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Cover Photo

Inside a barn near Kinsella, Alberta



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Message from the editor

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

Last month, I was privileged to attend World Pork Expo for the first time. As a media partner for the event, I did my best to represent our country and producers well, making plenty of positive connections and spreading the good word about everything happening on this side of the border. Coverage can be found in this edition, along with my thoughts on why events like these cannot be overlooked in terms of industry development, including lessons learned.

In the Spring 2023 edition, I published a lengthy piece that was critical of food retailers. In it, I took aim at value chain inequities, which I think are at the heart of many of the issues in the industry today. But with that in mind, it's important that finding solutions does not become a total blame game. Recently, regional retailers in western Canada stepped up to promote pork, and it was an excellent example of collaboration that ultimately looks good for consumers and benefits many stakeholders.

Much noise is made about climate change resiliency and who is best positioned to lead the way in this area, but there's no doubt that the lack of financial support is where a lot of the good intentions drift into the realm



of fantasy. Not so with RBC – Canada's oldest bank – which is putting its money where its mouth is, to encourage farmers to adapt. RBC president Dave McKay shares the news.

Speaking of money (don't we always?), a hybrid rye feeding trial with a Hutterite colony has shown cost savings for sows and nursing pigs, while maintaining pig performance. U.S.-based KWS Cereals has reported on their findings.

While Swine Innovation Porc (SIP) research has long been a fixture in this magazine, general manager Daniel Ramage is working on an entire series of Cluster 3 coverage that will continue to appear here in coming editions. In this one, you can find stories on projects related to pork quality grading and a pig gut health enzyme.

In other research, the University of Saskatchewan's Vaccine and Infectious Disease Organization (VIDO) is critical to the future of pig health, including the use of intrauterine immunizations. And work by Cargill is showing how heat stress on pigs is not just a summer problem but one that has a ripple effect throughout the year.

On the biosecurity front, a digital application by Farm Health Guardian is making managing farm visits easier to record through GPS technology, which improves upon paper-based documentation that can be an unwanted hassle.

Whatever makes farming easier is, naturally, preferable, but it's important not to cut corners where it truly counts: with your safety. AgSafe Alberta has been campaigning for better awareness and planning, and for good reason. An Alberta producer's dash with disaster demonstrates why.

Want to amplify your voice and make your thoughts known? Whether as a 'letter to the editor' in an upcoming edition, or a conversation on social media, I know there are many knowledgeable people across this sector, and your opinions matter. If you'd like to see your words published, don't hesitate to reach out to andrew.heck@albertapork.com or tag the Canadian Hog Journal on Facebook and Twitter (@HogJournal). ■


Andrew Heck

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Local retailers fight back on food prices

Andrew Heck

As consumers continue to wait impatiently for Canada's largest grocers to pony up with an explanation – and a solution – for high food prices, some smaller, regional companies are taking advantage of the collective discontent and working to bridge the gap between producers, processors and retailers.

In Alberta, Sunterra Market and Freson Bros. are two examples of grocers looking to make a positive difference by not only drawing on their direct connections to local pigs and pork but also by competing with the big guys on price – a challenging yet principled approach to business.

This summer, Sunterra Market and Freson Bros. worked with Alberta Pork to conduct activities under the banner of 'June is Pork Month,' including the use of special in-store promotions, contest giveaways and mainstream media to leverage the opportunity to win shoppers over and have them think differently about not only where their food

comes from, but where it's most affordable and accessible.

For Alberta Pork, the initiative was an opportunity to reach consumers who may have limited knowledge of the sector, to enhance their understanding of how pork makes it from farm to fork, and what that means for producers.

Sunterra's vertical integration creates efficiencies

The Sunterra Group includes ownership of multiple farms across Alberta, in addition to a federally inspected slaughter facility, a further-processing facility for cured products and a handful of retail outlets in the province's largest cities: Edmonton, Red Deer and Calgary.

More than four decades ago, hog farmer Stan Price began to blaze a trail that has blossomed into a fully vertically integrated system of producing pigs and processing pork, which is sold domestically and internationally, pro-

viding a strong position for the entire company, which remains closely tied to the Price family.

"Our company has an incredible commitment to growing, producing and retailing the best quality foods for Albertans. We are committed to feeding our communities well," said Kristi Mehr, Vice President, Marketing and Communications, Sunterra Market. "We think our company has a great Alberta-based story, and we want Albertans to know it. Looking at where our pigs and pork come from, we have a lot of people behind that, and they're the best ambassadors for it."

Last month, at all of its nine retail outlets, Sunterra set aside each weekend to celebrate 'June is Pork Month,' including a Value Pork Pack for \$49, featuring more than five kilograms of fresh chops, ribs and tenderloins, perfect for BBQ season, but also a great opportunity to tie the offer back to the Sunterra story. A comparative analysis of similar products in the marketplace, at that time, suggests the package cost around 40 per cent less than what competitors were selling.

The package was offered to Sunterra Market's loyalty members first, for pre-ordering and picking up the limited supplies. After those orders were filled, any remaining packs were made available for purchase by anyone who happened to frequent their stores. It was a smash hit.

"Sales volumes for the Value Pork Pack were outstanding," said Mehr. "We're humbled by the support of our engaged customers and their commitment to support local. We've had many customers thank us for the opportunity to enjoy savings while also receiving the highest-quality pork around."

As part of the weekend festivities at each location, other local food vendors whose products are carried by Sunterra were invited to join and give out free

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Sunterra Market celebrated 'June is Pork Month' at all of its Alberta locations, featuring activities that helped build pork demand. Ray Price, CEO, Sunterra Group and Jose Lomeli, Vice President, Operations and Purchasing, Sunterra Market are shown here with the Value Pork Pack specially created for the initiative.

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Sunterra Market's fresh pork offerings were promoted heavily in June. In fact, all of the company's products were price-compared with bigger retailers, coming in at a competitive or even lower price point.

samples. To help spread the word about the events, Sunterra also sought the help of local news media in Red Deer, after the company opened its first store there just a few years ago.

But a story alone is not a compelling enough value proposition for many consumers. While Sunterra's advantage in this area is clear, the company acknowledges that the current high-price environment, and assumptions about its status as a regional retailer, creates additional barriers.

When it comes to keeping costs low, in theory, volume matters. Large grocery chains will almost always win when it comes to certain generic packaged goods found on its shelves, but when it comes to fresh food, like meat, there's a lot more at play.

Sunterra's shortened supply chain means a more direct connection to the source and how products arrive in-store, which equals fewer costs to pass down to consumers. Not only is Sunterra's pork lower in price to what a shopper might find somewhere else, it's arguably better-quality and certainly

more obvious where it comes from. As a result of their efforts, they've examined the margin from farm gate to consumer plate and have taken a bold position to offer the best pricing on individual cuts within their meat departments, reduc-

ing prices across the board to maintain this edge in the long-term.

Given the success of last month's efforts, the company intends to ride the momentum well into the summer and fall by creating more deals to attract customers.

"We don't just want this to be a one-and-done," said Mehr. "We want to keep showcasing these great products while also remembering that times are tight, and people are concerned about their grocery bills."

By using the company's own pigs and pork, Sunterra has effectively cut middlemen out of the equation, which translates into price flexibility for consumers without sacrificing the attributes they want: healthy, tasty pork raised right around the corner. Unlike large-volume retailers, which will purchase pork from practically any available source at any time, based on the best possible margins, Sunterra hopes to continue punching above their weight when it comes to returning value to its customers and supporting the people who make Alberta-raised pigs and Alberta-processed pork possible.



Freson Bros.' commitment to selling fresh pork from Alberta's federally inspected processors affirms its support for local producers and comes with quality assurance guarantees.



Freson Bros. gave away BBQs at each of its stores in June, to incentivize purchases of fresh pork by loyalty members. Results showed a 15 per cent increase in sales over the monthly average.

Freson’s province-first approach inspires pride

Across the Canadian pork value chain, spreading the ‘eat local’ message can be difficult. For more than 99 per cent of Canadian pigs, which enter into the federally inspected system, a pig on-farm in one province can be shipped to another for slaughter, and then, most of that pork leaves the country.

But for Freson Bros., with 16 locations across Alberta, purchasing pigs through federal plants brings with it on-farm and in-plant quality assurance guarantees, along with a reliable supply that may not exist with smaller abattoirs, while still adhering to a consistent narrative that the company’s fresh pork is, indeed, local.

“We like to make it known all over our stores and in our flyers that we sell fresh Alberta pork and only Alberta pork,” said Brian Petty, Meat and Seafood Director, Freson Bros. “It’s really important to our customers and upholds the philosophy behind everything we do.”

To help gain some momentum for ‘June is Pork Month,’ Freson Bros. worked with Alberta Pork to acquire prize packages for all its stores, featuring high-end BBQs and other items, which were given away based on fresh pork purchases made by loyalty members. These giveaways were promoted in Freson Bros.’ flyer during the first week of June, further amplified using TV ads in the Edmonton market.

Freson Bros. places a lot of pride in its offerings, which go above and beyond what most major grocers are prepared to deliver. The company’s in-store butchering capacities include expertly cut fresh pork, along with house-made sausages, ham and bacon – products that customers can purchase and cook themselves or find already prepared in Freson Bros.’ restaurants, at various locations.

CONTINUED ON PAGE 10



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Freson Bros.' presence in many smaller and remote communities drives home the importance of what many of its customers value. By sticking to their commitments, it enhances not only customer understanding and appreciation but also, perhaps, keeps them shopping closer to home, rather than running off to the city to chase down a deal.

Producers and processors need supportive retailers

Across Canada, conscientious retailers like Sunterra Market and Freson Bros. can be found everywhere, often overshadowed by the dense proliferation of stores operating under various names, owned by multi-billion-dollar giants like Loblaw, Empire, Metro, Costco and Walmart, which have effectively gobbled up the majority of market share. And while these retailers, too, may sell Canadian pork quite frequently, they have a habit of not making that totally clear, and it's far from certain.



Anyone visiting select Federated Co-op food stores this summer can pick up Verified Canadian Pork (VCP) promotional materials for inspiration, courtesy of Canada Pork, Alberta Pork, Sask Pork and Manitoba Pork.



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While exports have undoubtedly formed a solid foundation for the pork value chain for years, our reliance on overseas markets can sometimes conflict with the idea that Canadian-raised pigs and Canadian-processed pork sold in Canadian-owned retail outlets is truly focused on Canadian consumers. For the average domestic consumer, understanding the business side of agri-food is often confusing, which creates blind spots and adds to frustrations.

The Verified Canadian Pork (VCP) program, which is intertwined with the Canadian Pork Excellence (CPE) program, aims to set the record straight in Canada and around the world.

“VCP lets domestic and foreign buyers know that all of the pork coming from Canada is high-quality, safe and meets or exceeds their expectations,” said Jeremy Yim, Domestic Marketing Manager, Canada Pork. “VCP captures everything good about our pigs, how they’re processed, and what that means for those who eat the pork.”

Yim has been working with provincial pork producer organizations to support their consumer marketing efforts,

through the creation of point-of-sale materials extoling the virtues of VCP through attractive products like recipe cards, brochures and instructional videos.

