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PRAIRIE SWINE CENTRE

Fall 2026 Volume 35, Number 2



# Walking the Room: A Daily Practice Protecting Pig Health and Barn Performance





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The importance of walking the room can be often overlooked, however it is one of the most valuable tools in your operation. Done properly, it can identify health concerns, equipment failures, ventilation problems and welfare issues before they become costly or difficult to correct. The goal is not simply to find what is wrong. It is also to recognize what is normal, confirm that systems are working properly and respond quickly when conditions begin to change.

The *Walking the Room Handbook* emphasizes a practical approach: assessing the pigs, the pen and the room or barn environment every time. This method applies across all stages of production, although the specific observations will differ between phases of production.

*(Walking the Room ... cont'd on page 2)*

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Program funding provided by

SaskPork ManitobaPork Alberta Pork Saskatchewan Ministry of Agriculture

Publication # 40010021

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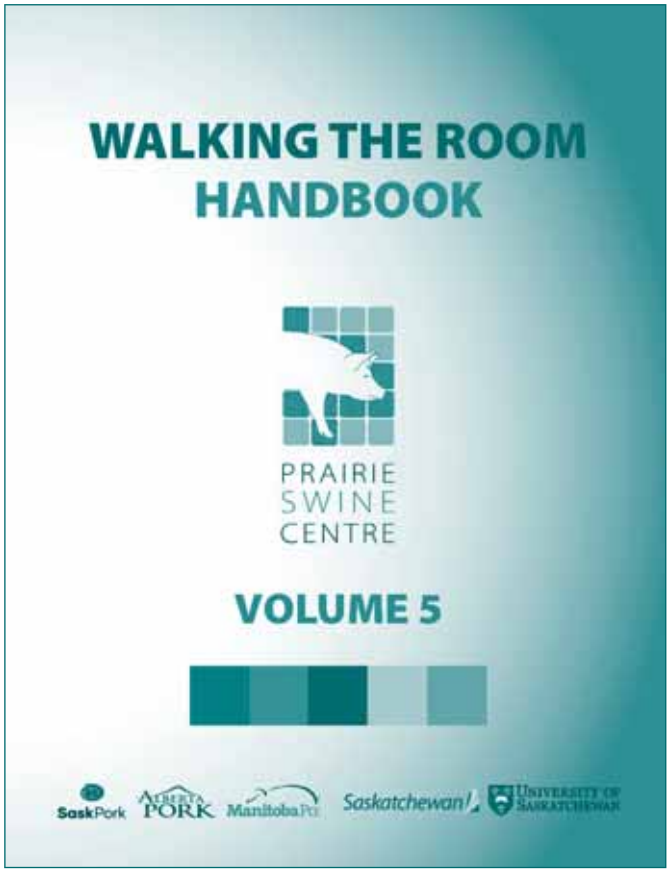
### Start calmly and observe

The greatest value comes from observing pigs before they are disturbed. In the morning, approach quietly and, where possible, look through the door window before entering. Observe how the pigs are positioned and whether their behaviour appears comfortable and normal.

When everything is working properly pigs commonly rest close together or touch each other. However, pigs piled on top of one another may be cold, while pigs lying far apart may be too warm. Both patterns can also point to potential issues with ventilation, drafts or unsuitable stocking density. Observe whether pigs are using the pen as expected, with distinct sleeping and dunging areas. Changes in these patterns can be an early indication that the room environment is no longer comfortable.

Enter the room slowly and walk through the centre alley before entering individual pens. This allows staff to observe every pen without immediately disturbing the animals. Use all four senses:

- Look for abnormal behaviour, injuries, wet areas, deadstock and damaged equipment.
- Listen to coughing, wheezing, squealing, fighting or unusual fan sounds.
- Smell for ammonia, heavy or stale air and other unexpected odours.
- Feel for drafts, excessive heat, humidity or cold spots.




A calm approach is important because startled pigs may not behave normally. Once the group has been observed from outside the pen, enter carefully and encourage the pigs to stand and move.

