

Better pork

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SOW LAMENESS

Prevention Tips

6

BUILDING MARKETS

Dedicated Producer

20

CPE PLATFORM

Program Changes

14

REPRODUCTIVE TOOLS

Best Practices

26

FEED COSTS

DISEASE OUTBREAKS

SOW GROUPINGS



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DEAR READER: LETTERS FROM A FAMILY FARM

ONGOING EVOLUTION IN AG

In the ag industry, our technology and farming practices can evolve rapidly.

Sometimes, we alter our practices in response to new or revised regulations. I think, for example, of the Ontario government's rules surrounding the use of neonics-treated seed. On my family farm – as on others across the province – we've had to scout more acres, complete more paperwork, and change our seed treatment programs.

More commonly, perhaps, we shift our practices to improve our production, strengthen our margins and decrease our impacts on the environment.

Recently, for example, I registered my family farm with a field data management platform. My family and I have the fall and winter to become familiar with it. (**Dad** and my sister **Jessica** have been very kind in responding to my enthusiastic text messages as I learn another tidbit about the new software.)

In the spring, we can review the rainfall reports to shape our planting decisions and reference the vegetation maps to pinpoint areas to scout. I hope we can use this platform to manage our crops more efficiently.

Regardless if making changes based on internal initiatives or external pressures, I believe training and education are the keys to success.

And we are fortunate in our industry to have multiple resources. We can turn to friends and neighbours with experience. We can consult industry experts like veterinarians, nutritionists and agronomists. We can attend conferences or seminars.

I also hope you find *Better Pork* to be a valuable resource in shedding light on important and timely issues.

Producers and other industry representatives, for example, continue to prepare for the transition to group housing for gilts and sows. This month, staff writer **Kate Ayers** explores an important consideration in this process: preventing and addressing causes of lameness. She highlights management practices producers should review now to ensure a smooth switch to the new housing system.

In our second feature, writer **Kaitlynn Anderson** provides an overview of the **Canadian Pork Excellence (CPE)** platform. Launching in 2019, the platform includes the **PigTRACE**, **PigSAFE** and **PigCARE** programs. Producers can use CPE to document their commitment to animal welfare.

As always, I encourage you to be in touch to discuss this edition of *Better Pork*, or your thoughts or concerns about our industry. **BP**

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Beck family photo

"We like to believe we look after our animals in a humane and caring way. Nobody is perfect, but we do the best job that we can," says Terry Beck, a pork producer in North Kingston, N.S. See related story on page 20.

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LESSONS LEARNED ABOUT SWINE HERD HEALTH IN THE U.S.

Despite producer fears, changes to antibiotic use regulations in the U.S. have had limited impacts on animal health, the **National Pork Board** said.

In January 2017, the U.S. discontinued the use of medically important antibiotics for livestock growth promotion and implemented increased veterinary oversight for therapeutic uses of antibiotics, a June *Farmscape* article said.

These changes are like the Canadian regulatory changes coming in December, which require producers to obtain a veterinarian prescription for medically important antibiotics.

A significant factor enabling America's continued optimal herd health is "forward preparation," said **Lisa Becton**, a veterinarian with the National Pork Board.

Many industry groups "got together and made sure that producers knew what the changes were and when" they were coming, she said.

This collaboration "really helped because ... a lot of people started to strategize about some of the herd health challenges they had."

Another important component to maintaining animal health is having an established relationship with your veterinarian, she stated.

And farmers are committed to producing quality pork in a safe and responsible manner.

"Producers are adaptable and ... I think farmers come together to approach herd health in a multi-pronged manner," Becton said. **BP**

PIGGING OUT ON PORK FOR HEART HEALTH

Individuals could improve their health by consuming unprocessed lean red meat – including pork, a recent **Purdue University** study revealed.

Initially, participants in the study followed a Mediterranean diet for five weeks. During this time, they consumed three ounces of lean red meat either every day or twice per week.

This diet "emphasizes fruits, vegetables and low-fat dairy products and is designed to lower blood pressure," **Adria Huseth** with the **National Pork Board** said. This organization provided the researchers with funding for the study.

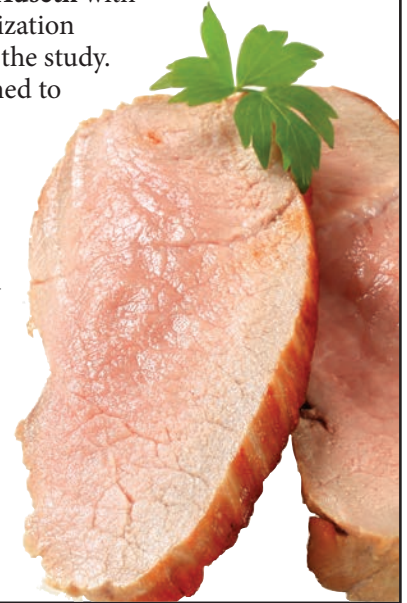
During the second phase, people returned to their regular eating patterns.

In the final five-week segment, participants resumed a Mediterranean diet.

Individuals who consumed up to 18 ounces of lean and unprocessed red meat per week while following this diet lowered their blood pressure and cholesterol levels, Huseth said.

Overweight or moderately obese adults "may improve multiple cardiometabolic disease risk factors by adopting a Mediterranean-style eating pattern," she added.

The study's findings could help the industry promote pork and its benefits. **BP**



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MOVING AHEAD FROM PED OUTBREAKS

From its arrival in Canada in 2014 to its resurgence in Manitoba last year, **Porcine Epidemic Diarrhea** (PED) is nothing short of evil, which makes the primary lesson learned by industry rather fitting: the devil is in the details.

"Biosecurity remains at the core of preventing disease introduction, but none of us do biosecurity as well as we

think we do," **Dr. Egan Brockhoff**, a partner at **Prairie Swine Health Services** in Red Deer, Alta., said to *Better Pork*.

He urges producers to train their staff on proper biosecurity practices and to review them frequently.

Another central lesson is that communication – with industry, neighbours and government – is critical.

Forge close relationships with

your veterinarians, ensuring they know everything about your pig flows.

You should also understand your transport pathways, and audit your transporters and truck wash

protocols frequently.

If PED still strikes, do not try to tackle the outbreak alone.

"Dealing with this disease is going to be stressful for you, your team and your family, so don't be afraid to ask for help," he said. **BP**



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TAKING STEPS TO AVOID SOW INJURIES

Don't let sow lameness affect
your operation's profitability when
you move sows to group housing.

by KATE AYERS

Across North America and Europe, lameness is one of the top causes of culling in sow herds. Lameness accounts for between 8 and 15 per cent of culled sows, says Dr. Laurie Connor, a professor in the department of animal science at the University of Manitoba.

Lameness can hurt animal welfare and the profitability of swine operations. It affects herd reproductive performance by decreasing the number of piglets per sow per year while increasing a farmer's workload and treatment costs, Connor adds.

And upcoming regulatory changes in the Canadian swine industry may affect the prevalence of sow lameness in herds, some industry leaders say.

As of July 2014, Canada's Code of Practice for the Care and Handling of Pigs requires that producers renovate existing buildings or build new barns to accommodate sows in groups during gestation. The second phase requires any existing barns that operate with stalls to provide greater freedom of movement by July 1, 2024, the National Sow Housing Conversion Project website says.

"When looking at group housing, we must examine all factors such as what lameness problems are present before group housing is implemented," says Dr. Jennifer Brown, a research scientist at the Prairie Swine Centre in Saskatoon, Sask.

"If poor conformation and hoof lesions are present, producers may need to change genetics or diet or implement a vaccine treatment before making the transition."

Causes of lameness

Lameness is any abnormality of gait or "failure to move in a regular and sound manner on all four feet," says Connor.

It is a complex issue, and several causes often exist.

Common contributing factors include

SOWLAMENESS

- genetics
- gilt diet, which affects skeletal integrity
- infections (e.g., brucellosis, clostridial diseases, salmonellosis, Mycoplasma hyosynoviae)
- non-infectious diseases (e.g., osteochondrosis, arthritis)
- flooring
- fighting
- housing management

The first step is to “assess lameness (i.e., when, where and how frequently it occurs) to identify the chief issues affecting sows and appropriate prevention measures,” says Brown.

Treatment

Methods for treating sow lameness largely depend upon the causes and contributing factors.

First, sows recovering from lesions or lameness should be separated from the group and placed in pens with compressible flooring.

“Pain control medications and use of rubber mats in comfort pens are more recent treatment options and can be effective for treating mild lameness,” says Brown.

While producers may be unable to treat lameness caused by a pig’s conformation, producers and farm workers can trim hooves or dewclaws that are too long, affect gait or get caught in flooring gaps, Connor says.

However, Dr. Kenneth Stalder, a



Laurie Connor photo

Those working directly with the sows need to “have strong stockmanship skills, observation skills, the knowledge of what to do after they see a problem and an action attitude to address it right away,” says Dr. Kenneth Stalder.

professor in the department of animal science at Iowa State University, believes trimming may be only a short-term solution.

“I believe that a lot of these larger units don’t have the time or personnel to trim hooves regularly. I would rather we take the approach of finding what causes the toe and dewclaw overgrowth and address it before it happens,” he says.

The industry “would have to train more people on the farm to trim because of biosecurity, and I just don’t think that is a long-term solution.”

If the lameness is caused by

infection, producers and their veterinarians can use antibiotics and vaccinations to treat sows. However, the foot, when compared with the rest of the body, is not well vascularized, says Stalder.

“It takes a long time for something you’re feeding, putting in the water or injecting into the pig to get to enough concentration to do any good,” he adds.

Unfortunately, some diseases that cause sow lameness have poor treatment prognoses.

“Ultimately, issues associated with osteochondrosis are not treatable.

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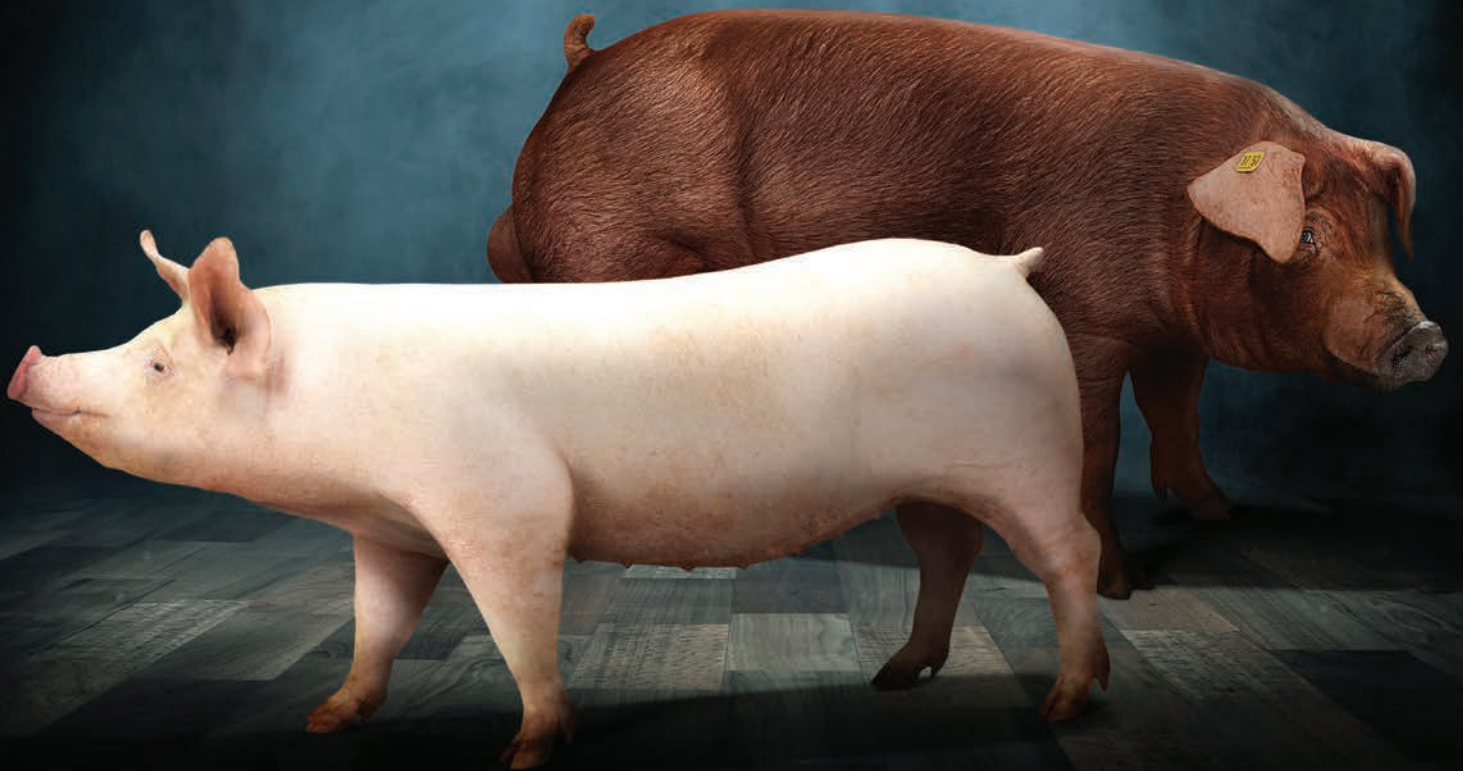
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Pain medication or cushioned flooring may alleviate discomfort temporarily, but osteochondrosis is not a curable condition,” says Connor.

For sows suffering from moderate to severe lameness, culling – either shipment or on-farm euthanasia – is the most common treatment, says Brown.

“Lameness prevention and early treatment are the best options, both in terms of having the lowest cost and

the best outcome for sows and production,” she says. So, producers should examine their management practices to ensure that their sows stay healthy and sound throughout the housing transition.