Timed with Alberta Pork’s ‘June is Pork Month’ activities, Canada Pork worked with Alberta Pork, Sask Pork and Manitoba Pork to develop and distribute materials to Federated Co-op food stores – more than 100 total across western Canada – often located in settings with just a couple thousand people each. The materials include QR codes for shoppers to easily access content on their mobile phones, showing how to prepare various pork-based dishes at home.

“VCP-branded materials not only inspire consumers to be creative and think differently about their food, but they help transmit the positive messages about the program,” said Yim. “By offering consumers something helpful and interesting, the goal is to get them to pick pork over something else.”

Thanks to the power of collaboration and combining resources, Canada Pork’s line-of-sight to the Canadian Pork Council’s (CPC) producer mem-

bers and the Canadian Meat Council’s (CMC) processing members places the organization at a critical crossroads for brokering relationships at both ends of the value chain, which is needed now more than ever.

When consumers win, we all win

Much discussion has been had about the inherent pricing disparities between producers, processors and retailers. While it is always a matter of perspective, from wherever you happen to view the situation, a united front is clearly the most valuable offense we can provide in the face of growing consumer defense, which includes stingy purchasing habits.

On the basis of price by weight, and the nutritional value provided, meat is often wrongly assumed to be an expensive option relative to other types of food, which bodes badly for everyone in the sector, unless minds can be changed.

It’s no secret that consumers are highly price-conscious, over and above all of the great stories and marketing claims behind their food. As we look to become increasingly more effective at sharing why Canadian pork is the best in the world, we cannot get too stuck in the intangible side of things that are easily overlooked by those who buy the end product.

Sympathy for producer concerns around high input costs and low pig prices, processor concerns around labour issues and political tensions, and retailer concerns around narrow margins are, frankly, less important to the average Canadian than his or her own financial standing. Overcoming the complex internal value chain disputes is fundamental to its overall success, and thanks to the efforts of everyone involved, there should be no question it is both essential and possible, with the right focus. ■



Getting Canadians to recognize pork’s value among many other options in the grocery store is a worthwhile pursuit. Thanks to pork’s inherent advantages over other foods, it’s also very possible, but not without putting in the required effort.

World Pork Expo sets the showmanship standard

Andrew Heck



'Piggy Smalls,' a giant inflatable pig, welcomes guests to World Pork Expo. His imposing presence is an effective analogy for the significance of this truly world-class industry event.

With a name like 'World Pork Expo,' and a claim to being the 'world's largest pork-specific trade show,' the event has a lot to live up to. Without question, it positively shatters those expectations.

Taking place this year between June 7 and 9 in Des Moines, Iowa, World Pork Expo 2023 welcomed more than 10,000 hog producers and industry partners from all over. Situated in the heartland of America, this gathering is a must-attend event, featuring all the who's-who of the pork industry.

World Pork Expo has a little something for everyone and delivers a whopping array of activities that are sure to educate, entertain and inspire across all three days it's held. For us in Canada, it sets a high but achievable bar for what industry events can and should include, to attract attention and renown.

Why, oh why, Iowa?

Most people familiar with the pork industry would not be surprised that the Midwest U.S. is a major hub of hog activity. Indeed, it is *the* hub, with pigs in Iowa outnumbering people by about six-

to-one. The state alone raises one-third of all U.S. hogs annually, representing approximately 46 million head – the most of any single state – and one-in-10 Iowans has a job tied to the industry.

Not only pig production, but pork processing is a considerable economic driver here, with the likes of Smithfield, Swift, Hormel and other prominent players operating in the surrounding area, serving many communities large and small. Across the U.S., there are 15 plants responsible for nearly 60 per cent of all hog slaughter, and of those, five are found in Iowa, with seven more in neighbouring states.

The World Pork Expo's organizing partner, the National Pork Producers Council (NPPC), is also headquartered in Des Moines, making it a natural location to showcase what this proud industry has to offer. In nearby Ames, the main campus of Iowa State University is home to much of the cutting-edge research that helps the industry continuously improve pig performance and reduce its environmental footprint.

While Iowa is not likely the top choice for a U.S. holiday destination, for most foreigners, the state does serve a critical need when it comes to supporting food



The Iowa State Capitol's golden dome towers over Des Moines, representing the prosperity and ambition Iowa has represented to the U.S. since being granted statehood in 1846. Much of the state's success since then has been owed to agriculture, especially hogs.

security for Americans from coast-to-coast, in addition to widespread economic benefits. Across Canada's more remote stretches of farmland, where many of our pigs come from, and where many of you work and live, the situation is the same.

Producer issues placed front-and-centre

To kick off World Pork Expo, NPPC hosted a news conference, with thoughts shared by various organization representatives, primarily focused on recent legislative challenges.

Scott Hays, President, NPPC is a fifth-generation hog farmer from Missouri. Now that California Prop 12 is a done deal, legally speaking, he suggested the next steps should be to work with officials to implement it in the least-destructive way possible.

"Our immediate concern is keeping pork on shelves in California," said Hays. "Our [NPPC] strength is what happens on the farm – the life cycle of the pig – and what's a fair timeline for transitioning."

But, for Hays, Prop 12 goes a lot deeper than economic considerations: "The poor don't get high-quality pork they deserve; it doesn't help the pigs; it's morally wrong. That's what we're trying to do: protect producers and consumers."

Regarding the resiliency of producers, and their ability to adapt to ever-changing conditions, Hays did, however, offer a hopeful message to counter the negativity: "Our ancestors figured it out, and so will we."

Managing the trade implications of foreign animal disease remains top-of-mind to help make up for any lost domestic consumption, which may be the case, in light of Prop 12.

"The number-one priority for our industry is preventing a foreign animal disease from arriving on our shores," said Maria Zieba, Vice President of International Affairs, NPPC.

Zieba mentioned Puerto Rico, a U.S. territory in the Caribbean, not far from the Dominican Republic, where African Swine Fever (ASF) was found in 2021. As the disease is considered endemic to

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The U.S. National Pork Producers Council (NPPC) began World Pork Expo with a panel discussion, covering issues that matter to U.S. producers.

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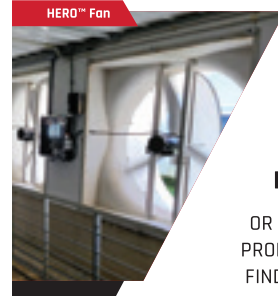
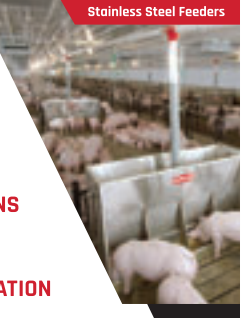
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the island of Hispaniola, where the Dominican Republic and Haiti are located, compartmentalization is key if a disease were to arrive in Puerto Rico, potentially affecting pork exports from the continental U.S. If trading partners choose not to recognize a Puerto Rican compartment, it could prove disastrous.

“That would be highly unfair to producers in Iowa, Minnesota or anywhere in the U.S. outside Puerto Rico,” she said.

Lowering barriers to trade in Southeast Asia is one trade strategy NPPC is pursuing to diversify market access and insulate itself against political concerns. Zieba referenced making inroads in Vietnam as a way to compete with countries under the umbrella of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which includes Canada.

When it comes to country-of-origin labelling for meat sold in the U.S., which has re-emerged as a topic of interest recently, Zieba expanded on NPPC’s logic when it comes to opposing its re-introduction, citing the increasingly integrated nature of the industry, especially with Canada and Mexico.

“Although the label would be voluntary, a lot of times, voluntary labels become mandatory. That’s just the way the market works,” she said.

Between 2008 and 2015, officials from the Canadian pork and beef industries effectively went to battle for Canadian producers in front of the World Trade Organization (WTO), citing the potentially costly and needless consequences of economic protectionism. The WTO ruled that country-of-origin labelling was, in fact, unfair to Canadian livestock shipped to the U.S., and struck it down. If it were to again be enacted, WTO compliance would result in retaliatory compensation for Canada, despite creating further headaches for the pork and beef industries on both sides of the border.

Given the scope of issues covered by NPPC, it is clear that the threats and opportunities expressed by the U.S. in-

dustry are many of the same we share in Canada. However, on a pound-for-pound (kilogram-for-kilogram?) basis, the potential risks and rewards are proportionally larger for Canada, given our heavier reliance on global conditions.

Trade show floor dwarfs most others

With nearly 400 booths total, featuring attendance from most of the world’s top swine industry suppliers, the World Pork Expo trade show floor could be considered the most-concentrated place anywhere to rub elbows with influential people in this business, including top brass from genetics and nutrition companies, equipment manufacturers, processors, government officials and others. The trade show provides a great chance to foster friendships and further commerce.

“Planning for World Pork Expo is a huge undertaking that begins for the next year almost immediately following the most-recent show,” said Randy Curless, Senior Marketing Specialist, PigTek. “Our company does not sell directly to producers, but through dealers, so the unique opportunity to build relationships with our end users at this event is invaluable for us.”

For some other vendors, promoting company research was the goal, as a way to pitch their products.

“World Pork Expo is a great place to connect with producers and people across the industry to showcase our work,” said Zach Rambo, North America Swine Manager, Zinpro Corporation. “Being able to network in-person helps us make the direct connections that get our products on-farm in the U.S., Canada and beyond.”

But not all exhibitors were there to sell products. Some, like U.S. Customs and Border Protection’s (CBP) agriculture specialists, were there to provide information on the risks of bringing contraband plant and animal products into the U.S. For the U.S. pork sector, as in Canada, a primary concern is the potential arrival of ASF from outside the country.

Several representatives from CBP were on-hand to answer questions and distribute materials to help attendees understand what they do and why it’s important. Curiously, not all CBP representatives were human.

Ozcar, one of CBP’s ‘beagle brigade’ members, is tasked with sniffing out pork and other meat in passengers’ luggage at Chicago O’Hare International



Upwards of 400 exhibitors set up shop at World Pork Expo – a scale unseen at other pork industry events.

Airport. He and his handlers even provided a demonstration to showcase Ozcar's abilities, to much fanfare. Ozcar and his canine colleagues each specialize in a handful of scents, totalling upwards of 100 for the entire brigade, spanning from food products to drugs and cash.

Wherever you look at World Pork Expo, exhibitors want to be noticed. Massive, elaborate displays dot the landscape, with others preferring a more subtle or people-first approach. However you slice it, it's safe to say *this* trade show is unlike any other in the industry.

Seminars cover hot topics

If you manage to find your way out of the maze of booths, conference rooms host a variety of sessions. Several were hosted by NPPC and the U.S. National Pork Board, while others were company-specific.

Rupert Claxton and Richard Herzfelder from Gira Food – a specialist international consultancy and market research firm – packed a room to the brim with guests and media looking to gain insights on the global pork situation, especially in China, where Herzfelder lived for many years.

By now, many have heard of China's 'hog hotels,' but not much is known about these surreal-looking complexes except that they are intimidating, bizarre and incredibly vulnerable, from a disease standpoint.

