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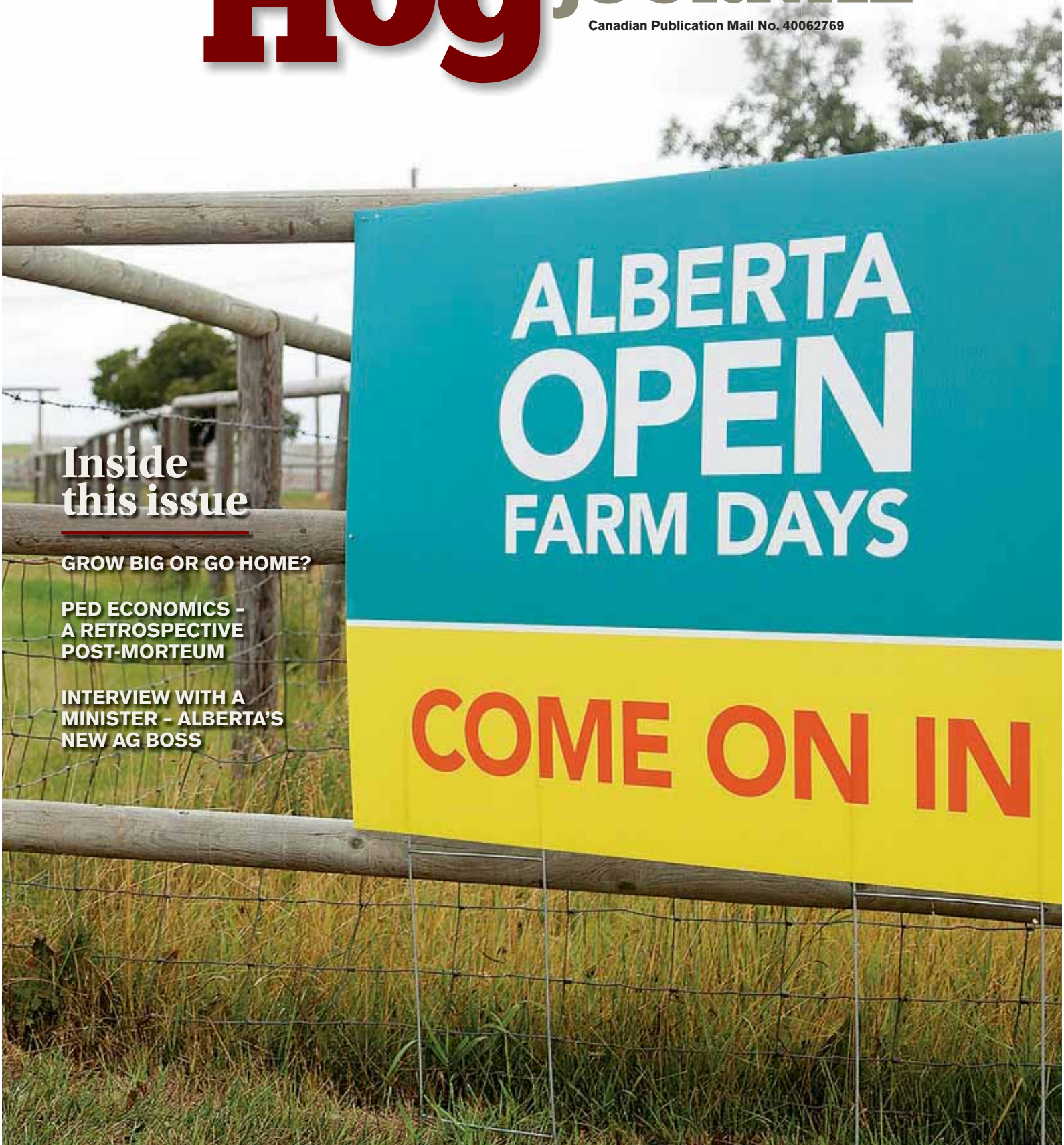

Inside this issue

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Front page: Alberta Open Farm Days attracted more than 3,000 visitors last year at 61 farms across the province. This year's event is set for August 22 and 23. See story on page 26.

Photo courtesy of Alberta Open Farm Days

Western Hog Journal

Message from the editor

It is amazing how quickly spring turns to summer. All of a sudden the kiddies are out of school, and it's an ongoing challenge to keep the weeds and lawn under control. (And the kids too, if I'm being honest!)

I recently had the pleasure of attending the Alberta Pork regional meeting in Lethbridge, as well as the Alberta Pork Congress in Red Deer. Congratulations to the following award winners:

Alberta Pork Congress Awards
Industry Ambassador - Brent Moen
Farm Team – Horst Farms – Wim and Linda Van Wijk
Lifetime Achievement - Alfred Wahl

Reach For The Top – Olymel awards
Grand Champion – VFA Pork
High Health Award – VFA Pork
Food Safety Award – Mannville Colony
Core Lean Award – Lougheed Colony North
Core Weight Award – Alix Colony

It's always great to reconnect with people and learn the latest buzz in the industry. We received a lot of positive feedback about our spring edition with our lead story about antibiotic use in the industry. For that issue we switched up our front cover strategy to give the magazine a more contemporary, professional feel. I don't think we'll go that route every time, but it's nice to try new things and to broaden our horizons a little bit.

A reminder to everyone to please take the time to complete our survey. It's printed within the magazine, or you can take it online at www.surveymonkey.com/r/HogJournal. Don't forget to provide us your email address to ensure you are entered into our draw!

It's been a wild ride in Alberta with the recent election, and I know that there are more than a few people in the business who will be carefully watching this new NDP government to see if they respond to the pork industry in the same way that Manitoba's NDP responded to theirs. In this issue, you can find an interview with Alberta's new ag minister, and in our next issue, you can look forward to a look back at exactly what the industry in Manitoba has had to endure for the past 15 years or so.

We're planning our fall edition now, so if you've got any great story tips or ideas, now is the time to let me know. Have a safe and productive summer, and we'll see you in October! ■

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Western Hog Journal

News and Views from Far and Near

Prevtec Microbia receives EU approval for vaccine

Prevtec Microbia Inc. announced that its German subsidiary, Prevtec Microbia GmbH, received marketing authorization for its vaccine, Coliprotec® F4 in the European Union, an important market for the Canadian company.

Coliprotec® F4 will be distributed in the European Union by Elanco Animal Health (Elanco), a major player in the animal health industry doing business in more than 75 countries.

Coliprotec® F4 is a live oral vaccine that will enable European veterinarians and producers to access a new technology for immunizing piglets against enterotoxigenic F4-positive *E. coli*, which is associated with post-weaning diarrhea (PWD).

"We are very happy to have received the European Commission's approval for Coliprotec® F4. We believe our product will be very successful, not only because it's a pioneering alternative to the existing solutions, but because we can also count on Elanco's exceptional team," said Michel Fortin, president and CEO of Prevtec Microbia Inc.

Developed by Prevtec Microbia, Coliprotec® F4 has been available in the Canadian market for over seven years.

New account manager at DNA Genetics

DNA™ Genetics is pleased to announce Lambert Houwen has accepted the position of Regional Account Manager. In his new role, Houwen will be primarily responsible for sales and service to customers in Manitoba. He will also be utilizing his extensive background in pig production and genetics to be a technical resource to DNA Genetics sites throughout the United States and Canada.

Houwen brings a wealth of knowledge and more than 25 years of experience in the pork industry to DNA Genetics. His prior experience includes: production manager, technical services manager, operations manager, and various roles in breeding and production.

Houwen is originally from the Netherlands, growing up on a family farm that raised pigs. While in the Netherlands, his interest and education in pork production continued through college where he completed a specialized program in pig production and genetics that's equivalent (in Canada) to a bachelor of science in agriculture.

"I'm looking forward to joining a great team of people, being a part of gaining new customers, and utilizing my background to help increase the production of DNA Genetics' customers," Houwen said.

Ralco acquires rights to sell Birthright Moveable Milk Cup

Ralco announced in April that it has entered into an agreement with Advanced Birthright Nutrition® (ABN) for the exclusive worldwide rights to sell and distribute the Birthright™ Moveable Milk Cup. The new technology is a new in-line milk system that increases the profitability and efficiency of swine producers by allowing them to move supplementation milk cups within a farrowing facility while the system is running.

CONTINUED ON PAGE 8

"This technology lets producers get Birthright™ milk to the right pigs and reduces overfeeding," said John Vignes, owner of ABN and inventor of Birthright™ baby pig milk replacer. "They can also remove the cups while the milk system is running and clean the hard-to-reach bottoms, which is important for fighting PRRS and PED."

Swine producers that utilize the technology plumb each crate in a farrowing room, and then insert cups where they are needed. Birthright™ milk can be targeted to the smaller pigs for more uniform litters and less weaning of underweight pigs. Targeting the pigs that require supplementation the most reduces overfeeding and controls milk costs. Also, the cups can be removed and completely cleaned without shutting down the milk system, which is essential for biosecurity.

Fostera® PRRS licensed to help protect the whole herd

Fostera® PRRS, from Zoetis, is now licensed for whole herd protection against both the respiratory and reproductive forms of disease caused by porcine reproductive and respiratory syndrome (PRRS) virus.

The new reproductive claim allows for vaccination of sows and gilts pre-breeding to help provide protection against the reproductive form of the disease. Also, the reproductive safety of Fostera PRRS has been demonstrated when sows or gilts are vaccinated prior to breeding or at any stage of pregnancy. The new respiratory claim allows for vaccination of pigs one day of age or older against the respiratory form of the disease.

With the new claims, Fostera PRRS is now the first and only PRRS modified-live virus (MLV) vaccine to be licensed for the vaccination of healthy, susceptible swine one day of age or older in PRRS virus-positive herds to:

- Aid in preventing reproductive disease with a duration of immunity of at least 19 weeks*
- Aid in preventing respiratory disease with a duration of immunity of at least 26 weeks

Now, with label claims against both the respiratory and reproductive forms of PRRS, Fostera PRRS helps bring solutions to the whole herd.

For more information on these new industry-leading claims for Fostera PRRS, contact your local Zoetis representative.

** Sows and gilts should be vaccinated pre-breeding. Revaccinate prior to subsequent breeding or as recommended by your veterinarian.*

Multifan High Pressure Filter Fan

At the World Pork Expo 2015, Vostermans Ventilation Inc. introduced the Multifan High Pressure Filter Fans. The addition of air filters in swine facilities will lead to higher resistance in the ventilation

CONTINUED ON PAGE 10

Strength in Numbers

PigTrace Superheroes...

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- ENSURE BUSINESS CONTINUITY ON THE FARM AND IN THE MARKETPLACE
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system. These Multifan High Pressure Filter Fans have been developed for filtered hog facilities or any application where a higher stable pressure area is required. Proper ventilation in hog barns results in improved pig performance due to improved pig health and comfort. With the high pressure filter fans' static pressure, up to 0.5 inches of water can be achieved and as a result, incoming air is mixed with the inside air, preventing cold spots and improving air mixing. The fans are standard equipped with corrosion proof PVC or aluminum inlet shutters. With durability and reliability as an asset, the Multifan High Pressure Filter Fans guarantee fresh air (up to 32,300 CFM) at low cost.

New team members at Genesus

In late May, Genesus announced the addition of seven new employees and agents, all formerly with JSR Group of Companies (Topics-Norsvin).

- Paul Anderson, formerly international sales director JSR (Topics-Norsvin), is now international sales manager for Genesus.
- Simon Grey, former director JSR-Checkfarm will now be responsible for Genesus Europe, Russia and former CIS countries as Genesus general director.
- Natalina Zarubina was JSR-Checkfarm in Russia will now be sales support coordinating Genesus business in Russia and former CIS countries.
- Olena Miller has joined Genesus from JSR (Topics-Norsvin) and will be focusing on the sales growth for Genesus in Russia, CIS countries and Lithuania.
- Yolanda Hou worked with JSR (Topics-Norsvin) in China as international key account manager and is now Genesus sales and technical support executive for business in China.
- Jack Wozny, formerly JSR-Checkfarm manager will now be operating a Genesus sales agency in Russia and the EU.
- Dr. Ayodele Christopher Oniku of Continental Genetics Ltd. of Lagos, Nigeria, which marketed JSR (Topics-Norsvin) will be working with Genesus to promote growth in the 15 countries of ECOWAS (Economic Community of West Africa States).

The Swine genetic industry is quickly consolidating. Genesus is excited to have this strong group of swine professionals join the team. Genesus is committed to not only produce the best swine genetics today but also in the future. The choice of this group to join Genesus is a testament to their faith in the value and commitment that Genesus brings globally to our customers.

Schippers Canada opening new office in London, Ontario

Schippers Canada Ltd has been serving Canadian farmers' operational supply needs for more than 11 years. The first Canadian office in Lacombe, Alberta has quickly


Serena Allen


Arian de Bekker


Paul de Rond


Jeremy Eichler


Jason Lane


Michael Lowe


Jos Steenbergen


Mart Swinkels

expanded, and at the beginning of May 2015, Schippers branched out to London, Ontario to open a new second office as the main Schippers Canada Ltd office.

Arian de Bekker, Schippers Canada's general manager, has led in the set-up of an in-office sales team with help from the new office manager Serena Allen, as well as Mart Swinkels, a sales team leader visiting from Schippers Europe. Two new hires were chosen to start the Schippers Ontario in-office sales team – Jeremy Eichler and Michael Lowe, both London locals. Schippers' Ontario team also includes three on-the-road sales reps – Paul de Rond, Jason Lane, and Jos Steenbergen. Schippers Canada supplies livestock farmers nationwide out of three warehouse locations in Lacombe (Alberta), Winnipeg (Manitoba) and Watford (Ontario). Schippers looks forward to serving its customers through both Alberta's and Ontario's Schippers Canada offices, with support from their on-the-road sales representatives stationed all over Canada.

JSR Genetics and Topigs Norsvin agree to a genetic partnership

JSR Genetics and Topigs Norsvin have reached an agreement to form a genetic partnership for Great Britain. JSR Genetics will become the exclusive distributor of Topigs Norsvin genetics in Great Britain and the AI activities of AIM UK in Great Britain will be integrated into the JSR AI network. AIM UK is part of the Topigs Norsvin AI network. In addition, JSR Genetics and Topigs Norsvin will combine their research and development programs. The international activities of JSR are not included in the partnership.

The sow line breeding of JSR will now be 'powered by Topigs Norsvin,' which means Topigs Norsvin will be responsible for breeding value calculations and other technology related to the JSR breeding program in Great Britain. ■

COOL Pain to End?

By Kevin Grier

I first started to work on behalf of industry associations in Canada with regard to the implications of Country of Origin Labeling (COOL) going back to 2000 or so. Country of origin labeling has been promoted by U.S. livestock, particularly cattle industry protectionists, for years before that. These protectionist livestock groups knew that a mandatory program of country labelling would be costly and burdensome for importers of Canadian livestock. They knew that a mandatory program would reduce imports of Canadian livestock and so they pushed for it to become law in the United States. The first serious attempt came in the 2002 Farm Bill. Opponents of mandatory COOL successfully managed to beat that effort back and COOL was simply voluntary in that bill. By 2006, when Democrats won the House and Senate, the writing was on the wall. Mandatory COOL was part of the 2008 Farm Bill and came into effect by the fourth quarter of 2008. As U.S. analyst Steve Meyer has often said, "It was a bad law whose time had come."

Canadian livestock producers have been living under the COOL burden now for about seven years. It has resulted in lower prices for Canadian cattle and hog producers, it has reduced or eliminated markets for Canadians and has resulted in a smaller industry in Canada. COOL has been more effective and destructive of the Canadian livestock industry than any of its U.S. cowboy supporters could have ever hoped. It worked like a charm, not in keeping consumers informed which, was the façade rationale, but in keeping Canadian livestock at bay.

Now however, thanks to the efforts of the Canadian Cattlemen's Association, the Canadian Pork Council and the federal government, there is real hope that COOL could be history by the end of 2015. The long, drawn-out World Trade Organization process is winding its way to allow Canada and Mexico to retaliate against U.S. products imported into Canada and Mexico. Given the threat of retaliation, it is likely that Congress will vote to repeal COOL and the Administration will agree. In other words, the long painful chapter of COOL is potentially going to be over.