### Assess every pig from nose to tail

A pen-level assessment should include every pig, not just the pigs that appear obviously sick. Watch how each pig rises, walks and interacts with its pen mates. A pig that is slow to move, reluctant to stand or avoid interaction may be lame or experiencing pain.

Check the animal from nose to tail. Look at:

- Alertness and responsiveness.
- Breathing rate and effort.
- Body condition and gut fill.
- Skin, hair and visible lesions.
- Eyes, ears, mouth and snout.
- Joints, feet and legs.
- Belly, hernias and reproductive structures.
- Tail, anus and signs of diarrhea.

> *"Developing a logical and structured approach for daily tasks is an important step to achieve long term success."*

Look for normal breathing (regular with approximately 25 to 35 breaths per minute). Pay special attention to panting, mouth breathing, coughing, wheezing, sneezing or laboured breathing should be investigated. Deep, gasping breaths may point toward respiratory problems, while shallow, rapid breathing can be associated with pain or painful breathing.

Body condition is another important early-warning tool. Healthy pigs should be sound, well-muscled and have normal gut fill. Visible spines, ribs or hips, hollow flanks, a flat appearance or hollow-looking eye sockets may indicate weight loss or poor intake. Lameness can contribute to weight loss if pigs make fewer trips to the feeder, usually indicating that something else is going on in the room.

Skin and coat changes also deserve attention. Lumps, sores, scabs, hair loss, discharge and crusting may be associated with infection, parasites, fighting, nutritional problems or behavioural issues. Blue colouring of the ears, nose or feet, shivering and raised hair are serious signs that require prompt attention and should be managed according to farm and veterinary protocols. It is a good idea to stay in contact with your herd health veterinarian when something out of the normal occurs. Taking a photo is an easy way to accomplish this.

## Treat problems early

The purpose of identifying an issue is to act on it. Sick or injured pigs should receive treatment according to the farm's protocol, and treatments must be recorded accurately. Non-competitive or fall-behind pigs should be moved to an appropriate pen where they can access feed, water and care. Critically ill animals should be moved to a hospital pen or considered for humane euthanasia. Hospital pens should be among the best pens in the room. They should have a stable temperature, good drainage, easy access and a comfortable, clean and dry environment. A hospital pen that is poorly located or uncomfortable will not support recovery.



Behavioural problems such as tail, side or ear biting, belly nosing, vulva biting, bar biting and chronic aggression should also results in critical look at the facility. Check stocking density, water availability, feed access, air quality, temperature, pen cleanliness and enrichment. Injured pigs should be treated or isolated, and it may be necessary to remove the aggressors rather than repeatedly treating the victims. Deadstock should be removed promptly using appropriate personal protective equipment. Staff should observe the carcass, including its body condition and whether it is cold or stiff, then move it to the designated deadstock area according to farm protocol. Equipment, hands and forearms should be cleaned and sanitized afterward. Record mortality carefully and report increasing or repeated losses.

## Check feed, water and pen condition

Walking the room is also an equipment inspection. At the feeder, check both the supply at the top and the feeder pan below. A feeder can appear full while the outlet is blocked by moisture-cemented feed or excessive fines. Confirm that feed is clean, dry and accessible. As a practical reference, feeder pan coverage should generally be about 40% to 50% most of the time, decreasing to approximately 30% for finisher pigs weighing 70 kilograms or more. Feed on the floor suggests wastage and may indicate that the feeder opening needs adjustment. Pigs fighting around feeders or working hard to obtain feed may also signal poor feeder adjustment or inadequate access.

Water deserves equal attention. Water intake is typically two to three times feed intake, and a decline in consumption may be an early sign of illness. Monitor daily water use where possible and investigate sudden decreases or increases, in addition to several consecutive days of lower use. Leaking drinkers increase water costs, add manure volume and create wet, uncomfortable pens. Check drinker height and flow regularly. For 90-degree nipple drinkers, the nipple should be approximately at the shoulder height of the smallest pig in the pen. For 45-degree drinkers, the nipple should be about five centimetres above the back of the smallest pig. Drinkers that are too low can cause injuries and damage, while drinkers that are too high may limit water intake. Flow requirements change as pigs grow, so adjustments should be part of routine maintenance.