"Hog hotels are a result of consolidation in the Chinese pork sector, which has switched from backyard production to huge intensive feeding operations in the last decade," said Herzfelder. "Big Chinese pork companies started building these facilities due to limited space. The benefit is that they consolidate operations, focus logistics and reduce the need for trained staff. The biggest danger comes if any disease actually does gain entry to the facility despite biosecurity. Additional challenges include the ability to supply large amounts of feed and the need to handle huge volumes of waste."

Another conference, arranged by Commodity & Ingredient Heading (CIH), featured analysis from Ontario-based Kevin Grier Market Analysis and Consulting. Grier provided an overview of Canadian pork for those less familiar with the situation, touching on Quebec's arbitrated pig and pork pricing structure, including the situation for Olymel, which has been tumultuous of late.

"Given the challenges facing the Canadian industry, there are concerns about shipments of Canadian market hogs to U.S. plants," said Grier. "For most eastern Canadian producers who are currently sending hogs to the U.S., this is not a sustainable situation. U.S. producers do not like to see those hogs coming, but most Canadian producers hate it."

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Kevin Grier spoke about the Canadian pork industry, during a private reception at the end of the first day of World Pork Expo.

And while these seminars undoubtedly bring in many eager attendees, the sheer size of the event manages to make them look more like a side attraction to the rest. Anywhere else, conferences of this calibre would stand on their own, but at World Pork Expo, they are just another option among the cornucopia of things to see and do.

Fairground feel makes it fun

While World Pork Expo attendees, presenters and vendors alike certainly benefit from the 'business' end of things at the event, outside, the Iowa State Fairgrounds provide ample space for excitement and indulgence.

A long row of white canvas tents lines the midway as far as the eye can see, almost like a mirage generated by the heat emanating from the pavement. Following a morning full of steady networking and education, afternoons at World Pork Expo take on a party atmosphere.

The pull of company-run hospitality sites is powerful. A wide array of tasty food and drink options are available all day, each day, and many of the important conversations take place between bites of pulled pork sandwiches and sips of beer, mixing engagement and enter-

tainment into a potent cocktail. Many organizations are eager to bring people into their surroundings, and during the latter part of the day especially, tents are the place to be.

One stop among the bunch stood out, operated by Indiana-based equipment manufacturer Hog Slat. While its no secret companies are there to *sell, sell, sell*, the Hog Slat tent also offered a

light-hearted yet insightful presentation on farm-cured pork, including bacon and country hams.

Leo Landis, curator of the nearby State Historical Museum of Iowa, has a remarkably deep understanding of Iowa's agricultural history. He presented on the traditions and techniques of makin' bacon across the state and the pork industry's cultural significance.

"In the mid-19th-century, Iowa farmers focused on hogs and wheat as their cash crops. Iowa's environment varies from east to west, but hogs made sense as the ultimate forager, requiring limited human intervention regardless of setting," said Landis. "While the state has timberland around the Mississippi River, across much of the state, tall-grass prairie was converted to cropland, which helped take hog production to a new level. Corn and soybeans are the basis for Iowa's pork industry today."

Whether you're just looking for a little fresh air and something to fill your belly, or whether you want to chat up some of the producers and industry partners you've been dying to meet, the fairground festivities, possibly more than anything else, set World Pork Expo apart from many of the comparable events of lesser scale in Canada and likely elsewhere.



On the midway, company hospitality tents and other attractions invite World Pork Expo attendees outside to enjoy the weather, along with many food and drink options.

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Capturing clout for Canada

The Canadian and U.S. pork industries share a lot of similarities but also some stark differences.

While both Canada and the U.S. have their sights set on lucrative foreign export destinations, there is an inverse relationship between domestic and foreign consumption of our pork. Whereas upwards of 70 per cent of Canadian pork

is exported, only about 30 per cent of U.S. pork ends up overseas. Consequently, only 30 per cent of Canadian pork is consumed at home, with Americans eating 70 per cent of their own. That may sound purely statistical in nature, but it points to something that has long characterized our respective national sectors.

Historically, the Canadian pork industry prided itself on quality over quantity,

which was a necessary strategy for all kinds of reasons, but if we want to continue to be a fair and friendly competitor to our southern neighbour, long-term thinking suggests we can both benefit by taking a page from each other's book. For Canada, that means making greater efforts to develop our industry events to make them truly interesting and valuable for those who attend.

These realities underscore the importance of conferences attracting people from outside our own borders especially. These activities are highly valued by the U.S. industry, and they could and should be considered even more vital to the Canadian industry.

While Canada certainly isn't without its own distinguishing features – think the mountains of Banff or the charm of Old Quebec, as only two examples – you would be hard-pressed to find a conference in Canada that leaves an impression as confidently as World Pork Expo.

Granted, that isn't to take away from all of the great events we do have, nor is it envy for the things we don't, but there are indeed some lessons to be learned by venturing south, if we want to continue improving our presence on the global stage, for the benefit of the entire Canadian pork value chain. ■



We in Canada are well aware of our southern neighbour's strengths, and our own, but to grow industry events in our countries, we could certainly learn from each other.

Unearthing Canada's economic and climate opportunities

David McKay

Editor's note: David McKay is President & CEO, RBC. For more information, contact Jeff Lanthier at jeff.lanthier@rbc.com.

The question of how to revive growth is at the top of the list for government and business leaders everywhere. Even more important is how to combat climate change while doing so.

Perhaps no other group of people can make more progress on both of these challenges than farmers.

From my earliest days as RBC's CEO, I've been focused on the challenge and opportunity of our country's climate transition and the fundamental reshaping of our economy that will be required to make it happen. During this time, I've seen that, for many of the business leaders and policy makers driving the net-zero transition, Canada's agricultural sector is too often overlooked.

And yet, few sectors have done more for growth, productivity and exports lately. Over the past 25 years, farmers have been embracing climate-smart agricultural practices, and, today, the sector's productivity numbers are leading the

country and outperforming other advanced economies, including the U.S., France and Germany.

Canada can be the sustainable breadbasket for an increasingly hungry world.

In the past few years, I've met with farmers in almost every province across the country. The more time I spend learning from them, the more I believe Canada can add to the \$82 billion worth of food that farmers already produce and export globally each year – and better capture emissions while doing so.

This year's federal budget laid out some significant and much-needed climate investments across critical minerals, electricity and clean-tech manufacturing.

But to truly turbocharge Canada's ability to be a global net-zero innovator, our country needs to complement these investments with climate-smart agriculture commitments. This is one critical way we can compete with the incentive-heavy U.S. *Inflation Reduction Act*,

which continues to attract investments and talent to green energy projects south of the border.

The good news is that at least 65 per cent of farmers across Canada have already adopted climate-smart practices to make their soil as productive as it can be by embracing activities like cover cropping, low or no tillage and nutrient management.

To keep that going and growing, we must collectively find ways to reward farmers for what they preserve, not just what they produce.



Take soil sequestration as an example. Soil, like trees, absorbs carbon, which makes it so important for farmers to




With climate change policy playing an increasingly influential role in agriculture, farmers must do what they can to take advantage of the possibilities to become more environmentally

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find ways to better manage and observe those carbon-capturing abilities.

Our research estimates that a carbon soil market could be worth as much as \$4 billion, but right now, Canada lacks a consistent and credible system to measure, report and verify carbon soil storage. Without this, farmers get little to no economic credit for the sustainable farming practices that many of them are so good at.

To help, we've formed the Canadian Alliance for Net-Zero Agri-Food, a collaborative effort with Maple Leaf Foods, Loblaw and Nutrien, supported by Smart Prosperity, Natural Step and Arrell Food Institute. Through this process, we have been engaging dozens of farmers, food producers and partners across the country.

The group's goal will be to advance climate-smart agriculture that grows more food while reducing emissions, providing farmers with the tools and financial incentives to promote soil health to improve their environmental sustainability and increase public trust in agriculture among consumers. The alliance aims to cut emissions in the sector by 50 megatonnes by 2030 and by 150 megatonnes by 2050.

For RBC's part, we're kicking things off by working with partners on a market-driven system around crop production

that could help build a groundbreaking Canadian carbon credit market that compensates farmers for what they preserve. We're also partnering on a pilot that helps livestock producers increase their capacity to install anaerobic digesters with fewer policy hurdles.

Looking ahead, we hope the industry can work together with government and other partners to scale these projects across the country, continuing to cultivate a farmer-led sustainable agriculture movement.

All of this work is among the first being explored through the RBC Climate Action Institute. The institute will seek to bring industry experts and partners together to share insights and inspire action for Canada's net-zero journey across key sectors such as construction, energy and agriculture.

Our bank believes this model can help inspire industries across Canada to shift from strategy to action.

At this critical moment on climate change and the reimagining of our economy, every sector in Canada needs to work with long-term thinking, coordination and focus. Businesses and governments cannot act independently and expect to make progress.

It's time to work closer together – with more ambition than ever before. ■

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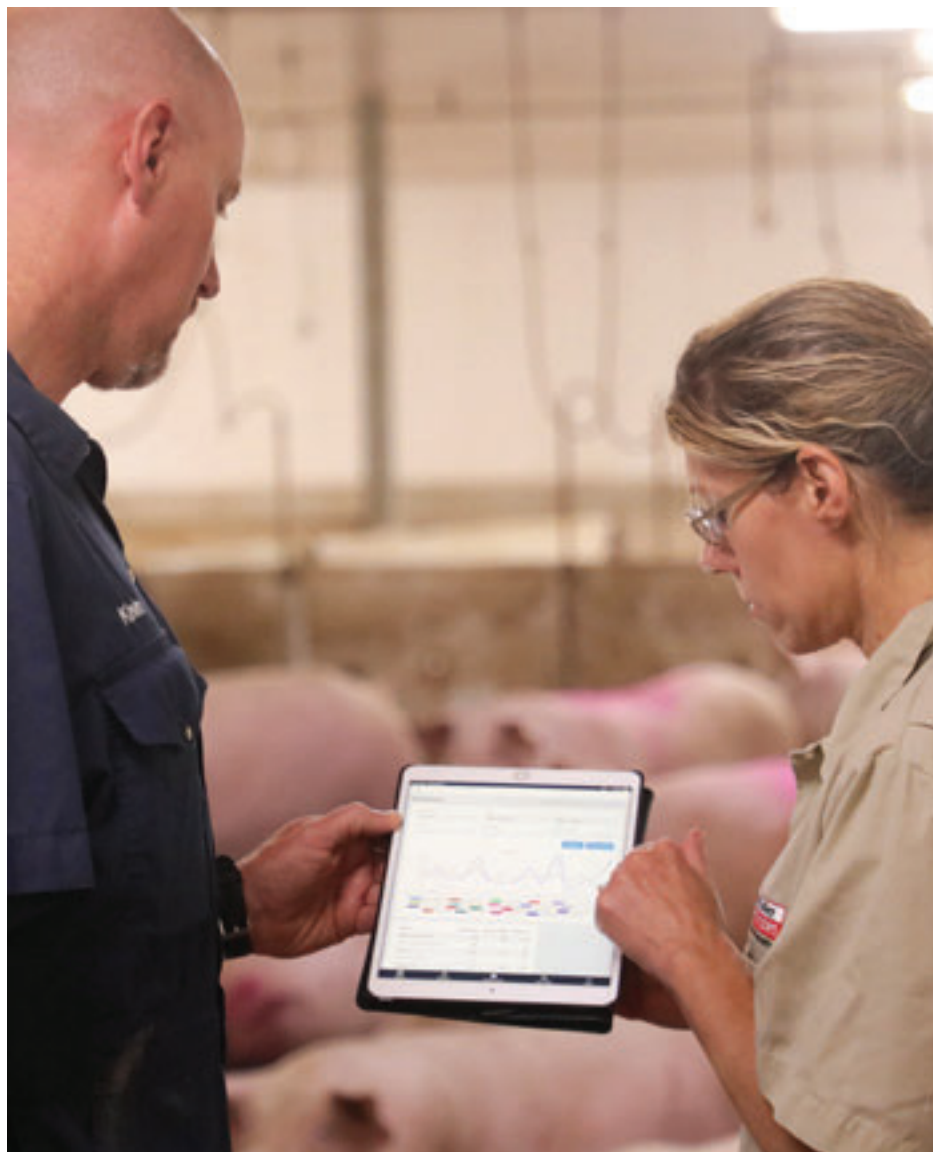
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Digital solutions help improve farm biosecurity

Treena Hein



Practical steps to reliably track biosecurity protocols, including the use of technology, are essential to eliminating gaps and giving farms their best chance at staying disease-free.

