak of ASF, the Canadian Food Inspection Agency (CFIA) has a critical role to play when handling public, government, producer and stakeholder communications. They also negotiate with international partners, whenever necessary, to re-establish trade after an outbreak of disease has occurred.

Qiang Zhang, a research scientist from the University of Manitoba, pointed out just how hard it is to contain the viruses that plague the pork industry.

“Viruses don't just get into the air on their own,” he said. “They travel by direct contact and indirect contact: touching an object that a sick animal has previously touched. Then there's the problem of airborne transmission of viruses. COVID-19 in humans is a good example.”

Zhang provided some examples of airborne animal viruses, which travel much more widely than viruses spread by either direct or indirect contact. One instance is Foot-and-Mouth Dis-

ease (FMD), which travels even farther than the Porcine Reproductive and Respiratory Syndrome (PRRS) virus, which has been shown to travel up to nine kilometres through the air, hitching a ride on a water molecule or dust particle smaller than five microns, completely undetectable by the human eye.

Zhang noted that PED has been shown to travel at least the same distance as PRRS and can conceivably travel from one barn to another on dust or moisture expelled by an air ventilation fan and taken in by a fresh air intake at another barn.

The problem with this airborne transmission is it is impossible to filter, as the density of an air filter that could contain the airborne virus will also interfere with ventilation required for healthy air in the barn. The problem with filters is that they require regular maintenance to remain effective and they are costly, according to Zhang.

Getting back to getting together

With viral transmission creating hiccups and attracting negative attention at times, Prairie Livestock Expo's friendly environment and fun activities remind us of the positives. The ability for producers and partners to come together, proudly display their work and benefit their surrounding communities is a testament to everything good in the agri-food sector. ■



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CPC names new executive director

The Canadian Pork Council (CPC) named Stephen Heckbert as the organization's new executive director in late November.

Heckbert speaks English and French fluently, and brings more than 25 years of experience working in government, non-profits and academia, with a deep understanding of strategic communications, government engagement and organizational leadership.

"Stephen is joining CPC at an opportune time," said Rick Bergmann, Chair, CPC. "His extensive background is much needed as we tackle challenging policy files and move forward with our next stage of strategic planning."

Heckbert was once named a top '40 under 40' in the *Ottawa Business Journal* and



Stephen Heckbert

has led the Public Relations program at Algonquin College.

"I am excited to join CPC and work with Canada's pork producers to protect and grow this exceptional industry," said Heckbert. "I look forward to connecting with members and hitting the ground

running on the important issues impacting our sector."

Quebec producers welcome new GM

Éleveurs de porcs du Québec (Quebec Pork) officially welcomed Keven Beauchemin as general manager of the organization in early November.

Beauchemin holds a Chartered Professional Accountant (CPA) designation and a Master of Business Administration (MBA). He first joined Quebec Pork in 2019 as Director of Finance, then became Assistant General Manager, Administration and Finance. He has acted as Quebec Pork's interim general manager since early July.

"I am very proud to make this appointment. Keven is the perfect person to lead our team," said David Duval, Chair, Quebec Pork. "In the past months, Keven has successfully completed several projects, despite the major challenges facing the pork industry."

Keven will continue working on important files, such as the negotiation of the Quebec

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Keven Beauchemin

hog marketing agreement, the organization's strategic plan and other priorities.

Swine production course debuts in Manitoba

Manitoba Pork and Assiniboine Community College announced in mid-November the establishment of the Swine Production Foundations course.

"Everyone who makes their living in the hog sector in Manitoba shares the same set of values, focused on providing the best animal care, and the new Swine Production Foundations program ensures we continue to be leaders in that area," said Rick Préjet, Chair, Manitoba Pork. "We are thrilled to have worked with Assiniboine Community College on this program, as we seek to train a new generation of farm owners and staff that will carry on the tradition of being global leaders in animal care."

The online, self-directed program provides learners with an understanding of swine operations, including regulations, health and safety, record-keeping, and barn systems and maintenance. It will also cover content on production practices related to stockmanship, pig health, breeding, farrowing, nursery, and grow-to-finish.

"The college is excited to collaborate with Manitoba Pork and industry partners to develop a program to meet modern animal care standards and address workforce needs," said Tim Hore, Dean, Russ Edwards School of Agriculture and Environment, Assiniboine Community College. "The program will train the next generation of hog farmers and swine technicians to uphold the strong animal care standards the hog sector is responsible for."

CONTINUED ON PAGE 34



Manitoba Pork has worked with Assiniboine Community College to develop new hog production programming.

Renewed funding for livestock innovation

The Canadian Agri-Food Automation and Intelligence Network (CAAIN) launched the latest round of Livestock Innovation Program funding in early November – a \$5-million initiative designed to foster advances in animal agriculture.

“Our team is pleased to unveil this opportunity to further support the country’s agri-food industries,” said Cornelia Krepelin, CEO, CAAIN. “Of the \$49.5 million the Government of Canada has committed to our activities, \$9.5 million is earmarked to fund livestock innovation. While we already have several such projects either on-the-go or about to launch, including in the area of pork primary processing, we want to enable and encourage a broader cross-section of livestock-related initiatives.”