Genetics

While making management decisions, producers should keep swine genetics at top of mind.

“Because we are grouping sows in

loose housing, where they need to be more mobile than they are in a stall, I think we need to have an animal that is much more correct on her feet and legs to be able to withstand the rigours of fighting that normally happens when sows re-socialize periodically,” says Stalder.

“I think it starts by selecting the right animals – a gilt that has good feet and leg structure, good foot size and even toes.”

Sows that have difficulties walking or are prone to lameness could pass those traits to their offspring, he adds.

As a result, producers should exclude animals with joint lesions and poor conformation from their breeding programs.

Flooring

The best flooring choice may vary by operation. When building or renovating pig barns, producers should keep their eyes on a few key features.

For example, the recommended dimensions for slat and gap widths are, respectively, 127 millimetres (5 inches) and 19 millimetres (0.75 inches), says Connor.

“However, recent research demonstrated that early parity sows, at least, can benefit from narrower 105-millimetre (4-inch) slats with the same 19-millimetre (0.75-inch) gaps,” she adds.

“Fewer feet and leg problems in the younger animals improves longevity and overall herd productivity.”

In addition, the slats need to have “pencil-rounded edges, as sharp edges can be abrasive to the pads of gilts,” Stalder says.

While plastic slats may be more comfortable to walk on than concrete flooring, they can also be slippery and can possibly result in hoof overgrowth, a 2016 Porcine Health Management article says.

Concrete slats should have a broom finish to ensure good footing when sows get up and to keep claws worn down.

However, the surface cannot be too abrasive as it could result in damage to the sole of the foot and cause lesions.

When planning floor types and



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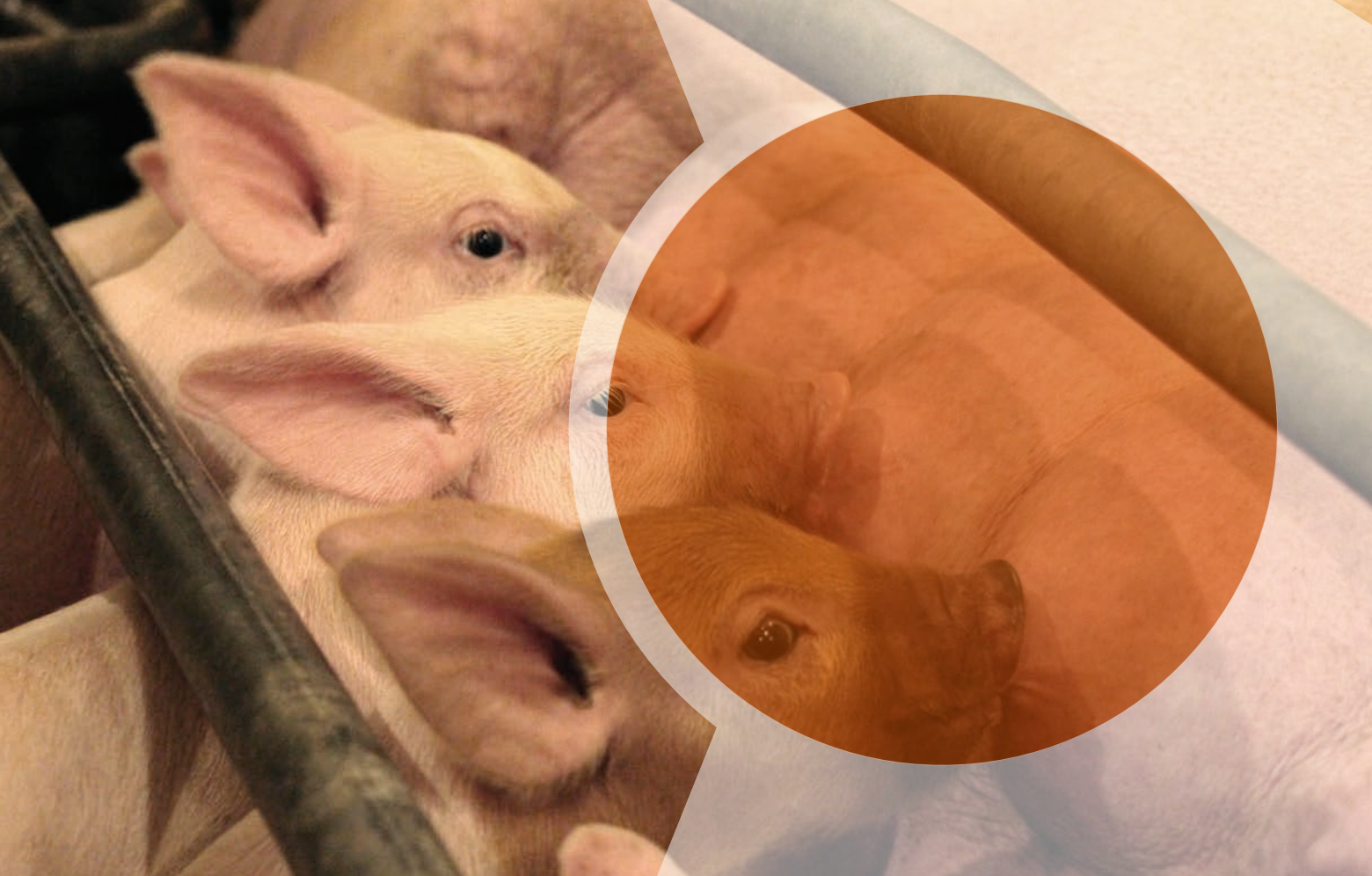
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maintenance, producers should also consider drainage, cleanliness and compressibility.

The “incidence of lameness is greater on concrete slatted floors than solid floors with bedding,” says Connor.

Straw and rubber mats can help prevent injuries caused by concrete floors.

Producers should also keep the floor clean and dry to prevent sows

from slipping and falling, which can lead to injury and lameness.

Pens with dirty, wet slatted floors increase the risk of lameness 2.8 times more than pens with good floor hygiene, the Porcine Health Management article says.

When working on their sow barns, producers are encouraged to consult veterinarians and industry experts to ensure that they make the best choices for their operations.

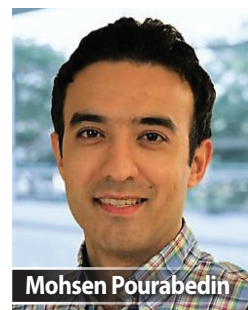
Nutrition

Macro- and micronutrients play a role in sow immunity as well as bone development. They can affect animals’ susceptibility to lameness.

“Nutrition affects bone structure and content,” says Dr. Mohsen Pourabedin, the technology development specialist at Cargill Animal Nutrition, Canada.

“If nutritional deficiencies or imbalances occur, the risk of lameness increases. The role of trace minerals and vitamins are very important for bone quality and healthy hooves. Among them, zinc, copper, manganese, vitamin A, E and biotin are key minerals and vitamins,” he explains.

A deficiency of micronutrients can also lead to lesions, says Dr. John



Mohsen Pourabedin

Deen, a professor and swine veterinarian at the University of Minnesota.

The proper balance of nutrients is important for “the immune

system, which can play a role in preventing inflammation and diseases that cause problems and swelling in the joints,” says Stalder.

In addition, “improper feeding regimes can influence lameness. Some producers, for example, may feed finisher diets to their replacement gilts,” Pourabedin says.

“But finisher diets are not suitable for developing gilts as they are formulated for increased growth rate and best cost. Specifically formulated gilt developer diets that consider nutrient requirements for skeletal development can effectively reduce lameness and improve the longevity of young sows,” he explains.

Pen configuration

Barn layout is another important factor that helps prevent lameness.

Producers need to ensure that all sows have access to feed, water and resting space. If pens are overcrowded, it is “difficult for some sows to

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Laurie Connor photo



Methods for treating sow lameness largely depend upon the causes and contributing factors.

reach areas of key resources,” says Connor.

Overcrowding “promotes more aggression and injuries, and compromises lower-ranking animals the most.”

And competitive feeding systems can lead to more injuries which can cause lameness, Connor adds.

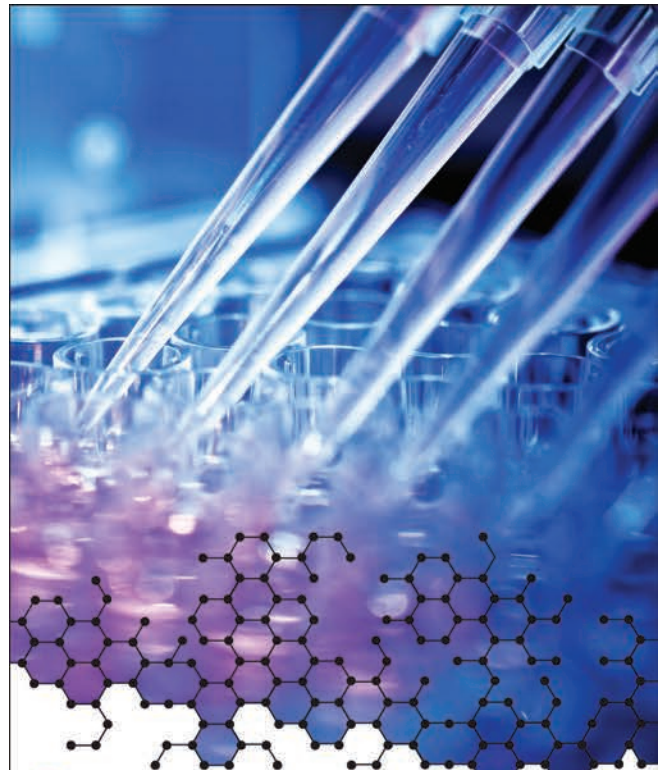
Pens should have “clearly defined areas for feeding, drinking, dunging and loafing to minimize competition and enhance social stability in the groups,” she says.

Once sows are in group housing, “producers need to make a concerted effort to walk those pens. Make sure every sow is getting up, behaving appropriately and is not ill or lame,” Stalder says. “Especially if you don’t have an electronic sow feeder telling you about animals not eating.”

Those working directly with the sows need to “have strong stockmanship skills, observation skills, the knowledge of what to do after they see a problem and an action attitude to address it right away. If you don’t catch it right away, lameness will be a harder problem to deal with,” he stresses.

Although loose sow housing may require a bit more management and time, it offers benefits.

“Initially, sows may have more problems because they are not fit and not used to being in a social group. But after spending time in loose housing, they become calmer and fitter and are easier to move and handle,” says Brown. **BP**



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National Pork Board and the Pork Checkoff. Des Moines, Iowa photo

Pork producers and processors will access all three industry p

Hans Kristensen, the general manager of Metz Farms Ltd., a 3,600-sow farrow-to-wean operation in New Canaan, N.B., is proud of his fellow Canadian pork producers and their efforts to raise high-quality animals.

Now he's excited to adopt Canadian Pork Excellence (CPE), a new platform that will demonstrate this hard work.

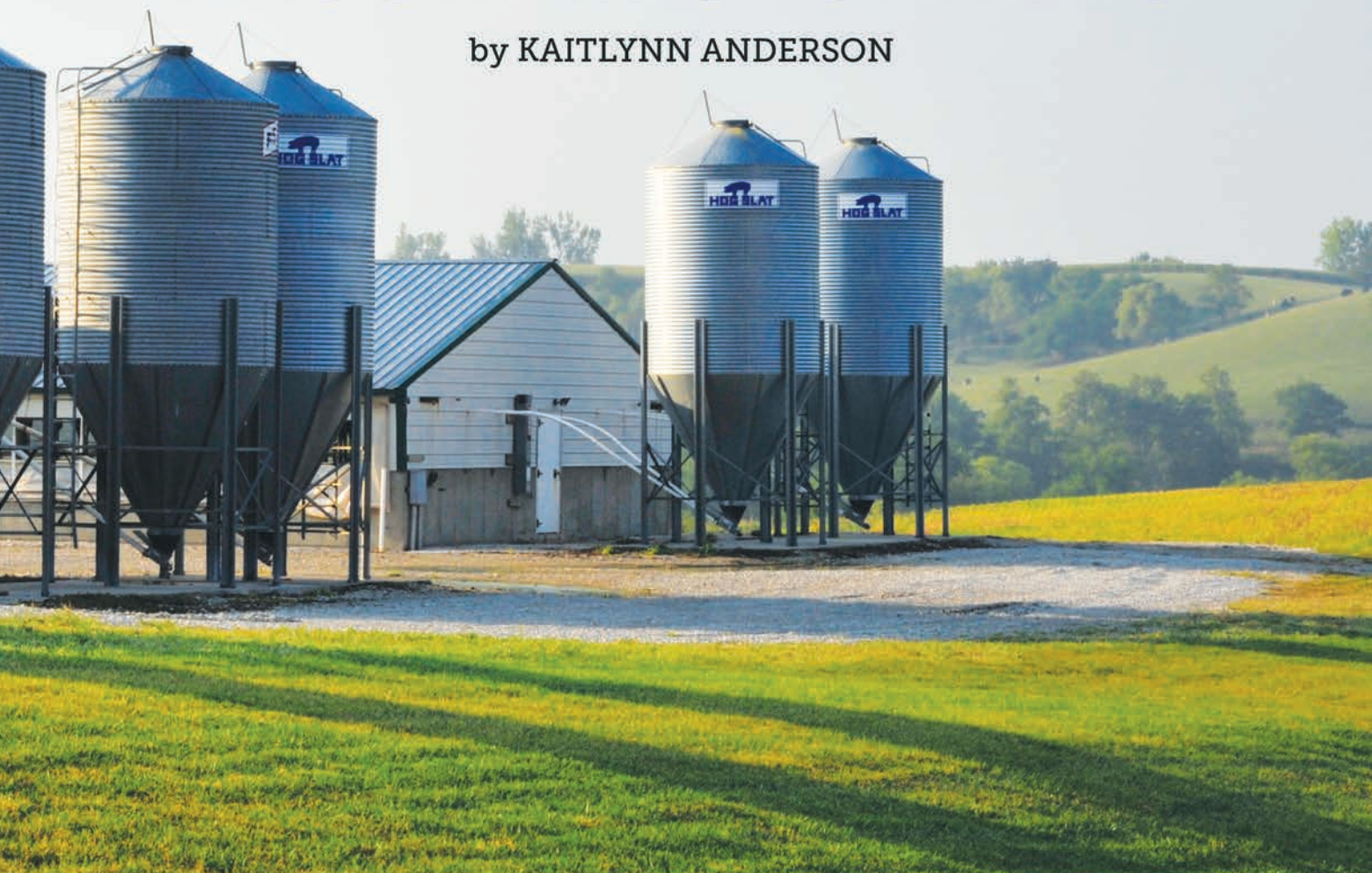
"I'm anxious to get certified on the program because it

will tie us into the Verified Canadian Pork (VCP) brand, which is what we're using to promote our pork around the world," says Kristensen. He joined the CPE management group as a representative for the Maritimes in 2016.