As the importance of biosecurity continues to be increasingly better understood, biosecurity practices have evolved to become more efficient and effective for producers.

Farm Health Protect – a digital solution offered by Farm Health Guardian – is currently being used on about 600 swine properties in Canada, including about three-quarters of Manitoba pig farms, along with 100 more

in the U.S. Farm Health Protect, formerly known as ‘Be Seen, Be Safe,’ is a Canadian-made subscription-based system that offers a range of biosecurity services.

First and foremost, it confidentially records farm visits through a computer-based application, relying on GPS beacons attached to farm vehicles and property that are used for ‘geofencing.’ The GPS boundaries of the property are

entered into the system, which then records every time the boundaries are crossed by a system vehicle or device. In addition to keeping a record and offering instant analysis of farm visits, Farm Health Protect can also immediately establish geographical control zones in case of disease outbreaks, sending alerts and reference maps to producers, and more.

The system automatically records the date and time of entries and exits by farm employees and regular service visitors, like trucks for livestock transport and feed deliveries. Upon arrival, visitors receive a notification via the app asking them to answer customizable biosecurity questions. They will then receive approval to enter or be denied until the issue can be sorted out.

Barn visitors are required to fill out a digital visitor logbook, located in the barn entrance or wherever visitors are required to sign in. This can also be customized in terms of check-in questions to ensure visitors meet the barn biosecurity protocols.

The system can also be used for things like enforcing property downtime requirements and rapid-targeted or system-wide communicating with farm workers and other people in the system. This functionality can be used in the case of an animal health concern when employees and visitors may need to be notified in real time.

“An example of this would be messages about manure spreading in a certain area,” said Rob Hannam, CEO, Farm Health Guardian.

Overall, Hannam explains that Farm Health Guardian helps farmers and agri-food companies better understand what’s happening on their properties and make better management decisions, proactive or otherwise.

“Part of this includes notifications if there’s a breach of biosecurity,” said

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Farm Health Protect is highly accessible, with real-time data available to users at their fingertips.

Hannam. “We’ve developed a feature that will provide alerts to notify people if there’s been a breach such as a truck wash, downtime between barns, health pyramid or the order in which trucks are going from farm to farm.”

On-farm implementation finding success

Topigs Norsvin Canada has been using Farm Health Protect on their breeding farms in Saskatchewan and Manitoba for close to two years at this point. The company’s veterinarian, Brad Chappell, says it was implemented as part of Topigs Norsvin’s ongoing prevention of disease on its premises and its preparedness for the potential arrival of foreign animal diseases.

“We’d always been very detailed about biosecurity, but it’s impossible to track all farm traffic and do a rapid search of visits without the electronic records that a system like this provides,” said Chappell. “It’s a big step up from that piece of paper in the barn. Minimum once a week, I look at who has come on the properties and into the barns to see if there was anything unusual – was anyone is denied entry, to see what was delivered. It’s helped us analyze whether there are things coming in that don’t need to. Every visit is a biosecurity threat.”

The installation was smooth, and implementation among the staff required higher-level oversight to ensure everyone is trained and using the system without issues. Going digital with this aspect of operations has been a change in workplace culture for Topigs, and any culture change takes a little while to achieve.

“The other nice feature is you’re able to ask questions of people before you decide to admit them,” said Chappell. “We have service people who need to go into the barns, and they may be new to the job, and the system ensures they read the rules – no pork meat for lunch, for example – but we also ask questions to make sure they are abiding by the rules.”

The Maschoffs, based in Illinois, are one of the largest family-owned hog production networks in North America. They recently trialed Farm

Health Protect because the geofencing and tracking system allowed more transparency with feed and livestock trailer movements. The current scope of the pilot project involves more than 100 properties with geofences, 18 users and 29 trailers with GPS installed.

“Since the start of this year, the system has logged more than 12,000 visits or geofence crosses,” said Kayla Henness, one of the Maschoffs’ veterinarians. “The platform is simple to use, and the ‘Outbreak Report’ feature has been helpful during a health investigation. We are working closely with Farm Health Guardian and moving towards utilizing the platform for truck wash compliance audits, biosecurity breach alerts and people entering sow farms. Our learnings throughout this pilot have ranged from which GPS devices work best, misses on truck movements, as well as transparency to people movements.”

Farm Health Guardian’s reach keeps growing

Chappell has suggested that it would be nice to have a set of questions for property entry in addition to the ones for barn entry.

“I recently presented at a conference in the U.S. about how we use the system, and a person suggested after that it would be useful to be able to take a picture of what service people are bringing into the

barn, to have a record of that, but also perhaps it would encourage them to only bring in the equipment that’s really required for the repair or maintenance,” said Chappell. “As people use it, they get ideas for added capabilities and some of those are already going into further product development.”

Farm Health Guardian also recently announced a merger with U.S.-based NoveTechnologies to launch Protocol, a biosecurity management system that utilizes facial recognition technology for controlled barn access. The two companies have joined forces under the Farm Health Guardian banner and operate out of Ontario and Nebraska.

Maple Leaf Foods has also embraced Farm Health Guardian as a traceability and biosecurity digital technology partner.

“Working together, Maple Leaf Agri-Farms has provided Farm Health Guardian with recommendations to adapt and customize the digital biosecurity system for pork production operations across North America,” said Hannam.

With producers constantly looking to get an edge on biosecurity and make it simpler to manage, Farm Health Guardian is one company leading the way to serve farmers while helping to protect the industry at large. ■

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Hutterite colony feeds hybrid rye with success

Carly Rundle & Becca Brattain

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With recent changes in environmental conditions across the prairies, farmers are looking for a crop that can thrive in extreme climates. Winter hardiness, drought resistance and disease tolerance rank as some of the top characteristics they look for in a crop, and what some have found is hybrid rye.

Hybrid rye is a fall-planted winter cereal that is harvested in mid-summer. Bred for its high yields, ergot resistance and standability, hybrid rye produces high-quality grain and greater yields compared with conventional rye varieties. Pairing that with the fact that this is a low-input crop, needing 20 per cent less water than winter wheat, it is a perfect fit for the region.

Self-sufficiency matters for Upland Colony

Upland Colony is one such farm that recently found hybrid rye. Located near Artesian, South Dakota, they have developed an interest in diversifying their crop rotation to improve soil health and increase annual crop yields. Upland Colony is one of many Hutterite colonies in the area, and they focus on holistic farming – raising livestock, producing manufactured goods and striving to be as self-sufficient as possible.

Ken Wurtz, the farm manager at Upland Colony, has been planting hybrid rye for a few years now.

“I’m impressed by its ability to suppress weeds, its drought tolerance, its low fertilizer requirements, and disease tolerance,” said Ken.

Given the ease they had in growing hybrid rye, Ken’s next mission was to find out how best to use it.

The natural option was to sell to the distilling market. However, when faced with an on-farm corn shortage in 2022, he and Cornelius Wurtz, the hog manager at Upland Colony, became very interested in the opportunity to incorporate hybrid rye into their swine diets.



Upland Colony hosted a field tour for local farmers to find out how growing rye has proven useful for feeding their hogs, not just as a cash crop.

Previous research conducted at the University of Illinois concluded that the crude protein in hybrid rye ranges from eight to 12 per cent, with 0.25 grams per kilogram of digestible lysine. The total dietary fibre content is around 18 per cent, and the metabolizable energy content is estimated to be 3,150 kilocalories per kilogram when fed to growing pigs. Additional work by the University of Illinois and South Dakota State University (SDSU) has shown that, altogether, hybrid rye has an attractive nutrient profile that fits extremely well in all stages of swine diets.

Upon hearing these results, interest at Upland Colony grew, and they started developing a plan to get further use out of their rye beyond selling it to the distilling market. In collaboration with their swine nutritionist, and with support from the research team at SDSU, they developed a plan to begin incorporating hybrid rye into their sow diets.

Testing the rye diet on-farm

After careful consideration, Upland Colony decided to start including hybrid rye in their sow diets in September 2022, at 20 per cent of the total ration for gestating and lactating sows. They wanted to better understand how to process and handle this new feedstuff and get a clearer idea on how their hogs consumed and performed with it in their diets.

When asked how the sows were performing with hybrid rye, Cornelius was quick to brag.

“Hybrid rye is as good as or better than corn,” said Cornelius. “They eat it well, it digests well, and we are weaning some heavy pigs”.

Compared with feeding sows a standard diet, adding hybrid rye did not influence feed intake, as sows fed with and without hybrid rye reached their optimal targets. After the success of incorporating hybrid rye into sow diets, they were excited to see just what else hybrid rye could do.

To test it out, Cornelius set up their nursery barns so that one barn was fed a traditional corn-based diet that did not contain hybrid rye, and the other barn was fed a diet with five per cent hybrid rye in the diet during the first week, continuing with seven per cent for the remainder of the nursery period.

The nursery pigs that were fed hybrid rye had a feed-to-gain ratio of 1.32, whereas pigs that were not fed hybrid rye had a feed-to-gain of 1.56, indicating that feeding hybrid rye is more efficient than feeding a diet without it. Based on these results, Ken and Cornelius plan to continue including hybrid rye in their swine rations and are eager to keep seeing all the benefits that hybrid rye has to offer their farm.



Upland Colony has experienced good results feeding rye to both sows and nursing pigs.

Results show cost savings

Currently, feed costs make up the largest portion of a livestock producer's budget. Input costs for hybrid rye are substantially lower than corn. With lower seed, fertilizer, chemicals, fuel, labour and drying costs, the direct cost of producing hybrid rye is estimated to be around USD \$225.25 per acre (CAD \$302.97) compared to USD \$498.06 per acre (CAD \$669.91) producing corn based on averages in the U.S. Midwest region (*Table 1*).