While that is all good, COOL is continuing to do serious damage to Canadian hog producers. As has been the case since COOL began more than six years ago, the COOL discount or the U.S. buyer willingness to take Canadian hogs due to COOL, has varied depending upon supply and demand in the U.S. As of this spring Canadian hogs are not in demand due to COOL again.

Last year when U.S. finishers were starved for weaners and feeders due to PEDv, they practically begged their packers to accept "B" hogs (weaners and feeders as defined by the COOL law as "B" category). Hormel and Morrell among others made accommodation. Canadian Bs were taken without noted discount because the situation was so short. Meanwhile Tyson had been taking B hogs over the long haul. For many years, regardless of supply and demand conditions, Tyson had decided to make production and marketing adjustments to try and adapt to the ridiculous costs and logistical impediments imposed by COOL. They handle Bs at Storm Lake, Perry and Logansport. The only challenge Tyson's

finishers might have is due to scheduling issues, whereby they might need to take the Bs to a plant that is not the closest on some occasions.

Now that supply in the United States is no longer constrained by PEDv, Morrell and Hormel are no longer taking Bs. Morrell stopped in February, which was a move that hit particularly hard. As a result, once again Canadian weaners and feeders are seeing a sharp pricing discount with COOL being cited by buyers as the reason. Depending on weight the discount can run anywhere from $4-8 per pig. The current discount and backup is about the worst since the initial uncertainty of COOL back in 2008-2009.

Despite the COOL discount, the numbers coming from the prairies into the U.S. Midwest are up notably this year compared to last. So far this quarter, USDA data shows that shipments through North Dakota have amounted to about 63,500 head per week. That is about 4,500 per week more than last year at the same time.

The COOL discount is particularly ironic given the sharp demand for hogs on the prairies. Maple Leaf is killing at least 10,000 fewer head each week than they would like. Meanwhile an increasing number are heading south at a discount. The bottleneck on the prairies is finishing space. StatsCan data shows that there are another 6,000 to 7,000 sows on the prairies this January 1 compared to last year. Private estimates suggest that the actual number of added sows this spring compared to last could be as high as 15,000. Sow barns that were closed due to the federal program are now coming back. The trouble is the added pigs cannot be finished here. Not only is financing an issue, but the capital costs, as outlined here many times, are simply too onerous. Capital costs are not competitive with what finishers in the U.S. can do. That is on top of the Manitoba government's efforts to throttle the industry and the constraints of the federal temporary foreign worker squeeze.

Another irony is that given the exchange rate depreciation in Canada, this should be a time in which the Canadian weaner production and trade to the U.S. should be thriving. Even a modest market in the United States translates into a good one in Canada, if not for the discount. Furthermore, given the strong demand for Canadian pigs last year, the quality and reliability of the pigs was once again a key part of the U.S. demand.

A final irony is that if and when COOL is gone, it will make the flow south much easier and volumes will increase. That in turn will increase the supply pressure on domestic packers across the country. Of course getting rid of COOL will be good for producers and anything that is good for producers will ultimately lead to increased supply.

Despite that, lets hope that by next year at this time, the damage of COOL is just a painful memory.

Canadian Meat Council

At the Canadian Meat Council annual meeting in Ottawa in early May, Canada Pork gave an overview of its new national marketing program. Established in 2014, Canada Pork is the national market development division of Canada Pork International for the Canadian pork industry (excluding Quebec).

Canada Pork is a joint initiative of participating provincial pork producing associations and pork processing plants. It is an equal partnership between Canadian pork producers (excluding Quebec), participating pork processors and Federal government Agri-marketing funding. It is governed by a

CONTINUED ON PAGE 14

National Marketing Committee of stakeholders. Its budget is $250,000 for 2014-15 and $500,000 in 2015-16.

Canada Pork's vision is that Canadian pork is recognized as the highest quality and preferred protein choice in the domestic marketplace. Its mission is that the Canada Pork national marketing program will improve competitive position, market share and the prosperity of the Canadian Pork industry.

The presentation at the Meat Council meeting provided details of the programs and initiatives that Canada Pork is undertaking. These initiatives focused on demand building, carcass utilization, quality assurance, differentiation and merchandising, among others.

I don't pretend to know much about merchandising, but the Canada Pork presentation was very thorough, specific, detailed and appeared to address important aspects of marketing. The plan demonstrated a very intense effort designed to get the most out of a limited budget. It will be interesting to watch it going forward because domestic marketing has never really gotten off the ground in Canada, despite many efforts over the years.

As a final point on this topic, I have never been one to get worked up about Canadian pork versus U.S. pork on our domestic market. Given that it is a North American market, I just think it is important that pork demand in general should be strong, regardless of whether it is Canadian or American product. With that said, any effort that is designed to show the merits of Canadian product from a value perspective would be time and money well spent.

2014 Consumption Data

Speaking of marketing and promotion, StatsCan released the 2014 per capita consumption data at the end of May. Perhaps not surprisingly given the reduced North American production last year, Canadian per capita consumption of pork declined by one per cent. Canadians ate less pork because of reduced availability and high prices generated by the reduced supplies. Further to that, recall that Canadian fresh and processed pork prices increased by over 13 per cent last year. With that noted, however, the decline could have been much worse. Given the price increase, Canadian consumption could easily have declined by 10-15 per cent based on past performance. The one per cent decline stands out because it is so small relative to what could have been the case given consumer prices.

In other words, the relatively modest consumption decline, combined with the sharp price increase, indicates that Canadian pork demand was very good last year. In fact, over the last few years the data shows that the depressingly long decline in pork demand has abated. In the last three years there is evidence of much improved pork demand. The situation was similar in the United States. That points to a firm hog and pork pricing undertone which is something that has been sorely lacking for the industry for many years.

Canadian beef per capita consumption declined last year by about three per cent due to very short supplies. As with pork, beef demand has also been improving in recent years. Not surprisingly chicken per capita consumption increased by nearly three per cent. The chicken industry was able to take advantage of reduced red meat supplies and gained market share again. ■

Kevin Grier Market Analysis and Consulting provides industry market reports and analysis, as well as consulting services. You can reach him at kevin@kevingrier.com to comment or to request a free two-month trial of the Canadian Pork Market Review

Story Ideas? Press release? Comments?

Email the editor!
sherimonk@gmail.com

Grow Big or Go Home: The Move to Heavyweight Hogs

By Geoff Geddes

As anyone who has tried to parallel park a Hummer can attest, bigger isn't always better. For the North American pork industry, however, big pigs are a big deal. Processors want heavier hogs, and the onus is on producers to deliver them. It sounds simple enough, but in the pork business, the only thing simple is the mindset of animal activists. For everyone else, issues are complex, and the move to heavier weights is no exception.

Why is it happening? What does it mean for producers? How does it impact the industry going forward?

They're all great questions, and given the stakes for those involved, taking some time to find the answers is worth the "weight."

Raising the Bar

In Canada, the Olymel name is synonymous with quality pork products. Getting to the top in this business means keeping abreast of changing markets, which may explain their recent introduction of a new 102 kilogram grading grid that rewards producers for heavier weight hogs.

"For us, it's all about staying competitive," said Don Brookbank, Olymel's vice-president of procurement for western Canada. "You think the entire U.S. industry is running at 105-106 kilogram because it's costing them money?"

While the move helps Olymel by improving plant efficiency, Brookbank calls it a win-win proposition.

"Sure it's good for us, but it also benefits the producer. By offering a heavier grid, we enable them to maximize their revenue per kilogram if they meet the core of the grid, and at the end of the day, they're selling weight, not heads."

Weighing the Options

Whether it's a home sale agreement or a marriage licence, due diligence is always wise before you sign on the dotted line, and the heavier weight contract is no exception.

In a recent study performed on a Hutterite colony by Alberta Agriculture and Rural Development (ARD) and Alberta Pork and published in the spring 2014 edition of the Western Hog Journal, researchers looked at the impact of spatial allowance on cost and animal performance. While it wasn't their primary focus, those behind the study noted some implications of the heavier weight requirements.

"What we found is that when you weigh the pros and cons of bumping up the grid, you can't just look at one parameter," said Dr. Miranda Smit, technical writer/research assistant in the Livestock Research Branch of Alberta Agriculture and Forestry (AF).

One of the study's co-authors, Dr. Smit said producers need to take a wider view of the issue.

"Yes, higher feed requirements are a factor in raising bigger

CONTINUED ON PAGE 16

pigs, but so are reductions in feed efficiency and, consequently, in average daily gain (ADG). You also need to consider spacing, higher utilities and possibly more capital costs to house the larger animals. For some producers, it may mean fewer pigs being raised in the same amount of space."

Although he concedes that some have concerns around space requirements, Brookbank is quick to reassure them.

"In our experience as producers, we've managed to maintain an 18-week cycle and maximize returns."

For those who find it hard to duplicate Olymel's performance in meeting the 102 kilogram grid, the company will continue to offer the 98 kilogram grid as an option with the ability to lock in delivery for the next five years.

Lighten Up

For a different slant on the subject, another of the study's authors, Dr. Eduardo Beltranena, Adjunct Professor at the University of Alberta and Monogastric Research Scientist, Feed and Feeding with AF, offered his own perspective.

"Going to heavier weights is not a problem if the Western Hog Exchange develops a light pig weight grid for the 60-90 kilogram animal. That way, we can remove slow-growing hogs early on, send them to provincial packers for the domestic market and allow the best pigs to grow until they can go to Olymel for export. Pulling slow-growing hogs early on would provide the additional pen space required by fast-growing hogs. But producers should be paid fairly and consistently for slow-growing hogs, not just for export-quality hogs shipped to Olymel."

Price Check

To underline the complexity of the subject, a Quebec study in 2013 entitled 'Techno-economic study on the slaughter of heavy pigs,' found some other factors to consider.

"In general, small increases in weight allow you to adjust more easily," said study co-author Michel Morin, Agricultural Economist at the Centre de Développement du Porc du Québec (CDPQ), an institution of pork expertise akin to the Prairie Swine Centre, which represents Quebec pork producers. "But in the end, every barn is different."

For example, Morin cites aging barns with old equipment that is more fragile or unsuitable for big pigs.

"I have heard of feeders where pigs have trouble putting their heads into them because they're too big, or only four can eat at a time instead of five so more feeder space is required."

In light of the study's findings, Morin said all producers must look at their own situation and decide what's best for them.

"We had mixed messages from the field when we presented our numbers. Some had trouble adapting to higher slaughter weights while others could adapt easily. Some said we were too optimistic and others called us too pessimistic. I guess we were right in the middle as nobody agreed with us, so it must have been a good study!"

That aspect of adaptation is a critical one in Morin's view.

"There are many strategies for sending hogs to slaughter where you can raise the weight and finish more kilograms per year without lowering barn output, but many producers can't adjust in a year. For them, the change needs to be gradual."

For that reason, Morin likes the Olymel approach of offering two grid choices with a five-year lock-in.

"It gives producers time to adapt, and that's often the key to success."

So what's his advice to producers in looking at the heavier grids?

"Finishing hogs to heavier weights can be profitable, but producers need to re-evaluate this as often as they can based on hog and feed prices. Last year, hog prices were high so it was easy to send them to slaughter at a higher weight, but as history has taught us, that's not always the case."

Brookbank understands that and is proceeding accordingly.

"We're not here to force anyone. We're trying to be as flexible as we can while still achieving our goals."

The Cost of Progress?

To survive in the volatile pork industry, you must keep both eyes squarely focused on the bottom line. With that in mind, Murray Roeske, who developed the Alberta Pork Cost of Production project, reviewed both the Alberta and Quebec studies in light of the move to heavier weights.

"The Alberta study supported the finding in the Quebec project that as a hog grows in age and weight, the growth rate slows and the feed conversion ratio increases. While this can be partly attributed to space allowance, there is also a genetic component as evidenced by the slower growth rate and poorer feed conversion exhibited in all three stocking densities used in the Alberta study [15, 18 and 24 pigs per pen]."

In Beltranena's view, the importance of feed efficiency can't be overstated.

"The efficiency of utilizing feed to put

CONTINUED ON PAGE 18


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on fat in heavy hogs is lower than to put on lean in lighter hogs," said Beltranena. "Feed efficiency worsens when shipping heavier hogs and it is not a straight line response. I don't perceive that Olymel is willing to pay incrementally more for each kilogram of extra carcass weight".

At the same time, Roeske agrees with Dr. Miranda Smit that the feed component is just one consideration.

"If you're at the maximum stocking rate in your barn right now, adding six kilogram of live weight at an average of 700 g/day will extend your finishing time by nine days. That leaves you two options: Acquire more finishing space or reduce the sow herd. The first option creates additional cost for the producer, while the latter is counter-productive to the processor."

With so much at stake and so many factors in play, Roeske advises producers to think it all through and begin a dialogue with their processor before making a decision on the heavier weights.

"That way, each partner in the supply chain can move forward with a good grasp of the other's needs and limitations."

Given the changing landscape of pork production, it seems like sound advice.

Chances are, like the Hummer that finally squeezes into the perfect spot, the move to heavier weight hogs is here to stay. ■

PED Economics — a retrospective post-mortum

Was PED a blessing or a curse? That depends who you ask.

By Geoff Geddes

Once upon a time, there lived six blind men in a village. One day the villagers told them there was an elephant in town. They had no idea what an elephant was, but they went and felt it anyway.

"Hey, the elephant is a pillar," said the first man who touched his leg.

"Oh, no! It is like a rope," said the second man who touched the tail.

"Oh, no! It is like a thick branch of a tree," said the third man who touched the trunk of the elephant.

In fact, they were all right, because they each described their own experience of the elephant at a specific place and time.

Apart from its penchant for destruction and lack of subtlety, Porcine Epidemic Diarrhea virus (PEDv) shares another trait with that elephant: The lack of one simple label to define it. Thanks largely to its impact on pork prices, PED's status as a blessing or a curse depends on when you're asking and to whom you're posing the question.

May 2013: PED Hits PDQ

When it first touched down in the United States, PED was still a bit of an unknown, prompting a "wait and see" attitude from the markets. Once the disease began spreading rapidly, however, killing up to 100% of baby pigs in the process, the wait would soon be over.

January 2014: Un-Happy New Year

On the heels of mounting pig losses in the U.S., PED made its debut in Canada to less than rave reviews. It may have been sunny when the first Canadian case – a farm in Ontario – was announced at the Banff Pork Seminar, but it felt like a cloud of impending doom was in the air.

February - April 2014: Spring Fever

"That's when the markets went crazy," said Ron Gietz, Pork Specialist with the Government of Alberta in the Livestock and Farm Business Branch.

"Since it was a fairly new disease to which our herds were naïve, it caught everyone off guard with how quickly it spread, especially in the United States. This in turn created panic conditions in the market, causing pork prices to spike at

$130 US/cwt (hundredweight) in April compared to a normal price for that period of $80."

May - July 2014: Heat Wave

One year after PED hit North America, producers with infected herds were reeling from the devastation, both financially and emotionally. For those who managed to dodge the bullet though, PED was a timely shot in the arm.

"At this point panic was at its peak, leading to record high prices," said Gietz.

For the unaffected observer, it was an interesting study in human nature and its impact on the market.

"PED probably reduced U.S. slaughter last year by about six to seven per cent," said Kevin Grier, founder of Kevin Grier Market Analysis and Consulting.

"Prices were driven higher by reduced supply, which of course makes sense. But I think uncertainty about supply also played a role, sending prices about US$10/cwt higher than they would have been based solely on lower slaughter and production."

In fact, at the height of the speculation, there was talk of a 20 per cent pork production loss for 2014 according to Dr. Christopher Hurt, professor of agricultural economics at Purdue University.

"If market participants had accurately evaluated the impact of PEDv in 2014, U.S. hog prices would still have gone up, but only by about 5 per cent," said Dr. Hurt. "Instead, they rose by 19 per cent. As the old trading rule goes, 'buy the rumour, sell the fact.'"