The VCP brand, a globally recognized marketing program, certifies that products are "locally farmed, federally approved (and) globally distributed," the program's website states. In addition to CPE, the VCP pro-

PREPARING FOR PROGRAM UPGRADES

by KAITLYNN ANDERSON



programs through the new Canadian Pork Excellence platform.

gram incorporates the Hazard Analysis and Critical Control Points food safety system and guarantees that participating producers raise their pigs without added growth hormones.

The Canadian Pork Council (CPC) began developing the CPE platform in 2014 with producers across the country. The group will officially launch the program early next year, Gary Stordy, the CPC's director of government

and corporate affairs, tells *Better Pork*. Producers will use the platform to document their practices and display their commitment to animal welfare.

"We already know that we're applying the highest standards of animal care on our farms," Kristensen says. "We want to make sure that consumers – both domestically and internationally – know we're doing it."

The platform will help the public purchase Canadian

Jevitic/istock/Getty Images Plus photo



**“We are gaining a worldwide reputation for our product,” Hans Kristensen says.
“As producers, we do a lot to ensure that that happens.”**

pork products with confidence.

“When consumers around the world are looking for pork, they’re going to recognize the maple leaf and CPE,” Kristensen says. “This platform is going to open up markets for Canadian pork and ensure that we

keep our competitive edge. It will provide us with premium market access and set us above our competitors.”

As a result, Canadian pig farmers could gain access to new global opportunities.

Processors understand the impor-

tance of consumer perceptions, too.

“These standards provide the farm-side quality assurance that our customers – especially in international markets – are looking for. They help provide integrity to our entire value chain,” says Arnold Drung, president of Conestoga Meat Packers in Breslau, Ont. This family-owned co-operative supplies fresh and frozen pork to both the domestic and international markets.

Such industry programs can show international customers that the “quality assurance focus in production facilities traces back to the farm level,” he adds.

Preparing for improvements

During CPE planning, Kristensen acted as an advocate for Canadian producers alongside many other industry representatives.

“I was there for the final stages of development and the critical stages of the pilot testing and the peer reviews,” Kristensen says. “I wanted to make sure that this new program not only recognizes our hard work, but also provides us with a way to verify and promote it.”

When discussing the challenges of previous industry programs, committee members agreed that the new platform should be simpler for producers to set up and use.

To achieve this goal, the CPC



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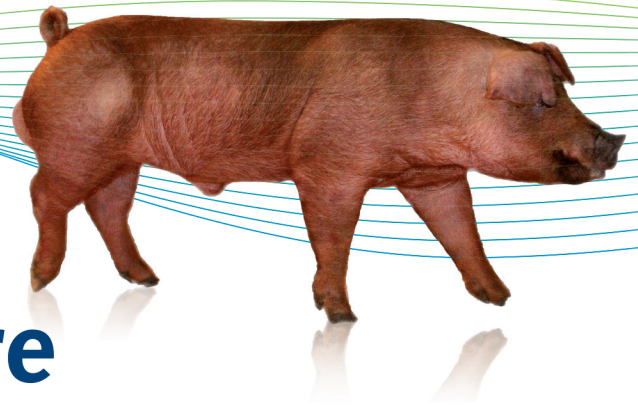
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incorporated three main pillars into the CPE platform: PigTRACE, PigSAFE and PigCARE.

The first program, PigTRACE, will remain relatively unchanged.

It “will see some internal modernization, but producers won’t have to make any adjustments” at the farm level, Stordy says.

The other two pillars are unique to CPE. PigSAFE will replace the Canadian Quality Assurance (CQA)

program and PigCARE will replace the Animal Care Assessment (ACA) program.

“The CQA program was due to be changed,” Stordy says. “It’s been around for 20 years. While there have been subtle changes to this program each year, it hasn’t been through a complete update or rebranding.”

Committee members believed the ACA program could be improved, too, he says.

Previously, these two programs outlined procedures that producers should follow on their farms. The new programs will offer farmers more freedom in their daily operations.

“The new platform was designed in a modular format so that it’s easy for producers to use,” Kristensen says. “The standard operating procedures and protocols are written out so that producers can adapt them to their farms rather than start from scratch.”

In the current programs, operators lack access to resources to help them fill out their forms to ensure their farms conform with regulations.

“The new procedures, in contrast, include information that producers need to answer the questions and be compliant with the program,” Stordy says.

For example, in the previous program, producers had to document what they did to prevent birds from entering their barns. In CPE, producers can simply select options from prepared responses and apply them.

Because the CPC updated the programs and organized them under one umbrella, the certification process should be simple for Canadian producers.

“The programs have been greatly streamlined so that producers can spend more time taking care of their animals and focusing on the day-to-day aspects of their operations and less time completing paperwork,” Stordy says.

During the consultations, participants also wanted to ensure that the industry could improve the platform over time.

“We wanted to make sure it was a living document,” Kristensen says. “So, when new requirements come up or new technology comes into play, we won’t have to rewrite an entire program. We can just change that module.”

CPE “is never going to be complete, because we can continually build upon it,” he says.

This approach could allow industry groups and producers to save time in the future, as they can simply update the CPE program rather than build new programs.



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“We compete with other countries – Australia, Brazil, the U.S. – in the global marketplace,” Hans Kristensen says. “About 70 per cent of the pork we produce is eaten outside of this country.”

Preparing to implement CPE

Pork producers should be able to adopt the new platform without any challenges.

“The transition should be fairly seamless,” Kristensen says to *Better Pork*. “There are some changes to the existing programs, but nothing that will be too overbearing for producers to handle.”

Nonetheless, farmers may want to familiarize themselves with the new programs to prepare for the platform’s official launch next year.

“Producers can take a look at the

program binder to see how CPE will function on their farms,” Stordy says.

And, after the program’s establishment, the CPC will train pig farmers to use the CPE platform and help them understand the new recording requirements.

The CPC will also train validators who will visit Canadian farms to ensure that pork producers comply with CPE.

Pork processors may easily adapt to the new platform, too.

Since PigSAFE and PigCARE will primarily affect producers, “challeng-

es on the processing plant side are minimal,” Drung says.

And PigTRACE’s documentation has “already been in place for a few years and is not a problem,” he adds.

Overall, industry members are eager to make this transition.

“I’m proud to have had a part in this process, and I’m really looking forward to the program,” Kristensen says.

“I view this as a new shining way to promote and brand our product. We are the best in the world, and we want people to know that.” **BP**

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by
**KATE
AYERS**

BRINGING THE BACON HOME

A first-generation Nova Scotia pork producer supplies his local community with fresh and quality meat.

Beck family photo



Five tired piglets cuddled up together for a nap.

Terry Beck, a farmer in North Kingston, N.S., takes pride in producing and selling his pork.

“We are working to provide Nova Scotians with good, fresh pork,” Beck says.

Although Beck was not raised on a farm, his summer jobs were always on neighbouring operations. So, he had close ties to agriculture growing up in a rural community.

In fact, one of Beck’s jobs led to the opportunity to start a farm. The dairy producer he worked for at the time was selling a property, so Beck decided it was the right time to enter the ag industry. In 1982, Terry and his

wife Heather purchased the farm which had a barn used for both pigs and cattle. Although Beck was originally uncertain which sector of the ag industry he wanted to pursue, he decided that pork production seemed like a good fit.

Unfortunately, a fire in 1988 forced the couple to build a new barn. Since then, they have added two more pig barns.

Today, Beck and his family have a 700-sow operation and produce pigs of all stages – farrow to wean as well as farrow to finish. Terry’s son Justin manages the cash crop portion of the operation and animal husbandry.

Terry and Heather also have a daughter Nicole who lives and works in the United States.

The Beck family recently began milling feed and formulating complete rations from the peas, soybeans, wheat and corn they grow on 350 acres. If necessary, Justin also buys ingredients from within the Atlantic provinces.

One of the family’s top priorities is animal welfare, which is why their breeding barn has large individual stalls. In the dry sow barn, the animals can move around freely and interact with one another. The family beds the stalls down with hay and



In Beck's dry barn, the sows can move around and interact with each other.

straw so that the sows can both lay and chew on it for enrichment.

Terry likes to promote exercise for the sows during the first stage of gestation. Indeed, he puts some of the herd out on pasture in the summertime, marketing these animals as “free-range pasture pigs.”

The family sells their pork at local markets in the Annapolis Valley, as well as in the Halifax and Bridgetown areas. Terry and Heather also have a meat shop in the province's capital. Terry's mission is to inform people about the availability of local pork in Nova Scotia.

“Following the loss of a major packing plant in the province, a lot of the industry disappeared. But it didn't all disappear,” Beck says.

So, he sets out to “tell the story that there is still a hog industry left.”

The family's close attention to detail and the great care that they put into raising their pigs ensures they supply their customers with premium pork.

“We like to believe we look after our animals in a humane and caring way. Nobody is perfect, but we do the best job that we can,” Beck says.

When did you start farming?

1979. So that's 39 years ago, this year.

Describe your role on your farm operation.

I'm not in the barn as much as I once was but I am still there a couple of days a week.

I have taken on the role as the local supplier of pork for customers that we have at farm markets. We also (run) a meat shop in Halifax (with another farmer).

We retail more than just pork. We sell chicken, lamb, beef and fish as well.

I look after that side of things, which keeps me on the road a fair bit.

Hours you spend in the barn per week?

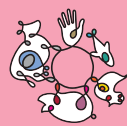
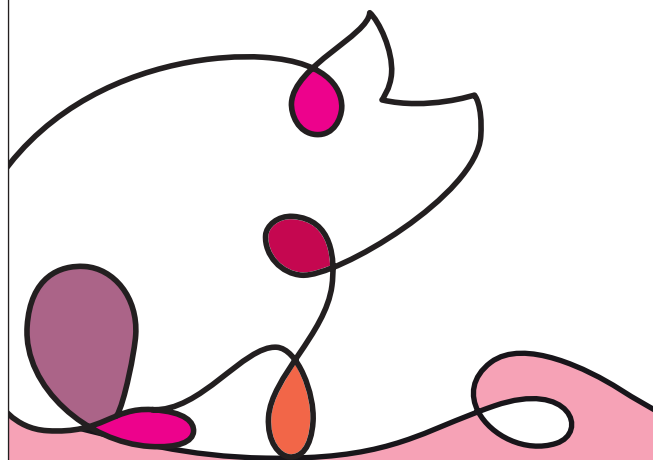
Probably 20 to 25 hours per week.

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Beck family photo



The Beck family's breeding barn has large individual stalls to enhance sow welfare.

Hours you spend in the office per week?

I would say 10 to 15 hours.

The rest of the time, I am on the road talking to customers and pricing products.

How many emails do you receive per day?

Probably 10 to 20.

I receive more emails during the summer than in the winter.

How many text messages do you receive per day?

I'm not a big text message kind of person.

I might send a couple of texts in a week. I prefer to talk to people on the phone rather than text them.

Hours a day on a cellphone?

I spend a fair bit of time on the phone – an hour or two a day.

Hours a day on the Internet?

Probably about an hour.

How often do you travel?

The store is an hour and a half away from the farm, so I'm travelling six to 10 hours a week.

Since we also sell pigs to Ontario, I travel there once a year.

What do you like best about farming?

Meeting people and explaining the

story about agriculture.

Trying to fill the consumer in on what is happening on the farm and in agriculture in general.

What do you like least?

The early hours, sometimes.

What's the most important lesson you've learned?

Patience.

You must be able to accept that things, especially on a farm when you are dealing with nature, don't always go your way.

It can be tough because, sometimes, I am not much of a patient person. But, over the years, I have developed that skill. When dealing with crops, weather can be an issue. When breeding animals, whether it's cows or sows, something could happen without an explanation. Like why didn't she produce the piglets she should have?

If you let those things bother you, they will eat at you. So, you must think, yes, it may be unfortunate but then (you must) figure out how to not let it happen again. You must let some of the stuff roll off you and work to try to make the (situation) better moving forward.

What's your guiding management principle?

Listen to your employees and understand where they are coming from.

And explain your expectations for each job.

What's your top tip about farm transition planning?

Every situation is different but, if you have family members who are coming in, you must allow them to do some management on their own.

They will manage (the farm) differently than you would but, if the end result is close to the same, it doesn't really matter.

Give them the opportunity to manage the people working for you because (these family members) will eventually have to do these (tasks) when they take over the whole show. And allow them to make decisions. They will learn through their mistakes.

Are you involved in any committees, boards, associations or volunteer efforts?

