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Cover Photo

Marc Barmentloo and his children in their barn near Tofield, Alberta

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anadian Message from the editor



The Summer 2020 edition of the Canadian Hog Journal is here!

After a few months that have seemed like an eternity, life is creeping back toward the [new] normal we have been told to expect. With any luck, we will now be better prepared to handle the predicted second wave of COV-ID-19, if and whenever it comes.

This edition prominently includes an exploration of shared

value between producers and packers. It should come as no surprise that this matter is quite controversial and divisive. Many producers I encounter pull no punches when it comes to describing their deep-seated frustrations regarding pricing, and this article is an attempt at reflecting those concerns in a way that can hopefully inspire positive change and a collaborative path forward.

This edition also includes an update on the Spring 2020 coverage of COVID-19's impacts on the Canadian pork industry. It is a lot to digest, and quite frankly, the news has been happening too fast to cover with an entirely clear picture of the situation. It is a tricky story to tell, and out in the world beyond our industry, our story has, unfortunately, been told badly. This has likely resulted in undue harm to our collective reputation, and we will now have to work even harder to share accurate, balanced news to raise public awareness.

In 2019, several hog and poultry farms in B.C., Alberta, Ontario and Quebec were the victims of animal activist orga-

nized crime. Some people, including me, would consider it terrorism. In many of those cases, most perpetrators have not been brought to justice. Meanwhile, news media, at best, has been lax on reporting the truth, or at worst, has worked to deliberately spread misinformation. It is an indescribable insult to producers' livelihoods and a black mark on the legal institutions that are supposed to protect farmers but fail miserably. Thankfully, some sympathetic political representatives have been aiming to change the game. This edition looks at what progress has been made.

If you manage to make it all the way through the heavy content, you will enjoy a summer-focussed look at the growth of home cooking, as a result of the COVID-19 pandemic. The story reminds us how, in spite of challenges, we are ready to continue enjoying the brighter side of life to the best of our ability.

Research in this edition covers the potential cost savings of including enrichment for your herd, the intestinal fate of dietary zinc and copper, along with the role of protected acids in sow performance.

I have once again included a "Letters to the editor" section featuring reader feedback. Got something to say about what you see here? Do not hesitate to reach out and let me know. Email andrew.heck@albertapork.com with your thoughts, and they could make it into the next edition!

> Andrew Heck Editor

andrew Heck

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Canadian Letters to the editor

In reply to "Defending the pork value chain during COVID-19" (Spring 2020)

"Marie-Claude Bibeau, Minister, Agriculture and Agri-Food Canada, recently said agriculture needs to 'make better use of existing [financial] support.' What support is she referring to? AgriStability, AgriInvest or provincial programs? AgriStability is based on the last five years with the highest and lowest drops, with the remaining three years generating your average. My farm's average sucks because government refuses to acknowledge what trade wars have done to us. Under AgriInvest, the support is matched up to \$15,000. Hell, the carbon tax alone is going to eat that up!" - Maaike Campbell, Arkona, Ontario

In reply to "Defending the pork value chain during COVID-19" (Spring 2020)

"Since COVID started, my family and I have been enjoying lots of Canadian pork. It's yummy and supports local producers and the economy!" - Karin Melnyk, Red Deer, Alberta

In reply to "Producers should seek better share of export values" (Spring 2020)

"Exports obviously form an important part of the Canadian pork industry, but consumers sometimes forget that there are great local products close to home. I'm proud to serve local food and beverage at my business, The Copper Coil Grill and Still, and I think it's really important these days especially to support producers." – Scott Gadsby, Squamish, B.C. ■





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Producer-packer tensions threaten viability

Andrew Heck

The Canadian pork industry is only as strong as its leastappreciated asset: producers.

Business continuity is currently under threat due to a host of issues in the industry, and underscoring the struggle is a lopsided relationship between producers and packers, which is further slanted down the value chain at the retail level. Consumers often do not see this, and it remains far too easy for them to ignore that reality when food continues to fill their plates.

Research from the Canadian Centre for Food Integrity (CCFI) shows that the Canadian public trusts farmers, even if many non-farmers are not always up-to-speed with how the agriculture industry operates. As such, producers have earned a significant amount of respect from many people who are simply not aware of the financial dynamics at play. Even among producers, interpreting the dollars-and-cents paper trail can seem like a bit of a shell game.

Addressing long-term viability - specifically independent producer profitability - requires certain challenges to be brought to light for the betterment of all partners. With the decade-low prices seen in September 2018 and similar prices in April 2020, many producers are still stuck in multi-year contracts with packers. As it stands, some producers have been and will continue to make a departure from producing pigs altogether before losing more of their equity.

Coming together for the greater good

In mid-May, the pork producer organizations in B.C., Alberta, Saskatchewan and Manitoba issued a joint invitation to executives from Maple Leaf Foods, Olymel and Donald's Fine Foods to have an open and frank discussion on the state of the industry, and to work for solutions that generate shared value for producers and processors.

Part of the written invitation reads: "As a result of our flawed value sharing system, pig producers in Canada have needed to rely on the goodwill of the federal and provincial governments and taxpayer dollars to support producers' very survival."

It continues, "For too long, the producer and packer have been at odds with each other, and it has created an unmanageable and antagonistic relationship that is weakening the industry and the brand in the global marketplace. This approach must come to an end."

Shortly after the letter was sent to packers, notice was given to the broader Canadian pork industry and news media. Following the wider distribution, David Duval, Chair, Les Éleveurs de porcs du Québec (Quebec Pork Producers) expressed his support for the initiative:

"This is a very legitimate request that espouses our concerns that we have repeatedly expressed to our partners in Quebec. Sharing the price according to the real value of pork on the markets is a critical issue, both for the sustainability of pork producers and for buyers."

With the COVID-19 pandemic highlighting some of the stress points in our value chain, producers are eager as ever to work on solutions. With limited options at their avail, many producers are feeling cornered by the lack of incentive to grow their businesses. The resulting stalemate can be considered a huge lost opportunity for everyone.

Processor profits helped by narrow producer margins

Réjean Nadeau, President & CEO, Olymel, in his company's most recent annual report, stated: "The Western hog production sector recorded a loss in 2019 almost equal to that of the previous year despite the favourable impact of a weaker





Olymel not only exports fresh and frozen pork but also offers a diverse line of products that are enjoyed by Canadians across the country, supported by hard-working local producers, who often receive a fraction of the retail price.

Canadian dollar. The loss stemmed primarily from lower livestock prices and higher grain costs."

While that is no shock to producers, on the meat side, the story was different: "In 2019, the Western fresh pork sector recorded improved results for the fifth successive year despite the suspension of the Red Deer plant's export licence for China. This solid performance was driven primarily by a higher meat margin stemming from the increase in slaughtering volume and a greater share of value-added products."

Olymel's strategic targets, as indicated by the company's strong push for overseas market development, are largely

dependent on a reliable, increasing supply of hogs for its plants. Olymel operates four hog slaughtering facilities in Quebec and one Alberta. Aside from a two-week span in mid-April, during which time one plant was temporarily shuttered after several workers contracted COVID-19, Olymel typically cannot get enough hogs to satisfy existing capacity and new growth.

In Alberta and Saskatchewan, Olymel's integrated 50,000sow production accounts for more than 60 per cent of what is shipped to its plant in Red Deer. Factoring in everything else Olymel contracts or buys, the company owns most hogs on-farm in Alberta, effectively controlling the largest proportion of available supply.

The highly skewed nature of producer-to-processor leverage, in favour of processors, places producers in the difficult situation of having only two prominent hog buyers dominating the market. It is a precarious position for those who may feel powerless to break the cycle of disadvantageous contract negotiations.

Further complicating the situation is the difference between production levels and profits in western and eastern Canada, which translates into a disparity between what producers are paid in Alberta and Saskatchewan versus Quebec.





Olymel is a division of La Coop fédérée, now known as Sollio Groupe Coopératif. The cooperative is composed of more than two dozen localized traditional agriculture networks in Quebec, to which thousands of hog producers belong. In 2019, Sollio distributed \$17.6 million in patronage refunds to cooperatives and paid a \$2.4 million dividend to the Cooperative Pork Chain.

In addition, for those who raise hogs in Quebec, the provincial Farm Income Stabilization Insurance (ASRA) program provides an added competitive advantage by acting as a form of collective insurance to protect against market and production cost fluctuations. Complementary to the federal AgriStability and AgriInvest programs, ASRA compensates producers when the average selling price is lower than the stabilized income. The stabilized income is based on the production costs of specialized farm businesses.

In western Canada, there is one saving grace for producers who sell to Olymel: a transport proximity bonus, introduced in mid-2019, that helps off-set the cost of shipping to Red Deer. Additionally, the company has recently widened its grids to accept larger hogs, introduced incentives for group sow housing and provided new futures-based forwardcontracting options. While these perks have helped sweeten the pot for some, many producers are still seeking options for mutual prosperity.

Olymel asks to revert Quebec pricing decision

Among the potential solutions that could help producers across Canada is a pricing structure that takes into consideration cut-out values, such as the model in Quebec.