August 2014 – February 2015: From Deadly Infection to Market Correction

With an estimated 7-8 million piglet deaths tied to PED last year, why was supply healthier than expected?

"That's the really cool story here," said Millie Haley, agricultural economist with the United States Department of Agriculture.

"Because of high piglet losses, producers suddenly had a lot of room in their finishing barns, so they started finishing their hogs at heavier weights to offset the losses. Faced with adversity, they responded by saying, 'Hey, I'm being paid per pound and I have space in the barn. I'm going to make this animal as heavy as possible.'"

As a result, the market saw its mistake in over-estimating PED's effect on supply and adjusted accordingly.

"After the peak in late July, prices trended downward through the first quarter of 2015," said Gietz. "By late February, the U.S. market bottomed out below $60/cwt."

CONTINUED ON PAGE 20

To put that in perspective, Gietz pointed out that hogs were probably the only commodity to have a larger price decline than crude oil last year. As distinctions go, it's not one to strive for.

It was a similar story in Canada, where prices went as low as $1.29/kg on February 21. Fortunately, the falling Canadian dollar helped cushion the blow somewhat north of the border.

March and Beyond

Following a dismal first quarter, which Gietz described as a "market hangover following the PED party in 2014," pricing and production are returning to "normal" – or at least the pork industry equivalent of that.

"At this point, prices have rebounded and most of the industry has returned to profitability," said Gietz. "Herds are more productive, there's more supply and demand, exports are on the rise and the domestic market in Canada and the U.S. has picked up thanks to record high beef prices that make pork an appealing alternative."

As Gietz sees it, "We overreacted to the upside as well as the downside. Now we're back in the middle and we can move on from here to address other market issues: Will the U.S. expand production? Will China boost demand over last year?"

COOL Customers

One of the prime issues from a Canadian perspective is the ongoing saga known as COOL (Country of Origin Labelling).

"2015 may be the year we finally put COOL to rest," said Gietz.

"Canada will ultimately 'win' the dispute because international trade law is on our side, but it is a hollow victory considering accumulated losses to the industry in the billions of dollars. Canadian pork producers have lost potential markets for both weaner and slaughter pigs, but there have also been price depressing effects that are more difficult to measure."

Once COOL is gone for good, Gietz said "there will be more opportunities to export live pigs, which in turn may force Canadian packers to 'pay up' to secure supplies. The change will benefit producers but not so much packers, particularly Maple Leaf, which is struggling to supply hogs for its Brandon Manitoba slaughter plant."

TPP or SOL

Also on the trade front this year is the TransPacific Partnership (TPP). The potential trade deal could be a huge win for Canada's pork exporters if negotiators are able to pry open Japan's market further.

"It is imperative that Canada gain the same market access as the U.S., meaning we must stay at the negotiating table despite significant pressures from the supply managed industries to back away," said Gietz.

"If the U.S. Congress is able to pass a bill giving the Obama administration Trade Promotion Authority (TPA), the end game will begin and all countries must bring their best offers or risk dropping out of the deal."

According to Gietz, "the stakes are high for all participants, with 36% of the world's GDP (2013) represented in the participating countries."

Some Win, Some Lose

Ultimately, PED and its consequences meant different things to different people.

"While PED was a major contributor to record industry-wide profits, individual farms that were hard hit could have had considerable financial losses," said Dr. Hurt.

"Alternatively, the vast majority of farms that did not have any baby pig losses were strong financial beneficiaries of the disease. In the end, the biggest portion of the financial cost of PEDv was transferred to pork consumers in the form of higher retail prices."

For those who like black and white issues and "yes or no" questions, PED is a tough nut to crack. On one level though, the answer to whether PED was a blessing or a curse is a simple one.

Yes. ■

Interview with a Minister

Alberta's new agriculture boss is learning the ropes, excited for the future

By Sheri Monk

Though the polls had predicted it, Canadians were nonetheless still stunned when the Alberta's Progressive Conservative reign of 43 years was toppled by Rachel Notley's NDP. Oneil Carlier was appointed as Alberta's new minister of agriculture and forestry.

"When I was first offered the portfolio I was thrilled. If I was to guess which ones I would have chosen for myself, it would have been these two so I am pretty excited about that," said Carlier in an interview with Western Hog Journal.

Carlier grew up on a cow-calf operation near Val Marie, in southwestern Saskatchewan, and spent 20 years working for Agriculture Canada before working in the Alberta labour sector with the Public Service Alliance of Canada. He ousted incumbent George VanderBurg in the Whitecourt-Ste. Anne riding to hold one of the 54 seats belonging to the newly minted NDP.

"My brother still has the farm, fourth generation now. It's my favourite place. I can't live there because I can't make a living there, but I still go back as often as I can," Carlier said.

At the time of the interview, Carlier was engrossed in learning the ropes – and when it comes to agriculture in Alberta, there are quite a few of them.

"And I thought I have a pretty good agricultural background. I grew up on the family farm and 20 years with Agriculture Canada, but as I get more involved in this portfolio, I realize how exciting and interesting it really is and how many different aspects there is of it," he said.

Alberta's agricultural economy is as diverse as it is in-depth, and that means a lot of consultations with all of the different producer groups in order to learn the nuances of each sector.

"Down the line, I hope I might be able to say I'm not still learning, but right now I'm still learning. I've been doing a lot of listening to the stakeholders both in the beef and hog industry and learning tons. I've been talking to people within the departments as well who have been extremely helpful and perhaps a little patient as well, as they bring me up to speed. But that's been really good. The term 'beef politics' has been tossed around a few times," he chuckled.

Although he may still be learning the ropes, Carlier is very clear on one thing – the significance of agriculture to Alberta's future.

CONTINUED ON PAGE 22

"We are a new Alberta government, but we know the importance of the agriculture industry to the province and we know it's exciting times – commodity prices are good. The opportunity to expand markets – perhaps to our neighbours to the South even more, but also to the Asian market – exists. I think it's a good time to be in the agriculture industry from processing to farmer to other producers, and I think it's a good time for myself to be in government as the agriculture minister to help grow that industry, and the markets and their products."

Carlier says he knows Alberta has some hot button issues, but he hasn't heard refundable check-off come up yet. However, the new NDP government has promised to enact new regulations to protect farm workers – but no one is quite sure how that will play out. Currently, Alberta's farm workers are not covered under occupational health and safety laws, the Workers' Compensation Act, the Labour Relations Code, or the Employment Standards Code. Whether the government will fully extend coverage to farm workers or find a solution somewhere in the middle remains to be seen.

"What I have found interesting from the producers I've talked directly to, not necessarily the marketing boards and that kind of thing, but from the producers themselves, most don't have too big an issue with it. They're more concerned perhaps that it's yet another regulation and it is coming," Carlier said, who emphasized the government is committed to proceeding in a collaborative manner.

"We are going to have a lot of opportunities to talk to stakeholders — from farmers to other industry people, to the workers themselves — to come up with a plan that's going to be workable and have our workers safe and give them the same rights that are enjoyed by other Alberta workers. We're looking forward to that," he said.

Alberta's new ag boss says he's aware of some of the acute challenges the industry is facing.

"The shortage of labour is a real challenge. I think it's something we need to explore. I am not sure yet how myself as minister or even the department can help with that. I think there's some work we can do perhaps with the federal government, but it's my understanding – especially in the processing side of things – that there's a shortage of labour," said Carlier.

After 40-plus years of Progressive Conservative governing, some Albertans are a little skittish about the province's political about-face. In 1999, a similar upheaval occurred in Manitoba, and the new NDP government instituted a "pause" that effectively halted the pig industry from growing beyond its previous size for 15 years.

"I can't speculate on what decisions have been made by another government. That they happen to be an NDP government is frankly irrelevant. It in no way shape or form affects us on whatever decision we might make about anything. There is no correlation whatsoever. We know the importance of the hog and the beef industry and we will continue to grow that. What happened in Manitoba is not relevant," said Carlier.

In neighbouring Saskatchewan, Brad Wall's Saskatchewan Party ousted the long-reigning NDP government in 2007. Rural voters expressed discontent with the former administration's investment into rural infrastructure and development, but Carlier says his NDP is committed to rural Alberta.

"I am a rural guy myself. I have been all my life, except for maybe 10 or 15 years I spent in Edmonton and in Saskatoon for various work. But I think a rural focus is important to this government and to myself personally. We'll continue with development in the rural communities along with the agricultural industry because that's important, and again taking a co-operative, collaborative approach to making sure that we listen," Carlier said. "And if there's any challenges or opportunities, that we work together." ■

Story Ideas? Press release? Comments?

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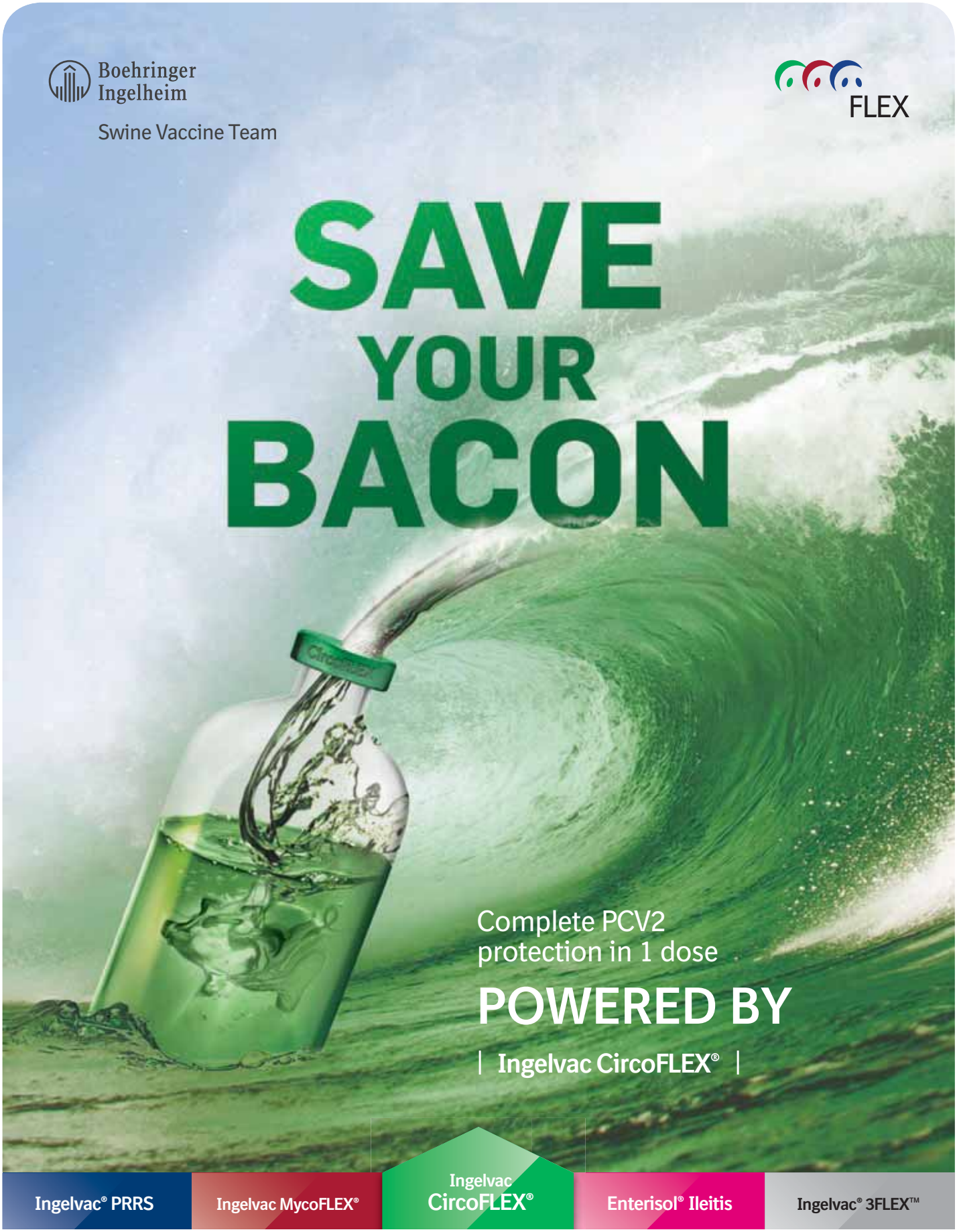

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Industry News

Alberta Pork spending time with those who pay the bills

Submitted by Geoff Geddes, Alberta Pork

When you're young and sheltered, bills are like door-to-door salespeople: You know they're out there, but if you ignore them long enough you hope they'll go away. As you get older (and wiser?), you realize they're more like the annoying teenager who keeps asking for money. Pay them off or they'll haunt you forever.

That's why I'm lucky that at Alberta Pork, those who pay the bills, namely the producers, are some of the best people you could ever work for. And while technically, PR stands for "public relations," (I knew I learned something in university), for me it's all about producer recognition.

Meeting, Not Tweeting

Social media use is exploding, but I still believe the biggest bang for your buck in making a connection is face-to-face. That's the thinking behind our regional meetings and it seemed a lot of producers agreed with us this year, as over half of them came out in late May to Vegreville, Red Deer, Lethbridge and Grande Prairie. While the focus was on swine health, there was also a healthy optimism among attendees that even without the record high pork prices of last year, the industry is on the upswing.

I hope they're right, because apart from the recognition we give them at meetings and events, the best acknowledgment for their hard work is a fair price. Speaking of acknowledgement, Executive Director Darcy Fitzgerald called on producers to help represent their industry at events like Stampede and Porkapalooza. Although we love singing their praises to all who will listen, hearing them engage the public directly would be music to our ears.

In the meantime, we'll keep meeting producers in person, hearing their concerns and doing our best to address them. Besides, Twitter and Facebook have a lot to offer, but they won't let you shake hands; at least not yet.

Seeing Black in Red Deer

Shortly after the regionals, we had another chance to interact with producers and applaud their efforts at Pork Congress in Red Deer. With Hutterites making up the majority of the crowd, it was a sea of black on the tradeshow floor and, according to many I spoke to, some black ink on the balance sheets back home. It was also one of the busiest years in recent memory at the Alberta Pork booth. There were questions, compliments, contests and even the odd concern – all things that draw us back to the event year after year.

As an added bonus, we gave those in attendance a chance to complete the producer survey right on the spot so we wouldn't have to call them later about it. For those who

didn't make it to Red Deer, our phone survey has been delayed but is coming soon.

We understand that producers are busier than a waiter on wing night, but we hope they won't fly under the radar when it comes to the survey. It really is our only way to know what's happening in our industry and to have the facts on our side when advocating for producers with government and consumers. We can't offer you free wings for answering our questions, but the knowledge we gain may help your business to really take off.

Pork, Meet Palooza

Pork and puns go together like activists and hidden cameras, so it's no surprise that our second annual Porkapalooza BBQ Festival was billed as "A Big Meat Up". Over two and a half days at the newly renovated Borden Park, thousands of Edmontonians were treated to cooking demonstrations, live music and even a competition featuring celebrity chefs. Oh, and they also enjoyed the best barbecue cuisine north of Kansas City.

With a massive Father's Day brunch and extensive play area for kids, it was the perfect family event and the ultimate venue for showcasing Alberta-grown pork. Given the generous spirit of our producers, it was fitting that the event benefitted 71 charities. We also donated all unused $1 tickets to the Daniel Woodall Family Trust Fund in memory of the Edmonton Police Services officer who died in the line of duty on June 8. It's easy to get stressed about rollercoaster prices and rising feed costs, but things like this can lend some perspective.

New Faces in New Places

In case you're just waking up from a lengthy coma or getting paroled, there's a new government in Alberta. Premier Notley and the NDP scored a massive win at the polls, and while some of them are short on experience, they're long on energy and passion.

We're looking forward to working with them and sharing the feel-good story of Alberta pork producers, who generate some of the world's finest pork and a pile of jobs and provincial revenue in the process. We'll also be building on our current relationships with staff in various government departments who continue their hard work on behalf of the industry.

Adding it up, we've done a lot to promote producers over the last few months and there's much more to come. Personally, apart from offering job satisfaction, it lets me make up for lost time. After all, this dedication to those who pay the bills is a fairly new practice, something I neglected for the first 30 years of my life.