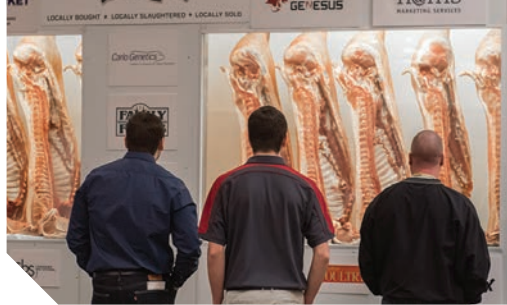
I am involved in the marketing board of Pork Nova Scotia.

I assist in marketing the livestock here and promoting the hog industry in the province.

What are your hobbies or recreational activities?

My son played hockey when he was much younger. He played against Sidney Crosby many years ago.

So, I was involved in the administrative part of hockey here in Nova Scotia. For 17 years, I was involved in



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organizing minor hockey teams. I still enjoy the game and get out for a skate every now and again.

What does your family think of farming?

My wife Heather is not a farmer. Many, many years ago, I remember her saying she'd never live on a farm. But she has (lived on a farm) for 39 years now.

Heather sells property insurance to a lot of farmers. Being involved on a farm has helped her in her professional career because she understands farming and can relate to farmers.

I have a daughter Nicole who lives in the state of New York with her family. She comes up sometimes. We have three grandkids. One doesn't care to be in the barn but the other two seem to not mind it.

What's your top goal?

I just want to keep moving forward. I don't know if I have a top goal.

I figure if you reach a goal, then maybe it is time to change what you are doing or get out of it because that means you've reached the finished line.

We just want to continue growing our business (in terms of) what we are producing and our sales. If that means having another sales outlet or (adding a) processing facility for our meat, that is what we would look at doing.

As far as a retirement age, I don't have one in mind.

I turn 60 this year, so I know many people who would look at retiring but I have no plans to do so at the moment.

Is your farm vehicle messy or neat?

It is relatively neat.

What are three items that are always in your pickup?

Pens, a receipt book and a water bottle.

What was the last piece of shop equipment you bought?

The last thing that I bought was a pallet jack for the feed mill.



Beck family photo

The Beck family sell their pork products at local markets in the Annapolis Valley, as well as in their store in Halifax.

What's the best time of day?

Getting up in the morning isn't always easy but I really don't mind mornings.

Sometimes I wouldn't mind staying in bed for an extra half hour, but I really enjoy mornings.

Everything comes to life.

What were your most memorable production years?

I won a provincial award for the most pigs weaned per sow per year a few years ago. But we are surpassing those numbers now.

I had a bad year not too long ago. We had a situation in the farrowing barn where we lost a lot of piglets.

And the problem was that anything we did just wasn't solving the issue at the time. So that was quite frustrating.

What do you see as current or future challenges for the industry?

In this business, there are always challenges.

Trade is a big one, but it can be an opportunity or a challenge, especially when you are dealing with different countries with different policies. Canada depends on trade because we produce a lot more (pork) than we consume.

In our area, getting access to markets is a challenge. **BP**

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REPRODUCTIVE TOOLS: RISKS AND REWARDS

Barn staff must follow proper protocols to safely and effectively use these products in swine operations.

Producers frequently use reproductive aides in their swine operations. When used appropriately, these products are helpful and can improve productivity.

Farmers can use reproductive aides in their operations to induce heat in gilts or to shorten wean-to-service intervals. The products can induce farrowing or stimulate contractions to assist gilts or sows with the birthing process.

Despite the regular use of reproductive aides, however, farmers do not always review and update best practices as new products become available and additional staff join the team in the barn.

These products are often the same compounds that mammals produce naturally and sometimes they are synthetic products that mimic natural hormones. Recently, the U.S. Food and Drug Administration (FDA) alerted veterinary medical professionals and those working with pigs about the adverse effects that swine reproductive aides can have in people.

The agency's alert was specifically about Altrenogest (Altresyn, Altermate, and Regumate).

This over-the-counter product is typically administered as a top dress. Producers use the medication on sows for estrus suppression and synchronization. Specifically, farmers can use the product to synchronize gilts to meet breeding targets or to synchronize entire batches in batch farrowing systems.

Off label, some producers administer Altrenogest for a prolonged period to maintain sow pregnancies as the product simulates progesterone. Typically, the corpus luteum, which develops on the ovary after ovulation, produces progesterone and sustains the pregnancy.

If the corpus luteum is present, the pregnancy is sustained. If the gilt or sow is not pregnant, Altrenogest mimics the endogenous progesterone



James Copeland/Stock/Getty Images Plus photo

Farmers can use reproductive aids to synchronize gilts to meet breeding targets or to synchronize entire batches in batch farrowing systems.

to prevent return to estrus.

Producers apply this product for 14 consecutive days, around the same time each day, in accordance with the Canadian label. Once farmers stop administering Altrenogest, the gilts or sows typically come into heat within five to seven days.

This synthetic progestin is just as active in humans as in pigs, as both mammals have similar reproductive hormones and cycles. As a result, Altrenogest is a high-risk product due to its ability to cause adverse effects once in contact with the skin.

Other products that can possibly cause adverse effects once in contact with mucus membranes (eyes, mouth, and nasal cavity) or accidentally injected include oxytocin, cloprostenol, dinoprost, and other products such as P.G. 600 and Pregnenol 6000. They contain gonadotropins, which are hormones secreted from the anterior pituitary gland that act on the ovaries and testes.

Since 1987, 130 cases of accidental human exposure to Altrenogest have been reported in the United States, resulting in adverse effects in 137 people.

While numbers are not easily available in the Canadian context, I can provide some anecdotal evidence

from my experience as a swine veterinarian and discussions with equine veterinary colleagues who also use these products.

I suspect the numbers are just as high – if not higher – here than in the U.S., as incidences of exposure are likely under-reported.

While staff should not be afraid to handle these reproductive aides, producers should teach them proper safety precautions.

To avoid exposure, the person handling and/or administering the product should wear non-porous disposable, protective gloves (nitrile, vinyl, polyethylene or neoprene). Latex gloves may not provide enough protection.

Workers should don protective gloves when cleaning, disassembling, or disposing of any dosing guns or syringes used to administer these products.

Staff should also wear safety glasses to protect the mucous membranes of their eyes.

Certain groups of people should not handle the Altrenogest products as they simulate progesterone and anabolic-androgenic steroid release (such as testosterone).

The groups named are

- women who are pregnant or

possibly pregnant, have known or suspected carcinoma of breast, or have undiagnosed vaginal bleeding

- anyone with thrombophlebitis or thromboembolic disorders, cerebral-vascular or coronary-artery disease, known or suspected estrogen-dependent neoplasia, or liver dysfunction or disease
- people with benign or malignant tumors that developed because of or during the use of oral contraceptives or other estrogen-containing products

Staff that are pregnant, possibly pregnant or trying to get pregnant (including men) should also take precautions when handling other swine reproductive aids. Oxytocin can cause contractions and possibly abortions. Cloprostenol can cause abortions and gonadotropins can alter normal menstrual cycles.

To have such adverse effects, these three products typically need to be in direct contact with mucous membranes or injected. Mucous membranes are highly vascularized and absorb compounds rapidly.

In the event of an accidental exposure, the individual should wash the product off immediately from the skin, eyes and mouth. The person should change his or her clothing and gloves. The individual should not touch his or her face until the substance is removed.

Every production site should have



While we must take the proper precautions when handling reproductive aids, these products are extremely useful and often critical in swine production.

a functional eyewash station in case of such an exposure.

We recently had a farrowing technician become exposed to oxytocin while pregnant due to a syringe malfunctioning. The product sprayed onto her hand and cheek. She experienced no adverse effects as she could wash it off in time, and her eyes and mouth were not exposed.

If adverse effects occur from exposure to any of these products, the individual should seek medical care immediately.

In the event of exposure with no adverse effects, the person should still contact his or her veterinarian or doctor for further advice, information on

the product and precautions for future usage.

Producers should also carefully review the labels of all products they use.

While we must take the proper precautions when handling reproductive aids, these products are extremely useful and often critical in swine production. In the next issue, I will discuss the effective use of the other products mentioned, such as oxytocin and cloprostenol, and how to avoid adverse effects in swine. **BP**

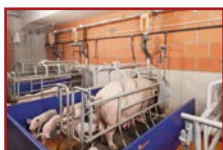
Dr. Jessica Law is a veterinarian with Prairie Swine Health Services in Red Deer, Alta.

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STARTING WITH SOWS TO STOP DISEASE

New project tracks disease outbreaks at sow sites in an effort to control and manage PRRS.

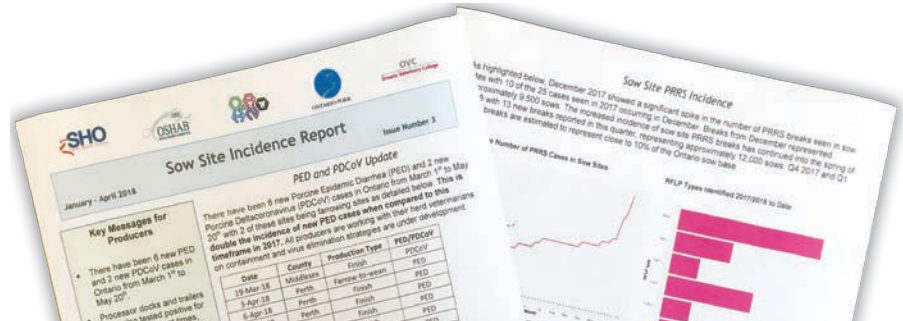
Porcine Reproductive Respiratory Syndrome (PRRS) virus continues to plague Ontario's swine industry. In an effort to better understand and manage the virus, Swine Health Ontario and several industry partners have come together to collect disease outbreak data from the province's sow facilities.

Veterinarians are asked to provide information about PRRS breaks among their clients to inform a centralized database. Specifically, vets are requested to share details on the PRRS breaks in sow herds, including basic farm demographics, PRRS RFLP type, and clinical presentation of the virus. Vets are also asked to note the impacts of the strain on production parameters, such as abortions, pre-wean mortality and sow mortality. The information is recorded anonymously and is updated four and eight weeks after the outbreak of PRRS in a sow facility.

"This information is very valuable because it puts numbers and science behind what we're hearing anecdotally," explains Dr. Greg Wideman, a veterinarian with South West Ontario Veterinary Services who also served on the expert committee that helped develop the project.

"As farms transition from stable, negative or naïve PRRS status to positive PRRS status, we get a flag about that in the system and we can do an investigation to track the severity of an outbreak. If we know the strain we're dealing with, we can communicate that with the industry and alert them to specific risk factors," he added.

Swine Health Ontario, Ontario Animal Health Network, Ontario Pork and Ontario Veterinary College summarize information from the database and publish the findings in regular reports. The groups distribute the reports quarterly to industry stakeholders. Past incidence reports



Swine Health Ontario, Ontario Animal Health Network, Ontario Pork and Ontario Veterinary College publish quarterly reports to update industry stakeholders about PRRS breaks.

can be found at onarce.ca under Biosecurity Protocols & Articles.

Although the program is still in its infancy, the information it provides is valuable, Wideman says.

"We can see, month by month, the number of PRRS cases in Ontario but we are also starting to see, week by week, the impact certain strains are having on individual farms," he says.

The reports, for example, track pre-weaning mortality during outbreaks. Whereas some strains of PRRS have very little impact, one particular strain results in very high pre-weaning mortality.

The sow site incidence project also helps to shed some light on how the virus spreads. Some strains appear to spread very easily from farm to farm through the air, but that is the situation in only about half the current PRRS cases. For the rest, other gaps in biosecurity – such as transport or gilt introduction – are considered probable causes of the breaks.

The past winter was ideal for the spread of PRRS – plenty of cloudy, wet days with high humidity, low UV light and temperatures hovering around the freezing mark. As well, new strains are always appearing and existing strains are mutating, so it is important for Ontario's swine industry to put PRRS back on the front burner, Wideman urges.

So, here are three things producers

should do to protect their operations against PRRS:

1. *Have a safe and secure gilt quarantine.* "It's inevitable over time that gilt suppliers will become affected by PRRS, so your best defense is a gilt quarantine that will stop the virus if you do get it," Wideman advises.
2. *Work with your transporter to develop a good, safe plan for any livestock transport vehicles that come into contact with the sow barn.* This plan should include weanling and cull sow shipments, as well as market hog shipments for farrow-to-finish producers. "It's not enough for the trailer to be clean. We also need to be able to get the driver from the cab to the trailer without contaminating the trailer, which means we need a driver entry protocol. It can be difficult to achieve but it needs attention," Wideman says.
3. *Follow general biosecurity procedures.* This includes biosecurity at barn entrances, as well as protocols for deadstock pick-up, and material and service providers. **BP**

Swine Health Ontario is a leadership team focused on improving and coordinating the industry's ability to prevent, prepare for and respond to serious swine health threats in Ontario.

Pig Trace & Premises Identification: Pillar one of effective traceability

A key component of PigTrace is premises identification. Premises identification is the assignment of a unique identification number to a parcel of land where livestock, poultry or agri-food activity occurs.

In the event of a food safety issue or foreign animal disease outbreak, premises identification gives animal health officials the ability to trace animal movements simply and efficiently during an investigation.

Who should register?

Any agri-food business owners, operators, leasers or tenants can apply for a premises ID. Registering a premises is crucial to the effectiveness of the PigTrace program, which is why all producers from large to small should register.

Other examples of swine premises that should register for a premises identification number include:

- Assembly Yards
- Abattoirs
- Exhibitions/Fair Grounds/Competition Facilities

Registering a premises

Registering for a premises identification number is easy and free.



What you need:

- Assessment Roll Number (ARN) - Your tax assessment number from the Municipal Property Assessment Corporation.