Inspect floors for wetness, manure accumulation, feed wastage and diarrhea. Excessive wetness may indicate a leaking water line or drinker. Don't leave damaged infrastructure too long, broken slats, damaged gates, sharp edges and broken penning can injure both pigs and staff and should be corrected promptly. Bigger the pigs the harder they are on things. A small repair always becomes a larger one when left too long.

## Manage temperature and ventilation together

Temperature should never be assessed using the thermometer alone. The effective environmental temperature experienced by pigs is influenced by air movement, humidity, stocking density, wetness. A room that appears warm on the controller may feel cold to pigs exposed to a draft. Conversely, high stocking density or bedding can make conditions feel warmer. Use pig behaviour as a practical indicator:

- Piled pigs may be cold or exposed to drafts.
- Pigs lying far apart may be too warm.
- Heavy breathing, wet resting areas and reduced contact between pigs may indicate heat stress.
- Pigs dunging in the wrong area may be avoiding an uncomfortable draft or cold spot.

Check fans, inlets, louvers, heaters and controllers. Minimum ventilation fans should be operating efficiently, and changes made at the controller should match what is actually happening in the room. Inspect fans for dust, damage and wiring problems. Dirty blades can significantly reduce ventilation efficiency. In winter, ensure unused fans are properly covered and that snow or ice is not blocking exterior air inlets.

Air quality should be checked especially carefully in the morning. Fog, condensation, frost, heavy air, dust or ammonia odour may indicate excessive humidity or inadequate air exchange. Persistent lameness, illness or dirty pens in one room across multiple batches may indicate a recurring ventilation or building problem. Good records make these patterns easier to identify.

*(Walking the room ... cont'd on page 11)*

# Stockmanship first: experience passed from one generation to the next



**Barn Insights Series – Practical Solutions to Group Sow Housing (Part 3)**



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In Canada, approximately 20% of swine breeding herds operate as family-run barns housing between 150 and 600 sows. Many of these farms have deep roots in pig production, with knowledge and experience passed down through generations. As these operations transition to group housing, they often face the challenge of balancing capital investment with limited labour capacity while maintaining effective herd management. Dave Linton, together with his wife Brenda and son Jeff, operates one such farm in Walton, Ontario. Managing a herd of around 200 sows, the family draws on decades of experience as they navigate this transition. They shared their story on how they successfully transitioned to a group housing system with us.

> "That sounds like as awful lot of work, but it's not, because you're in with the pigs. If there's a lame pig or there's a pig in heat, you see those things."
>
> -- By Davi Linton

## A farm with a history of knowledge

With nearly four decades of experience in swine production, Dave Linton transitioned to group housing in 1997 and has continued refining the system ever since. Before transitioning to group housing, he used conventional gestation stalls. Looking back, he describes that period as one where stall systems were accepted without questions largely because they were standard practice at the time. In 1997, Dave decided that it was time to explore alternatives. He visited group-housed sow barns in Michigan, USA, where he saw firsthand how such systems could function in practice. He also drew inspiration from large-scale free-range operations in Sweden, where sows are grouped by 10–12 animals. He believed that sows should have the freedom of movement and the opportunity to choose where they lie based on their own comfort needs because every sow can be a bit different. Based on these principles, Dave designed a system using solid-floor pens housing 10–12 sows per group. Each pen is structured into three functional areas: a front floor-feeding area, a central wet/dunging area, and a straw-bedded lying area at the back. Straw is supplied using round bales, which are placed with a skid steer on a wooden platform on top of the lying area. During cleaning, sows can be temporarily locked into the back area while the dunging area is cleared. A single round bale typically lasts 7–10 days in each area.