Sorry Mom and Dad. ■

Open Farm Days create connections

By Jennifer McFee

Heritage Berkshire pigs enjoy a free-range lifestyle at Irvings Farm Fresh Ltd., which will welcome guests for Alberta Open Farm Days. Photo by Nicola Irving

Come one, come all!

Farmers and ranchers across Alberta and Manitoba are throwing open their gates and inviting visitors to step inside for the annual Open Farm Days initiative.

For the past decade, Open Farm Days have sprouted up across the country, starting in the Maritimes and moving westward. This year, Alberta will host its third annual event on Aug. 22 and 23, while Manitoba will host its sixth rendition on Sept. 20.

As CEO of Alberta Association of Agricultural Societies, Tim Carson can clearly see the benefits for both farmers and guests.

"This venture is truly focused on tourism and education. There are several levels of goals that we are trying to achieve," Carson says.

"The first goal is to get people out to the rural areas to not only enjoy the scenery and see what's off the beaten path of the main highway but also to see what those communities are like. There is a tremendous quality of life in rural communities."

The second goal is to bolster an economy based in rural tourism, he says, while the third goal is to increase knowledge about agriculture and food production.

"The quality of food that we produce here in Alberta is some of the best in the world and it happens in our own backyard. Many people living in Alberta today are generations removed from the farm, if they came from there at all," Carson says.

"It's a great way to showcase the agriculture industry and how strong and diverse it is."

Open Farm Days is also an ideal way to create a connection among farmers and ranchers who have different agricultural specialties, ranging from animals and grains to agribusiness and ag-tourism.

"It's not just about connecting urban to rural. It's even about connecting our rural neighbours. Farmers can learn from each other," he says.

"Oftentimes, there's a different type of production a few kilometres away that your neighbour doesn't necessarily have a very good grip on. This is a great opportunity to sit across the fence and talk shop."

When one farm becomes involved in Open Farm Days, nearby neighbours often consider getting on board.

"One of the greatest things that happens is when we get a cluster of farms involved. It allows the consumer to come out and interact with several different places without having to travel hundreds of kilometres," Carson says.

"So if there's one in the area that has the opportunity to be a catalyst for those around them, it works out tremendously well. It's a great opportunity for producers of all types to actually tell their story."

Last year, 61 farms participated in Alberta's Open Farm Days, which also featured six culinary events across the province. In total, more than 3,000 people came out to enjoy the two-day agricultural adventure.

Several partners are involved to bring the project together: Alberta Agriculture and Forestry, Alberta Culture and Tourism, Travel Alberta, Alberta Association of Agricultural Societies and Ag for Life.

"There's a real array going on out there. There was more than $40,000 spent on on-farm purchases last year from different agribusinesses that are trying to build a diversified type of revenue on their farm," Carson says.

"There's also been some great uptake on the education piece about where the food comes from and how well people are supporting their land as well as creating a quality product for people. I think one of the things that gets lost on the general public is how innovative and technologically savvy these producers are."

Visitors can experience a mouth-watering selection of culinary excursions on Saturday, Aug. 22 when chefs team up with local producers to create farm-fresh flavours that will be available for a fee.

Then on Sunday, Aug. 23, visitors can enjoy free admission to open-house events at farms in northern, central and southern Alberta.

"They open the farm gate and invite everybody in. You can get in the car with the family and see what's out there and maybe meet some new and interesting people," Carson says.

CONTINUED ON PAGE 28

Nicola and Alan Irving finish between 300 and 350 Heritage Berkshire pigs each year at their family farm, which will welcome guests for Alberta Open Farm Days. Photo by Nicola Irving

Alberta Open Farm Days:

- Mark your calendar for Aug. 22 and 23 for the third annual Open Farm Days in Alberta.
- There are separate fees for each culinary event on Aug. 22.
- Admission is free to visit farms on Aug. 23, but there might be a fee for extra activities such as corn mazes, wine tasting or horseback rides.
- For a list of participating farms and ranches, visit www.albertafarmdays.com.
- For more information about the event, call 1-800-Alberta.

Manitoba Open Farm Day:

- Save the date of Sunday, Sept. 20 for the sixth annual Open Farm Day in Manitoba.
- For more information, visit www.openfarmday.ca or call 204-821-5322.
- Updates will also be posted on Manitoba Agriculture's Twitter account at www.twitter.com/MBGovAg.
- Admission to the farms is free; however, fees might apply for specific activities.

"You can find out some information that can affect you for a long time. Honestly, it's just a great way to spend the day."

While you're out and about, you might want to drop by Irvings Farm Fresh Ltd. in Round Hill. At this small family farm, visitors can get up close and personal with Heritage Berkshire pigs, as well as kittens, dogs, chickens and horses.

Open Farm Days visitors will have the chance to buy specialty pork products during their visit at Irvings Farm Fresh. Photo by Nicola Irving

"We work with a heritage breed, the Berkshire pig, which is not normally done commercially. We operate a free-range outdoor system. We're not breeding, but we are feeding and finishing. We probably finish about 300 to 350 a year," says Nicola Irving, who operates the farm with her husband, Alan.

"The animals have an opportunity to be indoors if they want, but they are essentially free range and open to the elements year-round. That in itself is why we have to keep it fairly small."

For the second year, the Irvings look forward to welcoming the crowds as they showcase their farm, which they have continued to build since they moved to Alberta from England nearly a decade ago.

"I don't have the same biosecurity issues with bringing in strangers to my farm

that you would have with a commercial hog barn," she says.

"To me, it's a concern but it's not a big issue. Most people have not been on a commercial pig farm before they come to me. It might be their first time ever on a farm."

In an unforgettable experience, visitors can walk among the animals in their own environment.

"If they're not scared, they can come in and be amongst the pigs and watch how they behave. The pigs are super inquisitive and like to chew on your pants and your boots," she says.

"When it's warm, they have mud holes that they like to wallow in to keep cool. They dig in the dirt, and they have to go outside to eat and drink. We have straw beds inside so people can actually come in and see how they live and touch them. It's a very different experience."

For the second year, Nicola and Alan Irving will welcome guests to tour their free-range pig farm. Photo by Nicola Irving

Last year, the Irvings partnered with Slow Food Edmonton to offer a free lunch of pulled pork on a bun served alongside apple and fennel coleslaw. They plan to host a lunch again this year, although the menu has not yet been set.

"A lot of people that came last year were customers," Irving says, "so it was our chance to give a little bit back to them."

Like last year, the farming couple will be on hand to answer queries from curious visitors.

"They always have a million questions about stuff that we take for granted and assume that they know. They want to know what the pigs eat or why our pigs have curly tails and commercial pigs don't. We explain that when they're in an environment where the stress levels are much less and they're not as confined, we don't have problems with tail biting. It's letting them see the difference with what we do," Irving says.

"They probably get fed a pretty similar diet to a commercial pig. They eat a grain and then we add a supplement and a

CONTINUED ON PAGE 30

The Bruce D. Campbell Farm and Food Discovery Centre offers the public the chance to witness the daily life of a pig. Photo courtesy FFDC

protein and mill our own. They have free access to their food, so they eat when they're hungry."

After a visit to Irvings Farm Fresh, guests will leave with a better understanding of where their food comes from, right from when the pigs are sent to slaughter.

"We drive them in our own truck and trailer to a local slaughterhouse. Then we go the next morning and pick our carcasses up and bring them back. We actually have a meat shop on the farm, so we do all of our own cutting," she says.

"I guess, in some ways, we're justifying why you pay $2.99 a pound for pork chops in the store and you pay $7.99 a pound for pork chops when you buy off me. There's a huge difference there. It's making them understand that our costs of production are way higher."

In their 1,500-square-foot meat shop, the Irvings sell 12 different types of fresh sausage, as well as smoked pork chops, sliced ham, burger patties, ribs, steaks and roasts.

"If it comes from a pig, we make it. Basically, we try to utilize everything that we get and make a whole range of things," she says.

"Last year, we gave people tours of the meat shop so they could see all the different bits of equipment. They could see the smoke house and where we store things. Then there was an opportunity to buy things at the end of their visit."

Like the Irvings in Alberta, a long list of farmers will welcome visitors throughout Manitoba, where Open Farm Day is slated for Sunday, Sept. 20. Last year, more than 8,000 people visited 47 farms across the province during the annual event, which is organized by Agriculture, Food and

The Bruce D. Campbell Farm and Food Discovery Centre will offer limited servings of a free lunch featuring Manitoba pork on a bun for Manitoba's Open Farm Day on Sept. 20. Photo courtesy FFDC

Rural Development in partnership with the Manitoba Association of Agricultural Societies.

Guests can visit farms featuring livestock, grain, and fruits and vegetables, as well as a selection of agribusinesses.

The Bruce D. Campbell Farm and Food Discovery Centre (FFDC) is participating once again, as it has done since it launched nearly four years ago.

Operating under the umbrella of the University of Manitoba's Faculty of Agricultural and Food Sciences, the FFDC is located at the university's Glenlea Research Station, which covers about 500 hectares. This research hub houses the faculty's livestock facilities and feedmill services for teaching, research and outreach projects.

Open year-round, the FFDC was created to highlight current faculty research while encouraging people to learn about how their food is grown.

Program co-ordinator Siobhan Maas explains that the FFDC provides visitors with an unbiased look at conventional agriculture in Manitoba and the western Prairies.

"The goal of the FFDC is to provide a place for schools, the public, and national and international visitors to learn about where their food comes from and how Manitoba farmers produce the food that is bought in-store," Maas says.

"The Centre participates in Open Farm Day because the annual event highlights food production and agriculture, encouraging city folk to venture outside of the Perimeter and experience modern-day farming."

For this year's Open Farm Day, organizers will offer limited servings of a free lunch featuring Manitoba pork on a bun.

The main highlight, however, will be the chance to glimpse through windows into the University of Manitoba's conventional swine unit.

"This is special because with biosecurity in effect for hog operations, it is rare for the public to witness daily life of a pig," Maas says.

"Visitors can experience the different life stages of the sows as they move from the breeding room to the gestation room to farrowing, and then watch the

CONTINUED ON PAGE 32

Visitors to the Bruce D. Campbell Farm and Food Discovery Centre can look through the windows into the University of Manitoba's conventional swine unit. Photo courtesy FFDC

When you head out the door for Open Farm Days, here are some tips to help you make the most of your adventure:

- Wear sturdy footwear and dress in layers. Make sure that your clothes don't have strings or excess fabric.
- Bring rain gear, if necessary, since the events happen rain or shine.
- Don't forget your bug spray, hat, sunglasses and camera.
- Leave your pets at home.
- Keep your children close to you.
- Follow all instructions from your host.
- Don't feed or touch animals without permission.
- Don't touch farm machinery without permission.
- Bring a cooler and some cash in case you decide to buy any farm-fresh products.
- Schedule about one hour per stop, plus travel time in between.
- Use hand sanitizer after you leave each farm.

piglets grow and move into the nursery once they are weaned from their mothers."

As a result of these memorable moments, Open Farm Day provides benefits to the producers and the public alike, she adds.

"There is a growing desire for people to experience a connection with the food that they eat. Open Farm Day gives farmers and the public the opportunity to learn about food production from one another," Maas says.

"The public can gain knowledge and insight into certain methods of food production at this event. Unfortunately, it is hard for all methods of agriculture to be displayed because of biosecurity measures."

That said, Open Farm Day provides an educational and entertaining outing for guests of all ages.

At Open Farm Days, special activities include crushing canola into oil. Photo courtesy FFDC

"I encourage people interested in Open Farm Day to make a day of the event and plan to bring a picnic lunch along. Visit the Open Farm Day website and plan out a route, visiting multiple farms over the day," Maas suggests.

"There are many options to choose from – agri-tourism businesses, conventional farms and small-scale farmers' market suppliers."

For more information on Manitoba's Open Farm Day, visit www.openfarmday.ca. To learn more about Alberta Open Farm Days, visit www.albertafarmdays.com. ■

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   If you would like to receive the Western Hog Journal, please provide your name, your role in the industry, and your mailing address.

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2. How well do you think the Western Hog Journal covers the Canadian swine industry?

   _____

   _____

   _____

   _____

3. In the past, the Western Hog Journal has presented very strong coverage in the research category. However, in the past two years, coverage of other industry issues such as economics, policy and topical issues has increased. Please select the types of stories that interest you the most.

   ○ Articles about the economics of the pork industry, such as retail pricing, trade agreements, processor pricing.

   ○ Articles about the politics of the pork industry, such as country of origin labeling, trade disputes, provincial issues such as the moratorium in Manitoba.

   ○ Articles about controversial issues such as animal rights organizations, and labour shortages.

   ○ Articles about the latest research in the industry such as scientific papers and reports.

   ○ Articles about new production techniques and new products in the industry.

   ○ Articles and photo coverage of industry events.

   ○ Articles about consumer and retail trends.

   If you have any topics not listed here, please share your ideas with us.

   _____

   _____

   _____

   _____

4. Is Western Hog Journal your pork industry magazine of choice? ○ Yes ○ No

   What other industry publications do you read?

   _____

   _____

5. If Western Hog Journal was to develop a website, would you visit the site to read articles and receive timely information about developments in the swine industry?

   ○ Yes ○ No ○ Unsure

   Which industry-related websites do you currently visit? _____

   _____

   _____

6. Do you usually read most of the publication, only parts, or just scan the material?

   ○ I read most of the magazine.

   ○ I only read parts of the magazine.

   ○ I just scan the magazine.

7. Western Hog Journal publishes five editions annually. Please mark the editions you typically read.

   ○ Winter ○ Summer edition

   ○ Special Banff ○ Fall edition

   ○ Spring edition

   If you have a favourite edition, please let us know what it is, and why. _____

   _____

   _____

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   _____

8. People often share magazines, and a single copy may be read by several household members or employees. In your estimation, how many other people read the copy of Western Hog Journal that you receive?

   ○ One person ○ Four people

   ○ Two people ○ Five or more people

   ○ Three people

   If you would like to receive additional copies of the Western Hog Journal for your employees, please tell us how many extra copies you would like each time the magazine is published, and please provide your name and address.

   _____

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9. The strong support the Western Hog Journal receives from our advertisers is what enables us to continue to provide such in-depth industry coverage. When you read the Western Hog Journal, do you notice and act on the advertisements?

   ○ I frequently notice the advertisements and will act on them if the product/service is of interest to me.

   ○ I occasionally notice the advertisements and will act on them if the product/service is of interest to me.

   ○ I don't often notice the advertisements or act on them.

   Do you have any ideas as to how our advertisers could reach you more effectively through the Western Hog Journal? _____

   _____

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   _____

10. What is your involvement in the pork industry?

    ○ Producer ○ Industry organization

    ○ Supplier ○ Government

    ○ Researcher ○ Processing

    ○ Animal health ○ Wholesale/retail

    ○ Other _____

    _____

11. If you are a producer, how many hogs does your operation sell annually?

    ○ 2,000 - 2,999 ○ 5,000 - 9,000

    ○ 3,000 - 4,999 ○ More than 10,000

    ○ Other _____

12. How optimistic do you feel about the future of the hog industry in Canada?

    ○ Very optimistic

    ○ Somewhat optimistic

    ○ Not optimistic

    Please share any additional thoughts you may have about the future of the Canadian hog industry here.

    _____

    _____

    _____

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    _____

13. Would you like to be entered into a draw for completing this survey? If you select "yes" please be sure to provide your email address on the line provided. Thank you for taking the time to complete this survey!

    ○ Yes ○ No

    _____

Please mail completed surveys to:

Sheri Monk
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Renowned exporter Jim Donaldson moving on after 40 years in the biz

By Sheri Monk

After 40 years in the swine export business, James Donaldson, owner of Donaldson International Inc., is scaling down business.

"I like to think I had a positive impact on the swine industry around the world," he said.

Indeed, Jim supplied most, if not all, of the terminal sire line Duroc in multinational breeding companies such as DanBred, Hypor, Topigs Norsvin and many others around the world.