If you cannot provide an Assessment Roll Number (ARN) you will need to provide one of the following:

- Municipal Address
- Lot and Concession Number
- Latitude and Longitude

Who to contact

To register with the Provincial Premises Registry

- Online: www.ontariopid.com
- By phone: 1-888-247-4999

Ontario Pork can also assist in obtaining a premises identification number by submitting a registration on behalf of the individual. Please contact Member Services at Ontario Pork if you wish to register your premises at 1-877-668-7675 ext. 1220, by email at member-services@ontariopork.on.ca.

*Emma Payne
Member Services Liaison,
Ontario Pork*

Troubleshooting Reproductive Issues

Information in this article is from the 2018 London Swine Conference proceedings- Jennifer Patterson and Dr. George Foxcroft from the Swine Research and Technology Centre from the University of Alberta. The full paper is at londonswineconference.ca

Both gilt development and management are critical when examining

the reproductive performance of a sow herd. Gilts are the foundation of good production, and successful replacement gilt management begins at birth. A good gilt management program will monitor and manage the following key components:

- Litter of origin as a key benchmark of selection potential
- Appropriate retention criteria through the pre-selection program
- A final selection program that identifies the most fertile gilts that also meet body weight targets for breeding
- A consistent supply of service eligible gilts
- Appropriate management of both weight and a positive metabolic state of breeding

It is difficult to troubleshoot reproductive performance problems within gilt replacement programs because it is a multi-factorial issue. Some of the main troubleshooting points to address are 1) the gilt had a good birth weight and was from a litter that had a good average birth weight; 2) there is a supply of service eligible gilts; 3) the most fertile gilts are selected to enter your breeding program; and 4) the gilt's body state was managed properly at breeding. If you do not address these key components of gilt management, there are many reproductive issues that can take place, including:

It is difficult to troubleshoot reproductive performance problems within gilt replacement programs because it is a multi-factorial issue. Some of the main troubleshooting

points to address are 1) the gilt had a good birth weight and was from a litter that had a good average birth weight; 2) there is a supply of service eligible gilts; 3) the most fertile gilts are selected to enter your breeding program; and 4) the gilt's body state was managed properly at breeding. If you do not address these key components of gilt management, there are many reproductive issues that can take place, including:

- Low retention of gilts through selection program
- Low efficiency of replacement gilt production
- Gilts are too heavy and too old at puberty
- Delayed onset of first estrus
- Poor synchrony of first estrus among gilts
- Poor response to boar exposure
- Services per week are not met
- Late return to estrus after first weaning
- A high amount of non-productive days
- Poor retention to the third parity
- Poor performance in first lactation
- Low first litter size
- High pre-weaning mortality rates
- Poor growth performance of low birth weight piglets
- High replacement rate
- Poor lifetime production

Identifying Reproductive Issues in a Timely Manner

The detection of reproductive issues heavily depends on the observational ability of the producer and the regular recording of reproductive events. By collecting observational data on the herd daily, it can be used to track and monitor reproductive successes and failures, and used to make data driven decisions that can positively affect the overall performance of the herd. Particular markers that should be recorded are litter size, sex-ratio and birth weight. This set of criteria can help identify a sow that repeatedly displays the low

birth weight phenotype. This allows producers to cull extreme low birth weight phenotype sows that make a very limited contribution to the gilt replacement program. The daily monitoring and recording of signs of estrus and heat-no-serve events are critical in differentiating "Select" from "Non-Select" gilts, and for the proper use of PG600 to induce pubertal estrus in known non-cyclic "opportunity" gilts.

Risk Factors for Retention Through the Gilt Selection Program

Low Birth Weight: As litter size increases, there is an increase in low birth weight piglets. The current literature states that low birth weight gilts are at a reproductive risk later in life, especially gilts weighing less than 1.0 kg at birth. These piglets have an increased chance of pre-weaning mortality, and the gilts that do survive past the nursery phase have poor growth rates, and continue to be significantly lighter than their higher birth weight littermates. If these low birth weight gilts go on to be replacement females, their low birth weight negatively impacts their reproductive potential. Flowers (2015) suggested that gilts less than 1.1 kg at birth do not have the reproductive machinery to be efficient reproductively, even if they are managed well later in life. Magnabosco et al. (2016) reported that replacement gilts born less than 1.0 kg produced fewer pigs over three parities and remained in the herd for less time, than their regular birth weight counter parts. Additionally, most producers know the importance of newborn piglets getting their share of colostrum to boost immune function, but lack of colostrum can also negatively impact reproductive performance as an adult female.

Low Birth Weight Phenotype: Can A low birth weight phenotype

carries all the same risks described above for an individual born with a low birth weight, but it is a "litter" trait. It is reported that the low average birth weight phenotype is related to a hidden prolificacy trait, arising from the interactions between ovulation rate and the dynamics of embryonic and early fetal survival (factors that determine litter size in early gestation). Sows can be identified that consistently exhibit the low birth weight phenotype over consecutive parities. Sows that do exhibit the low birth weight phenotype are more prone to give birth to offspring that have limited survivability after birth, compromised growth potential, and overall will have a low efficiency of replacement gilt production. If gilts from these low birth weight phenotype sows do end up as replacement gilts, they will pass on this low birth weight trait to their offspring, continuing the cycle.

Failure to Select the Most Fertile

Gilts: Choosing the right gilts for your breeding herd helps to drive the lifetime performance of the herd. Gilts that respond to boar stimulation during a pre-established time are more productive gilts, as this is a sign of reaching early sexual maturity. Gilts that take a longer time to respond to a boar have a reduced rate of remaining over a number of parities. Gilts that reach sexual maturity earlier are also seen to have a higher farrowing rate and have more pigs born alive, have a longer reproductive life, and are culled later.

Failure to Maintain a Consistent Supply of Service Eligible Gilts:

Establishing a gilt development unit (GDU) protocol is important in selecting gilts with the greatest reproductive potential. A GDU protocol can be divided into two 28 day periods, compromised of pre-stimulation management, followed by

a stimulation program. In pre-stimulation, routine procedures such as vaccinations, sorting and tagging are completed. It could also be beneficial to have daily alley-way contact with boars during this phase. During the stimulation phase, puberty stimulation and detection are the main focus. Boar libido is a critical factor in influencing the start of puberty in gilts. Daily exposure to a rotation of mature, high libido boars maximizes the response to the “boar effect”. During the stimulation and detection phase, records are kept on when gilts reach puberty. After 23 days of the stimulation and detection phase, if there are not enough gilts cycling to meet breeding targets, eligible gilts (known non-cyclic, adequate growth rate), can be induced with PG600. By implementing a GDU protocol, predictable numbers of high-quality breeding-eligible gilts can be delivered to the sow herd.

Inappropriate Body State at Breeding:

- **Weight:** Gilts should be bred at a target weight of 135 to 150 kg (300 to 350 lbs). Williams et al. (2015) reported that gilts weighing less than 135-140 kg at breeding have less total pigs born over 3 parities. Additionally, Amaral Filha et al. (2010) reported that gilts bred at greater than 170 kg were at risk of low retention and locomotion problems over 3 parities. Using a scale or weigh tape during GDU will help meet these targets, and help improve management and welfare.
- **Age:** Breeding on the basis of age alone is considered to be an inaccurate benchmark.
- **Growth Rate:** Low growth rates have been shown to decrease the percentage of gilts showing heat by 10, 20 and 30 days after the start of puberty stimulation at 130 to 149 days of age.

In conclusion, successful introduction of gilts into the breeding herd, and retention through early parities, drives lifetime performance of the herd and allows the opportunity to improve overall production. Reproductive success depends on the implementation of a good gilt management program and the ability to address the key components to success.

Group Sow Housing 101

In 2014 the National Farm Animal Care Council (NFACC) released an updated version of its *Code of Practice for the Care and Handling of Pigs*. This updated code included changes to sow housing standards, moving hog farmers away from traditional gestation sow crates. The code states that “for all holdings newly built or rebuilt or brought into use for the first time after July 1st, 2014, mated gilts and sows must be housed in groups”. Additionally, the code gave producers 10 years to make the change if they already have an existing barn, by stating “As of July 1st, 2024, mated gilts and sows must be housed in groups, individual pens or in stalls if they are provided with the opportunity to turn around and exercise periodically.” In both cases, the code states that “individual stalls may be used for up to 28 days after the date of the last breeding, and an additional period of up to 7 days is permitted to manage grouping”. At time of writing, the definition of periodic exercise has not yet been determined. NFACC has announced that they will clarify the definition of period exercise, as well as exercise options, by July 1st, 2019.

Group housing systems allow for freedom of movement, increased exercise for the animals, and the ability for pigs to socially interact with their pen mates. Group sow

housing has many positive benefits in terms of animal welfare when done correctly, but it does increase the difficulty of monitoring herd dynamics. Group housing environments may provide a greater opportunity for aggressive interactions between animals. However, with proper management and facility design, sows in group housing systems have been shown to have reproductive performance that is equal to, or better than, that of sows in traditional stalls. A survey of Ontario hog farmers found that there was an increase in the number of litters/sow/year in group housed sows, compared to traditionally housed sows in crates.

Whether you are considering building a new barn or renovating an existing structure, choosing the best housing system varies from producer to producer, and herd to herd. A good sow housing system is able to find a balance between both producer and animal requirements. When choosing an appropriate housing system three main factors are often considered: economics, animal welfare and management style. Choosing the best housing system for your management style and budget can be a daunting task. The information below explains the difference between competitive and non-competitive systems, and highlights the 5 main feeding system designs available. For more information on the other housing design options, visit the National Sow Housing Conversion Project website at www.groupsowhousing.com.

Competitive vs. Non-Competitive Systems

When choosing a group housing system that is suitable for you, your structure, and your herd, one of the first decisions that must be made is whether or not you would like a competitive or non-compet-

itive system. In competitive group housing systems, feed is available in common areas, such as troughs or on the floor. In non-competitive group housing systems, sows are able to enter a private area, such as a stall, and feed without interruption from other sows.

In competitive housing systems, sows may try to gain additional feed using aggressive behaviour. In order to minimize this it is recommended to group sows by parity, size and/or body condition to help reduce aggressive interactions at feeding and minimize any power imbalances between sows of varying sizes.

Non-competitive systems deter sows from gaining feed through aggressive behaviour. However, there may still be aggression in front of the feeding stations, as sows attempt to gain quicker access. Competition and aggressive behaviour may be reduced in these systems because sows can have access to the feeders 24/7, therefore they can eat their ration all at once, or visit the feeder several times throughout the day.

Competitive Option 1: Floor Feeding

Floor feeding requires the lowest capital investment, but in turn, requires the highest level of management. However, some producers are confident in their management skills and it is possible to minimize aggressive behaviour of sows. In these systems it is been shown that dominant, or “bully” sows have increased feed intake and weight gain, compared to submissive sows. To minimize this, spreading out feed drops and providing dividers in the pens helps.

Competitive Option 2: Non-Gated (Shoulder) Stalls

Like floor feeding, non-gated stalls (Figure 1) require low capital investment, but high effort in terms of management. Feed is provided in equal quantities to each stall via troughs and partitions provide protection around the head and shoulders of the sow when they are standing or feeding in the stall. The partitions help to reduce aggression and injury, and give the sow an area to eat by themselves; however, sows can easily move around and push other sows from their stall area.

Feeding wet diets, or using a trickle feeding system set to the eating speed of the slowest sows in the group, will help decrease aggressive interactions in this type of system.

Non-Competitive Option 1: Electronic Sow Feeders

An electronic sow feeder (ESF) is a system that requires moderate capital investment, as well as moderate management. An ESF system provides one feeding station for up to 60 sows (depending on the system). Individual feed curves can be directly programmed into a computer. When a sow enters the feeding area, their ear tag is scanned using radio frequency identification (RFID), and this will prompt the release of a sow’s diet allocation. Training gilts to use the system is critical to its success. Employees should also have a good understanding of the computer system in order to identify sows that are not eating due to injury, illness or a missing ear tag, and that may require additional attention. ESF systems may also be utilized to sort sows, feed multiple diets, and identify sows that have returned to estrus.

Non-Competitive Option 2: Free-Access Stalls

Free-access stalls require a high capital investment and increased floor space, but less intensive animal management, compared to other systems. Free-access stalls allow the sows to feed at the same time and they prevent dominant sows from taking feed from submissive sows. Once sows enter the stall a gate behind them shuts so that they are able to be in their stall without being interrupted. They are able to push the back of the stall open and leave whenever they want to. There must be an available stall for each sow in the group. In these systems, individual feeding curves cannot be used. It is im-



Figure 1: Competitive group housing system with non-gated (shoulder) stalls.

Prairie Swine Centre Inc. photo

portant to identify and train sows that are having difficulties with the stalls to ensure they are receiving all the benefits of group housing by leaving the stalls and spending time in the loafing area (free space). Placing enrichment items such as toys and improving the comfort of the loafing areas with walls to lean on and mats or straw to lie on will encourage the sows to use the space.

Non-Competitive Option 3: Free-Access Electronic Sow Feeders

Free-access electronic sow feeders are a relatively new form of non-competitive group housing which is available at an intermediate cost. This housing system combines the advantages of the ESF with those of the free-access stalls. Individual feeding of the sows uses RFID ear tags and programmable feed curves to provide sows with individualized diets, similar to standard ESF equipment. This system requires considerably less pen space than free-access stalls. The stalls can be easily used by sows; however, some may still require training. Aggression during feeding is reduced in this system because of the lower sow-to-feeder ratio (20:1). This system has lower maintenance requirements because it is less mechanically complex, compared to typical ESF systems.

While there are pros and cons to every system, knowing your options for which group housing system best fits your needs and the needs of your animals will aid you in making the best possible decision.

Do you want to learn more about group sow housing and management?

Over the last couple of years we have seen a flurry of activity around sow housing. Many produc-

ers in Ontario have already made the change, or are in the process of doing so now. We estimate that about 30% of Ontario producers are now managing sows housed in groups.