## Observe and you shall find

The sow barn is naturally ventilated. Dave also likes his system because it allows for better observation of the animals during daily chores and retains the flexibility to adapt management

decisions based on what he sees in the barn. Sows are fed twice per day, and during the morning feeding additional straw is pulled down as foraging substrates. Feed is distributed at both the front and back of the pen to spread intake and reduce competition. These routines allow Dave to walk the pens twice daily, assessing sow health, body condition, and behaviour. For him, regular observation is an essential part of good stockmanship, enabling early detection of issues and timely management decisions. The system has proven effective on his farm, consistently achieving a farrowing rate of approximately 90%.



On the Linton farm, the farrowing unit uses loose lactation pens with a temporary crating option that they developed in-house. During warm weather, crates are opened to allow sows greater freedom of movement and improved thermoregulation. Under cooler conditions, sows are typically temporarily crated for approximately seven days around early farrowing, a period considered critical for reducing piglet crushing risk. Piglets are weaned at around four to five weeks of age, depending on market requirements. Following weaning, sows are moved into a group breeding area where artificial insemination is carried out.

### Next generation of farming entrepreneur

Dave's son, Jeff, represents the next generation of the family operation. In 2010, he travelled to Scotland to gain hands-on experience with alternative pig production systems on a 500-sow outdoor herd. Since then, Jeff has developed his own crossbreeding program, combining conventional white breeds with Berkshire and Kune Kune genetics. The resulting pigs produce distinctive, well-marbled meat that is marketed to high-end restaurants across the Greater Toronto Area. Jeff places a strong emphasis on understanding meat quality, regularly observing carcasses on the slaughter line and adjusting feeding strategies to finetune fat and lean composition. For him, animal welfare and meat quality are closely linked, with good husbandry forming the foundation for both.

Weaned pigs are initially housed on fully slatted floors fitted with large rubber mats, allowing rooting materials to be provided while maintaining hygiene. They are then moved to a naturally ventilated, partially slatted finishing unit with straw bedding. Some pigs are also finished on outdoor pasture to meet specific market demands. Tail docking is not practiced in their growing-finishing systems. While occasional mild tail biting occurs, Jeff interprets this behaviour as an early signal that space or environment needs adjustment, often indicating that pigs are ready to be moved. Like his father, Jeff relies on close observation of animal behaviour to guide day-to-day management decisions.



### Great stockmanship passing down

After more than two decades of working with group housing, Dave says he could not imagine returning to gestation stalls. For him, successful group housing rests on three core elements: appropriate feeding (both volume and method of provision), access to straw, and good ventilation. He also repeatedly emphasises the importance of stockmanship. Proud to be a pig farmer, Dave places strong value on close observation and confident, calm handling of his animals, and he does not hesitate to demonstrate what he believes is good practice in the barn. With the support of his wife Brenda and son Jeff, the Linton farm reflects a strong foundation for passing on both experience and a commitment to high-welfare pig production to future generations.



# Thinking ahead: lessons from a family-run electronic sow feeder barn

## Barn Insights Series – Practical Solutions to Group Sow Housing (Part 4)



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In modern pig production, technology can support more precise management while helping reduce labour demands. Electronic sow feeder (ESF) is one such technology that has been widely adopted in commercial swine systems around the world. Broadly, ESF systems can be categorized into two main types. The first is the free-access ESF (walk-in, back-out) system, in which sows use the same opening to enter and exit the feeder. These systems typically support up to 20 sows per feeder, often serving groups of 40–60 sows. Because of their simpler design, free-access systems generally require less gilt training and lower technical maintenance. The second type is the conventional ESF (walk-through) system, where sows enter and exit through separate gates. Some designs include a long exit chute to discourage fed sows from immediately returning to the feeder, thereby increasing waiting time. These systems can support up to 60 sows per feeder and are commonly used in larger groups of 100–200 sows. As a result, walk-through ESF systems are more complex and typically require greater training for both stockpeople and animals. For any medium-size barn, ESF means more capital investment, which requires careful consideration.

For medium-sized operations, adopting ESF represents a significant capital investment and therefore requires careful planning and system selection. At Ursula and Will O'Neil's farm in Warwick, Ontario, we observed a successful example of an ESF system that balances efficiency, sow welfare, and day-to-day practicality.