"In addition," he added, "we supplied one of the largest shipments ever to leave Canada and to arrive in Moscow on one plane – 1,400 pigs. In 2005 we supplied 14,000 pigs to Cuba, made up of five boatloads and one planeload. More recently, we supplied five boars to an AI centre in Japan and 89 pigs to the Hungarian Swine Association. So, as you can see, no order was too big or too small," he laughed.

Donaldson started his adult life in Alberta, where he met his wife, Anya, who had recently become a nurse. She found work in Ontario, and James followed.

"I became the manager of the Ontario Swine Breeders' Association. I did that for about five years and then I took a delegation of Ontario breeders to Europe for a pig tour," Jim said.

Jim and 25 breeders went to Holland, Denmark and Sweden, and people there were very interested in the Hampshire and Duroc breeds.

"They asked how much, and then I was in the export business. That was in 1978 and it just snowballed from there. First Sweden bought, then Denmark and then Norway, Holland and Germany. Basically all of the coloured pigs – the Hamps and Durocs – in Europe all originated from Canada."

Jim is 67 this year, but was in Japan last week, and was recently in China for the 40th time.

"I really feel lucky. I studied at the University of Guelph and back then if I had wondered what I would be doing, or what life would have dealt me, I would never have believed that I would have the chance to see the world as I have and meet so many nice people," he said. "I've had the pleasure of travelling with numerous ministers of agriculture and prime ministers, and I have met ministers and prime ministers in countries all over the world."

Jim and Anya Donaldson are looking forward to travelling together after winding down their successful 40-year export business.

In his 40 years exporting swine around the world, Jim has witnessed great change and transformation.

"I have seen many changes in countries but never as much as what I have seen in China. Second would be Russia or the Ukraine, but China just blew me away. When I first went in 1984, there were no cars, only a few government cars

and everything else was on bicycle. Everybody was on a bike, and from the airport to the downtown to the Forbidden City in Beijing was a little old street and today there's three ring roads and traffic jams and pollution so you can't even see the tops of the buildings for it," he described.

Jim and Anya are selling their unique facility and grounds, which is CFIA-approved and was designed to be used as a training facility as well as a quarantine for importing and exporting animals. The facility includes a residence for guests and students, as well as a main residence.

"For training purposes it has been very economical. Instead of paying the high cost of hotels and food in restaurants, guests are able to have their own residence and experience a level of hospitality that would not be possible at a hotel. We have hosted students and trainees from all parts of the world. These students have stayed at the facility anywhere from a couple of days to nearly a year, and close relationships and friendships have been made," Jim said, adding they are also interested in selling their GGP terminal sire line nucleus Duroc herd.

Jim says he won't miss some aspects of the export business, which is not for the faint of heart.

"You have a lot of money on the table. Anything can happen, and politics can turn dirty and all of a sudden Russia closes the border and you could be bankrupt just because of a government policy. There's no insurance for things like that."

Though he may be ready to downsize the high-stakes, high-pressure world of the export business, he's not quite ready to stop working entirely.

Even though the world is so big, the swine industry is quite small and I have met the most amazing people. ~ Jim Donaldson

"In the 50 countries that I travelled you end up with some favourites that you feel comfortable in, and where you've made some friends," said Jim, who plans to stay in the business by speaking about swine production and new technologies. "I still plan to travel, but now I can take my wife with me. She's travelled, but she's pretty much worked all her life, and we've always been busy raising a family."

Jim is grateful to have formed all the relationships he has throughout the years, and plans to maintain them, even though he won't be exporting any longer.

"Even though the world is so big, the swine industry is quite small and I have met the most amazing people." ■

New CPC chair gives back to pay it forward

By Geoff Geddes

Given that agriculture runs deep in his veins, it's little wonder that the latest chair of the Canadian Pork Council (CPC) is pumped about his new role.

"It's something that spans the generations for me," said Rick Bergmann. "Since my wife and I bought our first hog farm in the mid-1980s, the pork industry has been part of our lives."

Like most producers, free time is hard to come by, and when it does appear, Bergmann is quick to fill it with pork pursuits.

"I started as a regional representative for my district through Manitoba Pork and went on to be a director and eventually vice-chair of Manitoba Pork."

He had a similar progression with the CPC, moving from board member to the executive and on to his current position as Chair.

The Master of Modesty

While it's a high profile position that speaks volumes about the industry's respect for him, the humble Bergmann is low key about it all.

"It's gratifying when people see a skill set in you and show a level of confidence in your ability. That's not something I take lightly. I figured that if others felt I could lead the organization, I should pursue it."

Like any wise man who knows what's good for him, he discussed the idea with his wife before making a decision.

"We always do things together and she was very supportive. Like me, she recognized it as both an opportunity and an obligation, giving back to an industry that has given us so much and paying it forward to set up future generations for success. Having both grown up on a farm, we know there are many links in the chain. The farm may be the first link, but bodies like the CPC are a key component as well."

The Pink of Health

If current pork industry issues were a family, animal health would be like the first born. Fawned over, coddled and always the center of attention. The financial health of producers, on the other hand, is akin to the "accidental child" — seen but not heard.

Got a problem with that second one? Bergmann does.

"Of course animal welfare is a huge priority for producers, and it is for CPC as well. Without sustainability though, who's going to provide that welfare?"

It's a bit like the warning on a plane that if the cabin pressure should suddenly drop, put your own mask on before assisting others. As Bergmann points out, last year was phenomenal for producers, mostly thanks to PED, "and that was great as our industry really needed a strong year."

The question is "Now what?" How will farms fare now that the price bubble has burst?

"Whether it's CQA (Canadian Quality Assurance), traceability or the code of practice, producers must be rewarded for all the good things they do all the time to create a world-class product, not just when a calamity hits. We're in the business of feeding the world, but we must be able to feed our own families in the process."

Story Time

Part of ensuring viability, according to Bergmann, is telling our story to anyone who will listen.

"We need consumers and industry partners to understand and value what we do on farm to ensure safe, high-quality pork, and why we need and deserve a fair price in return. For example, we have a domestic marketing program through Canada Pork International to educate meat buyers on the quality and uniqueness of our product. We must continue to build on that."

Banks, too, require a better appreciation of the industry's challenges as well as its potential.

"I've been asked to meet with a borrower organization to tell our story and I look forward to that opportunity of building a communication bridge with them and others."

And, of course, government is another key part of the puzzle.

"I've met with Minister Ritz both in his office and numerous times in the airport. We talk about COOL (country of origin labelling) and the importance of animal health and overseas markets. It's a connection we need to cultivate and I'm happy to do my part in that regard."

Pass the Puck, Not the Buck

He may take a little credit for "doing his part," but Bergmann is quick to shine the spotlight on producers, provincial pork organizations and his own staff at the CPC. And with the NHL playoffs recently concluded, what better time for a sports analogy?

"The passion they all demonstrate for promoting our industry is significant. When everyone suits up and is ready to play, driving for the net or passing the puck so others can score, it represents a total team effort in reaching our goals."

Okay, maybe they'll never win the Stanley Cup. But if Rick Bergmann's vision for the CPC comes to pass, it may be the producer's cup that runneth over. ■

Exploring consumer perceptions around animal welfare in Alberta

Submitted by the Animal Farm Animal Care

In order to improve the connection with the general public, Alberta Farm Animal Care completed some work around exploring the perceptions of Albertan consumers regarding animal health and welfare. This research was broken down into two sections – qualitative and quantitative. The qualitative portion was focused on an in-depth exploration of perceptions around animal welfare across a broad spectrum of the population in Alberta. This work has helped to identify potential barriers and triggers that influence consumer purchasing.

The five primary themes and insights were identified as:

1) Some consumers see animal farming as part of Albertan culture.
2) Many consumers feel increasingly disconnected from animal farming.
3) Many consumers suppress feelings around animal health and welfare.
4) Some consumers give up control and place total trust in the system.
5) Some consumers take back control through purchasing behaviour.

An important take-away from these insights is that a consumer who is suppressing their feelings is able to maintain ignorance but is also susceptible to 'shock' when information comes to light through undercover exposés.

Additionally, consumers placing total trust in the system place a heavy burden on the industry to proactively understand, manage or eliminate any potential health and welfare "shocks." Finally, an increasing number of consumers that seek control over the system can be seen through purchasing trends that allow them to deal with their feelings (i.e. buying local, organic, etc.).

The seven animal health and welfare "consumer perceptions" were identified as:

1) Some consumers felt natural space in Alberta helped animal welfare.
2) Many consumers expressed concerns around animal confinement.
3) Many consumers expressed concerns around "superfarms".
4) Many consumers expressed concerns around hormones and antibiotics.
5) Some consumers expressed concerns around the slaughter process.
6) Some consumers expressed concerns around physical handling.
7) Consumers look for government and industry to take responsibility.

It seems that the casual observation of open farmland and grazing animals has improved perceptions of animal welfare within Alberta. However, many consumers were concerned with the concept of confinement, with particular emphasis on calves, hens, chickens, and pigs as well as the concept of "superfarms" (defined as large, corporate, industrialized farming operations). This concern was primarily based around the worry that animal health and welfare are not balanced with corporate profit and scale of production and resulted in consumers questioning the morals and ethics of corporate farming.

The perception of consumers around hormone and antibiotic use was focused mostly on the potential impact on human health and not on the ability to treat animals that are sick. This perception represents a key focus area for communication between the livestock industry and the public. Any physical handling concerns were triggered specifically by media or news stories, thus identifying another area where the livestock industry can be increasingly proactive.

There was an overall concern and desire to see humane and ethical treatment of farm animals through all life stages, including slaughter. Although some consumers felt that the government should be partly responsible for humane treatment, most felt that it should be the primary responsibility of farmers and the livestock industry to ensure that farm animals are being treated ethically and appropriately.

In the second piece of the consumer research that AFAC completed, we examined how perceptions and beliefs identified in the first piece of the research translated into purchasing decisions and impact on consumption. A representative demographic made up of a statistically significant portion of the population (750 individuals) was recruited and surveyed.

The six primary consumer "facts" boiled down to:

1. On average, Alberta residents who are younger (15-29) and/or female have the strongest negative beliefs about farm animal health and welfare.
2. On average, Alberta residents' strongest concerns involved animal overcrowding (63%), animal living space (43%), superfarm impact on animals (39%), and hormone and antibiotic impact on human health (38%).
3. On average, Alberta residents' agreement with positive beliefs about animal farming does appear to have a significant positive impact on their meat, poultry, and dairy consumption behaviour.
4. On average, Alberta residents' agreement with negative beliefs about animal farming does not appear to have a significant negative impact on their meat, poultry or dairy consumption behaviour.
5. If Alberta residents were looking for information about the health and welfare of farm animals, they are most likely to trust veterinary organizations (64%) and independent organizations like AFAC or the AB.SPCA (56%).
6. If Alberta residents were looking for information about the health and welfare of farm animals, they are most likely to look in online search engines (81%), newspapers (51%), television (37%), and YouTube (16%).

This research provided insight into consumer beliefs and behaviour and will help to direct the communications and actions of the livestock industry.

AFAC supports the following six industry recommendations:

1. Alberta residents who are younger and/or female should be the focus for communication and education regarding negative beliefs.
2. Concerns around animal living space, superfarms, and hormone and antibiotic use should be the focus for communication and education.
3. Increasing positive beliefs may lead to consumption increases.
4. Reducing negative beliefs is unlikely to lead to consumption increases but reducing negative beliefs may still be important from a public policy or regulatory perspective.
5. Trusted farm animal health and welfare information should come from veterinary and independent organizations such as the ABVMA, AFAC, and AB.SPCA.
6. Farm animal health and welfare information should be promoted in search engines, newspapers, television, and YouTube where possible.

The complete report is available for AFAC members and may be requested via phone or e-mail at the AFAC office. ■

Effectively assessing barn renovations

Lee Whittington, President/CEO, Prairie Swine Centre, Murray Elliot, FGC Inc.

On the third week of March 2014 pork producers saw something they had never seen before – individual pigs sold for more than $300 each. The fact that this coincided with moderating grain prices meant that margins had never been better in recent memory (last seven years). Now what? Although there is plenty of debt to soak up these margins, there is a noticeable change in perceptions on the future of the pork industry. A new future could be imagined that includes facility and equipment renewal. Over the next two years, there will be plans and purchasing decisions made to address pent up demand by facilities and their managers to address the repair and maintenance concerns of pig barns.

Nationally we have an aging 'fleet' of barns, with the last big building effort concentrated between 1991 and 1998. These barns have seen more than half their productive life, even with good maintenance. This is complicated by the fact the maintenance and repairs over the past seven years have been well below the level required to keep the 'fleet' in tip top shape. Some barns have passed their 'best before date,' but for those barns we want to remain operational for the next 20 years we need to consider reinvestment. The challenge – there are many demands and few resources, so how do you decide where the first dollar should be spent?

It would be nice to "have an app for that," but the complex considerations of capital versus operational investments, people versus infrastructure, and short-term versus long-term return on investment make analysis of this 'apples and oranges' comparison very difficult. We challenged ourselves to consider what kind of a tool might assist in making these decisions logical, as well as a good contributor to profitability. We also saw the challenge of barn reinvestment choices being influenced by personal preference, and rather than money spent being a positive influence on future cash flow and profitability, they could be simply expenditures on 'my favourite things'.

Here is a checklist approach to making objective barn investment decisions. We considered a simple approach using a combination of perceived risk of not making a change in each area, and the impact of a worst case scenario if catastrophic failure of that overlooked area was to occur. Our suggestion is you take a walk around and through the entire barn. You may want to have someone accompany you since perception of risk and impact is subjective and the exercise could benefit from a second opinion. You will also want to take a few tools with you to poke and prod and assess equipment and structure. You should have a high intensity flashlight with you to inspect below slats, in attics and behind pillars and equipment. We recommend at least 200 ft candle power (as little as $50) and better yet 800 ft candle lights, an inexpensive investment that will bolster your judgment with greater clarity in important areas such as assessing concrete cracks and rafter strength. The other tools you will need include a ladder tall enough to allow you to get on the roof, a small ladder in the barn for accessing attic hatches, and in the tool belt a screwdriver and knife for scrapping and digging, perhaps a can of fluorescent paint to mark areas for re-inspection in the future.

The following risk assessment checklist looks at four areas of consideration – biosecurity, structural, utilities, operational – and certainly more could have been added. However, in balancing the need for brevity and ease of use against being all-encompassing, we opted for a quick tool that will reveal the areas of greatest need and allow you to pursue an action plan or to seek professional structural or other engineering

and construction advice. A special note regarding safety for people working in barns; the structural and utility sections of the checklist identify safety considerations, for example marked exits, emergency egress exits and fire separation to increase time to exit the building. These may not have been part of the original barn plan but should be considered essential upgrades as we evaluate our barn structures.

Perimeter (walk the barn)

- Check for cracks in foundation wall, hairline cracks are expected, larger cracks need further investigation.
- Stud walls can be inspected by removing fasteners and looking at the condition of insulation, studs and vapour barrier.
- Check the manure pit access, this is will give the best view of visible pit walls, DO NOT enter pit.
- Check eaves, this is where ventilation air enters barn, eave doors should be intact, soffit and fascia can be checked

Check roof

- Climb on roof and check steel condition, watch for rust at seams, popped screws and pay special attention to valleys and any chimney or pipes that penetrate roof steel, note placement on roof so that when inspecting attic these areas can be targeted from the inside.

Enter barn and check floors and slats

- When checking slats look for surface cracking, cracks or pops along the length of the slat mean rebar has been exposed to manure and is rusting, cracks across the slat is of more immediate danger and slat could collapse without warning.
- Check the bottom of the slats in 10 high-use areas, slats will often show wear under slat first, this will show as concrete blown off the bottom side of slat, if this occurs slats are of no value.
- Check solid hallways for cracking, minor cracking in these areas is expected, look for unusual amounts of cracking that could be caused by frost penetration.

Check equipment tied to floors

- Areas where equipment such as dry sow stalls, feeders, farrowing floors are attached to floors are high wear areas.
- Use screwdriver and scrape until metal is uncovered, this will give some indication of required maintenance.