If you are interested in learning more about group sow housing, or you are a producer that already has group sow housing and would like some more tips and tricks from fellow producers as well as researchers, mark your calendars for December 4, 2018. OMAFRA, Ontario Pork, OPIC, the Prairie Swine Centre and the London Swine Conference will be hosting a 1 day Group Sow Housing & Management Seminar at the Best Western (Arden Park) in Stratford. Program and registration details can be found at

www.londonswineconference.ca

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NOISE LEVELS AT FEEDING TIME

From the Sep-Oct 1978 issue

We sometimes accuse our pork producers of turning a deaf ear to our recommendations. Possibly some pork producers are in fact becoming deaf. Some Australian research would indicate that the sound levels pork producers are exposed to at feeding times are potentially more dangerous than the noise from a tractor.

The decibel level of a normal conversation is rated at 60, a factory at 80, a jet plane taking off 110

and the threshold of discomfort at 120

An unreceptive sow gave the boar something to think about with a squeal that registered 115 decibels, the researcher concluded.

Comments: Safety Supply Company in London sell ear protector muffs for prices from \$7-\$17.00. Many farm supply centres also carry these ear protectors.

Andy J. Bunn, Swine Specialist O.M.A.F., London, Ontario

Noise Levels in Decibels

	Before and after feeding Average	During Feeding	
		a.m.	p.m.
Breeding stock	80	95-105	85-97
Growers	70	100-111	91-112
Weaners	70	90-107	95-105

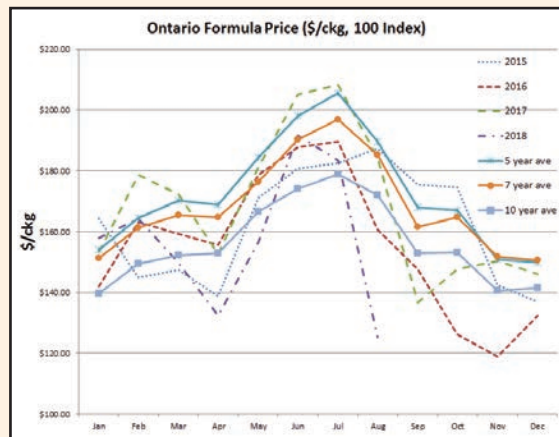


2018 Ontario Monthly Hog Market Facts

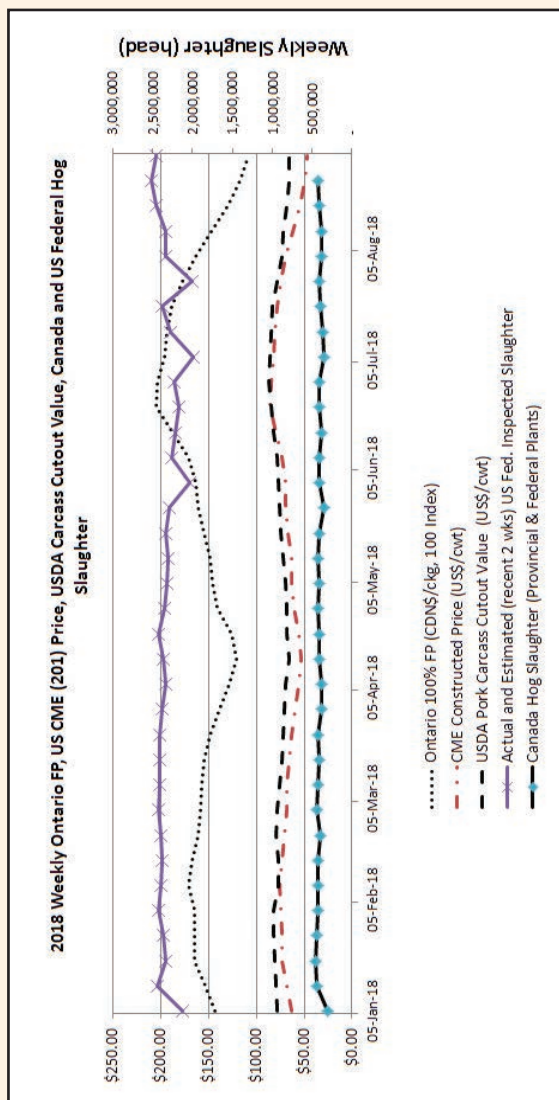
Compiled by Jaydee Smith, OMAFRA

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Month	1st 6 mo.	Jul '18	Aug '18
100% Formula Price (\$/c/kg, 100 index)	\$156.78	\$188.54	\$132.86
* Same Month - Previous year	\$170.99	\$210.92	\$191.96
Average price (\$/c/kg, DW total value)	\$182.31	\$215.98	\$168.52
Low price (\$/c/kg, DW total value)	\$164.21	\$197.27	\$149.00
High price (\$/c/kg, DW total value)	\$213.99	\$247.84	208.65
Ontario Market Hog Sales	2,531,271	383,342	516,386
*% Change Same Weeks - Previous Year	0.5%	1.9%	8.2%
Average Carcass Weight (kg)	103.80	101.33	101.27



Weaned Pigs (\$/pig, 5 kg)**Formula	\$40.71	\$49.02	\$34.54
Feeder Pigs (\$/pig, 25 kg)**Formula	\$64.58	\$77.78	\$54.80
Value of Canadian Dollar (US\$)	\$0.7839	\$0.7609	\$0.7670
* Same Month - Previous year	\$0.7496	\$0.7866	\$0.7928
Prime Interest Rate at End of Month	3.45%	3.70%	3.70%



Corn (farm price) - \$/tonne	\$185.35	\$186.27	\$196.93
* Same Month - Previous year	\$185.93	\$184.65	\$176.67
Soybean Meal (Hamilton + \$20)-\$/tonne	\$545.40	\$544.81	\$529.22
* Same Month - Previous year	\$497.45	\$486.76	\$463.38
Corn - Western Ontario Feed - \$/tonne	\$199.56	\$200.02	\$209.03
* Same Month - Previous year	\$200.77	\$200.47	\$193.73
DDGS FOB Chatham/Sarnia/Alymer (\$/tonne)	242.28	\$214.00	\$194.20
* Same Month - Previous year	\$163.53	\$165.25	\$150.50

Summary of OMAFRA Swine Budget (\$/pig, Farrow to Finish)

Value of Market Hog	\$182.71	\$214.25	\$151.11
Feed Cost	\$116.31	\$119.21	\$118.93
Other Variable Costs	\$43.74	\$44.17	\$43.98
Fixed Costs	\$24.72	\$24.55	\$24.55
Total Costs	\$184.60	\$187.93	\$187.46
Net Return	-\$1.90	\$26.32	-\$36.35

The Weekly Hog Market Facts, Monthly Summaries, and the monthly OMAFRA Swine Budget can be received by email by contacting OMAFRA.Livestock@ontario.ca



2018 Ontario Monthly Hog Market Facts

Compiled by Jaydee Smith, OMAFRA

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Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
CME Constructed Price (US\$/cwt)	\$69.49	\$73.34	\$64.95	\$56.16	\$65.54	\$78.41	\$79.31	\$56.50
* Same Month - Previous year	\$63.21	\$73.76	\$71.86	\$62.96	\$70.19	\$83.69	\$91.63	\$84.10
Pork Carcass Cutout Value (US\$/cwt)	\$80.34	\$78.98	\$73.88	\$68.08	\$72.81	\$81.84	\$82.70	\$69.05
* Same Month - Previous year	\$80.18	\$84.08	\$80.20	\$74.86	\$83.41	\$94.99	\$103.48	\$93.42
Retail Price (US\$/lb)	\$3.75	\$3.74	\$3.75	\$3.75	\$3.74	\$3.70	\$3.73	
* Same Month - Previous year	\$3.57	\$3.64	\$3.78	\$3.75	\$3.73	\$3.76	\$3.83	\$3.94

Early Weaned Pigs Cash Based Value	\$72.24	\$69.55	\$48.76	\$33.36	\$29.67	\$20.15	\$16.30	\$17.32
* Same Month - Previous year	\$53.01	\$53.47	\$43.35	\$30.23	\$30.15	\$25.13	\$25.00	\$20.20
40 Pound Feeder Pigs Cash Based Value	\$82.76	\$85.27	\$81.71	\$66.99	\$57.52	\$42.85	\$30.41	\$20.55
* Same Month - Previous year	\$68.06	\$72.95	\$74.13	\$60.38	\$53.94	\$51.73	\$51.80	\$41.26

Commercial Hog Slaughter '000 Hd	10,714.1	9,636.3	10,724.6	9,992.5	10,217.7	9,606.2	9,595.7	
* % Change from Previous Year	5.8%	2.8%	0.4%	7.0%	2.7%	-2.7%	6.4%	
Number of Sows Slaughtered '000 Hd	264.2	238.0	259.0	245.8	261.7	247.2	241.8	
* % Change from Previous Year	7.5%	1.5%	-5.4%	4.8%	2.2%	-4.1%	9.2%	
Ave. Barrow & Gilt Dressed Wt. (lbs.)	212	212	212	213	211	207	205	
* Change from Previous Year (lbs.)	+1	+2	+2	+2	+3	+1	0	

Pork Production**	6.3%	3.5%	1.3%	7.7%	3.7%	-2.2%	6.5%	
Pork In Cold Storage**	10.8%	7.4%	12.0%	7.5%	6.0%	0.5%	-1.2%	
Pork Exports**	6.4%	8.9%	2.7%	18.4%	0.3%	1.3%	8.9%	
Feeder Pig Imports**	-1.2%	-7.1%	-5.8%	-4.0%	-0.8%	-15.9%	-3.9%	
Market Pig Imports**	-5.7%	-21.1%	-17.9%	-1.4%	-6.3%	-20.2%	2.8%	

Summary of Iowa Swine Budget (US\$/pig, Farrow to Finish, 270 lb. pig, live wt.)

Value of Market Hog	\$138.58	\$135.66	\$114.17	\$103.51	\$128.22	\$159.46	\$141.55	\$182.71
Feed Cost	\$70.43	\$71.68	\$73.53	\$75.27	\$77.43	\$78.89	\$77.67	\$116.31
Other Variable Costs	\$38.21	\$38.34	\$37.66	\$37.78	\$39.22	\$41.00	\$40.13	\$43.74
Fixed Costs	\$16.19	\$16.19	\$16.03	\$16.03	\$16.03	\$16.48	\$16.48	\$24.72
Total Costs	\$124.84	\$126.21	\$127.22	\$129.08	\$132.68	\$136.37	\$134.28	\$184.60
Net Return	\$13.74	\$9.45	-\$13.05	-\$25.56	-\$4.46	\$23.09	\$7.28	-\$1.90



Swine Budget – August 2018

Compiled by Jaydee Smith, OMAFRA

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Income (\$/pig)	Farrow to Wean	Nursery	Grow-Finish	Farrow to Finish
Market Pig @ 101% of Base Price \$132.86/ckg, 110 index, 101.02 kg plus \$2 premium				\$151.11

Variable Costs (\$/pig)

Breeding Herd Feed @ 1,100 kg/sow	\$13.30			\$14.59
Nursery Feed @ 33.5 kg/pig		\$17.51		\$18.45
Grower-Finisher Feed @ 277 kg/pig			\$85.90	\$85.90
Net Replacement Cost for Gilts	\$1.97			\$2.16
Health (Vet & Supplies)	\$2.16	\$2.10	\$0.45	\$5.03
Breeding (A.I. & Supplies)	\$1.80			\$1.98
Marketing, Grading, Trucking	\$0.90	\$1.50	\$5.76	\$8.33
Utilities (Hydro, Gas)	\$2.35	\$1.38	\$2.13	\$6.17
Miscellaneous	\$1.00	\$0.10	\$0.20	\$1.40
Repairs & Maintenance	\$1.26	\$0.61	\$2.15	\$4.19
Labour	\$6.27	\$1.85	\$4.00	\$12.83
Operating Loan Interest	\$0.28	\$0.36	\$1.23	\$1.90
Total Variable Costs	\$31.29	\$25.41	\$101.81	\$162.91

Fixed Costs (\$/pig)

Depreciation	\$4.22	\$2.04	\$7.18	\$13.95
Interest	\$2.36	\$1.14	\$4.02	\$7.81
Taxes & Insurance	\$0.84	\$0.41	\$1.44	\$2.79
Total Fixed Costs	\$7.42	\$3.59	\$12.64	\$24.55

Summary of Costs (\$/pig)

Feed	\$13.30	\$17.51	\$85.90	\$118.93
Other Variable	\$17.99	\$7.90	\$15.92	\$43.98
Fixed	\$7.42	\$3.59	\$12.64	\$24.55
Total Variable & Fixed Costs	\$38.71	\$28.99	\$114.45	\$187.46

Summary	Farrow to Wean	Feeder Pig	Wean to Finish	Farrow to Finish
Total Cost (\$/pig)	\$38.71	\$69.29	\$145.00	\$187.46
Net Return Farrow to Finish (\$/pig)				-\$36.35
Farrow to Finish Breakeven Base Price (\$/ckg, 100 index) includes 101% Base Price & \$2 Premium				\$165.25
Farrow to Finish Breakeven Base Price (\$/ckg, 100 index) excludes 101% Base Price & \$2 Premium				\$168.70

This is the estimated accumulated cost for a market hog sold during the month of August 2018. The farrow to wean phase estimates the weaned pig cost for March 2018 and the nursery phase estimates the feeder pig cost for May 2018. For further details, refer to "Notes 2018 Swine Budgets" posted at <http://www.omafra.gov.on.ca/english/livestock/swine/finmark.html>.

DECREASING FEED PRODUCTION COSTS

by
ELIZABETH
SHIH



Researchers study piglets' performance response to acid-preserved high-moisture wheat.