Even though hybrid rye has slightly less metabolizable energy concentration than

corn, the cost per 1,000 megacalories of energy is USD \$5.15 (CAD \$6.93) less when feeding hybrid rye than with corn. This means that, ultimately, the producer is spending less for the same amount of energy used by the pig.

In a time when feed costs are high and hog margins are low, replacing corn with hybrid rye may be a solution to consider for an integrated farm to maximize profits. The benefits can be seen from the time of sowing the seed to bringing the pigs to market. With improvements in feed efficiency observed in the sow barns and the nursery, Upland Colony has had great success incorporating hybrid rye into their swine diets and say that they are looking forward to continuing this practice for years to come. ■

Table 1. Input costs of producing corn and hybrid rye in the Midwest region of the United States¹

	Corn	Hybrid Rye
Yield, bu/acre	180	100
Seed	\$114.50	\$57.60
Fertilizer	\$221.09	\$115.60
Chemicals	\$58.00	\$7.20
Drying	\$20.52	\$0.00
Crop Insurance	\$19.98	\$0.00
Fuel, repairs, labor	\$63.97	\$44.85
Total direct cost/acre	\$498.06	\$225.25
Metabolizable energy (Mcal/acre)	14,970	8,009
Cost/1,000 Mcal metabolizable energy	\$33.27	\$28.12

¹Market pricing and farm expenses are only estimates based on averages in the Midwest region of the United States (Illinois, Michigan, Minnesota, Nebraska, North Dakota, South Dakota, Wisconsin).

²Metabolizable energy concentrations adapted from McGhee and Stein (2020).

Table 1

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Farm injury highlights importance of safety

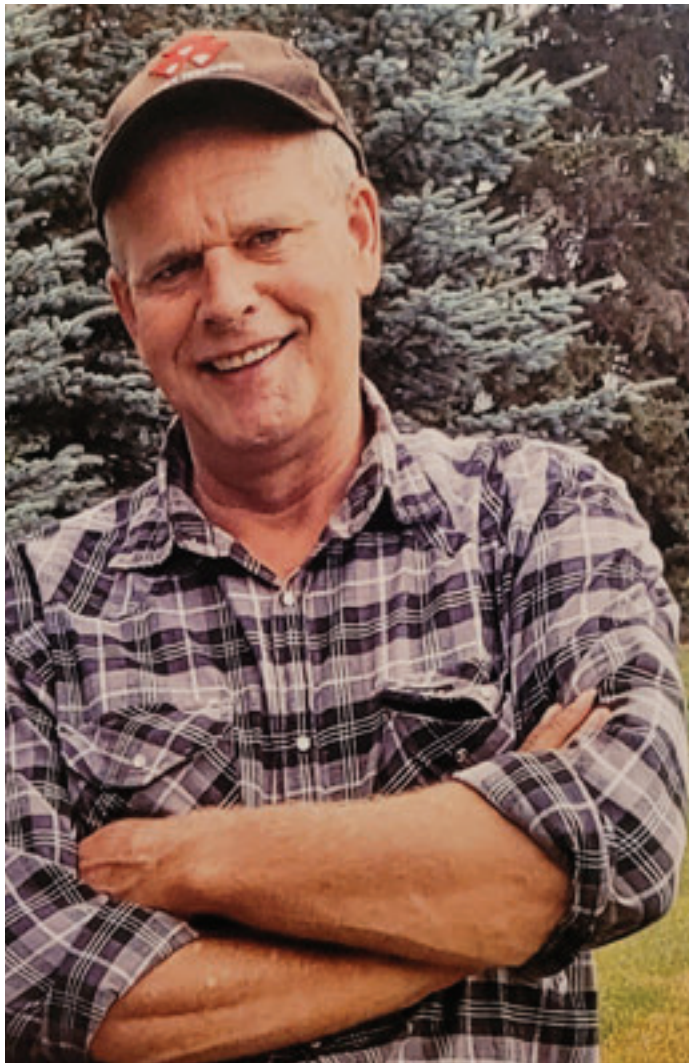
Delaney Seiferling

Jaco Poot remembers the evening of July 29, 2011 like it was yesterday.

It was a Friday evening, after dinner, and as a hog producer in Bloomsbury, Alberta, his workday was, as usual, not finished.

As his wife and daughter headed into town, he went back outside to his farm to check how full his feed bins were, as he was expecting a delivery the next day.

It was a stressful time, said Poot, who moved to Alberta with his wife from the Netherlands in 1996 to fulfill his dream of owning a hog farm. He was understaffed and grappling with the economic ups and downs that have long been a feature of the hog industry. Because of this, he was



Alberta hog producer Jaco Poot knows first-hand the importance of farm safety, and the potential consequences of neglecting it, following a painful ordeal more than a decade ago.

trying to cut corners and do as much as he could on the farm by himself.

“Being kind of a go-getter, I climbed the bin there with one hand on the ladder and the other hand knocking on the bin, so you can hear how full the bin is, what the grain level is,” said Poot.

Focused on moving quickly, he misjudged where the top of the 18-foot-tall bin ladder was.

“I mis-grabbed, and bang, I was down on the ground again.”

After that, things were a bit hazy. He thinks he remained on the ground, unconscious, for about an hour before beginning to drift in and out of consciousness.

“Every time I came kind of back to the world, it hurt like hell. I wanted to be back to being passed out,” he said. “At the moment, of course, I didn’t know what was going on, but I was paralyzed.”

As he slowly started becoming aware of what had happened, he realized he needed help but didn’t think to try to locate his cell phone to call his son, who was in the house. Eventually, he somehow dragged his injured body back to the farmyard.

“I was laying on my belly, vomiting, crawling through my own vomit. It was so gross.”

He later learned that he had lost his phone somewhere along the way and that his son eventually found him, unconscious again, and raced him to the closest hospital, in Barrhead.

There, the nurses noticed right away that there was something seriously wrong with his neck and back.

“Somehow, they managed to get me on a stretcher, and they shipped me off to the hospital in Edmonton,” he said.

There, several MRI scans confirmed he had suffered five cracked and broken vertebrae, two in his neck and three in his centre back. He also had a minimal crack in his skull, and a concussion.

Despite this long list of injuries, there was also some good news – he started to get some sensation back in his toes.

“It was a good sign,” he said. “It was just basically from shock that that all feeling was gone.”

He remained in the hospital for observation for several more days, and the medical team confirmed that the vertebrae were cracked but, thankfully, not damaged further.

“I had movement in my toes, my feet, and I was able to stand again.”



After his accident, Poot was rushed to Edmonton to assess and treat damages, followed by weeks of difficult but necessary bed rest at home.

Eventually, he was sent home with a cast on his neck and chest and a warning to stay in bed for eight weeks.

“And that’s what I did,” he said, adding that those eight weeks presented a whole new type of challenge.

“I remember those eight weeks, especially the last couple of weeks, they were worse than the accident, mentally. I’m kind of a physical guy, I want to get going.”

In the end, he made a full recovery and is extremely grateful. But he admits that, in retrospect, he feels foolish for taking such major risks to save time.

“This whole accident is because I was just dumb, too much in a hurry,” he said, adding that, at the time of the accident, he was under more stress than usual.

“I took on more on the farm than I actually could handle, labour-wise.”

He believes that many farmers share the same attitude when it comes to facing challenges such as these.

“You keep going and you keep going and you keep going,” he said. “The workload you take on as one person is about double what you would do as

hired person. So, you make it a habit of working 80 hours a week, and you start paying the price for that after a while because you become kind of blind for danger, you become overly tired.”

This message should be taken to heart by everyone who works in agriculture, said AgSafe Alberta executive director Jody Wacowich. Poot’s story is a perfect example of how easily things can go wrong, and what the major risk factors are at this time of year, including the stress and ensuing fatigue that can come with busy times.

“The number of farm accidents and fatalities peaks during busy, stressful times on farms,” said Wacowich.

A tired worker is three times more likely to have an on-farm accident, and that tiredness is four times more likely to cause impairment than drugs or alcohol. Studies also show that 20 per cent of all vehicle fatalities can be attributed to fatigue.

Poot’s story also highlights the dangers that come with working alone.

“A shocking 50 per cent of farm accidents occur when the victim is working alone and is rendered in a position where they can’t call for help,” said Wacowich.

She encourages farmers and ranchers to mitigate risks by identifying work-

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alone situations in their operations and what measures can be taken to address the hazards.

Finally, the third risk factor highlighted in Poot's case is the dangers associated with working from heights on farms. In 2011, two farmers in Alberta were killed as a result of falling from grain bins.

"As grain bins are getting bigger, some up to 60-feet high, these risks increase, although even a fall from 10 feet can be fatal or critical," said Wacowich.

As a best practice, farmers and ranchers should endeavour to have fall protection measures in place when workers are at risk of falling from three metres or higher. Wacowich also urges farmers to take further safety precautions by consulting the many free resources AgSafe Alberta has made available to farmers and ranchers in the province.

"We've spent a lot of time identifying the most common hazards farmers and ranchers face throughout the year, and

there are simple and effective ways to address these risks," she said, adding this information is all available on Ag-Safe Alberta's website.

"It's just a matter of planning ahead and making sure these safety programs are in place before an incident happens, so everyone can go home at the end of the day," she said.

In the meantime, Poot has a simple safety message for farmers: "Just slow down. Use your head, count to 10."

He has adopted this mentality on his own farm and will continue to share his story with other farmers in the hopes that it might prevent another injury or even a fatality.

"When you're in bed after the accident, you realize what life is worth as far as family and values, and this farm that is so important to you, it's actually not," he said. "But it takes an accident to realize it, and that's the sad part." ■

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Feds look to update traceability requirements

The Canadian Food Inspection Agency (CFIA) hosted a public consultation period until mid-June on proposed changes to the *Health of Animals Regulations* under the *Health of Animals Act*, to which all livestock producers are legally bound.

PigTrace – Canada’s national traceability database that records pig movements – is directly impacted by these regulations, which have wide-reaching implications.

Response to the changes, as they relate to hogs, were mixed. The Canadian Pork Council (CPC) issued an official statement in mid-May, including: “The PigTrace program has been mandated by federal regulation since July 1, 2014. The pork sector has made great progress and experienced the value of the program in terms of preparedness and response to disease and food safety issues. We’ve also identified several requirements

that will negatively impact our business, human resources and animal welfare.”

One major change that could affect producers across the country is excluding the use of shoulder slap tattoos bearing a farm’s herd mark as an approved method of identifying pigs moved to slaughter by way of a collection site, such as an assembly yard. The proposed change would allow slap tattoos only for pigs being shipped directly to an abattoir. CFIA has suggested that its inspectors at assembly yards have experienced difficulty reading slap tattoos and have requested the use of ear tags.

Provincial pork organizations reacted swiftly in collaboration with CPC, to inform producers of the public consultation period, with the hope of preventing the slap tattoo exclusion and a handful of other proposed changes. Other proposed changes, including the mandatory use of premise identification, were supported by CPC and the provincial pork organizations.