Despite having established a new pricing model for that province less than two years ago, Olymel appealed to the Régie des marchés agricoles et alimen-

Quebec's recently established pricing formula has proven to be an equitable, stable model based on a price control mechanism, quality assurance premiums and cut-out values.



taires du Québec (the province's commodity marketing council) in early March to suspend the use of the existing price formula for a four-month period, on account of the COVID-19 pandemic, citing short-term processor losses.

Olymel's request was for a return to a combined formula taking 75 per cent of the previous structure while maintaining 25 per cent of the current structure outlined in the province's 2019 to 2022 Marketing Agreement. Les éleveurs de porcs du Québec (Quebec Pork Producers) quickly opposed the decision, which would have slanted the tables back to less equitable pre-2019 times.

Quebec Pork's opposition was based on Olymel's lack of a comprehensive proposal that would help reduce surplus pigs - a key issue at the time of the request. In the interest of fair risk sharing, Quebec Pork offered a temporary fallback proposal, which involved a 50 per cent calculation combining the two pricing formulas.

The rationale for the temporary decision was largely based on Olymel's arguments: destabilization due to CO-VID-19, including the Yamachiche plant's two-week shutdown and consequent retrofitting measures required for workers, caused harm to Olymel's slaughter margins and would have further affected meat-cutting. While such

measures equally impact those who raise pigs, the suggestion of a combined formula disappointed producers.

In early June, following a series of hearings, the Régie overturned the temporary 50-50 split, favouring a reversion to the pre-COVID structure. The decision, however, adds a condition that prevents the hog slaughter price from falling below 65 per cent of the cut-out price. In May, the price disparity resulted in record-high payouts to producers. Further hearings to review the decision are scheduled for July, August and September.

Going green while producers are in the red

Sustainability in the pork sector can mean different things to different people. For consumers, the word often conjures up impressions of eco-friendliness. But for producers, business continuity is the primary focus when margins are tight.

In November 2019, Maple Leaf Foods made the announcement that its organization had become the first major food company anywhere in the world to achieve carbon neutrality through the purchase of carbon offsets in addition to processing plant upgrades. As a result, in December 2019, Maple Leaf received a \$2 billion loan from BMO as a sustainability incentive. This type of

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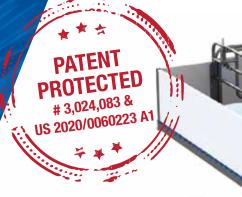
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Maple Leaf Foods' green initiatives have been turning heads around the world, but are producers being noticed?

"green lending" is gaining traction in Canada as motivation for companies to lower their carbon footprint.

In January 2020, Rory McAlpine, Senior Vice President, Government and Industry Relations, Maple Leaf Foods, suggested during the Canadian Agricultural Economics Society policy summit in Ottawa that competitiveness is an issue for processors. Environmental regulations, carbon pricing and other factors have hindered growth compared to Canadian processors' American counterparts. While the argument may hold water in a direct comparison, Maple Leaf's \$600-million chicken processing facility under construction in London, Ontario, announced in November 2018 - which is receiving more than \$50 million in combined funding from the governments of Ontario and Canada - may also suggest a discrepancy in that line of reasoning.

With the release of Maple Leaf's latest annual report, Michael McCain, CEO, stated: "At Maple Leaf Foods, we have embraced the principle of shared value and are on a purposeful journey to become the most sustainable protein company on earth... We believe our company's financial health and competitiveness are intertwined with the health of local, national and global communities."

He added, "For the year, our meat protein segment delivered 10.4 per cent adjusted EBITDA margins, up 50 basis points over the prior year, while absorbing the impact of difficult and unnaturally volatile market conditions which produced headwinds of 110 basis points. This speaks to the underlying strength of the business."

Maple Leaf's pursuit of shared value, while noble, may appear to conflict with its ambitious growth strategy. And while growth is no sin in the business world, the consequence may be that producers are no longer able to compete.

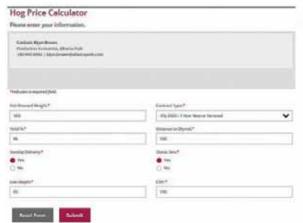
Contracts demystified using new tools

For the average producer, making heads or tails out of contract specifics can be a nightmare. For those signing the contract without a full disclosure of straightforward information, what appears to be a win-win deal can end up hurting producers by locking up their hogs at an unfavourable price. Market volatility is the name of the free market capitalism game, but not every party is necessarily equipped to fight fairly.

In early May, Alberta Pork published on its website a new Economics section designed to support producer success by providing the tools for effective contract decision-making. The section includes pork market and hog supply reports, information on cost of production and the latest economic research, in addition to pricing formula breakdowns for western Canada's federally inspected processors.

"COVID-19 has changed our world, and it is now time to fix the main issue that hampers the Canadian pork industry," said Darcy Fitzgerald, Executive Director, Alberta Pork. "Producers are simply asking for a system that gives them a financial reason to produce pigs. The catalyst for change is transparency, and it starts by placing as many cards on the table as possible. With the problem fully laid out in the

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Alberta Pork has worked with the CPC to develop a pricing calculator (under development) that lays bare contract options, to give producers a decision-making advantage.

nadian HOT ISSUES

open, it becomes more difficult to avoid solutions that are beneficial to both parties."

Following on that work, Alberta Pork teamed up with the Canadian Pork Council (CPC) in June to develop a pricing calculator to allow producers to use their own numbers for evaluating various contract options.

"The calculator will provide an important opportunity for producers to consider adjusting their businesses, according to any marketing options they might have in the future," said Phyllis MacCallum, Sector Analyst, CPC. "With the help of this new tool, we hope to strengthen producer leverage and encourage further work toward a fairer, more accurate pricing structure for all Canadian pork producers."

The calculator will use pricing formula data compiled inhouse by Alberta Pork, based on U.S. Department of Agriculture (USDA) mandatory reporting, which is also the basis for Canadian prices. Producers can enter their own information, which then creates a hypothetical comparison between contracts for most western Canadian packers and Quebec. The goal is to eventually include options for additional packers, including those in Ontario.

Donald's pursues unique opportunities

It can be challenging to serve niche markets, with an Asian focus, while having to rely on a largely out-of-province source of hogs, but Donald's Fine Foods has risen to the occasion for more than two decades.

Starting in the late-1990s, Donald's made significant investments to grow Britco Pork - an acquisition that helped transform the company from a humble Lower Mainland meat cutter into an up-and-coming heavy hitter in western Canadian pork processing.

In 2005, Donald's meat-cutting facility in Richmond, B.C. was commissioned, followed by the purchase of Thunder Creek Pork in Moose Jaw, Saskatchewan in 2010, along with



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B.C.-based Donald's Fine Foods sources most of its hogs from Alberta. The company also operates Thunder Creek Pork in Saskatchewan.

the launch of the Sakura Farms brand in 2012 and the purchase of Five Corners Meat Co. in 2017.

The province of B.C. is home to only a handful of commercial producers, making hog supply a challenge for a company looking to maintain – let alone expand – its operations. As such, Donald's today relies extensively on Alberta producers who ship to its slaughter plant in Langley.

It can be a perilous trip across the Rocky Mountains, no less than 1,000 kilometres for the closest producers in Alberta, and while new transport regulations have been a learning curve, Donald's maintains its commitment to producers by fully covering transport costs and pricing pigs to match the Maple Leaf Signature 4 formula.

In late May, Donald's undertook an eight-week study to determine the viability of converting a former beef plant in Moose Jaw into a sow processing facility, to complement its operations at the nearby Thunder Creek plant. The study is considering the financial feasibility of such a conversion, in addition to overall support from producers, the public and government.

"[This] announcement is the first step toward a strategic investment to meet the demand for domestic sow processing," says Allan Leung, CEO, Donald's Fine Foods. "We want to create more opportunities for pork producers and support the forecasted need for domestic sow processing capacity."

Thunder Creek will continue to operate independently, and the jobs created from the sow processing facility would be entirely new. The new plant is anticipated to employ approximately 100 people, with the capacity to process most cull sows in western Canada. Currently, producers export over 80 per cent of their cull sows to the U.S.

PROFITABILITY AND TRANQUILITY





HyLife steps up to the plate

As producer organizations continue to lean on packers for support, one stands out in terms of its progressive efforts to strengthen relationships: HyLife. In April, the company introduced new premiums to reward producers, including a bonus for hogs validated under the Canadian Pork Excellence (CPE) program, in addition to weight- and ration-based incentives.



Along with paying producers a premium for CPE, HyLife is growing business in a responsible way, including the acquisition of new assets in Manitoba and Minnesota.

Like other counterparts in Canadian pork processing, HyLife is undertaking ambitious steps to grow business. In early May, the company announced the acquisition of more than 37,000 sows and 250 employees after purchasing ProVista's hog operations.

"We have a long working relationship with ProVista and look forward to building on all the hard work that they have done," said Grant Lazaruk, President & CEO, HyLife. "This acquisition enables HyLife to expand our production team and secure hog supply to facilitate future growth."

In late May, HyLife further grew its capacity and employee base by purchasing a 75 per cent equity interest in Prime

Pork, a recently renovated facility that produces, processes and sells pork products out of Windom, Minnesota, southwest of Minneapolis. Prime Pork raises 300,000 feeder hogs to market weight annually and sources the remainder from third-party suppliers. The newly acquired plant currently processes one million hogs annually, on a single shift. The company's main processing facility is in Neepawa, Manitoba, northeast of Brandon, where they process 3.2 million pigs annually.