### Running an automatic system with human touch

Ursula and Will run a 325-sow, farrow-to-finish operation. Weekly farrowing maintains a continuous flow of sows moving in and out of the farrowing unit, while also supporting a steady number of finished pigs marketed each week. Sows are bred in mating stalls and remain there for approximately 30 days until pregnancy confirmation, after which they are moved into a dynamic group pen housing around 180 sows. The group is managed with six ESFs, resulting in 25–30 sows per feeder, an optimal distribution. This feeder-to-sow ratio has proven to be a critical factor in maintaining calm behaviour and allowing sows to eat at a comfortable pace. One key management adjustment involved increasing the maximum feeding time per sow from 5 to 20 minutes. Although initially counterintuitive, this change reduced the number of non-eating animals that required intervention. When sows are not rushed, they tend to eat more slowly and complete their ration in a single visit, rather than cycling repeatedly through the feeder. This improves individual feed intake and body condition, while also freeing feeder access for other unfed sows. The ESF system is equipped with a built-in scale, allowing sows to be automatically weighed after feeding. This provides valuable data for individual monitoring and feed adjustment. The gestation area also includes solid-floor lying bays, a feature that Ursula considers essential to the system's success.

> "You've got to always be very in tune with the animals...you've got to look at the animals and if you really watch their behaviour they tell you a lot.."
>
> -- Ursula O'Neil

Gilt training is conducted in a designated training area prior to entry into the main group. Most gilts learn to use the feeder before joining the large pen. Training takes place at the end of

the day, after most animals have already eaten, with them guiding any non-eating gilts through the training station.



### Experience sharing and learning

Their current group-housing sow barn was built four years ago. Prior to adopting this system, Ursula had experience with a range of housing and feeding approaches, including gestation stalls, small group pens of 10 sows with floor feeding, and an earlier model of ESF. When selecting a group-housing system, she emphasised the importance of consulting with veterinarians and other producers, learning from shared experiences, and applying lessons gained through trial and error. For the current ESF setup, a long exit walkway was required, so the barn was designed with sufficient width to accommodate this feature, with slats oriented perpendicular to the walking route to improve footing and flow.

In contrast, a previously used ESF system from a U.S.-based supplier had a different gate design, which she believes may have contributed to higher levels of vulva biting. Limited post-installation technical support for that system also proved problematic, ultimately making it unsustainable for their operation.



### Investing in what is important for your family

The farrowing unit contains 70 spaces and is equipped with a lift-crate system featuring a slightly larger footprint (approximately 6 × 8.5 ft) to better accommodate larger sows. Temperature control is supported by a drip cooling system and a boiler-based heating system, allowing conditions to be adjusted as needed. For Ursula, understanding where investment delivers the greatest benefit, to both the animals and her family, is critical. Rather than installing a more expensive feeding system, she chose to invest in lift crates to reduce pre-weaning mortality. This decision has also helped free up their time in the farrowing unit, allowing them to focus on other responsibilities, an important consideration for a family-run operation.

The system is delivering solid production results, with an average of 15 piglets born alive and 12 piglets weaned at around 28 days. Although the farm previously struggled with PRRS, the issue had been resolved through the installation of a physical separation between the farrowing and sow units, improved control of animal flow, and strengthened biosecurity protocols.

### Reaping the fruits of care and hard work

Reflecting on the success of their operation, Ursula and Will stress the importance of close observation of animal behaviour as a constant guide for fine-tuning their system. They also make a point of staying informed about new developments in the industry, using this knowledge to identify opportunities for improvement. “You’ve got to always keep looking ahead and think…because there are always tweaks or improvements to be made,” said Ursula. Anticipating future challenges has shaped how they designed their barn, creating an environment that is good for the animals and just as importantly, a pleasant work place for the hard-working family.



# Mycotoxins in pig diets: managing a persistent feed risk





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Every growing season brings its own set of challenges – 2026 is no different. A wet start to the year, dry July and a wet fall will result in a wide array of feed grain quality issues faced by pork producers. These conditions will lead to a potential increase in fungal diseases associated with the harvested crops. Pork producers need to stay on top of potential quality issues to avoid issues with herd performance and pig performance.