U.S. Supreme Court upholds Prop 12

California Proposition 12 was passed by the state’s voters in 2018, stipulating that all pork sold within the state must be sourced from farms that allow at least 24 square feet per gestating sow – a substantial increase over what most barns are capable of accommodating without renovation and a reduction in herd size, or new construction.

The law was opposed by several American farm groups, including the U.S. National



Proposed regulatory changes to Canadian pig traceability have been met with mixed reaction from pork producer organizations.

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Proposition 12

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Results		
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✗ No	4,481,267	37.35%
Valid votes	11,997,362	100.00%
Invalid or blank votes	0	0.00%
Total votes	11,997,362	100.00%
Registered voters/turnout	19,696,371	60.91%

More than 7.5 million Californians – equivalent to the Bay Area population – voted to impose stricter restrictions on pork sold in their state. California consumes upwards of 15 per cent of all U.S. pork, but it is estimated less than five per cent of U.S. pork is currently compliant with Prop 12.

Pork Producers Council (NPPC), which resulted in legal roadblocks to implementation that persisted until early May, when the U.S. Supreme Court upheld California's decision following a one-vote margin between the justices tasked with the ruling.

"We are very disappointed with the Supreme Court's opinion. Allowing state overreach will increase prices for consumers and drive small farms out of business, leading to more consolidation," said Scott Hays, President, NPPC. "We are still evaluating the court's full opinion to understand all the implications."

Under the terms of Prop 12, all fresh pork sold in California, acquired from July on, must be sourced from producers and processors in compliance with the new regulations. Pork acquired prior to July, in storage, can continue to be sold until supplies run out.

While arguments for opposing Prop 12 vary, as it relates to individual states imposing animal care standards on producers in other states, another major

liability is the potential for additional states to adopt similar legislation to California. Massachusetts Question 3, with a similar premise to California Prop 12, was originally approved by nearly 78 per cent of voters in that state, in 2016. Other current legislation in New Jersey and Texas is also raising alarm bells for the industry.

Olymel closes six barns in Alberta and Saskatchewan

Olymel announced in late May the closure of five sow barns in Alberta and one in Saskatchewan, due to continued financial losses for the company and expected market uncertainty into the future.

The closures will reduce hog supply for the company's slaughter facility in Red Deer, Alberta by around 200,000 market hogs annually from company-owned farms. The reduction will not be felt until next year at the earliest and will be subject to independent hog supply availability.

"Over the past two years, it is well documented that Olymel has experienced significant losses in the processing of fresh pork as a result of limited market access globally," said Yannick Gervais, President & CEO, Olymel. "Now, coupled with stubbornly high feed costs resulting in unprecedented losses in the hog sector, we have little choice but to retract and position ourselves for success in the future when conditions improve."

HyLife sells Minnesota plant

HyLife announced in early June it had found a buyer for its slaughter facility in Windom, Minnesota, which had been put up for sale in early April. Premium Iowa Pork agreed to a \$13-million sale of the plant, which was completed through a competitive bidding process.




A buyer has been found for the slaughter facility in Windom, Minnesota that was owned and operated by Manitoba-based HyLife since 2020.

HyLife originally purchased the plant in 2020, which was acquired to increase overall capacity, in addition to the company's main plant in Neepawa, Manitoba. Market volatility and labour issues have created challenges for many North American pork processors, including HyLife, leading to some difficult and unforeseen business decisions.

Immigration programs receive a boost

The Government of Canada announced in early May a five-year extension to the Agri-Food Pilot, launched in 2020 to help create permanent residency pathways for temporary workers in the agri-food sector, including farm workers and meatpacking employees.

CONTINUED ON PAGE 32



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“The meat processing sector requires skilled, year-round labour to put Canadian meat products on grocery store shelves,” said Chris White, President & CEO, Canadian Meat Council (CMC). “Our members invest in their workforce, and we are therefore very pleased with the measures announced, which will help us retain these valued individuals.”

Other details from the announcement included the removal of annual occupational caps, or the limits for how many candidates can apply for a specific occupation under the pilot. By the end of this year, further changes will also come into effect, including the expansion of work permits to family members of those working in agri-food and greater flexibility around qualifications that are related to experience or education level. A total of 2,750 applicants can be processed under the pilot annually.

In late June, the government launched the first-ever category-based selection for Canada’s economic immigration management system, Express Entry, targeting agri-food and other sectors. Express Entry is designed for people seeking to immigrate permanently through the Federal Skilled Worker Program. The first category-based invitations to apply are expected to be sent this summer.

Carlo Genetics names new GM

Katrin Braasch took over the role of General Manager, Carlo Genetics in early June, succeeding Kyla Ripley. Since 2020, Braasch has worked with all departments at the company.

“I am excited to transition into the role of GM at Carlo Genetics and will continue to work together with our excellent team to serve our customers with the same transparency that Carlo is known for,” said Braasch.

Originally from a small town in Germany, Braasch first visited Canada as an exchange student and has lived here full-time since 2005. In addition to working with Carlo Genetics, she and her husband run a cow-calf operation near Ste. Genevieve, Manitoba. ■



Katrin Braasch



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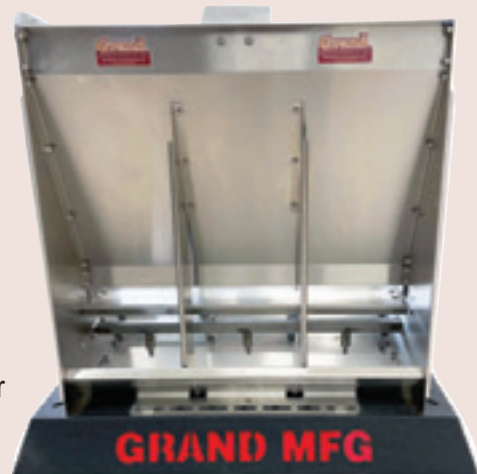
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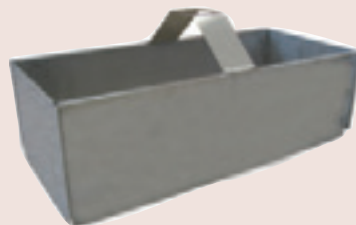


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Producer-supported research brings benefits

Daniel Ramage

Editor's note: Daniel Ramage is General Manager, Swine Innovation Porc (SIP). He can be contacted at info@swineinnovationporc.ca.

Swine Innovation Porc (SIP) is pleased to announce a special series of articles in the Canadian Hog Journal, where we will be highlighting the outcomes of our latest completed Swine Cluster research initiatives. This series aims to provide valuable insights for professionals in the pork industry, especially producers, while celebrating the achievements of Canada's pork research community.

SIP's Swine Cluster program is not only an investment in research but also a commitment to the future of Canadian pork. The Swine Cluster program plays a central role in enabling research capacity and investment across the pork sector. By partnering with Agriculture and Agri-Food Canada (AAFC) and bringing together top academic and industry partners in the pork value chain, SIP advances priority areas such as swine nutrition, health, welfare, biosecurity and sustainability.

SIP works on behalf of Canadian pork producers to mobilize investments and support knowledge transfer and partnerships across the sector. When industry, government and academia unite their efforts, we unlock greater possibilities and create a collaborative ecosystem that fosters ground-breaking advancements. By leveraging collective resources and expertise, we overcome complex challenges, develop innovative technologies and cultivate sustainable practices that drive our industry forward.

The outcomes of research conducted under the Swine Cluster 3 program, which recently wrapped up, are truly remarkable, and we are thrilled to showcase them through the Canadian Hog Journal.

Going forward, we will cover many projects. In this edition, you can find summaries of our work unveiling insights into gut health enzymes to reduce antibiotic use, along with cutting-edge technologies supporting pork quality grading. In future editions, we will delve into several other profound accomplishments from the latest round of Swine Cluster investments.

These research investments deliver valuable insights that inform how we raise and care for our hogs, improve production efficiency and meet the evolving demands and expectations of customers and regulators. For Canadian pork producers, this means gaining better knowledge to support business decisions, inform evidence-based policy development, address industry challenges and create new opportunities for growth and improvement.

Just as livestock farmers provide diligent care to raise their animals, our industry relies on the nurturing impacts of research and collaboration to thrive. SIP-driven research and collaboration are crucial ingredients that feed long-term excellence and global market leadership in our sector.

By investing in research and embracing partnerships, we can continue to push the boundaries of what is possible in the Canadian pork industry. Pork producers, as key stakeholders, play a pivotal role in championing SIP and the Swine Cluster program and actively encouraging research investment.

Together, we have the ability to shape the future of our sector through innovation, ensuring continued growth and competitiveness on a global scale. ■



Swine Innovation Porc (SIP) Cluster 3 research projects, supported by Canadian pork producers and partners, are complete. Results will be shared in the Canadian Hog Journal.

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Reducing antibiotic use with enzymes in feed

Swine Innovation Porc

Editor's note: This article is a project summary prepared for Swine Innovation Porc, as part of a series of articles covering SIP's work. For more information, contact info@swineinnovationporc.ca.

It may seem beyond our grasp, but making pigs more resistant to disease, while reducing the use of antibiotics, is well within reach.

Swine diseases associated with gut bacteria are regarded as the top risk factors for disrupting normal pork production, and this is especially true for weaned pigs. Weaners often experience gut disruption brought on by enteric diseases – infections occurring in the gastrointestinal system – poor digestion of nutrients or a shortage of alkaline phosphatase, an enzyme in the gut that helps maintain the gut micro-environment.

Responding on gut reaction

In response to these pig health issues, a research team led by Ming Fan at the University of Guelph worked on enhancing alkaline phosphatase efficiency. The end goal was simple: a healthier gut, leading to healthier pigs that would grow faster without the burden of infectious disease. This would also limit the demand for antibiotics, reducing

the threat of antimicrobial resistance, which affects the pork sector and public health.

In recent years, scientists have discovered the critical role of alkaline phosphatase in maintaining gut health, thereby protecting both pigs and people from the toxins that are produced by pathogenic microbes in the gut. These toxins frequently trigger disease, and while swine are similar to humans physiologically, there is a key difference in the effectiveness of alkaline phosphatase between the two.

In the human body, alkaline phosphatase coats our cells and guards them from bacteria. By contrast, in weaners, alkaline phosphatase breaks down and works less effectively.

Fine tuning feeds for health

To improve the gut response of alkaline phosphatase in weaners, researchers sought to develop feed additives that could supplement the enzyme in greater amounts than are naturally produced.

Fan's research team ended up creating an enzyme that shows great potential in advancing the pig gut micro-environment and helping the animal resist disease.

Of course, as with most great discoveries, there is still one large mountain to climb before it leads to black ink for industry: red tape.

Because the enzyme is a microbial product, it is highly regulated. Prior to making it available for use by producers, much data is needed to ensure the product is safe, effective and environmentally friendly. As part of the registration process, the federal government must also confirm that its biological working mechanisms are clearly revealed as a



While antibiotics play an important role in pig production, limiting their use to prevent resistance has become a widespread concern for animal and human health. A new gut enzyme supplement could help efforts.