While HyLife shares its competitors' growth desires, the company appears to be taking calculated, considerate steps toward expansion with independent producers' interests in mind, helping to augment the company's integrated operations - a refreshing situation for everyone.

All parties must cooperate to move forward

As the 2020 calendar year stumbles along in often unpredictable ways, flaws in the Canadian pork supply chain's shared value approach are being made more apparent than ever.

The COVID-19 pandemic did not cause the issues inherent to the pork sector when it comes to pricing and capacity. However, the pandemic has highlighted in a very powerful, public way the vulnerabilities that exist within our system.

In terms of ensuring the viability of that system in the future, it will need to adapt. In terms of cultivating a positive reputation for our sector, all parties will need to cooperate and present a united front to retailers and consumers. Transparency is key.

Producers and the industry cannot wait any longer for change. The ball is now in the packers' court. Who will accept the challenge, and who will dismiss it? At this point, it is not a matter of discovery and understanding, but action.



Tracking COVID-19's continued supply chain impact

Andrew Heck

With half a billion active or recovered cases and nearly half a million deaths worldwide, the COVID-19 pandemic has proven to be the most significant public health and economic disaster of the past century.

The pandemic has affected practically everyone around the world in so many ways, including the Canadian pork sector. Since then, much has happened, including the reopening of many previously closed processing facilities, the lifting of restrictions on conducting business, along with other factors that have helped the industry bounce back in some ways, while fundamentally transforming it in others.

Market impacts reverberate across borders

The impact of COVID-19 on pork markets continues to be observed with a combination of grief and cautious optimism that the Canadian pork value chain will be able to claw its way out of the spring pricing slump. As slaughter capacity returns closer to normal in the U.S., the effect on pricing has been a gradual climb toward the black.



The U.S. Pork Checkoff organization has created an interactive map to show the status of processing facilities. Active plants are indicated in green, partially active plants in yellow and inactive plants in red, as shown in this example from early May.

Data from China customs suggests that the country imported more than 400,000 tonnes of pork in April, representing a 170 per cent increase over the previous year. Record-low prices likely encouraged stockpiling, which is no surprise. Meanwhile in Canada, prices for producers plunged to nearly \$60 below cost of production during the same period, following initial reports that China would put a stop to pork imports while trying to contain the spread of the virus. This speculation has since proven to be unfounded.

While Chinese domestic pork prices can fluctuate rapidly, they were around three times higher than U.S. pork prices prior to plant shutdowns resulting from COVID-19. The total price gap, for nearly two years, can be attributed largely to the extended African Swine Fever (ASF) hangover that persists to date and continues to silently spread through Asia.

Government support generates mixed response

With hog futures plunging and a great deal of uncertainty around processing capacity, various market factors influenced provincial pork boards and the Canadian Pork Council (CPC) to step up and request support for producers.

In late April, the CPC asked the Government of Canada for an immediate injection of \$20 per hog to help producers overcome the projected direct financial losses caused by CO-VID-19 in 2020. While this ask has not been specifically addressed, producer organizations on the provincial level have been calling on their Premiers and key elected representatives to extend support on a localized level.



Canadian pork margins in late April were well below cost of production.

In early May, the federal government announced an initial agri-food support package that totalled more than \$250 million, of which \$125 million was earmarked for a producer AgriRecovery program, while \$75 million was dedicated to supporting processing, with the \$50 million balance going toward a food surplus purchase program.

The government response came as a harsh blow to most commodity sectors, including pork, with many producers



stunned by the value of support offered, which was only a fraction of the \$2.6 billion requested by the Canadian Federation of Agriculture. Reacting to lacklustre support, the CPC published an open letter to Canadian consumers, calling for their help to vouch for the pork industry.

"Farmers have been telling the government about the need to act for weeks, but it hasn't been enough to get governments to get meaningful help to the producers that need it today," wrote Rick Bergmann, Chair, CPC. "That is why farmers need your help. We need you to tell the Prime Minister, ministers, Members of Parliament and senators that now is the time to be serious about protecting our food supply by helping farmers."

In Quebec, the province's Union of Agricultural Producers (UPA), Sollio Groupe Coopératif (parent company of Olymel) and other partners issued a combined statement calling on the two levels of government to create a specific assistance program for the agri-food sector to ensure its viability.

"The agri-food sector has managed to maintain a continuous supply throughout the [COVID-19] crisis, but many companies are coming to the end of their resilience," said Marcel Groleau, President, UPA. "The federal announcement promising \$252 million in aid is clearly below the needs formulated by the industry as a whole. In addition, the current programs absolutely do not respond to the exceptional challenges we face."

The Agriculture Producers Association of Saskatchewan (APAS), likewise, called for further support.

"Any assistance to producers is welcome, but this package is only a small first step in addressing the needs at the farm gate," explained Todd Lewis, President, APAS. "We need more action from the government to help reduce our risk and secure Canada's agricultural industry and food supply."

In mid-March, the Government of Canada announced a \$5 billion lending capacity increase to Farm Credit Canada (FCC), in addition to loan deferrals. Since that announcement, more than 4,800 producers and agri-food businesses have used payment deferral options on FCC loans totaling \$4 billion and have established credit lines totaling more than \$500 million to alleviate short-term cash flow concerns.

To complement that original lending capacity increase, the \$100-million federal Agriculture and Food Business Solutions Fund was launched to support a wide range of agri-food businesses, with the goal of returning recipient companies to sound financial footing.

In addition, in late May, eligibility criteria were expanded for the Canada Emergency Business Account (CEBA) to

include many owner-operated small businesses, including farms, which were previously unable to access the program. The program is now available to a greater number of soleproprietor businesses and family-owned corporations that pay employees through dividends rather than payroll.

On the labour front, the government also announced an investment of up to \$9.2 million to enhance the Youth Employment and Skills Program (YESP) and fund up to 700 new positions for youth in agriculture. The goal of the additional funding is to help attract Canadian workers aged 15 to 30, to assist with labour shortages brought on by the pandemic. The program will provide employers up to 50 per cent of the cost of hiring a youth worker, up to \$14,000.

Many of these initiatives may appear good on paper, and they do much to influence public perception about support for agriculture. Despite that, pork producers have largely failed to benefit from the support, which is geared toward crop and other livestock sectors. The chorus of voices asking for further measures has not been enough to sway Marie-Claude Bibeau, Minister, Agriculture and Agri-Food Canada, who doubled down on her government's actions.

"We are a government who is proud of taking decisions based on evidence. We're not taking decisions only based on emotions," Minister Bibeau said. "Please go and get this money and then it will be much easier for me to identify the gaps and to get the money where it should be going."

While the federal announcements did little to satisfy most agri-food stakeholders, provincial announcements were welcomed in Alberta, where the government has increased the interim AgriStability payment from 50 to 75 per cent for the hog sector, with a total value of up to \$25 million for the sector or up to \$20 per pig. It remains to be seen whether producers will be able to benefit from this funding, which does not favour mixed-commodity operations. Timeliness is also key, as the money could arrive too late to make much of a positive difference.

Even if provincial support proves to be helpful in the medium- and long-term for producers, short-term cash flow issues still plague production, which is a message that the industry has carried for some time since well before COVID-19.

Processing capacity changes rapidly

The pandemic's threat to staffing and business continuity was felt very strongly by Canada's meat processors. Given the close-quarters nature of meat cutting, it did not take long for the virus to take hold and spread widely within some plants.





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nadian *HOT ISSUES*



Producers across Canada – like the Pastink family near Taber, Alberta – have taken to social media to offer thanks to essential workers, especially those on the front lines in meat processing facilities, grocery stores, food banks and restaurants.

Rather quickly, processors across Canada made commitments to address the safety concerns of workers by providing additional personal protective equipment (PPE) and training, working closely alongside provincial occupational health and safety officials to satisfy requirements. Companies including Olymel and Maple Leaf even offered hourly wage bonuses for workers, recognizing their employees' important contributions.

Retrofitting measures on the plant floor include taking temperatures of employees, additional cleaning and disinfection, monitoring of hand-washing stations and the requirement for employees to stay home if observable symptoms are present. Physical distancing has been addressed through added space or plexiglass barriers between workers where possible.

Despite these efforts, no amount of cooperation could shield processors from the wrath of certain parties that have been calling for full, immediate, indefinite shutdowns of any

plant where even one worker tests positive. These calls for shutdowns have been inspired mostly by two high-profile cases in Alberta beef plants.

With the deeply divided sides – processors and critics – in a political tug-of-war, producers continued to ride the pricing waves, while talk of potential welfare culls generated some backlash online from largely misinformed individuals.

Throughout the pandemic, the Canadian pork industry has been fortunate (if that term can be used) to have experienced only two plant shutdowns affecting domestic slaughter capacity: the Olymel facility at Yamachiche, Quebec, northeast of Montreal, along with the Conestoga facility at Breslau, Ontario, northeast of Kitchener.

The Olymel plant reopened after a two-week hiatus, while Conestoga was able to get up and running after only one week of stalling. The closures caused a backlog of more than 90,000 hogs, many of which were marketed through alternative chan-



nels, while others were able to be held in barns for longer periods of time and had their growth deliberately slowed.