Mycotoxins are toxic compounds made by moulds and fungi that infect grain. For pork producers, they can quietly erode feed intake, growth, health, reproductive performance and ultimately profitability—often before obvious clinical signs appear.

## What Causes Mycotoxins?

Mycotoxins are produced when moulds and fungi infect crops such as wheat, barley, corn and other cereal grains. Conditions during crop growth, harvest and storage all influence the risk. Humidity, temperature, oxygen availability and grain moisture can support fungal growth and toxin production. The challenge is that mould growth and toxin presence do not always match. Grain may not look severely mouldy yet still contain mycotoxins, while visible mould is not a reliable measure of the toxin concentration. Sampling is also difficult because mycotoxins are not distributed evenly through a load, bin or pile of grain. In practical terms, a wet growing season, delayed harvest, stressed crops, wet grain placed into storage, or inadequate drying can all raise risk. Once toxins are formed, simply improving storage conditions does not remove them; drying primarily helps prevent continued mould growth. Mycotoxin risk also rises because downgraded grain is commonly directed into livestock feed rather than the human food market. That can make pig diets an important destination for grain with known or unknown contamination

## Three Major Concerns

More than 400 mycotoxins are known, but a smaller group creates the greatest concern for Canadian swine production. Prairie Swine Centre materials identify deoxynivalenol (DON), aflatoxin, zearalenone, ochratoxin A, fumonisins, T-2/HT-2 toxins and ergot alkaloids among the primary toxins relevant to pig performance.

For Prairie pork producers, three particularly important categories are DON, zearalenone and ergot alkaloids.

## DON: The Everyday Threat

Deoxynivalenol (DON), also called vomitoxin, is a mycotoxin commonly found in wheat, corn, barley and other feed ingredients. Feeding DON-contaminated diets can reduce feed intake, average daily gain and body weight, with younger pigs generally more susceptible. Prairie Swine Centre research found that 1.57 ppm DON reduced feed intake by 9.1% and daily gain by 5.2% in late-nursery pigs over 22 days. At higher concentrations, pigs may refuse feed or vomit. In grower-finisher pigs, performance initially declined when diets contained more than 1 ppm DON. Although pigs appeared to adapt to levels between 1 and 5 ppm, reduced body weight persisted, and pigs fed highly contaminated diets were 5–8 kg lighter at market weight. Reduced feed intake appears to be the main cause of poorer performance. Feed additives have not consistently prevented these effects. Avoiding contaminated grain remains the preferred strategy, while DON-contaminated diets should be carefully evaluated for economic impact.

## Zearalenone: A Breeding-Herd Risk

Zearalenone (ZEA) deserves special attention in breeding systems because mycotoxins can impair reproductive function. When a herd experiences reproductive irregularities, producers should consider feed and ingredient testing alongside the usual health, management and breeding investigations.

Zearalenone is a mycotoxin produced by some Fusarium moulds in cereal crops. Feeding contaminated grain can be particularly harmful to breeding animals because ZEA has estrogen-like activity. Its effects are most evident in gilts and sows, where it can cause premature development of the mammary glands and reproductive tract at levels as low as 0.5 parts per million in feed. Concentrations approaching 1 part per million may create problems in many reproducing pigs. Zearalenone and related estrogenic mycotoxins can interfere with conception and

implantation, contributing to infertility, embryonic death and smaller litters. The toxin may also reduce reproductive efficiency, piglet viability and herd economic performance. Mould presence alone does not reliably indicate ZEA contamination, so representative feed sampling and laboratory testing are essential. When contamination cannot be avoided, certain clay-based feed additives may help bind ZEA and reduce reproductive effects

### Ergot: Watch Cereal Crops Closely

Ergot alkaloids are another major concern because they can occur in rye, wheat, triticale and barley. Feeding ergot-contaminated grain can significantly reduce pig performance and create potentially serious health concerns. Research indicates that ergot alkaloids reduce feed intake and growth. In growing pigs, diets containing 4 ppm ergot alkaloids resulted in lower overall growth and feed intake. Ergot also dramatically reduced serum prolactin, a hormone important for milk production. Consequently, contaminated diets should not be fed to sows or gilts intended for breeding. Symptoms of ergot toxicity can range from reduced feed intake to gangrene in the extremities. Producers are advised to avoid feeding contaminated grain whenever possible. Although steam explosion processing reduced ergot toxicity in one Prairie Swine Centre trial, extrusion did not reduce toxicity in another study. Processing should therefore not be assumed to make contaminated feed safe.