CNH Industrial photo



Producers can preserve high-moisture low-quality wheat by acidification for use as piglet feed, which can improve weanling digestive growth and health.

Pigs do not secrete sufficient amounts of hydrochloric acid (HCl) in their stomachs at the time of weaning to effectively digest protein and maintain gut health.

Adding acid to the feed of weanling pigs will lower pigs' gastric pH and so increase their digestive efficiency and health, previous research showed. For instance, pigs' stomach acid provides a barrier to pathogenic microorganisms, since low pH conditions control those populations. Acid can also improve the digestion of protein and other nutrients.

Typically, when weanling pig diets are supplemented with dietary acids to enhance digestion, piglet growth rates increase by 6 to 12 per cent (Tung and Pettigrew, 2006).

Wheat, often used on the Canadian Prairies as an energy source in pig feed, is typically harvested at 15 per cent moisture or lower to maintain its quality during storage.

When environmental challenges result in high-moisture low-quality wheat crops, producers often resort

Table 1: Corrosion rate of carbon steel and galvanized steel exposed to either phosphoric or propionic acid when used as preservatives for high-moisture wheat

Acid	Coupon type	Average corrosion rate (mils per year)	Classification
Phosphoric	Carbon steel	0.16	low
Phosphoric	Galvanized steel	7.00	severe
Propionic	Carbon steel	2.94	moderate
Propionic	Galvanized steel	7.46	severe

Table 2: pH and mould measurements in acidified high-moisture wheat

Acidified high-moisture wheat			
Acid	Initial (pH)	Final (pH)	Mould count, colony forming unit/gram
Phosphoric (Phos)	4.27	5.72	7,000
Propionic (Prop)	4.56	4.85	20

to drying grain artificially or storing it in oxygen-limiting silos. But these processes can jeopardize nutrient value and increase farmers' costs for fuel, power and specialized drying structures. As an alternative, producers can preserve high-moisture low-quality wheat by acidification for use as piglet feed, which can improve weanling digestive growth and health.

Whether the benefits of diet acidification are maintained when piglets

are fed acid-preserved high-moisture wheat is not known and requires further investigation. So, researchers conducted a nursery feeding trial to evaluate the efficacy of feeding acid-preserved high-moisture wheat as an alternative to in-feed acidification.

Experiment method

Technicians reconstituted wheat to 20 per cent moisture content and then added either a commercial,

phosphoric acid-based feed acidifier or propionic acid. They stored the mixture in polyethylene barrels for 34 days. Researchers embedded carbon steel and galvanized steel coupons in the treated grain to measure the effects of acids on corrosion rate in storage silos and bins.

As Table 1 on page 37 indicates, galvanized steel was more prone to corrosion than carbon steel. Propionic acid was more corrosive than phosphoric acid.

Technicians monitored grains for mould growth and, when levels were high, they analyzed samples for a complete mycotoxin profile. (See Table 2 on page 37.) The amount of mycotoxin in the wheat remained below the maximum allowable level.

Researchers weighed and randomly distributed a total of 160 newly weaned pigs (21 days of age, approx. 6.5 kg [14.3 lbs.] in body weight) to 40 pens with four pigs per pen. The scientists assigned the pens to one of five treatments in a randomized complete block design.

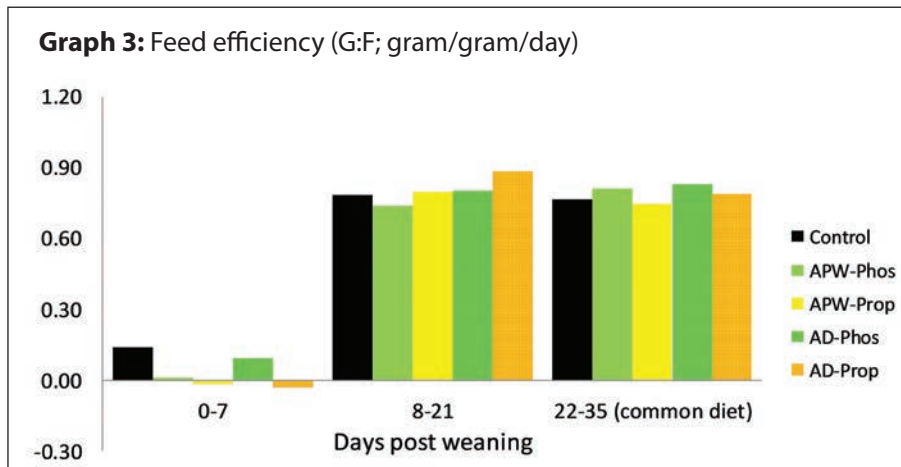
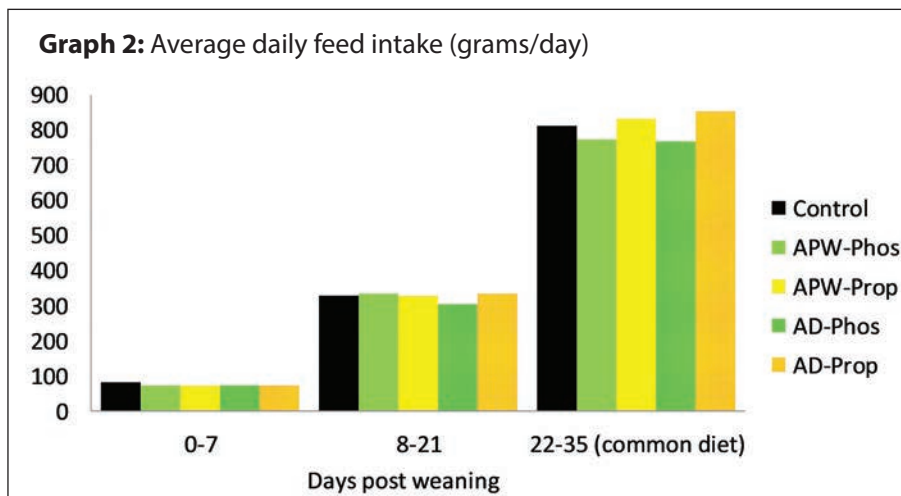
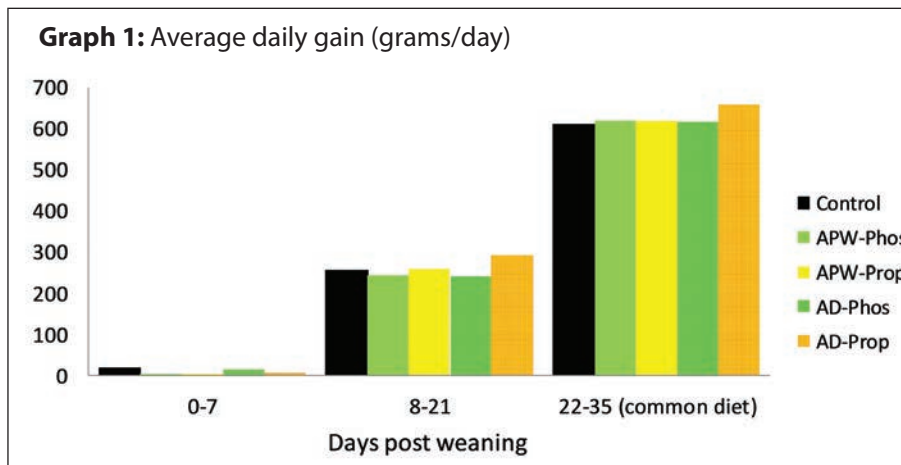
Researchers arranged treatments to measure the effect of each type of acid (phosphoric versus propionic) and the two methods of application (acid-preservation of moist wheat versus direct acidification of dry wheat), plus a non-acid control.

To summarize: technicians fed piglets a wheat-based diet without acid (the control), an acid-preserved wheat with phosphoric acid (APW-Phos), an acid-preserved wheat with propionic acid (APW-Prop), an acidified diet with phosphoric acid (AD-Phos), or an acidified diet with propionic acid (AD-Prop).

Technicians provided the pigs with a phase 1 diet between days 0 to 7 and the phase 2 diet from days 8 to 21 post-weaning. The animals received a common phase 3 diet from days 22 to 35. Researchers collected the average daily gain (ADG) and average daily feed intake (ADFI) at days 7, 21 and 35 and used this data to calculate feed efficiency (G:F=ADG/ADFI).

Results

Grain quality, grain pH, mycotoxin levels and corrosion rate. When the





The benefits of using wheat preserved by phosphoric acid may be gained without producers having to manage the corrosiveness of propionic acid.

grain was in storage, the mould count of the phosphoric acid-preserved wheat was higher than that of the propionic acid-preserved wheat. However, the mycotoxin levels in phosphoric acid consistently occurred at levels lower than the maximum allowable limits.

The pH in phosphoric acid-preserved wheat increased from 4.27 to 5.72, while the pH in propionic acid-preserved wheat increased from 4.56 to 4.85.

Overall, after the addition of acid to the wheat, the trend was for pH to rise over time, most notably for wheat preserved with phosphoric acid. The pH may rise due to such issues as the production of ammonia by microorganisms, the reaction of grain components to the acid and the evaporation of the acid.

The benefits of using wheat preserved by phosphoric acid may be gained without producers having to manage the corrosiveness of propionic acid.

Growth rate (ADG). Acidification, the type of acid and the method of

acid application, or a combination of all three, had no effect on the growth rate of pigs during days 0 to 7 after weaning, and days 22 to 35 after weaning. However, during days 8 to 21 after weaning, pigs fed diets with propionic acid, regardless of the method of application, tended to grow at higher rates compared to those fed diets with phosphoric acid.

Feed intake (ADFI). Acidification, the type of acid and the method of acid application, or a combination of all three, had no effect on feed intake of pigs during days 0 to 7 after weaning, and days 8 to 21 after weaning. However, during days 22 to 35 (when pigs received a common diet), those pigs fed propionic acid during phases 1 and 2 had higher feed intake compared to those fed phosphoric acid, suggesting a potential for a carry-over effect for propionic acid.

Feed efficiency (G:F). Acidification, type of acid and the method of acid application, or a combination of all three, had no effect on the feed efficiency of pigs during days 0 to 21 after weaning. During days 8 to 21,

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Through acid preservation, producers have an alternative tool of using low-quality high-moisture wheat as feed, with a potential to reduce cost by eliminating the need to dry the grain artificially.

pigs fed propionic acid had improved feed efficiency compared to pigs fed the non-acid control ($P < 0.05$) and compared to pigs fed diets with phosphoric acid ($P < 0.01$). However, during days 22 to 35, pigs fed phosphoric acid during phases 1 and 2

had higher feed efficiency compared to those fed propionic acid, again suggesting a potential for a carry-over effect for phosphoric acid.

The bottom line

Researchers wanted to determine the effectiveness of feeding acid-preserved high-moisture wheat as an alternative to directly supplementing acid to the wheat diet of weanling pigs.

Acidification of wheat with propionic acid resulted in a significant improvement in feed efficiency (G:F) in pigs in days 8 to 21 after weaning, regardless of the method of application. Feeding acid-preserved wheat using propionic acid had comparable performance with pigs fed acidified diets using propionic acid.

The addition of phosphoric acid to wheat did not significantly affect piglet performance. Its potential as a grain preservative requires further investigation.

Regardless of which acid producers use, galvanized steel is more prone to corrosion than carbon steel. Propionic acid is also more corrosive than phosphoric acid in carbon steel but not in galvanized steel.

Overall, organic acids such as propionic acid are typically more expensive and are also more corrosive to farm equipment than the inorganic phosphoric acid.

Through acid preservation, producers have an alternative tool of using low-quality high-moisture wheat as feed, with a potential to reduce cost by eliminating the need to dry the grain artificially. **BP**

Danilo Sotto, Jr. and Dr. Denise Beaulieu conducted this research. Sotto is a PhD Candidate in the college of agriculture at the University of Saskatchewan (U of S). Beaulieu is a research scientist at the Prairie Swine Centre (PSC) and an assistant professor in the college of agriculture at U of S. PSC conducts near-market research that can be applied by the pork industry within a one- to seven-year time frame.

Swine Innovation Porc financially supported this project as part of Growing Forward 2. Beaulieu and Sotto also gratefully acknowledge the strategic program funding from Sask Pork, Alberta Pork, Ontario Pork, the Manitoba Pork Council and the Saskatchewan Agriculture Development Fund. Beaulieu and Sotto thank the production and research technicians at PSC who made it possible to conduct the experiments that support this trial.

Sotto also gratefully acknowledges the Gowans Feed Consulting Graduate Student Award Program that provided him with an industry-funded position to undertake graduate research and experimentation at PSC.