In some highly exceptional cases, small numbers of marketready hogs were euthanized in accordance with the National Farm Animal Care Council's (NFACC) Code of Practice for the Care and Handling of Pigs, including one publicized example in Prince Edward Island. Reports out of Manitoba suggest that some isolated weaners were also disposed due to backlogs in Minnesota and Iowa, where these animals are typically sold. Despite these off-hand cases, no significant depopulation efforts have taken place in Canada, unlike some locations south of the border.

On the food safety side, processors continue to work with the Canadian Food Inspection Agency (CFIA) and provincial health authorities whenever plant closures are under consideration. Together, these stakeholders determine the length of potential closures and when business operations on-site would be able to resume.

To help create pathways for the secure, continued movement of meat and poultry, in late May, the CFIA established a temporary process to allow inter-provincial trade of goods produced at provincially inspected facilities. The goal is to alleviate any potential food shortages in one jurisdiction if food surplus is found elsewhere.

While political gamesmanship and other influences have received a disproportionate share of attention, processors have been the unfortunate victims of a reputational hit. However, producers and consumers alike should feel confident that Canada's meat processors are making the necessary efforts to protect our supply chain, even if mainstream media and special interest groups sometimes distort this truth.

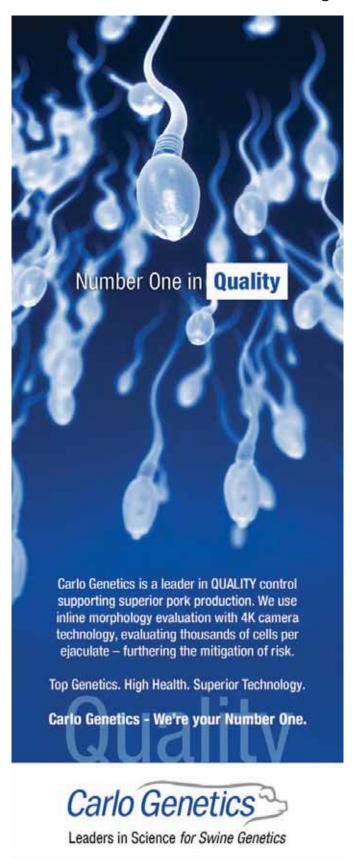
Producer organizations forced to adapt practices

Rather quickly in mid-March, provincial pork producer organizations and other industry partners made decisions to cancel, postpone or adapt upcoming in-person meetings, conferences and other events.

Nearly all pork producer organization staff members temporarily shifted to working from home for more than two months, while waiting on provincial and federal authorities to determine it was safe to return to regular work. For clerical staff, the effect was minimal, but for production and traceability staff, a lack of office access and postponing onfarm visits inevitably caused some interruptions for producers who typically rely on in-person support.

One specific impact was related to completing full validations under the Canadian Quality Assurance (CQA) and Animal Care Assessment (ACA) programs, along with the new

CONTINUED ON PAGE 22



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Full validations under the Canadian Quality Assurance (CQA) and Canadian Pork Excellence (CPE) programs, which require on-farm visits, were postponed due to COVID-19.

Canadian Pork Excellence (CPE) program. These programs represent more than 1,000 producers across the country and all hogs sent to federally inspected processing facilities.

In early June, the Canadian Pork Council (CPC), working through its constituent provincial organizations, resumed full validations under the CQA/ACA and CPE programs, in accordance with provincial public health guidelines - a major relief for those who were coming due to renew certification. Full validations require on-farm visits, which had previously been postponed indefinitely in mid-March.

As the COVID-19 air begins to clear, producer organizations are eager to resume their normal support activities for producers, who are looking for that helping hand more than ever.

Canadian meat industry supports communities

Support for communities across Canada during COVID-19 has been offered by many Canadian agri-food sectors, including pork.

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As food banks across Canada struggle to keep up with rising demand and declining donations, Ontario pork producers met this challenge as an opportunity to get fresh pork to families and individuals in need, through Ontario Pork's Friends of the Food Bank program and community-based food giving.



Ontario Pork's charitable goals this year include raising \$100,000 for food banks and also providing boxed lunches for workers in the province's three federally inspected processing plants.

The \$100,000 fundraising goal includes \$36,000 to provide boxed lunches to workers at the province's three largest processing facilities: Conestoga, Sofina, Domingo's. The remaining \$64,000 will go toward maximizing food bank donations. Ontario Pork will coordinate donations of up to 10,000 lbs. of fresh ground pork per week - or approximately 60,000 servings - based on available funding.

Since late March, Alberta food banks have collected more than \$25,000 in donations, and Saskatchewan food banks have collected more than \$11,000, specifically thanks to those provinces' Hutterite colonies. These efforts were spearheaded by a colony near Warner, Alberta, and were recognized in a formal letter from Food Banks Canada.

Processors, like producers, have been stepping up to the plate.

In mid-April, Maple Leaf Foods announced a partnership with Food Banks Canada and Community Food Centres Canada to commit more than \$1 million in financial contributions and a further \$350,000 in product donations to communities across the country.

In late May, HyLife made a combined \$750,000 donation to six hospitals, in recognition for those institutions' efforts to fight COVID-19. These included four facilities in Manitoba, one in Saskatchewan and one in North Dakota, in locations where HyLife centres much of its production.



While most of the world has been told to stay home, you don't.

To all of those working hard to keep food on our tables during these challenging times...

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HyLife has donated \$750,000 to six hospitals, including the Bethesda Regional Health Centre in Steinbach, Manitoba.

Also in late May, Olymel announced that more than 800 employees at three of its Quebec plants had volunteered to work overtime shifts in order to help reduce the backlog of hogs caused by the two-week closure of the Yamachiche plant in

April. In addition, for each hog slaughtered on May 30, the company donated \$2 to a charitable organization chosen by the employees of each plant, up to a maximum of \$5,000.

Altogether, these efforts, untaken during a very difficult time, demonstrate the industry's ongoing commitment to Canadians – a relationship that is not always fully appreciated. With application details released in mid-June on the Government of Canada's \$50 million food surplus program, it is likely we will see additional charitable efforts, thanks to the new support.

Virus woes decrease but anxiety remains

Hope has been extremely sparse for many over the past few months, but farmers, of anyone, are known to be resilient to a fault. Thankfully, for millions of Canadians and customers around the world, pork producers stand tall with the entire value chain, working together to maintain food security, even while being attacked from so many angles.

COVID-19 will undoubtedly have further consequences for our sector, often unpredictably and unintentionally. In other cases, it is possible that lessons learned will have us emerge stronger and better than ever. Our survival depends on it.



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Governments work to curb farm trespassing

Treena Hein

Growing calls for anti-trespassing laws to protect producers

In December 2019, CTV News reported that 11 animal rights activists had occupied a pig breeding barn in Saint-Hyacinthe, Quebec "demanding full access inside the agri-business operation and a meeting with Quebec Premier Francois Legault to discuss animal rights." The activists had entered the barn before dawn, and they kept a live video stream going of the entire event on social media.

Earlier last fall, this barn occupation was preceded by an incident near Fort Macleod, Alberta, where 30 activists entered a turkey farm. This spurred quick action by Alberta's provincial government, which passed the Protecting Lawabiding Property Owners Act and brought it into force in December. Last year, Saskatchewan also strengthened its anti-trespassing legislation, but the changes have yet to come into force.



The Government of Alberta took swift action last year following the invasion of a turkey barn. Premier Jason Kenney showed his support in a press conference hosted at the affected farm.

The Alberta law provides more protection for "law-abiding property owners" from civil liability related to injuries to trespassers where the owner has reasonable grounds to be-

CONTINUED ON PAGE 26







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lieve the trespasser is committing, or about to commit, a criminal offence. The law also boosts the consequences for trespassers, increasing maximum fines to \$10,000 for a first offence and \$25,000 for subsequent offences, along with possible prison time of up to six months. It also includes a maximum fine of \$200,000 for corporations that help or direct trespassers.

In the view of national animal welfare advocacy group Animal Justice, however, this law "seeks to intimidate people who want to call attention to animal abuse." Executive Director and lawyer Camille Labchuk added that "Alberta's 'ag gag' law violates the Charter protection for freedom of expression, because it prevents whistleblowers from exposing unethical and illegal acts on farms. It is my view that Alberta's ag gag law will likely be challenged in court." She points to a letter signed by more than 40 constitutional and criminal law experts, outlining the reasons why similar legislation in Ontario is unconstitutional.

For his part, Patrice Juneau, Communications Director, Quebec Union of Agricultural Producers (UPA), believes that, "When it comes to breaking and entering on farms, these are no longer demonstrations to raise public awareness. Breaking and entering is a Criminal Code offense. These acts aim to impose an ideology through defamation, pro-

"Thank you to the Minister and his team for hearing the concerns of the farming community and taking action."

Bill 156. We Thank You.

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Organizations including Ontario Pork have strongly advocated for better protections for producers.

paganda, threat and fear. This type of behavior is strongly condemned by society and must be reprimanded."

Entering and occupying barns, said Juneau, can cause stress to the animals, creates disease transmission and other biosecurity issues, risks the herd's health status, harms farm business by hampering market access and can negatively impact farm employees and the targeted farm-owning family. They can even affect the insurability of the farm. Juneau added, "Depending on the damage, the costs can be enormous."