> *"Every harvest is different. It is a good idea to assess crop quality early in the fall.."*

### Problems in Contaminated Grain

Pigs are generally more susceptible to mycotoxins than cattle and chickens, as pigs lack a large microbial population that can detoxify mycotoxins before digestion, as occurs in the rumen of cattle and, to some degree, in poultry. Feeding mycotoxin-contaminated grain to pigs creates production problems that vary by phase, with young and breeding animals most at risk. Mycotoxins can depress feed intake, slow growth, impair reproduction and increase health challenges across the herd. Less feed intake reduces nutrient intake, slows growth and can worsen feed efficiency or delay marketing. When intake falls in nursery pigs, the consequences can be especially costly because that stage is already biologically demanding.

Nursery and grower pigs are especially sensitive. Even modest levels of deoxynivalenol (DON, or vomitoxin) can reduce average daily gain and feed intake, with research showing a rapid negative response once diets exceed about 1 ppm DON. While some adaptation may occur at higher levels, performance losses still accumulate, and contaminated diets can leave finishers several kilograms lighter at market. In breeding stock, mycotoxins lower sow feed intake and weight gain, increase stillbirths and reduce pigs born per litter, while also delaying puberty and impairing boar libido and semen quality.

Certain toxins pose additional risks. Ergot alkaloids, for example, can suppress prolactin and cause milk production to drop or cease in lactating sows, and at higher exposures may lead to reduced intake and even gangrene in extremities. Because mycotoxins are not uniformly distributed in grain, accurate multi-point sampling and adherence to Canadian regulatory guidelines are essential before using suspect lots.

The most reliable strategy remains avoiding contaminated grain where possible. When use is unavoidable, producers should discount purchase price, monitor performance closely and consider that current feed additives have limited ability to fully mitigate DON effects in pigs.

### Practical Solutions

The best approach is prevention: avoid feeding contaminated grain whenever possible. When contamination cannot be avoided, producers need a documented decision process based on representative sampling, laboratory analysis, the pig group involved and the concentration in the final mixed diet.

Key actions include:

- Sample strategically. Because toxins are unevenly distributed, collect representative samples from multiple locations in a load or bin; do not rely on a single grab sample or visual appearance.
- Clean and dry grain promptly. Cleaning can remove lighter, more contaminated fractions, while rapid drying helps stop continued mould growth.
- Protect the most vulnerable pigs. Keep contaminated grain out of breeding-herd and newly weaned-pig diets whenever possible, because these groups are especially susceptible to DON's effects.
- Manage the complete diet, not only one ingredient. Prairie Swine Centre research supports an upper limit of 1 ppm DON in finished feed to avoid reduced performance.
- Adjust nutrient density when intake is depressed. If contaminated grain must be used, increasing nutrient density can help compensate for lower voluntary feed intake.
- Use additives cautiously. Binders and other additives may help with certain toxins, such as aflatoxin, but have shown little or no benefit in pigs fed DON-contaminated diets; they should not replace testing and sound ingredient decisions.

Emerging technologies may provide additional options in the future. Prairie Swine Centre researchers tested magnetic graphene oxide combined with titanium dioxide and LED light, reducing DON in contaminated wheat by about 62 percent after two hours and up to 81 percent after six hours; however, this remains a developing approach rather than a routine on-farm solution.