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novel microbial product, since nobody else has developed and commercialized a similar enzyme in the past.

Upon government approval, the new enzyme could become a valuable new tool for the Canadian pork industry. The product could support faster and more efficient growth for pigs, while reducing the need for antibiotics. By targeting weaners as a starting point, use of the enzyme could be explored for feeder pigs and sows.

Though antibiotics have been a powerful weapon for decades in the fight against human and animal diseases, the landscape has clearly shifted. Today, the use of such drugs is under scrutiny in the eyes of the public. This circumstance enhances the appeal of feed additives, like enzymes that strengthen natural immune defenses while developing treatments that balance the health of people, animals and the environment.

Building a path from lab to barn

Against that backdrop, a new weapon was required to aid pigs and producers, and finding it was the ultimate team effort.





Scientists relied on financial support from industry partners like Ontario Pork, as well as cluster funding from research bodies including Swine Innovation Porc (SIP) and Agriculture and Agri-Food Canada (AAFC). Apart from the dollars, this made-in-Canada solution relied heavily on lab technology at the University of Guelph and the brain power of researchers, associates and students.

In the journey from lab to barn, however, several steps remain. Now that the essential research and efficacy testing is complete, the team must work on technology transfer to universities, businesses and governments. This process helps ensure that the scientific and technological developments from the project are available to a wider range of users, who can then help develop them further. From there, it is on to intellectual property protection, government approval and, ideally, commercialization of the product.

As a course of further study, scientists hope to explore the effects on soil fertility of applying manure from pigs who consume this enzyme. They also want to look more closely at the possible benefits of the enzyme in sow diets. ■

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Better pork quality classification could boost sales

Swine Innovation Porc

Editor's note: This article is a project summary prepared for Swine Innovation Porc, as part of a series of articles covering SIP's work. For more information, contact info@swineinnovationporc.ca.



Whether pork is purchased from one processor or another, foreign buyers of Canadian pork are looking for consistency, when it comes to assessing quality – something that has missed the mark, in the past.

Focusing on delivering high-quality products makes for happier, repeat customers. When you're already positioned as a leader in pork production and export, like Canada, there's only one thing left to do: strengthen that position.

For agricultural commodities, classification and grading systems are the cornerstone of branding and reputation.

These systems play a key role in marketing for end users by measuring and communicating the specifications that a buyer can expect.

One example is the 'Prime' and 'AAA' grades used in the Canadian beef industry, which are widely recognized as indicators of exceptional quality. For pork, Canada's grading system has pri-

marily been focused on factors like carcass lean meat yield and weight, leaving a critical gap when it comes to attributes that matter more to pork consumers.

By looking at the tools used to measure pork quality, however, research is now carving a path towards higher value and competitive advantage, through the process of grading.

Industry competitiveness benefits from standards


It may sound obvious, but if you have high-quality pork, grading for quality could help grow sales and earn top dollar for processors and the producers who supply their pigs. With that in mind, some industry stakeholders have been championing a primal cut grading system to arm customers with in-depth knowledge of what to expect from Canadian pork products.

There is now growing recognition across the value chain about the importance of on-farm and in-plant quality assurance programs, which are used to consistently meet the demands of diverse markets around the globe. As a result, two researchers, Manuel Juarez with Agriculture and Agri-Food Canada (AAFC) and Laurence Maignel with the Canadian Centre for Swine Improvement (CCSI), have been tapped to investigate grading techniques.

As the researchers began their investigation with processors, they identified significant opportunities for improvement. While buyers are willing to pay for quality traits, potentially increasing processor revenue, those traits are often still being measured with a subjective, rather than objective, approach. Unfortunately, these subjective methods lack the standardization and accuracy that premium buyers request.

Measure twice, cut once

In pursuit of more objective grading methods, the researchers sought to assess and improve current technologies for gauging quality and identifying areas of the carcass that could be evaluated for loin color, marbling scores and firmness. Although some such tools already exist, they tended to be bulky, pricey and time-consuming, and were rarely used; however, the study also discovered less-expensive options for classification that worked as well or better than the costly ones. These tools ranged



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from hand-held near-infrared spectroscopy devices to assess colour standards, along with belly sorters based on firmness.

Before long, processors began adopting these technologies and working with the researchers to incorporate them within their operations. Because flexibility was key to widespread acceptance by the industry, researchers ensured that the chosen tools were adaptable for processors depending on their clients and facilities. The systems work equally well in a small plant processing 100 pigs per day and one with a volume of 2,000.

For processors, it means they can now classify cuts based on quality with greater accuracy, while using fewer workers to do the job, boosting sales and improving pork prices for the sector as a whole. This should enhance client satisfaction and could benefit producers, as processors could choose to compensate producers for delivering pigs that meet preferred specifications.

Automation may be the next frontier

The researchers are excited about what lies ahead, including a robotic arm that could work for plants wanting full automation and a spin-off project looking at the use of a voice-controlled headset to evaluate loins.

In the meantime, they are pleased with the project results and the ongoing support from industry partners. Considering that these scientists are working to give the Canadian pork sector a competitive edge on the world stage, they feel confident that producers, processors, retailers and consumers will share their excitement. ■

The Next

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Reproductive vaccines offer protection to piglets

Caitlin Gill, Trenna Brusky & Heather L. Wilson

Editor's note: Caitlin Gill is Communications Coordinator, Vaccine and Infectious Disease Organization (VIDO). She can be contacted at caitlin.gill@usask.ca. Trenna Brusky is Marketing Coordinator, VIDO.



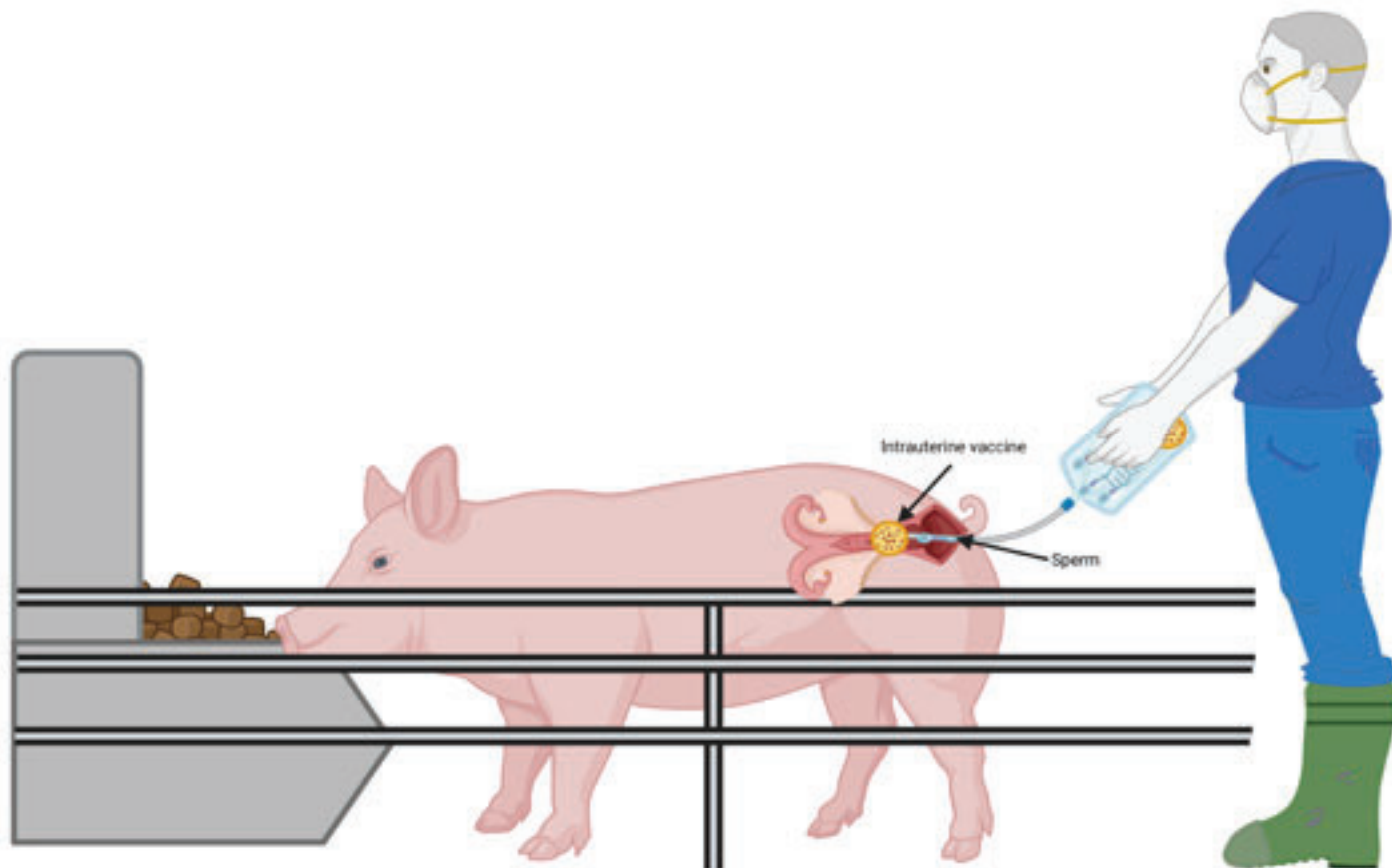
Reducing mortality from PED is a concern for hog producers, and thanks to new research, reproductive immunity is a possibility.

Immunization helps prevent and control infectious diseases and reduces associated economic loss in livestock industries. Innovative immunization strategies provide producers with more effective and efficient ways to protect their animals. These innovations include new vaccines that offer broader protection and new delivery methods that reduce stress on the animals, minimize the need for handling and remove the use of needles to protect the health of the animal and the barn staff.

Dr. Heather L. Wilson, a research scientist at the University of Saskatchewan's Vaccine and Infectious Disease Organization (VIDO), has spent almost two decades developing vaccines to protect breeding pigs from reproductive diseases and piglets against infectious diseases. Her team is now looking at the technical feasibility of intrauterine immunization – a possible breakthrough that could change the way female pigs are vaccinated, offering new solutions to existing disease issues like porcine epidemic diarrhea (PED).

Modern systems require new approaches

The industry transition to group housing and farrowing systems in Canada will require a shift in standard vaccination practices to protect barn personnel. The traditional intramuscular vaccine route includes the use of needles, which can break, leading to a food safety hazard and damage to the meat, and could be a risk of needle-stick injuries for the person administering the vaccine. These injuries



By injecting the vaccine directly into a sow's uterus, she and her piglets may have a better chance at fending off disease. Image © Haoming Liu

may be exacerbated by the freedom of movement provided in group housing.

Intramuscular vaccines that are administered at the site of invasion – such as

the nasal passages, gut and reproductive tract – have the potential to be more

CONTINUED ON PAGE 42

HELPING PROTECT CANADA'S FOOD SUPPLY

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effective against pathogens targeting those sites. In addition, a needle-free approach for livestock complements the use of group housing systems. Oral vaccines administered in water or feed are a popular needle-free vaccination route because they are safe to administer and have lower labour costs. Unfortunately, it is frequently difficult to achieve protective immunity through the oral route and control the dose administered to each animal.