CONTINUED ON PAGE 44

- Farrowing and nursery floors are self-supporting, check beams or framework to insure stability.
- Any plastic coated expanded metals should be inspected for cracking, even hairline cracks means life of product is greatly diminished.

Ceilings

- A variety of products are possible on ceilings, the most common are plywood and PVC liners.
- Pay particular attention around the interior perimeter, moisture entering from eaves will cause deterioration around perimeter first.
- Check integrity of plywood ceiling with a knife, wood should not be punky and should be difficult to penetrate with a knife.
- PVC ceilings will not show this wear but check to make sure strapping above this product is sound, again in a few suspect locations pierce the PVC and check for soundness of strapping.

Load bearing walls

- Not all barns have load bearing walls but any structure over 80' will almost always have trusses (even structures as narrow as 50' could have load bearing walls) supported in the interior of the barn, these may be steel posts, concrete walls or stud walls usually on a concrete curb, these supports hold up a split truss and are extremely important.
- If the structure has steel posts look for rusting especially at the base, again scrape away any surface rust until good steel is found, there should be very little deterioration or an engineer should be consulted.
- If concrete look for cracking, hairline cracks are expected.
- If wood, expose some of the stud wall and inspect for damage.

Attics

- This area tends to be the most neglected area of a structure so pay special attention to it.
- Trusses are normally spaced at 48" centers, you cannot step on any area except the bottom cord of a truss or you may fall through the ceiling.
- Any roof leaks will be obvious from the condition of the insulation, blown insulation should appear fluffy and evenly spread, any discolouration or sagging is a roof leak, every steel roof will have a few leaks (these should be repaired) but the important points are how much and how long, any leaks will have caused some deterioration to ceiling, bottom cords and truss plates, the amount and duration of these leaks will be directly related to the amount of damage, minor damage is not significant but if the bottom cord is punky or the truss plates corroded and engineer should do further assessment, again scraping rust looking for good metal in plates and penetrating wood trusses with a screwdriver will give some indication of the amount of damage.
- Pay special attention around the perimeter of the roof as this is where snow has most likely entered the attic
- truss plates should be closely looked at, they should appear shiny and basically look like new, any rusting on truss plates is an issue that can cause roof collapse.
- If there is no cladding under the roof steel such as tentest or vinyl back insulation holes in the attic will be obvious when you shut off the flashlight.
- If the roof steel has under cladding of tentest, this product sags easily if wet so roof leaks are again fairly obvious.
- If the roof has vinyl back insulation this is more difficult, water will run down the vinyl until it finds an exit so where you see insulation damage the leak may be higher up the roof. ■

Area		Description of area observed	Risk scale 1-5	Impact of failure on farm net income	Avoidance of risk, best return score
Biosecurity					
STRUCTURAL	OUTSIDE	Cracks in foundation wall			
		Insulation, studs, vapour barrier			
		Pit walls			
		Eaves, soffit, facia			
		Roof steel, seams, screws			
		Floors, cracking and heaving			
	INSIDE	Slats, cracks (along length or across slat)			
		Under the slat in high use areas			
		Farrowing and nursery floors			
		Suspended floor supports			
		Ceilings plywood, PVC liners			
		Interior perimeters moisture migration			
UTILITIES	OUTSIDE	Electrical service connection to barn			
		Emergency generator exhaust vent			
		Fire department access road around structure			
		Water supply for fire fighting			
		Exit doors and emergency egress openings clear of obstacles and functional			
		Gas lines painted yellow, and other utilities clearly marked			
	INSIDE	Fire detection/alarm system (tested)			
		Fire extinguishers in all passageways that lead to exits (tested annually)			
OPERATIONAL	OUTSIDE	Gravel building perimeter; control of weeds, placement of rodent control			
		Sewer vent pipes clear of debris			
		Manure pump out access covers solid and secured			
		Feed bins stable and secure, boot bottoms			
		Feed bins stable and secure, boot bottoms			
	INSIDE	Equipment tied to the floor			
		Sow stalls, feeders			
Other					

Effects of Mixed and Uniform Parity Groups on Feeding Behaviour, Welfare and Productivity of Sows in ESF Housing

Y.M. Seddon, F.C. Rioja-Lang and J.A. Brown

Background

While group housing can provide benefits to the sow related to increased fitness and freedom of movement, sows can also experience increased aggression and limited access to feed if the groups are improperly managed. ESF systems have the benefit of controlling individual feed portions and generally have low aggression due to limited feed competition. However, young or subordinate sows may experience competition for access to the feeder throughout gestation. Low-ranking sows in ESF systems experience more aggression and injuries, have reduced production, gain access to the ESF later in the daily feeding cycle, and are displaced from feeding more often. In static groups, high-ranking sows eat earlier in the feeding cycle and for longer. Because the use of ESF systems is becoming more common in North America, information on how to manage low-ranking sows in these systems is needed, and will benefit sow welfare and productivity.

The study objectives were:

1) To determine if younger sows (parity 1 or 2) will receive less aggression and injury during gestation when managed in uniform groups than in mixed groups, and what effects this may have on production.
2) To determine the effect of mixed and uniform grouping treatments on sow feeding behavior, measures of welfare and productivity.

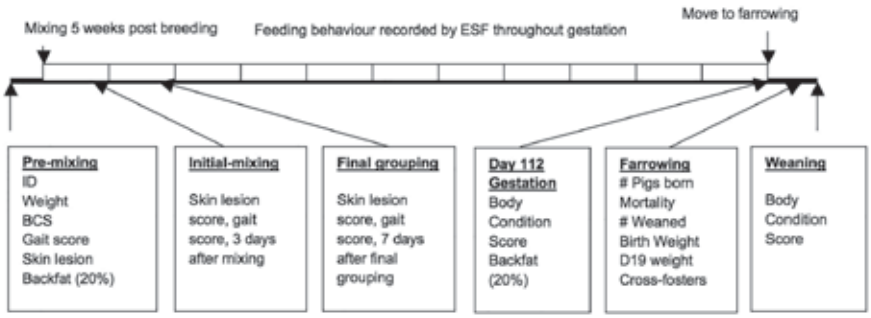
By examining different grouping strategies, this study explores the range of management practises that can be used in ESF systems.

Materials and Methods

Uniform low, medium and high parity groups were formed during gestation, and compared to control groups of mixed parity. The groups consisted of 60 sows each, with one ESF feeder per group. The low parity treatment groups were comprised of parity 2 sows, medium groups included parities 3-4, and high parity included sows over parity 5. The control group consisted of parities 2-8. Sows were mixed at 5 weeks gestation. They were placed in a mixing pen for 1 week, and then moved to gestation pens until farrowing. The ESF system (Nedap Velos, NL) recorded daily feeding behaviours

and feed amounts throughout gestation. Body condition scores, sow weights, skin lesion and gait scores were taken periodically throughout gestation. As well, sow backfat thickness was measured on a sub-sample of 20% of sows, equally distributed across parity and treatment. Standard production measures at farrowing were collected, as were piglet weights from a sub-sample (27%) of litters. Sows with lameness score ≥2 were removed from the study and placed in relief pens and provided care based on the farm's procedures. All sow removals due to lameness or other health considerations were recorded.

Figure 1. Timeline of experimental procedures used for data collection.



Results and Discussion

Feeding behaviour

The average daily meal length per sow ranged from 15 to 20 minutes. No significant difference was found in feeding duration among the treatments, however the uniform low parity group initially took longer to eat (20 min). After two weeks in ESF, feeding times for the low parity group had reduced to 17 minutes. The longer initial feeding times for young sows may reflect their lack of familiarity with the system, or greater time spent exploring the feeder.

Correlations between feeding time and sow weight and parity showed that sows with higher bodyweight ($r = 0.13$, $P<0.01$) and parity ($r = 0.07$, $P<0.01$) fed later in the daily feeding cycle. Previous studies found the opposite, with younger sows eating significantly later in the daily feeding cycle than old or intermediate sows. The reasons behind this difference are unclear, and further analysis is planned.

Backfat was used as a performance indicator in this study. It was found that sows with a greater backfat thickness entered the ESF earlier in the feeding cycle ($r_s=-0.14$, $P<0.05$) and had a longer feeding duration ($r_s=0.15$, $P<0.05$). These results indicate that the more successful sows eat earlier in the feeding cycle, and have a longer feeding duration.

Effects of grouping on sow production

Among the treatments, there were no significant differences in the total number of piglets born, the number born alive, or mummified piglets, but differences were found in the number of stillborn piglets, pre-weaning mortality up to 5 days of age and the number of piglets weaned ($P<0.05$). Uniform high parity sows had fewer total piglets born, higher piglet mortality and fewer piglets weaned. This is likely due to differences in productivity due to sow age, rather than a result of the treatment. Ongoing analysis will examine differences in the number of sows removed per treatment over the course of gestation due to low BCS, injury and lameness.

Backfat

There were significant interactions between treatment and parity score on changes in backfat recorded between 5 and 15 weeks gestation (Table 1). Young sows (parity 2) lost 4.12 mm of backfat on average when in mixed groups, while in the uniform treatment these sows had an average gain of 0.22 mm. Although parity 3 and 4 sows did not fare significantly better in uniform groups, these sows did show positive gains in backfat instead of loss when in uniform groups. High parity sows were the only ones to gain backfat in the mixed group, which indicates that high parity sows may be dominating access to the ESF system, reducing the ability of younger parity sows to feed at regular intervals, or at preferred times of day in mixed groups.

CONTINUED ON PAGE 48

Table 1. Changes in sow backfat (mm) between 5 and 15 weeks gestation, showing interactions among treatments within parity score, (n = 262).

Parity Score*									P- value
1		2				3			
Treatment		Treatment				Treatment			
Mixed	Low	Mixed	Low	Medium	High	Mixed	Medium	High	
-4.12[a]	0.22[bc]	-0.45[bc]	0.99[c]	0.87[c]	0.50[bc]	0.17[bc]	1.99[bc]	-0.64[b]	<0.05

*Within a parity score, where superscripts differ, P<0.05

Effects of group type (mixed vs uniform) on sow welfare

Sow lameness

Sows in the mixed parity group had a significantly greater increase in lameness between the pre-mixing assessment and day three after mixing (P<0.01), and also during the period from premixing to seven days after final grouping (P<0.05), compared to the uniform treatment groups. This indicates that there was a greater risk of lameness following mixing when sows were housed in mixed parity groups, and that housing sows in uniform groups helped to reduce the severity of lameness that developed as a result of mixing.

Lesion scores

In all groups, lesion scores increased from premixing to five days post-mixing, and then decreased. This indicates that there was little ongoing aggression or injury due to competition for ESF entry once the group hierarchy was established.

The lesion score data suggests that injuries from aggression were largely related to sow age, with younger sows receiving more injuries. Sows in the uniform low parity group had the highest injury scores. Medium and mixed parity groups had intermediate lesion scores, and groups of uniform high parity sows had the lowest level of injuries at day five following mixing (P<0.001).

The Bottom Line

In this study, housing sows in uniform groups helped to reduce the severity of lameness developing as a result of mixing. The increases in backfat over gestation also suggest that the well-being of younger sows may be better in uniform groups, and that competition may be less in uniform groups. The practice of managing gilts separately is already a common practice, and the results of this study indicate that parity 1 and 2 sows may also benefit from this practice. While the productivity of sows in uniform groups was equivalent to that of mixed groups, the study followed sows through one gestation, and so there may be longer term effects on sow longevity. Additional research would be needed to confirm this. The higher injury scores found in low parity sows appear to be related to the social ability of younger pigs, rather than grouping, and thus management practices that improve sociability of gilts (e.g. increased socialisation by repeated mixing before breeding) may be a further area of research to be examined.

In conclusion, the results from this study suggest that housing sows in uniform groups in ESF systems may be a positive strategy for the management of group housed sows. The large herd (≥ 6,000 sows) sizes found in North America make it possible to consider grouping sows by parity in these systems.

Acknowledgements

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Growth performance, mortality, carcass revenue and cost differences in a commercial production system positive to swine dysentery: A case study

By Jose Landero[1], Malachy Young[1] and Egan Brockhoff[2]

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Swine dysentery (SD) is a severe muco-hemorrhagic colitis that mainly affects pigs in the grower/finisher phase. The causative agents of SD are two species of *Brachyspira* that colonizes the large intestine, *B. hyodysenteriae* and *B. hampsonii*. The increase in costs associated with raising pigs with SD is usually related with slower and uneven growth, higher death loss, reduced feed efficiency and higher in-feed and in-water medications costs. In the present case study, 4,111 crossbred pigs (initial body weight = 35 kg) housed in four straw-based commercial grower-finisher barns were used to quantify the cost of SD. Pigs in two barns were fed non-medicated feed whereas pigs in the other two barns were fed medicated feed throughout the grower-finisher period. Results from the present case study indicate a biological and economic performance difference to feed medication. The economic benefit to feed medication in a flow positive for *Brachyspira* in this case study was estimated to be approximately $11/pig.

Introduction

Swine dysentery (SD) is an enteric disease of economic importance for pork producers. Swine dysentery is clinically manifested by mucoid or bloody scours, reduced growth rate and increased feed conversion, therefore causing major economic losses during the grower-finisher period. The higher mortality may also be observed in pigs with SD and the associated cost for the treatment of this disease with antibiotics also increases the economic losses. If production losses, feed and water medications, mortality and non-marketable pigs are considered, the cost of classic SD is likely in the range from $9.5 to 17.5/pig. Therefore, having strategies to reduce the production and economic losses of a farm are economically important. *Brachyspira* species are very susceptible to tiamulin but less susceptible to gentamycin and lincomycin (Duhamel et al., 1998). Tylosin used to be the drug of choice for treatment of SD but most isolates are now resistant to this drug (Duncanson, 2013). *Brachyspira hyodysentariae* appears to become resistant to antibiotics over time and producers should therefore use them judiciously.

The present case study was designed to quantify the cost of novel emerging *Brachyspira* species in a commercial straw-based grower-finisher barn with multisite production and identify a cost effective medication strategy to control *Brachyspira*.

The case study

The case study was conducted at a commercial grow-finish barn between May and October, 2014. This facility has four straw-based barns with each barn joined by a hallway. These four barns had previously tested positive for the novel species "*Brachyspira hampsonii*" clades I and II (strains 30599 and 30446 respectively). Each barn has wet/dry feeders (Crystal Springs™) at the center of the pen divider, serving two pens with one feed line. Each pen contained approximately 250 pigs. Feeders sit on a raised concrete area while pen is totally opened. Straw is added prior to pig arrival and biweekly thereafter throughout the grow-finish period.

A total of 4111 crossbred pigs (initial body weight = 35 kg) originating from a pig flow PRRS and mycoplasma negative and vaccinated for circovirus at weaning, erysipelas, ileitis,

CONTINUED ON PAGE 50

and blackleg in the nursery were conveniently distributed in the four barns. Pigs in barns one and four were fed *ad libitum* a control (non-medicated) diet whereas pigs in barns two and three were fed the same diet but medicated with tiamulin (Denagard, Novartis Animal Health Canada Inc.) at 90, 60 and 40 ppm to control SD during Grower 1 (35-50 kg BW), Grower 2 (50-70 kg BW) and Grower 3 (70-95 kg BW), respectively. Lincomycin (Lincomix, Zoetis Canada Inc.) at 44 ppm was used in the medicated diets during the Finisher phase (95 kg BW to market weight). Pigs were weighed prior to entry and at slaughter to calculate average daily gain (ADG). Total feed added per barn was recorded to calculate average daily feed intake (ADFI), total feed cost per pig and per kg of gain. The ADFI and ADG were used to calculate feed conversion (feed:gain; F:G). Dead and euthanized pigs were also recorded and accounted for the growth performance calculations.

Pigs were marketed at ~128 kg live weight and carcass data were captured by treatment on all pigs marketed which were identified with a tattoo number. Carcass weight, backfat and loin depth (mm) were electronically measured, collected and recorded to see if there was any effect of the medication on carcass characteristics.

The health status of the pigs and the availability of feed and water in each pen was monitored daily. During daily health checks, a fecal sample from pigs with observed loose stool was taken using a disposable spoon. Fecal samples were frozen at -20 °C until their analysis in the laboratory for *Brachyspira* spp. presence. Pigs appearing ill were treated and if deemed necessary removed from the study and reallocated to recovery pens.