Ontario's Bill 156 follows Alberta's lead

The rationale for the Ontario government's proposed legislation, the Security From Trespass and Protecting Food Safety Act, is described by the government in safety terms. In the press release, Ernie Hardeman, Minister,

Agriculture, Food and Rural Affairs stated: "We've heard from farmers who no longer feel safe in their homes, who have expressed concerns with increasing on-farm trespassing and the safety of their families, employees and livestock."

The Act proposes a first-time fine of up to \$15,000 and \$25,000 for subsequent offences. It also prescribes "aggravating factors" that would allow the court to consider increased fines and also allow the court to order restitution for damage in prescribed circumstances, which could include damage to a farmer's livestock or from theft. It also increases protection for farmers against civil liability from people "who were hurt while trespassing or contravening the Act."

There is also an added dimension in the bill of prohibiting interference with a livestock transport vehicle - such as

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stopping, hindering or obstructing its movement - and the animals in the vehicle without explicit prior consent.

This aspect of the bill no doubt stems from the now-famous event from four years back when a woman named Anita Krajnc was criminally charged but later acquitted for giving water to pigs on a livestock truck in Burlington, Ontario that was heading to a slaughter plant. Krajnc's group, Toronto Pig Save, held a protest in December against enacting Bill 156.

However, a spokesperson for Ontario Agriculture, Food and Rural Affairs said the government has received hundreds of letters calling on it to do something about trespassing on farms and obstruction of livestock transport trucks. In addition, more than 130 municipalities have passed or supported calls to strengthen protections for these operations.

In mid-June, Bill 156 was passed with support from Ontario's majority government. The government will continue to seek input on the legislation, as legal challenges from opponents are likely forthcoming.

Other provinces mulling similar anti-trespassing campaigns

In Quebec, the UPA believes similar farm-specific legislation should be passed.

"In the meantime, in February, the UPA obtained from the Quebec Superior Court a temporary injunction to prevent any further illegal intrusions on farms and is looking to render it permanent," said Juneau. "But this type of legal proceeding can take a long time."

As in Quebec, there was a protest on a pig farm near Abbotsford, B.C. last year. The 50 activists present claimed to be there because video footage taken previously at the farm demonstrated abuse of pigs. Charges for break-and-enter and mischief were laid against one of the trespassers.

In a statement responding to situation, B.C. Pork noted that while the video "has been edited and lacks context and understanding, some of the scenes are of concern." Following the incident, a swine veterinarian was sent to the farm to investigate animal welfare.

Talks in B.C. for farm-specific anti-trespassing laws are proceeding. At least one meeting with the province's Deputy Minister of Agriculture has been held, and another is planned, said Jack Dewit, Chair, B.C. Pork.

He added that, "We do realize that the animal activists are still quietly working behind the scenes as we focus on other things. We need to be prepared should another farm become the target of another protest, and we need to continue working with the authorities to protect producers."

In eastern Canada a few months ago, trespassing on farms was addressed by Christian Michaud, President, Agricultural Alliance of New Brunswick in an article published in Atlantic Farm Focus. His organization is looking to engage the provincial government and other stakeholders to develop meaningful mechanisms of deterrence against trespassing on farmland and significant penalties for doing so.

"There is currently no legal recourse in this province, because legislation requires the perpetrator to be caught in the act or with 'sufficient' evidence," stated Michaud. "Enforcement has been very weak, leaving producers with no meaningful legal options for protection. The onus of liability or permission remains in the hands of producers."

Political support for anti-trespassing on the national level

To address the issue on a country-wide level, John Barlow, Member of Parliament, Foothills (Alberta) & Shadow Minister, Agriculture and Agri-Food Canada, has introduced a private member's bill to amend the federal Health of Animals Act.

The Act currently features nothing to address the impact of trespassers on animal health. This amendment, says Barlow, will make farm trespassing a more serious crime in order to better protect livestock health, but it will also help protect farmers and their mental health. In creating this bill, Barlow wants to recognize the extreme stress faced by farmers who have had to wake up to intruders in their barns.

He further explains that while the bill, if it becomes law, will see increased penalties for groups and organizations who encourage individuals to threaten the biosecurity of animals and security of workers, it does not in any way limit the individual right to peacefully protest on public property.

"We want to send a strong message that entering farm properties will not be tolerated," said Barlow. "And we want people to understand the risk in terms of disease transmission."

The bill has gone through first reading, and Barlow hopes it will be debated this fall.

Undercover employees can deceive producers

While these new and proposed laws on the provincial and federal levels may do a lot to deter trespassing on farms, none of the legislation touches on prevalence of "undercover employees" - legal trespassing, if you will, by activists who are hired by farmers and later attempt to expose negative conditions relating to animal care through photographs or videos. In Ontario a few years ago, for example, CTV News reported on undercover video taken at a farm, showing questionable pig handling practices.

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In the U.S. over the last few years, several state governments have passed laws which prohibit capturing livestock images without farmer consent. Some of these have been challenged, and in Idaho so far, overturned. But even if illegal, attempts by activists to capture images are likely to continue. So, that leaves prevention - in other words, making sure you do not hire activists.

There are many tips available on the internet, but here are a few of the best: Have each applicant sign a document swearing the application is accurate and beware of applicants with things like high levels of education and no ag experience. Require references and follow through to check them, making sure to contact references through their company offices. Do a thorough social media search as well.

In taking on new hires, state in the employment contract that cell phones must be left in vehicles or lockers. Red



Activists are emboldened when strong action against them is not taken. Sympathetic journalists use major platforms to mislead the public and spread falsehoods about producers and their partners.

flags in new hires include being where they should not be, coming in early or staying late for no reason and other strange behaviour.

With care in hiring, adherence to animal welfare standards and further expansion of anti-trespassing laws, it seems that Canadian farmers are becoming better positioned against the risk of waking up to a barn full of protesters. Time will tell. ■



Protecting Lawabiding Property Owners Act (Alberta) Security from Trespass and Protecting Food Safety Act (Ontario)

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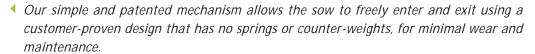
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News and Views

Fournaise named **CMC Chair**



Olymel's Sylvain Fournaise is the new CMC Chair.

In early May, Dr. Sylvain Fournaise was named the new Chair of the Canadian Meat Council's (CMC) board of directors, starting a two-year term.

"I am looking forward to working with the board and CMC," said Fournaise. "Not only with the COVID-19 pandemic, but also for the sustainability of the sector and our capacity to meet requirements."

Fournaise joined Olymel more than two decades ago and currently holds the position of Vice President, Food Safety and Technical Services. He leads a team that is responsible for food safety and quality assurance programs, along with research and development, for all of Olymel's pork and poultry facilities.

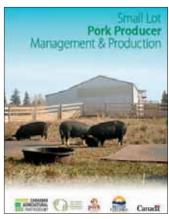
Open letter on the value of animal agriculture

In mid-June, more than 70 global organizations associated with animal agriculture, including the Canadian Pork Council (CPC) and Canadian Association of Swine Veterinarians (CASV), co-signed an open letter on the value of animal agriculture. The letter pleads for an increased understanding and appreciation of the animal agriculture's positive impacts on global health and nutrition.

"The coronavirus crisis has brought into focus the incredible public health challenge our world faces, and nowhere is this challenge more apparent than in food production. Nourishing the world during this crisis is a top priority across nations,"

the letter states. "We urge auintergovernmental groups, and NGOs to support these efforts by reaffirming the safety of livestock production and reminding consumers of our robust food safety system, including the important role of veterinarians and animal nutrition."

B.C.'s small-scale producers receive new support



B.C. Pork has developed a new handbook as part of enhanced training for small-scale producers.

In early May, B.C. Pork released its "Small Lot Pork Producer Management & Production" manual to support the growing number of small-scale producers in the province.

"This new manual will be a valuable resource for all small lot producers in our province. It's the first time we've had a production manual based on our provincial needs and regulations," said Jack Dewit, Chair, B.C. Pork, "The resource includes information on biosecurity, feeding, traceability and emerging diseases. We'd like to thank all the experts that contributed to the manual."

The organization is currently working to arrange training sessions for small-scale producers in fall 2020 or spring 2021, when new materials will be presented. The initiative is support by funding from the Canadian Agricultural Partnership, Investment Agriculture Foundation of British Columbia and the Governments of British Columbia and Canada.

DuBreton mandated to accept hogs

In mid-May, federally inspected processor Viandes du Breton, based in Rivière-du-Loup, Quebec, invoked the force maieure clause in the contracts of five commercial producers who were set to deliver hogs to the plant until September. Du-Breton specializes in certified humane and organic products, serving a niche market across North America.

In early June, the Régie des marchés agricoles et alimentaires du Québec (the province's commodity marketing council) made a ruling to overturn DuBreton's decision to reduce slaughter capacity, fortunately in time to accept the scheduled hogs, which were delivered at 140 kilograms or heavier, due to the delay. Such delays can negatively impact animal welfare, especially during the warmer summer months.

Canadian food system celebrated with new initiative

The Canadian Centre for Food Integrity (CCFI) has launched It's Good, Canada to celebrate the work of everyone involved in Canada's food system and to show that our system is designed with a single purpose in mind: to ensure goodquality food makes its way to the plates of all Canadians and families around the world.

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It's Good, Canada is meant to spark public food-related conversations.