As an alternative, Wilson and her team are investigating intrauterine immunization – administering vaccines directly into the pig uterus during artificial insemination.

“Incorporating vaccination into a current husbandry practice is critical for acceptance by the industry,” said Wilson. “We are trying to develop an alternative, safe and labour-reducing approach that will protect pigs from infectious disease.”

Disease protection could extend beyond PED

Wilson anticipates intrauterine vaccines can protect against reproductive diseases to prevent fetal death and improve the health of the sow, as well as diseases that impact piglet survival after birth. While intrauterine vaccines do not directly immunize fetuses, the sow’s antibodies are passed down to her piglets when they suckle.

Vaccines are carefully formulated so that they do not harm sperm function following insemination or jeopardize sow fertility but instead protect sows against reproductive diseases. Further, by administering the vaccine into the uterus, antibodies are delivered to the piglets through colostrum and milk after the sow farrows. These antibodies can improve piglet health and growth potential by protecting them against neonatal diseases.

The team developed and tested a vaccine against PED, which can cause high rates of piglet mortality. Trial results indicate the intrauterine-vaccinated sows farrowed healthy piglets with no adverse effects on fertility or piglet growth. In addition, the vaccinated sows had significant levels of antibodies against PED in their blood, uterine tissue and colostrum. The colostral antibodies were taken up by the piglets during suckling, and they provided the piglets with a modest level of protection against PED infection.

Wilson and her team are now working on improving the vaccine formulation so that piglets will be fully protected against PED. They are working with collaborators to encapsulate the vaccine with much stronger ingredients to protect semen from degradation. Once the vaccines are delivered to the uterus, they will hopefully trigger a stronger immune response that leads to increased colostral antibodies to protect piglets.

“We have evidence that intrauterine immunization may be an effective alternative route of delivery for vaccines,” said Wilson. “This could be a safer route of immunization that saves on labour without requiring special training to administer.”

The team intends to expand research beyond PED to investigate whether intrauterine immunization can protect suckling piglets against other neonatal diseases, such as those caused by rotavirus and *Escherichia coli* (*E. coli*). The approach could also be applied to other livestock industries that use artificial insemination for breeding. ■

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Heat stress impacts show up year-round

Zhenbin Zhang

Editor's note: Zhenbin Zhang is a swine nutritionist for Cargill Animal Health. He can be contacted at zhenbin_zhang@cargill.com.



While heat stress is highest in summer, production is affected all the way from conception to marketing. Because pig prices tend to peak in summer, just like temperatures, this is the time of year when producers should be concerned the most.

Many producers know first-hand that environmental temperature can impact pig production and reproduction. The target temperature level, called the 'thermoneutral zone,' offers the best production efficiency.

Ideal temperatures vary for pigs of different ages and sizes. For nursery pigs weighing five to 20 kilograms, the optimum temperature is 27 degrees-Celsius; for growing pigs weighing 20 to 55 kilograms, 21 degrees-Celsius; for finisher pigs weighing 55 to 110 kilograms, gestating or lactating sows and mature boars, 18 degrees-Celsius.

Understanding the impacts of heat stress

As shown in *Figure 1*, feed intake in grower-finisher pigs decreases at the same rate as environmental temperatures increase. However, somewhere around 30 degrees-Celsius, growth rate plunges and feed-to-gain ratio spikes, with a breaking point at the thermoneutral zone.

Feed efficiency as a component of feed-to-gain ratio is not changed when the ambient temperature is below 30 degrees-Celsius. When the ambient temperature reaches above that point, feed-to-gain is compromised by 20 per

cent, compared to a temperature of 20 degrees-Celsius. At the same time, modern genotypes could be more sensitive to heat stress than older genotypes of lesser growth potential.

In sows, heat stress has been reported to affect physiological characteristics, including increased rectal and skin temperature, and breathing rate. Behavior-wise, heat-stressed sows stand less while also sitting and sleeping more. As a result, heat-stressed sows are heavier, with bigger loins and more backfat.

For dry sows, heat stress occurs when temperatures rise to more than 27

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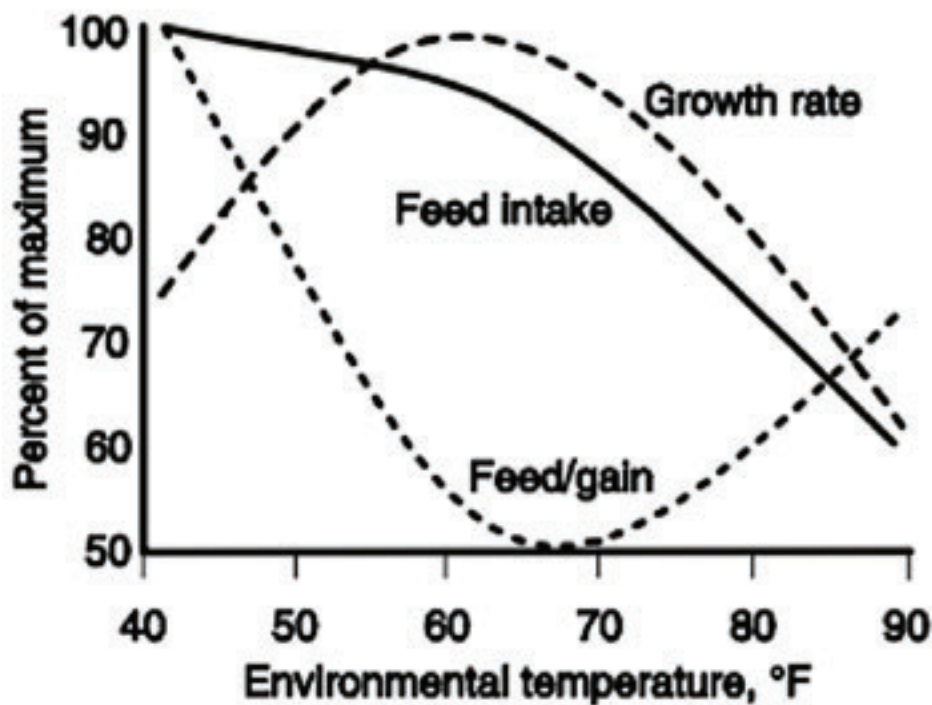


Figure 1

degrees-Celsius, which can delay or prevent the occurrence of estrus, increase wean-to-service intervals, embryonic deaths and abortion rates, while reducing conception and farrowing rates, along with litter sizes. Heat stress is also documented to shorten gestation length by approximately one-and-a-half days. Heat stress in gestation can also lower the birth weights of piglets from approximately 1.4 to 1.2 kilograms, but

this has no effect on piglet weaning weights compared to when sows are in the thermoneutral environment zone during lactation.

For lactating sows, heat stress reduces feed intake, which leads to negative energy balance, loss of body condition and reduced milk production. As a result, piglet growth is reduced during lactation with lower weaning weight. Figure 2 shows the impact of different ambient temperatures on lactating

sow performance. When the temperature reaches 27 degrees-Celsius and above, all parameters are worse than those under 22 degrees-Celsius. When the temperature reaches 29 degrees-Celsius, feed intake, body weight, body lipid and body protein drop significantly, which causes lower milk yield and reduced piglet growth and weaning weights.

Heat stress not only impacts sows but also their offspring. When sows are under heat stress during gestation, their offspring barrows have higher feed intake but reduced body weight and increased fat deposition at finishing, which contribute to poorer feed efficiency. The offspring gilts have lower litter sizes and weaning performance, while offspring intact boars show decreased sperm production and quality.

Based on everything we know about how heat stress affects all types of pigs at different stages, the impact of year-round heat stress becomes clear. If sows farrow in early July, they will likely experience heat stress throughout summer, into the lactation period, which will result in lighter weaning weights for hogs grown and finished at market weight in January. These sows will again be bred in early August.

Impact of heat stress on lactating sows

	Temperature (°C)					Statistics
	18	22	25	27	29	
Lactating length, d	21.2	23.1	21.1	21.1	21.0	
Feed intake, farrow to wean, g/d	5666 ^c	5419 ^{cd}	4947 ^{de}	4520 ^e	3079 ^f	p<0.001
Feed intake, d7 to 19, g/d	7161 ^c	6401 ^{cd}	6084 ^{de}	5321 ^e	3483 ^f	p<0.001
Body weight loss, kg	23 ^a	22 ^a	25 ^a	30 ^{ab}	35 ^b	p<0.01
Backfat loss, mm	2.1	1.9	2.7	3.5	3.5	ns
Mobilization of body lipid, g/d	389 ^e	356 ^e	449 ^{cd}	548 ^{de}	608 ^e	p<0.01
Mobilization of body protein, g/d	173 ^c	159 ^c	182 ^c	209 ^{cd}	259 ^c	p<0.05
Milk yield, g/d	7486 ^c	7536 ^c	6910 ^{cd}	7503 ^c	6180 ^d	p<0.05
Piglet growth rate, g/d	244 ^c	245 ^c	233 ^c	212 ^{cd}	189 ^d	p<0.01
Weaning weight, kg	6.89 ^c	6.92 ^c	6.90 ^c	6.20 ^{cd}	5.84 ^d	p<0.05
# pigs weaned	9.8 ^c	9.6 ^c	9.5 ^c	10.9 ^d	9.9 ^c	ns

Figure 2

Because of the summer heat stress impact, sows will have poor body condition at weaning, which contributes to longer wean-to-service intervals and lower conception rates. In August and September, heat stress on sows will affect embryo survival, leading to reduced litter sizes and fewer repeats. Because of heat stress during gestation, offspring pigs that are farrowed in December will grow slower. This means that the impacts of heat stress in summer will affect production throughout the year, going forward.

Improving conditions when it counts most

Heat stress impacts generate real financial losses for producers, which makes it important to take all possible measures to minimize the negative outcomes.

In terms of barn environment, things like adequate insulation and ventilation are key. From a management perspective, ensuring pigs have enough water to drink, to stay cool, plays a crucial role in reducing mortality. Using misters and cooling pads for lactating sows can help.

In terms of a nutritional approach to mitigate heat stress, the use of high-quality fats and fewer fibrous ingredients are common practices. Adjusting dietary lysine levels during lactation to match feed intake is important for maintaining milk production. Adding phytochemicals to feed can drive up intake by seven per cent, which can help prevent lactating sow feed intake from dropping.

Many approaches to reduce mortality can be applied when combatting heat stress. In addition to those previously referenced, Vitality Technology from Cargill has been proven to greatly reduce mortality.

In general, hog prices peak in summer, which also drives up the optimum market weight by two to three kilograms, but summer heat stress



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can lower market weights by the same amount. Consequently, there will be a deficit of four to six kilograms of weight that needs to be made up through a combination of enhanced nutrition and other strategies. To determine optimal levels of energy and amino acids in the diet, modeling can help producers understand and close

the gap, taking advantage of those summer hog prices.

With everything we know about how heat stress affects various production factors, producers should consider comprehensive approaches to address barn temperatures, management practices and nutrition to achieve the best possible production and financial outcomes. ■

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