The goal is to support research and development to enhance efficiency in livestock agriculture, including the adoption of

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automation, such as implementing robotics, using data-based decision-making and validating new technologies through smart farms.

The application deadline for the latest round of the program is in early February. Approved applicants will move on to submitting expressions of interest and full project proposals. Funding recipients will be announced later this year.

Fake meat continues to flop

Turmoil remains for the troubled plant-based meat sector amid weak product demand and high prices, most notably with California-based Beyond Meat, which announced a 20 per cent reduction of its workforce in mid-October.

In early November, Beyond Meat stock had slipped to just over \$13 per share,



Even with record-high food price inflation, deep discounts on plant-based meat alternatives – frozen, in many cases, to preserve shelf life – may not be enough to keep manufacturers afloat.

down from nearly \$100 per share a year before. At its peak, the company's shares were valued at more than \$230 each, in July 2019.

The poor stock performance and layoffs came as Doug Ramsey, former Chief Operating Officer, was arrested for 'terroristic threatening' and 'third-degree battery' in mid-September, following an incident that happened in a parking garage after a college football game in Arkansas. Ramsey allegedly bit his victim's nose during the incident.

Further complicating the image of the plant-based sector is a new study from Cambridge University (U.K.) confirming that biomarkers of inflammation in individuals who consume real meat are no different than for those who consumer plant-based products. Symptoms of chronic inflammation can include body pain, fatigue and mood disorders.

Study participants ate at least two or more daily servings of Beyond Meat products for eight weeks, followed by two

or more daily servings of animal meat for eight weeks, or vice versa. After the study period, participants' blood samples were analyzed to measure the difference of inflammation.

The study authors concluded: "Overall, none of the change scores between the two diet phases were significantly different... Additionally, the four biomarkers all slightly increased regardless of diet phase and order. These results do not support our hypothesis, that biomarkers of inflammation would improve during the plant-based meat diet."

The revelation appears to be another blow to the unsubstantiated marketing claims promoting meat alternatives as healthier than real meat.

ASF becoming further embedded in Europe

A new case of African Swine Fever (ASF) was detected in a wild boar carcass found in Czechia in early December, only a few kilometres south of the

country's border with Poland, which is rife with the virus. Czechia was the second European country to declare itself free of ASF, in 2021, following Belgium's declaration, in 2020.

At present, more than a dozen countries in continental Europe are afflicted with ASF, including the majority of regions in Russia west of the Ural Mountains, nearly all of Ukraine except Crimea and likely most of Belarus. ASF is also found in most regions of the Baltics (Estonia, Latvia and Lithuania), some regions of central Europe (Poland, Slovakia, Hungary, Romania and Moldova), and some regions of the Balkans (Bulgaria, Serbia, North Macedonia and Greece).

Three regions of Germany and two regions of mainland Italy have also discovered the disease in wild boar and domestic herds. Both Germany and Italy are export-heavy pork-producing countries. A separate strain of ASF has been endemic to the Italian island of Sardinia for decades.

CONTINUED ON PAGE 36

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¹ ES 164
² ES 124, ES 133, ES 147, ES 150, ES 144, ES 154

Since January 2020, ASF has been reported in 45 countries worldwide – not including those that were declared officially absent of the virus prior to that time – affecting approximately 1.2 million domestic pigs and nearly 40,000 wild boar.

Alliance Genetics Canada joins DanBred

Alliance Genetics Canada (AGC) will now be known as 'DanBred Canada,' following an acquisition last year to bring nine-year-old AGC under the 120-year-old umbrella of the DanBred corporation, headquartered in Denmark.

“Our focus is always on how to better the product we deliver to our customers, and this partnership is what we needed to take our local expertise the next step,” said Dave Vandenbroek, CEO, DanBred Canada.

DanBred will benefit from AGC's strong position as a trusted partner, as well as leveraging its established customer base and solid knowledge of the Canadian pig industry. The collaboration is a natural extension of AGC's clear ambition to always work towards making its customers more successful. DanBred is confident that this alliance will contribute with increased efficiency and profit for the Canadian pig producers.

B.C. animal activists sentenced

Two animal activists were sentenced to 30 days in prison and one year of probation in mid-October, following a widely publicized trespassing incident at a B.C. hog farm, in April 2019. As part of that incident, perpetrators captured unauthorized video footage inside the barn, which was later promoted by People for the Ethical Treatment of Animals (PETA) on social media.

Following the attention given to the crime by PETA, some collaborators in mainstream media chose to further amplify the distorted message, ultimately causing undue harm to the reputation of the industry while increasing the credibility of the activists among their peers.

The sentencing judge characterized the matter as, “a carefully planned and orchestrated mass invasion,” suggesting the activists, “incited and encouraged many others to break the law.” While the sentencing may, unfortunately, not go far enough to deter future trespasses, it marks an important step toward justice for farmers who feed Canadians and people around the world every day. ■

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