"It's natural for Canadians to have an interest and questions about food, which touches our lives every day and has been foremost in the minds of Canadians recently," said Kim McConnell, Chair, CCFI. "It's Good, Canada captures the spirit of the agri-food industry and delivers on the mandate of the CCFI to earn the trust of Canadians by providing credible, fact-based information and research."

The new initiative features three pillars promoting the accessibility, safety and affordability of food for Canadians, representing a diverse group of partners from across the supply chain. The initiative is supported by organizations including Maple Leaf Foods, Canadian Beef and Chicken Farmers of Canada, among others.

Maple Leaf seeks to improve plant-based products

Maple Leaf Foods' wholly owned U.S. subsidiary, Greenleaf Foods, announced in late May that its Lightlife brand of plant-based meat substitutes would be overhauled to include new ingredients and packaging.



Customers have been disappointed with earlier versions of Lightlife products, prompting changes.

To define its new brand and business strategy, Lightlife surveyed more than 11,000 consumers to better understand their values and expectations from plantbased protein. The study found that consumers were unsatisfied 98 per cent of the time when looking for such products with simple, recognizable ingredients.

"Our research shows that consumers want

to recognize what's in their plant-based food, but that need is currently unmet," said Dan Curtin, President, Greenleaf Foods. "Our goal is to combine great taste and the simplest ingredients so that consumers can choose the products that make them feel good, and never guilty."

Lightlife's newly reformulated products are currently rolling onto shelves at thousands of grocery stores across the U.S. and Canada just in time for BBQ season.

Local meat availability increases in B.C.

More locally raised meat will be available for restaurants and retail outlets following the B.C. government's efforts to establish a more resilient food system.

"We have been working with ranchers, abattoir operators and regional governments since 2017 to increase the amount of locally raised meat British Columbi-

CONTINUED ON PAGE 32

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News and Views

ans in rural communities can enjoy," said Lana Popham, Minister, B.C. Agriculture. "This change will help livestock and poultry producers in the new designated areas expand their sales in stores and restaurants in their communities, supporting a more sustainable regional food system."

The updated Meat Inspection Regulation now allows Class D licences in some areas and encourages the growing 'farmto-fork' trend. Class D licence holders are permitted to conduct on-farm slaughter of up to 25 animals for direct sale to consumers or restaurants and meat shops in the region where the meat was slaughtered.

Topigs Norsvin records strong growth in turnover

Topigs Norsvin's turnover grew in 2019 by 21 per cent to nearly \$250 million, while the operating profit increased by 64 per cent in the same period, to

more than \$15 million. With these figures, Topigs Norsvin once again performed well above budget.

"It's the best result ever. It proves that our strategy works and that investments in innovation and product development are bearing fruit," said Mark Tijssen, Chair, Topigs Norsvin. "We have a very strong and healthy organization with an outstanding solvency and liquidity. A superb basis for further growth."

Topigs Norsvin continues to invest worldwide in genetic progress, distribution and technical support. For 2020, the company's research and development budget has once again been increased.

Precision Veterinary Services celebrates first anniversarv

Precision Veterinary Services, based in Red Deer, Alberta, celebrated its first anniversary in April. The team consists of veterinarians Dr. Kurt Preugschas and Dr. Cordell Young, along with registered vet tech



Precision's Coraleen Jones, Sonya Foss, Lonneke Nooijen and Dr. Kurt Preugschas

Lonneke Nooijen and two customer care specialists, Coraleen Jones and Sonya Foss.

Precision provides innovative solutions with a complete and comprehensive experience at the swine veterinary service level, while prioritizing health, animal welfare and financial interests of producers. The team collaborates with other practices across Canada to share experience and knowledge in order to optimize onfarm interventions.



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Pork Culture and Trends

Lockdown drives uptick in home cooking

Sharman Hnatiuk



COVID-restricted home baking and indoor cooking has turned into backyard BBQing as the weather has warmed up.

Since the start of the COVID-19 pandemic, one message has remained the same: home is the safest place to be. As a means to combat home confinement, coupled with a reduction in restaurant and take-away dining options, one thing is certain: Canadians are spending more time cooking.

Today, most Canadians have access to more than 250 hours of cooking or food-related shows a week on television. YouTube offers an endless supply of cooking demonstrations and videos produced by everyone from home cooks to celebrity chefs, and during the COVID pandemic, the demand for online culinary inspiration has been increasing across web and social media platforms.

Celebrity chefs provide encouragement

Since the March 2020 onset of the pandemic, Chefs Anna & Michael Olson of Welland, Ontario have both increased their online presence with regular social media videos. As a celebrity chef with cooking shows viewed around the world, Anna has seen a dramatic spike in followers to her YouTube channel, "Oh Yum with Anna Olson," mostly from people searching for baking recipes.

COVID restrictions have impacted options for Canadians that were accustomed to eating out or ordering take away a few nights a week, leaving many searching for new recipes to add to their previously limited repertoire. For many, the excess of time at home is proving to be the perfect opportunity to getting their hands dirty in the kitchen and expanding their culinary skills.

"We have a lot of time to think about food; it is no wonder that people are digging out those unused cookbooks and looking for inspiration online," said Anna. "With absolutely no social commitment, the math is clear: there are seven dinner opportunities each week to try something new."

For the past two decades, Michael has made a career out of inspiring young chefs as a Professor at Niagara College's Canadian Food and Wine Institute. Through his cooking demonstration videos, Michael has attracted increased interest to his Instagram feed for his 'keep it simple' approach to cooking.

"I'm very sensitive to showing how to make something in the kitchen or on the grill that is not overly complicated, expensive or includes hard-to-access ingredients," Michael explained. "With excess time at home, I think there are a lot of people trying to embrace and overcome cooking as a chore. The last thing anyone needs right now is to feel inadequate."

Last year, when Michael launched his all-pork cookbook Living High Off the Hog, he was adamant that all of the recipes in the book were achievable to any home cook with access to the ingredients and enough time. In November 2019, Alberta Pork even gifted the book to guests during the organization's 50th anniversary celebration, and Ontario Pork has been actively promoting sales.

As the COVID response continues into summer, the search for something new to bake or cook has evolved into something new to BBQ or smoke.

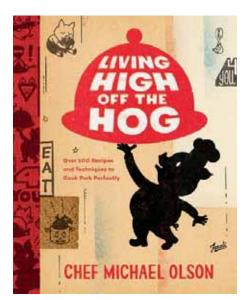


Social media has allowed Anna Olson to keep inspiring Canadian home cooks during the pandemic.

Summer plans go up in smoke

Being housebound has not limited Canadians from shopping online, and BBQ stores across the country have reported increased sales of smokers and grills.

"I keep hearing, 'I got a smoker,' or I get questions through social media about pellets or smoke," added Michael. "COVID has provided an excellent opportunity to learn something new, and staying close to home presents the perfect opportunity experiment with learning to smoke meat. With all the excess time, and BBQ season upon us, why not spend money on something you can enjoy at home?"



Michael Olson's popular all-pork cookbook, Living High Off the Hog, was published in 2019.

In the early days of the pandemic, panic-buying of both fresh and non-perishable goods left grocery store shelves empty. A Food and Consumer Products of Canada survey released in early April reported that leading food and consumer goods manufacturers experienced an all-time high in the last two weeks of March, representing a 500 per cent increase in demand.

For Corey Meyer, third-generation butcher and owner of ACME Meat Market in Edmonton, business has never been better. While his butcher shop survived the panic-buying early days of the COVID response, things have returned to a newer sense of normal, but sales remain high.

"More than ever, there seems to be an emphasis on supporting local producers

and businesses during the pandemic," said Meyer. "We enhanced our social media presence in recent years to attract a younger clientele to the shop, but COVID has certainly brought new faces making a conscious effort to support local."

The summer BBQ season is always popular at ACME, but this year is the highest volume the butcher shop has ever seen since being founded in 1921.

"People are spending more time at home watching cooking shows and cracking open cookbooks, and it is resulting in more customers, more frequent shopping and requests for new or different cuts of meat," Meyer added.

A renewed sense of culinary appreciation

Even as the COVID situation continues to evolve and restrictions are lifted. many will continue to carry on with newly developed cooking habits as a new normal.

Canadian consumers accustomed to paying restaurant prices are learning the value of quality local cuts at their grocery stores and butcher shops. Armed with new confidence in the kitchen, many have learned how cooking at home can help save money, help their families eat healthier and, perhaps most importantly, help their families spend time together.

"Years from now, people will remember the time they spent together during the pandemic, and many will be talking about the food they ate," said Michael. "They'll be telling stories about **Pork Culture and Trends**

sourdough bread mom made for the first time or those BBQ back ribs - the best they ever had - that dad made."

For Anna and Michael, the two believe they have never been closer or more in love than during their confined time together since COVID restrictions started in Canada.

"Children will remember this time differently than adults. Hopefully they are the ones to remind us of the importance that making food and eating together played during the pandemic as we go back to our functioning lives," said Anna. "I hope that in six months from now, or as long as it takes for things to start to normalize, Canadians are still taking the time to cook together and sit down to eat as a family."



While many restaurants have struggled during the pandemic, business is booming for small butchers like Edmonton's Corev Mever, who now wears a mask while working.