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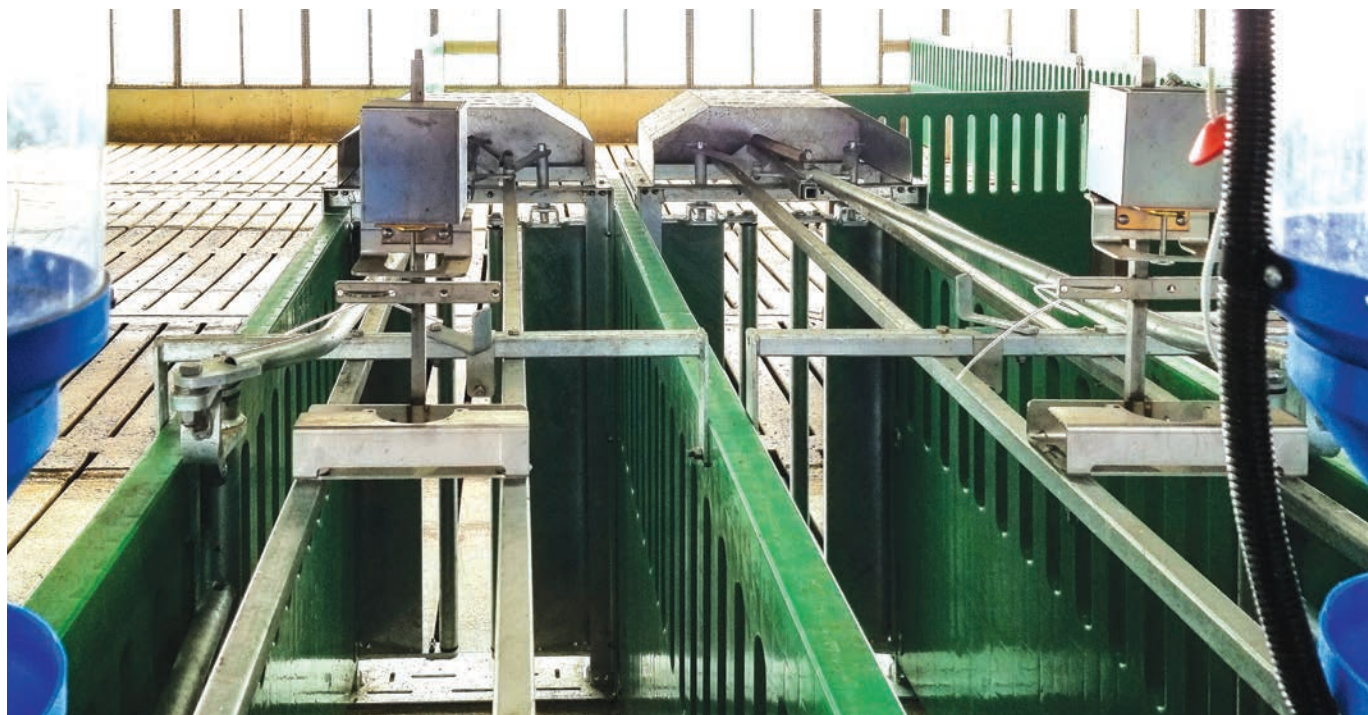
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PLANNING FOR LOOSE HOUSING SUCCESS

When shaping herd management practices, consider static groups and post-implantation groupings.

Maximus photo



Double side-by-side stations help to prevent sows from taking ownership of a station.

Group housing systems have five essential elements, says Dr. Lisbeth Ulrich Hansen of the Danish Pig Research Centre.

- These components are
- sufficient space allowance and adequate hospital pens
 - individual feeding
 - stable groups of animals
 - close daily inspection of the herd
 - effective gilt management prior to first service

And, in terms of reproductive performance, individual feeding is the most important factor. The ability to feed sows individually improves farrowing rate and litter size compared with stanchion systems, free-stalls, long troughs and floor feeding, the Centre's research shows.

Static or dynamic groups?

In static systems, producers move groups of sows into pens at the same time. Farmers group the animals by

projected farrowing dates and keep the herd intact (except for drop-outs) during gestation. Producers do not add new sows to the original groups.

This system makes it easier for farmers to manage the gestation barn.

It also allows sows easier access to the feed stations.

Static groups are better for sow welfare and produce lower levels of aggression than dynamic groups, advocates of such systems say. Avoiding the introduction of new sows enables the group to create a stable social structure (dominance hierarchy) more quickly. Since static groups are smaller than dynamic ones, aggression is reduced.

Hansen prefers static grouping systems. They are based on weekly breeding groups and are easier to manage. Producers with these systems do not need automatic separation facilities on the electronic sow feeder (ESF). As a result, the ESF station can be simpler and cheaper,

and will not break down as easily as stations used in dynamic grouping systems.

Recent University of Pennsylvania research on 11 ESF sow farms by John Hurst, Meghann Pierdon and Thomas Parsons also supports the advantages of static group systems.

Comparing static and dynamic grouping systems, these scientists found:

- Sows in static group systems have improved measures of physical welfare, such as fewer scratches and less lameness.
- Animals in these systems established a more stable social hierarchy and had decreased aggression.
- Sows in static housing were less timid, as demonstrated by more contact with novel objects and higher human approach scores.
- Overall, no difference in productivity existed between static and dynamic housing systems.

Pre- or post-implantation groupings?

Most commonly, producers move their sows to group housing after pregnancy check. So, farmers keep their sows in individual stalls for the first trimester of pregnancy and then move the animals to group housing. Using this method, barn staff can individually feed sows, do heat checks, watch for returns, and do pregnancy checks in stalls.

And this management strategy aligns with recent research.

When they compared pre- and post-implantation mixing, the University of Pennsylvania researchers found:

- Sows mixed post-implantation had more positive human approach scores.
- No difference in sow productivity.

Producer experiences

Joel Phelps, co-owner of Paragon Farms, a 20,000-sow production system in Ontario, is experienced with group sow housing. Indeed, he has converted his operation, as well as many others across North America, to ESF group housing. Phelps is now an ESF specialist for Maximum Ag Technologies.

Here are some of his recommendations for success based on those experiences:

Pre- versus post-implantation mixing: “Mixing sows right after breeding disrupts the pen and increases the barn size requirements. We want to keep them in stalls first and then form groups after they have had a positive pregnancy check.”

Static grouping: “It is not necessary to separate animals in pens by size or parity. We fill pens by due date, we try avoid any sow from coming into heat in the pen and we try to reduce competition for feed. Filling pens by due date and mixing all parities after they are confirmed pregnant reduces the competition for feed and reduces stress levels. Following this approach, we found that gilts learn from older sows how and when to eat.”

Feed station: “Being able to accurately feed sows individually can have the greatest impact on



Keeping sows in stalls until staff complete pregnancy checks simplifies the process.

productivity. Sows must have the opportunity to eat at their own pace, in a safe and comfortable space.

“We use feed stations where sows and gilts back out after they are finished eating. We’ve had no problems with this and think it’s one of the keys to the success of simple, mechanical feed station design.

“The feed stations should have a solid area at the bottom and an opening at the top so sows can see out. Pigs outside the station should not be able to contact the sow in the station. The feeding dispenser should be adjustable and easily set to accurately monitor and dispense feed.”

Pen design: “In our experience, pen shape and layout have the biggest impacts on sow longevity. Sleeping areas should be separated from the feeding, drinking and dunging areas. Pens should be laid out so that sows can see into the entrance of the feeding stations from any point in the pen. Stations should be separated to avoid funneling all sows to one area at feeding time.

“We use double side-by-side stations to avoid sows taking ownership of a station. Water should be outside the feeding area to encourage sows to finish eating and exit the pen to drink. To keep

sleeping areas dry and comfortable, water should not be in or around these sections. Sows should not be forced to walk through or by another sleeping bay to get to feed, water or the dunging area.

“The sleeping areas and pen separation gating should be solid at least one-third of the way up – this allows sows to exhibit normal behaviours and lay with their reproductive organs protected.

“Multiple pass-through gates are important, so caretakers can enter and exit the pens quietly and calmly. Climbing over gating or opening and closing gates can startle the sows and cause disruption in the pen.”

“Plan for one hospital space per feed station to pull lame, injured or unthrifty sows from the group and allow for recovery.” **BP**

Acting as Senior Strategic Adviser for Maximus, Dr. Tom Stein is the designer of the PigCHAMP software and co-founder of MetaFarms. He was named as one of the top 50 men and women who truly made a difference in the U.S. pork industry. The American Association of Swine Veterinarians recognized Stein for his outstanding contributions to swine production and health.



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MEATY ISSUES IN THE HOG MARKET

Recent trade negotiations and disease outbreaks have caused notable shifts in the market and industry.

This year has been an eventful one for the pork industry, to say the least, as U.S. President Donald Trump's trade wars with Mexico and China took centre stage.

Fortunately, the American and Mexican governments confirmed a bilateral trade deal in late August, which sent hog futures to limit-up levels. As part of the trade agreement, Mexico will immediately purchase as many American farm products as possible, Trump said.

In advance of the deal, Mexico already purchased these products, fearing a possible tariff situation in case the trade deal did not go through. As a result, market participants were uncertain how much extra demand Mexico would have for American imports in the short term.

But both countries were certainly relieved to have reached a trade agreement.

In August, the U.S.-China mid-level trade talks did not produce any significant results. Both sides continued to be patient for the long haul.

Trade analysts largely expected this outcome, as Trump said that he did not anticipate much progress during

these negotiations. At the time, he also noted that he had no timeframe for concluding trade talks, saying, "I'm like them (China); I have a long horizon."

Both sides are expected to resume discussions in a November summit between Trump and his Chinese counterpart Xi Jinping.

Meanwhile, in August, both the U.S. and China imposed tariffs on an additional \$16 billion in trade, taking the total to \$50 billion for both sides.

The U.S. government also threatened to increase tariffs to 25 per cent on another \$200-billion worth of Chinese goods, including chemicals, textiles, minerals and consumer goods.

For the American hog industry, which has increased supply and processing capacity over the past year or so in anticipation that export demand would continue to grow, any good news on the demand front was reflected in steep futures price rises.

This year, especially, market participants have keenly followed trade news. In August, the Chinese pork industry grappled to control the country's first outbreak of African

swine fever (ASF) that threatened the domestic pig herd. China has the world's largest herd with as many as 600 million pigs annually and the country is the world's largest pork consumer.

Chinese farmers started to sell pigs for slaughter, worried that the disease would hit their herds and that local prices would nosedive. Purchasing demand dropped and demand from end users was weak, pushing domestic prices down. The potential spread of any contagious hog disease, like ASF, would negatively impact consumer demand in China.

In such circumstances, the potential exists for increased Chinese demand for imported pork.

In order for the U.S. pork industry to take advantage of such export opportunities, the American and Chinese governments must resolve their trade differences. Lower tariffs could open the door for more U.S. product going to China.

As in the U.S., rising incomes in recent years have led to soaring domestic demand for more meat and richer diets, causing an expansion of the Chinese hog herd. Given these



Hog futures reversed steeply upwards in August by around +27 per cent for the December contract.

Source: QT Info Systems Inc, Chicago IL.

growing supplies, China's local hog industry is vulnerable to the costs and losses associated with hog disease outbreaks as heavy supplies of pork already pressure producers' bottom lines. But consumer demand will not decline and U.S. pork exports can fill the gap.

Though ASF does not harm other animals or humans, if an outbreak occurred in North America, export markets would close immediately. In China, newly expanded pork operations sit idle, which increases production losses and pushes even some of the big companies into losses, because of the ASF disease risk.

Chicago Mercantile Exchange (CME) hog futures reversed steeply upwards in August by around +27 per cent for the December contract.

Trade resolution news and the Chinese ASF outbreak supported this price increase. Albeit from technically oversold levels, the steep nature of the climb tells us that the market yearned for demand impetus. You have to feed the bull!



Kondor83/Stock/Getty Images Plus photo

Chinese farmers started to sell pigs for slaughter, worried that the disease would hit their herds and that local prices would nosedive.

So where do we stand? As far as the American pork industry is concerned, it is at the mercy of how the government sorts out its trade wars.

The outcome of trade negotiations with China and Canada has far-reaching repercussions. The U.S.-China trade row pushed up the latter's cost for livestock feed. A trade deal would increase Chinese commitment to the purchase of American soybean meal and/or soybeans.

American beef exports to China could also get a boost as this Asian country increases its demand for richer diets. **BP**

Maurizio "Moe" Agostino is chief commodity strategist and Abhinesh Gopal is head of commodity research with Farms.com Risk Management. Risk Management is a member of the Farms.com group of companies. Visit RiskManagement.Farms.com for more information.

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REFINING THE ART OF SELLING

While we often narrowly associate these skills with a specific job, they are important no matter your role.

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Understanding and studying sales techniques is an essential life skill.

Nothing happens until someone sells something, it has often been said.

Yet, to many farmers, the act of making a sale implies pressuring or even manipulating. All too often, it invokes negative used-car-salesperson stereotypes.

In practice, however, the act of making a sale involves logically explaining the benefits of a product or idea. And these skills are applicable in many situations.

Unfortunately, we often misunderstand and undervalue the sales skill set. Regardless of your position in the ag industry, you need these skills to succeed.

Where are sales skills required? Business owners need these skills for financing, employee motivation, and innovation. Employees need sales skills to sell products and services to customers but also to sell themselves within the company.

Your sales skills (or communication skills) establish your personal brand and that of your industry.

In business management, the general rule of thumb is that 80 per

cent of sales come from 20 per cent of clients.

Similarly, the thinking is that the top 20 per cent of salespeople make 80 per cent of the sales. The top salesperson this year will likely be the top salesperson next year.

Understanding and studying sales techniques is an essential life skill, no matter your role. We must continuously develop and improve these skills, especially with the changing dynamics in the marketplace, such as online selling, global marketing and social media customer conversions.

I learned, for example, Joe Girard's Law of 250. The Guinness World Records listed him as the number one car salesperson in 1973. He worked in Detroit, and people lined up to buy a car specifically from him. On average, he sold six cars a day. He could sell upwards of 18 in a day.

Working under the assumption that the average person knows 250 others, Girard recognized that poor conduct on a sale could have significant ripple effects. On the flip side, if he did an exceptional job, his custom-

ers would recommend him, almost exponentially expanding his potential customer base.

His salesmanship principles still apply: go the extra mile, be solution-oriented, ask for referrals and show appreciation.

On average, individuals have about 13 seconds to make a positive first impression and these preliminary judgements are based largely on how you look and sound.

Train and prepare for presentations, as these strategies can set you apart from others.

At the very least, prepare an elevator pitch. It is a brief explanation of an idea or even yourself. Keep this statement simple, so it is easily understood. An elevator pitch should be between 30 seconds and two minutes in length – the amount of time you would need to reach your destination in an elevator.

Can you make such a pitch? **BP**

Richard Smelski has over 35 years of agribusiness experience and farms in the Shakespeare, Ont. area.



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