Results

Overall, pigs fed the non-medicated or medicated feed consumed the same amount of feed during the study (2.65 vs. 2.62 kg/d, respectively; Figure 1). However, pigs fed the non-medicated feed gained 35 g/d less BW (~4% lower ADG; 776 vs 811 g/d) than pigs fed the medicated feed. The overall feed conversion (F:G) was approximately five per cent higher in pigs fed non-medicated feed than in pigs fed medicated feed (3.41 vs 3.23, respectively).

Clinical signs of SD such as mucoid and/or bloody diarrhea that are usually correlated to performance losses, were scarcely detected likely due to the conditions used in the present study.

Table 1. Differences in BW, days to market and mortality in pigs fed non-medicated vs. medicated feed.

	Non-medicated	Medicated
Initial BW, kg	36.1	34.6
Final BW, kg	127.7	129.1
Total days to reach market weight	110.6	105.8
Cost of finishing space/pig[1]	$18.83	$18.00
Mortality		
Number of pigs used in the study	2017	2094
Number of pigs dead/destroyed	98	52
Average weight when pigs were dead/ destroyed, kg	58	63
Mortality rate, %	4.86	2.48
Cost of mortality/pig[2]	$6.03	$3.29
Feed costs		
Feed cost, $/tonne feed	234.1	241.0
Feed cost, $/pig	72.12	74.62
Feed cost, $/kg weight gain	0.798	0.779
Feed cost per pig assuming 100 kg of BW gain	$79.8	$77.9

[1] Calculated assuming that cost of finishing space for 105.6 days is $18. The 4.8 extra days that pigs fed non-medicated feed was translated into an extra cost of $0.83 [$18.0 + (105.6/$18) * 4.8].

[2] Calculated as follows: [(#Pigs used * mortality rate %) * (weight when pigs were dead – initial BW) * (79/100) * $2 * (108.5/100) + (#pigs dead/destroyed * $80)]/(#pigs used - #pigs dead/destroyed), where 79 is the assumed dressing percentage, $2 is the price of kg dressed pig, 108.5 is the assumed index, and $80 is the price per pig if sold at the beginning of the study.

The fact that barns were straw-based increased the likelihood of pigs to become exposed and infected with *Brachyspira* by fecal oral intake, but these conditions also decreased the possibility of observing clinical signs of SD in feces such as loose, mucoid or bloody stool that can be hidden in the straw. The use of large pens also made it difficult to see loose feces after a few minutes. Laboratory results confirmed that *B. hampsonii* strain clade II (strain 30446) was presented in the herd as this was identified by analysis of a fecal sample by PCR.

Pigs fed the non-medicated feed required ~4.8 more days to reach market weight than pigs fed the medicated feed (110.6 vs. 105.8 days, respectively; Table 1). The extra cost for finishing space of pigs fed the non-medicated feed was calculated to be $0.83 per pig.

Mortality rate was double in pigs fed non-medicated feed than in pigs fed the medicated feed (4.86 vs. 2.48%, respectively). Considering the number of pigs entered and their cost, number of pigs dead/euthanized, initial BW and average BW of dead/euthanized pigs, it is estimated that the cost of mortality per pig was $6.03 for pigs fed non-medicated feed, but only $3.29 for pigs fed medicated feed, so $2.74 difference per pig (Table 1). It is important to mention that this farm has had challenges with *Streptococcus suis* serotype 2 in the past, so *S. suis* serotype 2 could have contributed to the differences in mortality as well.

Figure 1. Overall growth performance of pigs fed non-medicated vs. medicated feed

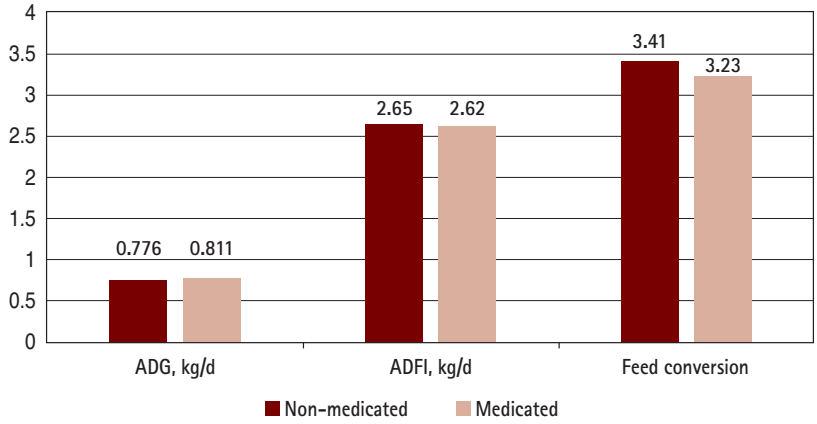
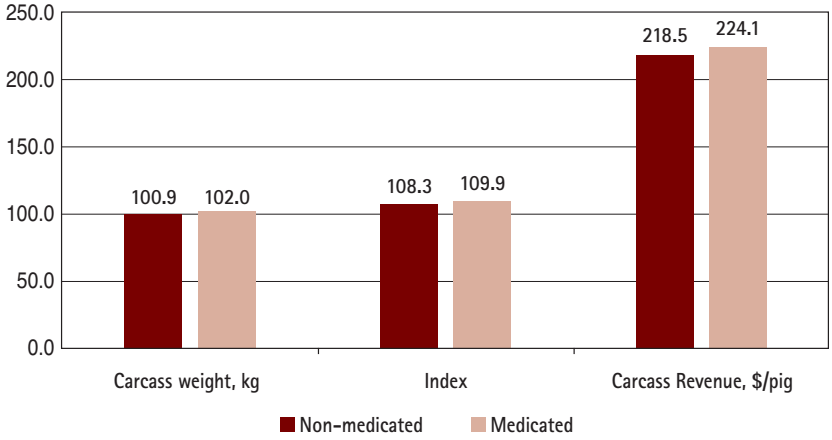


Figure 2. Carcass weight, index and carcass revenue in pigs fed non-medicated vs. medicated feed. Carcass revenue was calculated by multiplying carcass weight by index and price ($2) of kg dressed pig.



Because the medicated feed was more expensive than non-medicated feed, the feed cost per pig was less for pigs fed non-medicated feed than for pigs fed medicated feed ($72.1 vs. $74.6, respectively). However, when considering total kilograms of weight gain during the grower-finisher period, feed cost per kg of gain was $0.019 higher for pigs fed the non-medicated feed than for pigs fed the medicated feed ($0.798 vs. $0.779, respectively). Feed costs per pig are therefore $1.90 more expensive for pigs fed non-medicated feed than for pigs fed medicated feed if 100-kg of weight gain per pig is considered during the grower-finisher period (25 to 125 kg).

Pigs fed the non-medicated feed had one kilogram lower carcass weight than pigs fed the medicated feed (100.9

CONTINUED ON PAGE 52

vs. 101.9 kg respectively; Figure 2). Based on pigs that hit the desired core of dressed carcass weight and estimated percentage yield in the grading grid, pigs fed the non-medicated feed had also a lower index than pigs fed the medicated feed (108.3 vs. 109.9 respectively). The higher carcass weight and the higher index that resulted from feeding medicated feed to pigs resulted in higher carcass revenue for the pork producer. The carcass revenue per pig was $218.5 for pigs fed non-medicated feed but $224.1 for pigs fed medicated feed. These calculations considering an average price (August-October 2014) of $2 per kilogram of dressed carcass.

Antibiotics per se can have growth-promoting effects by controlling clinical and subclinical infections and reduce the microbial use of nutrients (Lawrence and Fowler, 2002). However, it seems to be that the growth promoting effects of antibiotics are only observed during the nursery phase but not during the grower-finisher period (Dritzz et al., 2002; Holt et al., 2011). .Pigs used in this case study were coming from a flow PRRS and mycoplasma negative and vaccinated for circovirus, erysipelas, ileitis, and blackleg, so the negative biological impact observed in the present study was likely related to the presence of *Brachyspira*. According to the calculations, it was estimated that the return to feed medication in this grower-finisher case study in a pig flow positive for SD was approximately $11/pig which is coming from $0.83 of extra costs for finishing space, $2.74 for higher mortality, $5.61 difference in carcass revenue and $1.90 difference in feed cost per pig.

Conclusion

Although the clinical signs of SD were sparsely observed, the negative biological impact in mortality and suboptimal performance that pigs challenged with *Brachyspira* usually present was shown in the current study. The medication of feed with Denagard during the grower feeding phases and Lincomix during the finisher phase represented a cost effective medication strategy to reduce mortality, number of days to market and feed cost per kilogram of gain, and increasing ADG during the grower-finisher pigs and carcass revenue per pig. The economic benefit to feed medication in a flow positive for *Brachyspira* in this case study was estimated to be approximately $11/pig.

Acknowledgments

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Phytase improves phosphorus digestibility in lactating sows

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Take Home Message

Around two-thirds of the phosphorus (P) present in diets for lactating sows is not digested, because sows do not produce sufficient phytase themselves to detach P from its complex phytate form. We tested the efficacy of a novel phytase on nutrient digestibility in lactating sows. Three diets were prepared: 1) adequate P, 2) low P, and 3) low P + 500 units of phytase/kg diet. Feeding the low P diets supplemented with phytase increased digestibility of P compared to low P diet and did not affect sow and piglet performance. In conclusion, the addition of microbial phytase to sow diets increased P digestibility by 12%-units, reduced feed cost, and reduced P excretion. Reduced P excretion reduces the environmental footprint of swine production.

Introduction

Phosphorus (P) is an essential nutrient required by pigs for important physiological functions and must be supplied in the diet. Phosphorus is the third most expensive nutrient, after energy and protein, in swine feeding. Around two-thirds of P in cereal grains, grain by-products, and oilseed meals is in the form of a complex called phytate. Pigs lack sufficient endogenous phytase to breakdown phytate P and thus large amounts of unutilized P are excreted in feces. Manure containing high concentration of P may pollute surface and groundwater if not managed properly, and increases the environmental footprint of pig production.

Dietary phytase increased digestibility of P and Ca in piglets and grower-finisher pigs. However, data on efficacy of phytase in lactating sows are limited. Thus, effects of adding a 6-phytase on apparent total tract digestibility of P, calcium, crude protein, and energy and the performance of lactating sows were assessed.

The trial

A trial was conducted to determine the impact of feeding diets supplemented with a novel bacterial 6-phytase

(Ronozyme® HiPhos; DSM Nutritional Products, Basel, Switzerland). The trial was conducted at Swine Research and Technology Centre, University of Alberta, Edmonton, Canada.

In total, 45 gestating sows (Large White x Landrace; Hypor, Regina, Saskatchewan, Canada) were housed individually and fed three experimental diets for 15 observations per diet. Major feedstuffs in the lactation diets (Table 1) were wheat, soybean meal, field pea, and corn DDGS. Three diets were prepared: 1) Adequate P, 0.52 per

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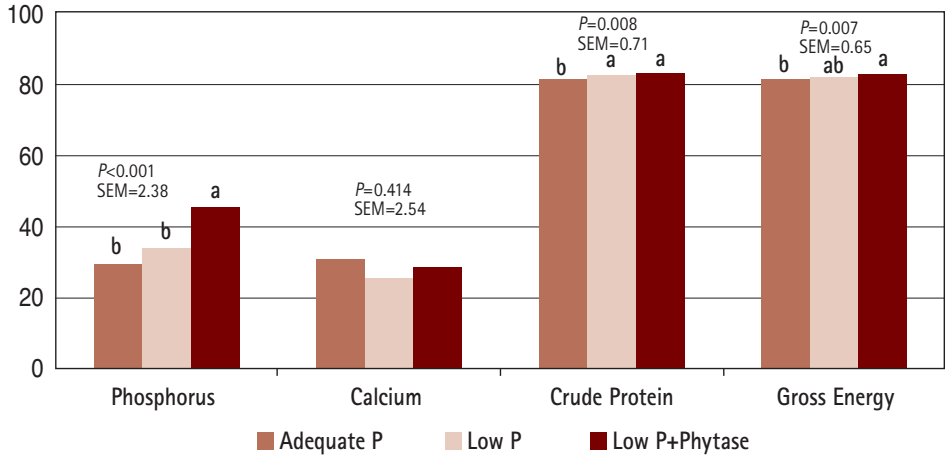
Figure 1. Effects of phytase supplementation on apparent total tract digestibility (%) in lactating sows



cent available P containing 1.54 per cent dicalcium phosphate as inorganic P source; 2) Low P as negative control containing 0.20 per cent available P without inorganic P; and 3) Low P plus 500 U of phytase/kg diet. The Adequate P and Low P diets were formulated to identical NE (2.425 Mcal/kg) and SID Lys (1.07 per cent). Each diet was fed to 15 randomly-selected sows for 21 days (from 5 days prior to farrowing to 15 days post farrowing).

Pregnant sows were moved to farrowing pens by 5 days prior to farrowing. Sows were fed experimental diets for a minimum adaptation of five days prior to farrowing. Feces were collected from each sow on day 15 of post farrowing. Sows were weighed before farrowing (day –5) and on day one and 15 post farrowing.

Results and Discussion

Analyzed total P content was 0.86, 0.59, and 0.59 per cent (as-fed) for the Adequate P, Low P, and Low P + Phytase diets, respectively. At d 15 post farrowing, apparent total tract digestibility of P and calcium did not differ between the Adequate P and Low P diets, but crude protein digestibility was 1.4 per cent-units higher ($P < 0.05$) for the Low P than the Adequate P diet (Figure 1). Supplementation of phytase to the

Table 1. Nutrient composition (as-fed basis) of experimental diets

Ingredients, per cent	Adequate P	Low P	Low P + Phytase
Wheat	51.6	53.5	53.5
Soybean meal	13.9	13.3	13.3
Field pea	10.0	10.0	10.0
Corn DDGS	10.0	10.0	10.0
Canola meal	6.50	6.50	6.50
Fat	2.94	2.50	2.50
Limestone	1.86	2.51	2.51
Dicalcium phosphate	1.54	-	-
Others [1]	1.01	1.01	1.01
L-Lysine•HCL	0.40	0.41	0.41
L-Threonine	0.12	0.13	0.13
Methionine hydroxy analogue	0.11	0.11	0.11
Phytase, per cent	-	-	0.005
Analyzed composition			
Dry matter, per cent	90.1	90.2	89.8
Crude protein, per cent	23.3	23.2	23.2
Gross energy, Mcal/kg	4.05	4.06	4.04
Ash, per cent	9.05	7.54	7.54
Calcium, per cent	1.29	1.17	1.16
Total phosphorus, per cent	0.86	0.59	0.59
Digestible phosphorus, per cent	0.26	0.20	0.27
Cost, $/MT	307.3	294.0	294.0 + phytase

[1]Others per cent: salt, 0.44; vitamin and mineral premix, 0.25; ethoxyquin, 0.02; and marker (TiO_2), 0.30.

Low P diet increased ($P < 0.05$) the digestibility of P by 12 per cent-units at d 15 post farrowing compared to Low P. Phytase did not affect ($P > 0.05$) the digestibility of calcium, crude protein and gross energy.

Feeding the three test diets did not affect ($P > 0.05$) feed intake, body weight changes of sows during the lactation, and litter weight gain of piglets. Sows fed the phytase supplemented diet tended to eat 15 per cent less ($P = 0.067$), all other variables were similar.

Phosphorus is a key component in the proper development and mineralization of bones. Phytate is the major P storage compound of plant feedstuffs used in swine diets. Wheat contains 0.32 per cent phytate, which can form complexes with other nutrients thereby reducing their availability. Wheat also has intrinsic phytase activity, but steam pelleting of feed will likely reduce or eliminate intrinsic phytase activity, because wheat phytase is heat-labile. In the present study, supplementation of phytase to a low available P, wheat-based diet increased the digestibility of P, thereby confirming the liberation of P from phytate by phytase. The 35 per cent increase in P digestibility could be because new generation bacterial phytases resist proteolytic digestion more than fungal phytases and are more active in hydrolyzing phytate; thus liberating more P from phytate present in plant-based feedstuffs.