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Making Cents of Enrichment

K Engele and J Brown

What would you think if I told you installing enrichment would improve the financial position of your operation? Enrichment seems to be one of those things that can be easily over looked. The National Farm Animal Care Council's 2014 update to the Canadian Code of Practice for the Care and Handling of Pigs states that all pigs must have "multiple forms of enrichment that aim to improve the welfare of the animals through the enhancement of their physical and social environments." While implementing enrichment on-farm is simple in nature, the proper selection, installation and maintenance of enrichments can have a positive impact to the bottom line of your operation. The lack of enrichment is known to result in more problematic behaviours such as tail-biting and belly-nosing and there is a need for practical and costeffective solutions that producers can implement.

Why is it important?

Overall, the purpose of enrichment is to improve the living conditions of pigs, by encouraging the expression of a wider range of normal pig behaviours. From a practical viewpoint, it is providing objects or materials for proper investigation and manipulation in order to keep pigs occupied to prevent future harmful behaviours. As defined by the Code, enrichment is a way of changing the environment of pigs to their benefit.

Benefits of Enrichment?

Why worry about enrichment? The overall goal of enrichment is not to make more work for producers. Rather the goal is to improve the environment of the pig, in a manner where producers also receive numerous benefits. Goals of incorporating enrichment include:

- Reduce the frequency of abnormal behaviour (tail biting, biting, aggression)
- Increase the pigs' ability to deal with challenges in a much more normal way
- Broaden the range of behaviours expressed
- Improve animal performances (feed intake, average daily gain (ADG) and feed conversion ratio (FCR))
- Boost positive use of space
- Reduce stress in the animals

Results from a recent project at Prairie Swine Centre showed that piglets given enrichment before weaning showed less penmate manipulation (tail-biting, ear-biting, belly-nosing, etc.) and tended to fight less at weaning than the other pigs. This is important because weaning is stressful for piglets, so anything that can help to reduce weaning stress has the potential to benefit their health, welfare, and productivity throughout the nursery and beyond. Similarly, piglets provided enrichment only in the nursery had fewer head and shoulder lesions at four weeks post-weaning than the other groups, indicating that they fought less towards the end of the nursery phase. Additionally, pigs given enrichment spent more time exploring their pens at three weeks post-weaning, indicating that they were more engaged with their surroundings. Pigs enriched post-weaning also showed reduced fear of humans, which has implications for both welfare and ease of handling.



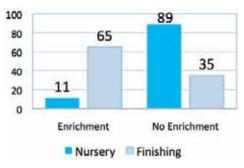
How well are we doing?

A project funded by Swine Innovation Porc (2018) examined the auditing of best management practices on farms across Canada, with enrichment being one of the parameters measured. Based on audit data, providing enrichment in the nursery and finishing are areas that require additional attention from pork producers. As seen in Figure 1, only 11 % of farms audited incorporated enrichment into nursery facilities, with chains being the most common form of enrichment. When looking at finishing facilities, the adoption of enrichment was higher than in nursery, with 65% of farms using some type of enrichment in finisher barns. Chains were again the most common form of enrichment (70 %) followed by wood (30 %).

According to the Code of Practice for the Care and Handling of Pigs (NFACC, 2014) pigs must be provided with multiple forms of enrichment that aim to improve the welfare of the animals

through the enhancement their physical and social environments. The incorporation of enrichment into individual facilities is unique to each operation. Support regarding

Figure 1. Estimated rates of on-farm adoption of enrichment on pork production facilities across Canada

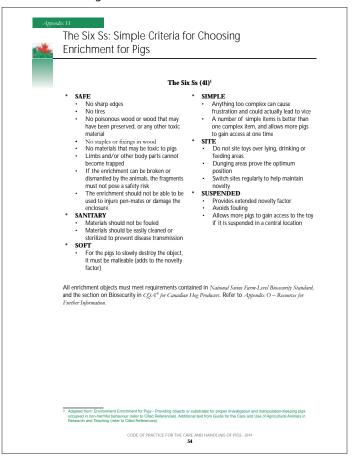


richment materials are available in Appendix H of the Code, with different types of enrichment grouped into categories along with the advantages and disadvantages of each type.

The Six Ss - Simple Criteria for Choosing **Enrichment for Pigs**

As outlined in Appendix H (page 54) of the Code of Practice there are six criteria to consider when choosing enrichment for your operation. Considerations could include the

Figure 2. The Six Ss - Simple Criteria for Choosing **Enrichment for Pigs**



follows aspects: SIMPLE, SAFE, SANITARY, SITE, SOFT, & SUSPENDED. Figure 2 (below) provides more detail for each of these considerations.

Cost of Enrichment

There are several options available for producers to enrich the environment of pigs, some being more expensive than other options. However, reusing materials or objects already available on the farm can help to keep costs in check and maintain

CONTINUED ON PAGE 38

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their effectiveness. It is important to hold pigs' interest, and this means changing the enrichment items on a regular basis.

Like anything else, we always have a choice on how much we decide to spend on any given investment. This is no different when it comes to deciding on our choice of enrichment. Lets take the example of installing a chain, with cotton rope attached, in a finishing room containing 12 pens, 260 pigs, and a 16-week finishing period. Based on the assumptions listed below producers would assume a one time annualized cost of \$.65/hog marketed.

Installation Cost

- Chain, mounting hardware \$40/pen
- Labour (3 hours, \$25/hour, 12 pens) \$6.25/pen
- Total \$46.25/pen or \$555/room

Room Throughput

- 260 pigs/room
- 3.25 turns/year (based on 16 week finishing)
- 845 pigs/year

One time annualized cost = \$0.65/pig

What happens if we take another approach to assessing this economic value? Assume that a market hog is worth \$170. To achieve payback on our enrichment investment of \$0.65/pig would represent 3.26 pigs (\$555 / \$170) or 0.4% (3.26 / 845) of the hogs marketed through that room annually. In other words we would need to find this value in order to make installation of enrichment economically worthwhile.

The benefits could be seen in a number of ways, perhaps we have less tail-biting and subsequently see a reduction in the number of mortalities, condemnations, or even amount of trim deducted at the packing plant. The point being, it takes only a very small change in these figures to see a positive economic benefit from enrichment. And if we assume that the benefits accrue over a four-year period rather than in a single year - installing enrichment looks even more economically viable, as we only need to find full value for one pig per year. Which seems easy to do given the wealth of research showing benefits of enrichment.

Conclusion

There is no denying that enrichment for pigs has been slow to catch on with pork producers. Besides the cost of materials and the time needed to install, clean or repair enrichments, producers may ask, "what's the big deal about pig toys?" However, there is now an impressive amount of research that providing enrichment to pigs results in benefits from reduced aggression, fewer damaging behaviors, and increased growth. We can also see that installing enrichment is an economically viable strategy for your operation.



Intestinal fate of dietary zinc and copper in pigs: the impact of sources, levels and dietary ratio

Danyel Bueno Dalto and J. Jacques Matte

Agriculture and Agri-Food Canada, Sherbrooke, QC J1M 0C8, Canada

Trace metals are essential nutrients in livestock diets. Besides their nutritional function, some trace metals such as zinc (Zn) and copper (Cu) are also used at pharmacological levels in pigs' diets due to their bacteriostatic actions [1]. In pigs, intestinal absorption of Zn and Cu range from 30% to 50% at nutritional levels [2; 3] and is inversely proportional to their intake [4; 5]. Although strategies to optimize absorption of these minerals are important for the pig production chain and the environment, the limited knowledge on the gastrointestinal fate of these minerals in pigs has hampered advances in this matter.

The classical method, the intestinal balance (dietary intake - faecal excretion), may be adequate for macro-nutrients but the accurate measurement of infinitesimal concentrations of trace elements in diets and excreta is a challenge for the reliability of this method. Moreover, this method does not consider the intestinal utilisation of nutrients. This aspect is far from negligible because the intestinal tissue, although biologically important, is not of great economic relevance as only post-intestinal nutrients are of actual interest for the growth of valuable tissues such as muscle.

In our laboratory, we have validated a new approach which takes into account the intestinal utilisation of micronutrients and assess the net availability of vitamins and trace metals for animal growth and development [6; 7; 8]. This approach is based on the real-time fluxes of micronutrients flowing in the portal vein during a given time after a given meal. The portal vein is a singular vessel collecting all blood from the gastrointestinal tract immediately before its entry into the liver. Differently from the other methods, this technique allows monitoring the real-time post-meal profile of net concentrations and fluxes of trace nutrients and comparing multiple types of meal treatments within the same animal.

Two studies using this approach of portal vein appearance were designed (1) to characterize the post-absorptive availability of Zn and Cu at adequate vs high dietary levels of organic and inorganic sources; (2) to determine the most appropriate ratio of dietary Zn:Cu which optimizes the bioavailability of both minerals; and (3) to evaluate whether, under nutritional levels, dietary absolute amounts of Zn and Cu affect their mutual post-absorptive availability.

In the first experiment, sources (inorganic vs organic) and levels (adequate = 200 and 20 mg and high = 40 and 400 mg for Zn and Cu, respectively) were evaluated using a constant dietary Zn/Cu ratio of 10:1. Adequate levels corresponded to European Feed Safety Authority (EFSA) recommendations (2014 and 2016). For the second experiment, four different dietary Zn/Cu ratios were studied (120 mg of Zn and 20 mg Cu, 200 mg of Zn and 20 mg of Cu, 120 mg of Zn and 8 mg of Cu, and 200 mg of Zn and 8 mg of Cu). Dietary levels of 120 mg of Zn and 8 mg of Cu corresponded to National Research Council (NRC, USA) recommendations (2012). In both experiments, dietary levels refer to daily amounts of Zn and Cu based on a feed intake of 2 kg/day.