While P digestibility was much higher for Low P diet + phytase than Adequate P, the digestible P content was similar for the two diets. The rest of the digestibility and performance variables were similar; thus, the economic value of phytase is equivalent to the price difference between the Low P diet + phytase and Adequate P diet: $13.30 per MT of diet. The cost difference is caused by three reasons. First, the source of digestible P switched from partially being provided by inorganic P in dicalcium phosphate to being solely provided by organic P in feedstuffs. Second, the removal of dicalcium phosphate forced more limestone into the diet to maintain calcium balance (much cheaper than dicalcium phosphate). Third, the remainder of space created by removal of dicalcium phosphate could be filled with more wheat and less soybean meal and fat in the diet. Phytase provided thus more value that strictly by improving P digestibility: the value of extra digestible P was $3.00 per MT of feed with a price of $660/MT for dicalcium phosphate.

In conclusion, supplementation of bacterial 6-phytase increased P digestibility and reduced feed cost.

Implications

Using phytase supplementation to sows, feed cost during lactation can be reduced. Phytase increases P digestibility, with the potential to reduce P excretion of lactating sows and thereby reduce the environmental footprint of swine production.

Acknowledgments

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Feeding value of cull lentils for growing swine

L. Eastwood, D. A. Gillis, M. R. Deibert and A. D. Beaulieu

Introduction

Saskatchewan is the world's leading exporter of lentils, and the second largest producer (Government of Saskatchewan, 2014). In 2014, approximately 1.64 million tonnes of lentils were produced in Saskatchewan, which was 87 per cent of the previous year's production (Stats Canada, Sept 2014). The production of lentils in Saskatchewan has increased by more than 100 per cent since 2008 (Stats Canada, 2014), and the marketing and processing industry accompanying this increased production provides valuable jobs throughout the province.

Lentils, primarily grown for export (mainly to India), are often downgraded due to chipping, wrinkling or staining, which may be a result of heavy rains late in the growing season, which occurred in 2014. As of November, it was estimated that almost 40 per cent of the 2014 Saskatchewan lentil crop, or 0.66 million tonnes, will be graded as sample salvage quality. On average, if just 10 per cent of lentil production in Canada is considered unacceptable for export, 0.19 million tonnes would be available for feed each year. If included at 10 per cent of the diet, this would feed more than 4.5 million pigs from weaning to market.

However, information on the feeding value of lentils, regardless of quality, is sparse. The current study was designed to characterize the nutritive composition, including digestibility and energy concentration, of feed-grade (cull) lentils for growing pigs. We conducted two studies. The first study determined the amount and digestibility of energy and amino acids in two samples of lentils. In the second study we used these values to formulate diets for growing and finishing pigs. We assume that if the pigs grow as expected, then the nutrient values determined in the first experiment are correct for that category of pig.

Table 1: Ingredient composition of experimental diets for growth validation trial

Ingredient, per cent as fed	Grower[1]		Finisher[1]	
	0 per cent	30 per cent	0 per cent	30 per cent
Feed lentils (grade 3)	0.00	30.00	0.00	30.00
Wheat	71.15	42.13	15.20	45.60
Barley	0.00	4.53	61.02	9.78
Soybean meal	25.00	17.90	19.00	9.60
Canola oil	1.40	3.00	3.00	3.00
Mono-dicalcium P	0.80	0.93	0.43	0.53
Limestone	0.93	0.83	0.70	0.83
Salt	0.40	0.40	0.40	0.40
Mineral and vitamin premix	0.25	0.25	0.25	0.25
L-Lysine	0.07	-	-	-
DL-methionine	-	0.03	-	-

[1]Diets formulated with lentils included at 10 and 20 per cent were intermediate.

Experimental. Materials and Methods

Experiment 1: Nutrient Digestibility. Ten barrows (initial weight 35 to 40 kg), were surgically fitted with T-cannulas at the terminal ileum. Two lentil samples (feed grade two (red) and three (feed)) were incorporated at two inclusion levels (15 and 30 per cent) into a wheat/barley-based control diet. The five treatment diets (two lentil samples at two inclusion levels, plus 1 control diet were randomly assigned to two pigs in each of three replicates, providing six pigs per treatment overall. Each replicate lasted nine days and consisted of four days of dietary adaptation, followed by three days of faecal grab-sampling and two days of digesta collection.

Experiment 2: Growth Validation. In this experiment, 200 growing (initial weight, 35 kg) and 200 finishing (initial weight, 90 kg) pigs received a diet with feed lentils

CONTINUED ON PAGE 60

Table 2: Chemical and nutritive composition of red and feed lentils (as fed)

	Red Lentils	Feed Lentils	NRC 2012 (n=1)
Moisture, per cent	11.5	11.0	10.0
Dry matter, per cent	88.5	89.0	90.0
Crude protein,	21.8	23.3	26.0
Crude fibre, per cent	4.0	3.2	ND[2]
Fat, per cent	0.6	1.1	1,3
Ash, per cent	2.2	2.6	2.8
Starch, per cent	40.7	37.5	4.2
Acid detergent fibre, per cent	5.7	5.5	3.0
Gross energy, kcal/kg	3458	3516	4483
Digestible energy, kcal/kg[1]	2895	2990	3540
Net energy, kcal/kg[1]	2021	2086	2437

[1]Values calculated from experimental determination of digestibility.
[2]Not determined.

(grade 3) included at 0, 10, 20 or 30 per cent. All diets were wheat and barley based, and formulated to be isocaloric and isonitrogenous, based on the results of the digestibility experiment (Table 1) and met all the nutrient requirements of growing and finishing pigs (NRC, 2012). Growth rate, feed intake and feed efficiency were measured throughout the trial, which lasted for four weeks.

Results

The chemical composition and determined DE and NE values are shown in Table 2. The crude protein content was comparable between these two samples; however the red lentils sample contained 25 per cent more crude fibre and 45 per cent less total fat than the sample of feed lentils. Values from the NRC (2012) are provided for reference. The lack of data on lentils is evident as the NRC (2012) bases their data on a single sample. This sample was lower in fibre, higher in fat, protein and energy relative to those tested in the current trial. The calculated DE and NE content of the feed lentils was slightly higher than the red lentils, while both are lower than the sample described in the NRC (2012), a reflection of the lower fibre content of that sample.

Table 3 shows the measured amino acid content of the red and feed lentil samples. This table also shows the amount of apparently digestible amino acids based on digestibility coefficients obtained in the first experiment. Ileal amino acid digestibility of the red lentils is 60 to 70 per cent of the feed lentils, which is most likely due to the high fibre content of this sample of red lentils.

The results of the validation experiment are shown in Table 4. Overall, we observed no adverse effects of including up to 30

Table 3: Amino acid composition of Red and Feed lentils (g AA/100 g, all as fed basis)

	Red Lentils[1]		Feed Lentils[2]	
	Total	AID[3]	Total	AID[3]
Dry Matter	88.5		89.0	
Aspartic Acid	2.74	0.85	2.61	1.65
Threonine	0.85	0.35	0.80	0.61
Serine	1.05	0.56	0.93	0.77
Glutamic acid	3.68	1.98	3.55	2.54
Proline	0.87	0.39	0.86	0.56
Glycine	0.97	0.27	0.94	0.42
Alanine	0.99	0.28	0.99	0.64
Cysteine	0.23	0.06	0.22	0.15
Valine	1.14	0.28	1.14	0.52
Methionine	0.19	0.10	0.18	0.14
Isoleucine	0.98	0.26	0.99	0.46
Leucine	1.74	0.60	1.68	1.06
Tyrosine	0.70	0.23	0.67	0.42
Phenylalanine	1.15	0.31	1.14	0.68
Lysine	1.65	0.52	1.61	1.01
Histidine	0.65	0.29	0.61	0.40
Arginine	1.83	0.90	1.88	1.34
Tryptophan	0.14	0.05	0.15	0.05

1Red lentils were classed as feed grade 2
2Feed lentils were classed as feed grade 3
3AID = apparent ileal digestible

per cent feed lentils (feed grade 3) into the diets of growing or finishing pigs, when the diets were balanced properly to meet the nutrient requirements of the animals. In fact, we saw an increase in ADG in finishing pigs as dietary inclusion of feed lentils increased. As expected, we did observe gender differences, with barrows having greater ADG and ADFI, but gilts and barrows responded similarly to the inclusion of lentils in the diet.

Discussion

In these trials, the maximum inclusion level was 30 per cent. We did observe an interaction between digestibility and inclusion level in the first trial. Amino acid digestibility was decreased at the 30 per cent level relative to 15 per cent inclusion. For this reason, we would caution the inclusion of cull lentils beyond 30 per cent of the diet, but with properly formulated diets, 30 per cent can be used without adversely affecting performance.

The difference between the red and feed lentils samples is interesting. Because we only had one sample of each, we can't conclude from this study if this really is a difference between these lentil varieties, or just a sample difference. However, it is apparent, that fibre analysis will assist nutritionists with an estimation of the energy content.

In a previous study (Landero et al., 2012), human grade green lentils were included into the diets of starter pigs (9 to 20 kg). They observed that inclusion levels beyond 22.5 per cent had negative effects on growth, without impacting feed intake. In our study pigs were older and appear to have been able to tolerate larger amounts of lentils without impacting performance. The lentils used in our study were feed grade (cull) lentils, not human food grade lentils. The lentils, however, are down-graded for appearance, which does not necessarily impact nutritive value.

The improved growth of the finishing pigs as lentil inclusion into their diets increased may indicate that the nutritive value of the lentil sample was under-estimated for this class of pig. The digestibility coefficients were obtained in younger pigs, and it has been shown in other studies that these values underestimate digestibility in older pigs.

The Bottom Line:

Results from this project provide the hog industry with information needed to properly formulate diets using feed grade lentils. The full nutritive value, including DE, NE, and amino acid digestibility, of the samples used in this study

CONTINUED ON PAGE 62

allows producers to include cull lentils into rations with confidence. As evidenced in the validation study, when diets were formulated using the nutritive value information, and were balanced to meet the requirements of the age of the pig, no adverse effects were observed on performance.

Acknowledgments:

The authors would like to acknowledge project funding provided by the Saskatchewan Ministry of Agriculture and the Canada-Saskatchewan Growing Forward bi-lateral agreement. The authors would also like to acknowledge the strategic program funding provided to Prairie Swine Centre by the Saskatchewan Pork Development Board, Alberta Pork, Ontario Pork, the Manitoba Pork Council and the Saskatchewan Agriculture Development Fund. ■

Table 4: Growth (ADG), feed intake (ADFI) and feed efficiency of growing and finishing pigs fed diets with graded levels of feed lentils (feed grade 3) for a 4 week trial

	Treatment					P Values		
	0 per cent	10 per cent	20 per cent	30 per cent	SEM	Diet	Linear	Quadratic
	Growing pigs							
Initial BW, kg	41.30	41.00	40.62	41.11	0.213			
ADG, kg/d	1.04	1.03	1.03	1.05	0.014	0.60	0.41	0.28
ADFI, kg/g	2.05	2.03	2.03	2.06	0.041	0.90	0.85	0.47
Gain:Feed,	0.51	0.51	0.51	0.51	0.011	0.99	0.92	0.93
Feed: Gain	1.96	1.96	1.96	1.96				
	Finishing pigs							
Initial BW, kg	91.17	89.99	89.52	90.98	0.550			
ADG, kg/d	1.02	1.02	1.03	1.07	0.017	0.10	0.02	0.30
ADFI, kg/d	2.83	2.82	2.84	2.92	0.069	0.22	0.09	0.22
Gain:Feed	0.36	0.36	0.37	0.37	0.007	0.80	0.33	0.96
Feed:Gain	2.78	2.78	2.70	2.70				

YOUR DAILY BACON

BY BUDDY SIMMONS

Here we are again! Time sure does seem to fly between Your Daily Bacon installments, but not quite as fast as bacon memes pop up on the Internet, of course.

This month's commentary will be a little more abbreviated, as there is a bit of exciting news from yours truly that will take up some space normally dedicated to reporting on the pop culture of pigs. But we'll add a couple extra memes to compensate for that! As far as that exciting news goes, well, first we'll have to share a little "secret." Your roving meme reporter has his base of operations a bit more southerly than you may have guessed, and this West Virginian felt that the time had come to put his money where the bacon is, so to speak. So to reach that end, I'm all too happy to report that by the time you read this, I will have visited Manitoba, Saskatchewan AND Alberta, graciously hosted by none other than your editor herself, Sheri Monk!

It is a sure thing that I will have been enlightened with knowledge on not only the pork industry, but the beef and wider agricultural industry as well, and will have seen and experienced many of the great things Canada has to offer. I'm hoping I will fit right in, despite allegations made by Sheri that I carry a rather thick accent. That is patently false, as I noticed SHE was the one with an accent when she visited here last year.

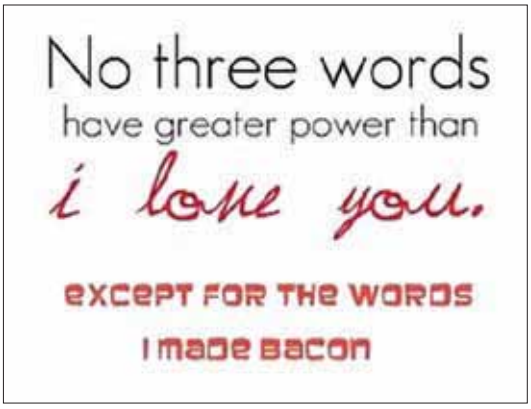
One big advantage to come from this adventure will be that your intrepid reporter will have visited the one place in the

CONTINUED ON PAGE 64

You have to start the day right.

world where ALL bacon is "Canadian Bacon"! Where I live, the closest I usually comes to it is seeing it on the menu of one of the local pizza establishments. Naturally, I will be very interested in seeing a lot more than that as I know that Canada has a lot of things going for it, including agricultural and scenic wonders, and the cuisine as well. I even have a bacon recipe that I found while searching for memes and might offer to work in the kitchen with Sheri to make the dish.

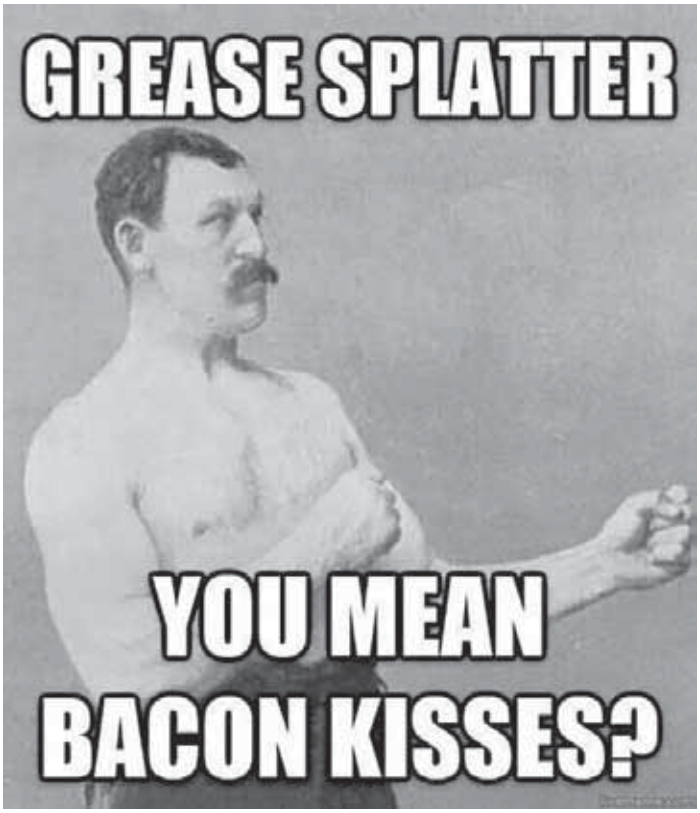
In the meantime, you can entertain yourselves by eyeballing this edition's selection of memes. ■



And maybe "Want More Bacon?"

And that's how you know, folks!

"Your Daily Bacon": The Book



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