Zinc

In the first study, peaks of blood serum Zn concentrations were observed as early as 45 min post-meal (Fig. 1) with greater values for organic than inorganic sources and high compared to adequate dietary levels. In the second study, these peaks were observed at 60 min post-meal with greater values with high dietary Zn. Such early peaks of Zn concentration sug-

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gests that the absorption of this metal takes place at the upper regions of the gut, even possibly in the stomach.

For the dietary source effect in the first study, the absolute net amount of Zn absorbed during the first 6 hours after meal tended to be greater after the ingestion of organic than inorganic sources of Zn in the meal. Values were 44% greater for organic than for inorganic sources of Zn during the first 4 hours post-meal. Considering the possible Zn absorption in the stomach mentioned above and the influence of low pH in gastric juice, this result could suggest a peculiar interaction of organic Zn with the acidic conditions of stomach leaving more elemental Zn available for absorption. However, it appears that this early post-meal advantage of dietary organic Zn was lost downstream in the digestive tract because the bioavailability of Zn (% of dietary Zn intake) calculated across the whole post-meal period

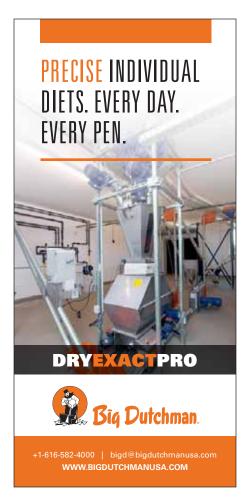
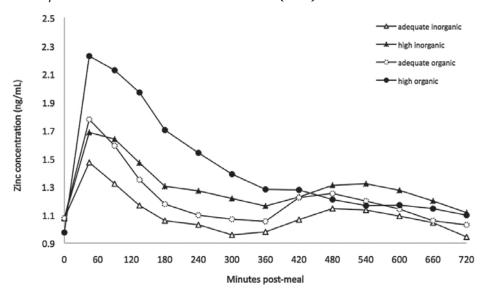


Figure 1. Average post-meal arterial serum Zn concentrations (mg/L) according to dietary zinc sources and levels. From Matte et al. (2017)



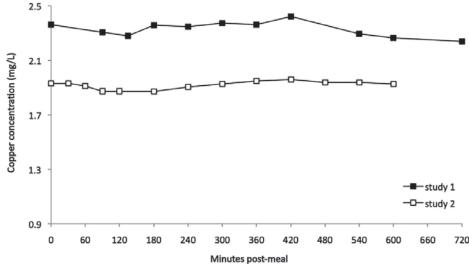
of 12 hours was not different between sources. For dietary level effects, it was not significantly affected by Zn dietary levels (200 vs 400 mg) in the first study. However, in the second study, the bioavailability of Zn (% of dietary intake) was lower for dietary Zn level of 200 mg as compared to 120 mg, possibly due to the saturability of Zn intestinal absorption [9; 10]. Interestingly, an effect of Cu levels was also detected in the second study, suggesting a positive impact of dietary Cu on Zn absorption.

In contrast to Zn, blood serum Cu concentrations varied only slightly during the post-meal period in both studies (Fig. 2) and no treatment effect was detected, suggesting a tight homeostatic control of Cu metabolism.

In the first study, there was no source effect on the bioavailability of Cu (% of dietary intake) but, for dietary levels, values were 32.6 % for adequate vs 0 % for high dietary levels of Cu. As high levels of Cu were concomitant with high levels

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Figure 2. Average post-meal arterial serum Cu concentrations (mg/L) across treatments. From Matte et al. (2017) and Dalto et al. (2019)





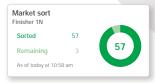
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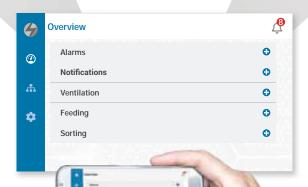






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of Zn, a possible interference of high Zn on the intestinal absorption of Cu cannot be excluded. This was confirmed in the second study where average values of Cu bioavailability for treatments containing Zn at 120 mg were substantially different from treatments at 200 mg (52.0% vs 3.3%). Interestingly, this apparent interference of supplemental Zn was more marked at 8 than at 20 mg of Cu supplementations. According to what is known from other species [11], Cu is taken up by the intestinal cells but a concomitant high Zn intake would trigger a sort of sequestration of Cu in intestinal cells. As these cells decay and are completely renewed approximately every 3-5 days, trapped Cu would be excreted in manure. On the long run, this may eventually result in systemic Cu deficiency.

In the first experiment, the dietary Zn/Cu ratio was constant at 10:1 whereas in the second study ratios varied (6:1, 10:1, 15:1, and 25:1). In both studies, treatments with greater levels of dietary Zn resulted in lower (even absent) post-absorptive Cu bioavailability. Although an optimum ratio was identified among the tested treatments in the second study, it appears that both the dietary Zn/Cu ratio and the absolute dietary amounts of these minerals are crucial to optimize their absorption.

Conclusions

Organic Zn tends to be transiently better absorbed after a meal than the inorganic source whereas for Cu the dietary source appears not to impact its absorption. Long-term supranutritional supplementation with dietary Zn may cause a potential risk of Cu deficiency whereas a positive effect of dietary Cu levels was observed on Zn bioavailability. Such results highlight the importance of the dietary equilibrium between both minerals. Under nutritional levels, Zn/Cu ratio of 120:8 (or 15:1) was shown to optimize both minerals' absorption. ■

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Protected acids a key to assuring sow performance

Zhenbin Zhang, Ph.D., P.Ag., Jefo Nutrition

Despite the great achievements' swine producers have made in sow production, the maximum number of quality weaned piglets is the ultimate goal. This task starts from pursuing high and consistent fertility rates. While people have been focusing on improving breeding management skills to get better fertility rates, urogenital health of sows needs to be closely monitored and improved. Generally speaking, urogenital health is associated with infections in urinary and reproductive tracts, which can result in low or inconsistent fertility. Quite often these challenges confuse swine producers since they occur sporadically which makes it difficult to directly analyze the cause. The other common challenge is high pre-wean mortality. Nowadays it is not uncommon for the producers to have 15 live born pigs. However, not many producers can successfully wean 13.5 piglets or above. We all recognize that the increase of litter size by genetic improvement brings down birth weight and that plays a role in pre-wean mortality. In addition, diarrhea in farrowing crates is a big challenge contributing to pre-wean mortality or low numbers of viable piglets. One of the causes for the above problems is the shedding of pathogenic bacteria like Colostridium Perfringens or E. Coli. in sows' feces. Therefore, a solution to improving urogenital health and piglet diarrhea in the farrowing room can help assure better sow reproductive and weaning performance.

Besides antimicrobial growth promoters (AGPs) which have been deemed as gold standard in battling pathogenic bacteria causing the above-mentioned problems, people have been tirelessly researching and evaluating alternatives. The use of acids in the diets has been commonly practiced. Most commonly organic or inorganic acids in the free or unprotected forms are used. These acids are generally called "acidifiers". Acidifiers can enhance growth performance due to their role in improving nutrient digestibility. However, according to the literature review by Dr. Pettigrew from University of Illinois, acidifiers can only lower dietary pH, but not gastric or intestinal pH (Tung and Pettigrew, 2006).

There is a novel generation of acidifier called "Protected Acids". From the name, the acids are coated by microencapsulation technology using either fat, starch or protein. The unique matrix technology allows effective ingredients to be progressively delivered to the hind gut in their active forms where pathogenic bacteria are primarily populated

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(de Lange et al., 2010). As a result, protected acids are able to demonstrate much stronger bacteriocidal and bacteriastatic effect in the gut as opposed to un-protected acids. The literature on in vitro studies shows that bacterial killing efficacy in protected acids is 10-100 times of that in un-protected acids (Gauthier, 2012). Therefore, protected acids can serve as a potent microbiome modulator notably

through action on pH sensitive and pathogenic bacteria. Based on extensive research at Jefo Nutrition, protected acids can improve sow urogenital health as characterized as reductions of uterine infections and vulvar discharge. Consequently, sow fertility and mortality are improved. At the same time, protected acids can reduce bacteria shedding of E. Coli. and Colostridium Perfringens in sow feces

> that can lead to reduced piglet diarrhea and improve pre-wean mortality rate. Additionally, comparing with free acids, protected acids can safeguard other feed ingredients, feed equipment and workers.

> To summarize, due to the novelty manufacturing technology, protected acids can effectively improve sows' fertility and weaning performance. This can be a powerful tool for producers to maximize the number of quality weaned pigs.

UNIVERSITY OF ALBERTA FACULTY OF AGRICULTURAL. LIFE & ENVIRONMENTAL SCIENCES Department of Resource Economics and Environmental Sociology

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Please contact Professor Ellen Goddard at egoddard@ualberta.ca or Alex Frias Luna at Aggar@ualberta.ca and we will provide a link to the survey. Thanks for your time.

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