*(Myotoxins in Pig Diets ... cont'd on page 10)*

*(Myotoxins in Pig Diets ... cont'd from page 9)*

| Mycotoxin | Primary Effect | Stage Affected | Clinical Signs |
|---|---|---|---|
| Deoxynivalenol (DON, vomitoxin) | Affects serotonin receptors and cytokine production | All stages (younger pigs may be more susceptible) | Reduced ADFI and ADG[1,2]<br>Vomiting[2]<br>Diarrhea (soft or watery feces)[3]<br>Reduced immune function[3]<br>Mild changes to kidney, thyroid, blood[4] |
| Aflatoxins | Mutagenic and carcinogenic | All stages | Reduced ADFI and ADG[5]<br>Reduced milk production[5]<br>Lethargy[6]<br>Ataxia (lack of coordination)[6]<br>Rough hair coat[6]<br>Hemorrhage[6]<br>Fatty liver[6] |
| Zearalenone | Estrogenic | Pre-pubertal gilts, sows and pre-pubertal boars | Swelling and reddening of the vulva[7]<br>Vaginal and/or rectal prolapse[7]<br>Anestrus[8]<br>Reduced litter size[8]<br>Fetal resorption[8]<br>Implantation failure[8]<br>Decreased libido and testosterone[9]<br>Feminization[9] |
| Ochratoxin A | Disrupts phenylalanine (an amino acid) metabolism | All stages | Kidney damage[10]<br>Decreased ADFI and ADG[11]<br>Immunosuppression, increased risk of infection[12] |
| Fumonisins | Disrupts lipid metabolism | All stages, especially young pigs | Pulmonary edema[3]<br>Reduced immunity[3]<br>Decreased ADFI and ADG[13]<br>Shortness of breath[3]<br>Weakness[3]<br>Cyanosis (blue/purple colour of skin/membranes)[3] |
| T-2 and HT-2 Toxins | Inhibits protein synthesis | All stages | Unthriftiness[6]<br>Low ADFI and ADG[6]<br>Reproductive failure[6]<br>Gastric upset (diarrhea)[6]<br>Cellular necrosis[6]<br>Immunosuppression [6] |
| Ergot Alkaloids | Neurological | All stages, especially the reproductive herd | Lameness[14]<br>Gangrene[14]<br>Decreased ADG[14]<br>Abortion[14]<br>Agalactia (absence of milk production)[14]<br>Ataxia[14] |

[1]Decreased ADFI and feed refusals have been shown at levels as low as 0.5-1 ppm (Smith et al., 2005), [2] > 2-5 ppm is for decreased ADFI and ADG, vomiting and complete feed refusal at > 20 ppm (Haschek et al., 2002), [3]Pierce and Diaz, 2014, [4]JECFA, 2001, [5]Nibbelink, 1986, [6]Whitlow et al., 2014, [7]Friend et al., 1990, [8]Smith et al., 2005, [9]Osweiller, 1986, [10]Kidney damage occurs at levels as low as 0.5 ppm (Lippold et al., 1992), [11]Performance is affected at levels of 2 ppm or greater (Lippold et al., 1992; Stoev et al., 2000), [12]Can occur when levels > 2 ppm are fed for longer periods of time (Harvey et al., 1992), [13]ADG reduced by 11% when 10 ppm fumonisin B1 was fed to starter pigs for 8 weeks (Rotter et al., 1996), [14]Strickland et al., 2011

*(Walking the room ... cont'd from page 3)*

### Adjust the walk by phase

Each production area requires additional observations. In breeding rooms, monitor body condition and heat behaviour. In gestation rooms, pay close attention after mixing sows, when fighting is most likely during the first few hours. Identify non-eaters and lame sows promptly, and investigate unusual nesting, mounting or discharge.

In farrowing rooms, watch sows approaching farrowing for milk leakage, discharge, contractions and reduced feed intake. Once farrowing begins, check regularly and ensure piglets are dry, nursing and using the heated area. Piglets need a much warmer environment than sows, so verify that lamps, brooders and heating pads are functioning safely.

Nursery rooms require frequent observation, particularly during the first 72 hours after weaning. Walking the room four times daily during the first three days can help identify pigs that are not eating, becoming lethargic or developing diarrhea. Move from younger to older pigs and from healthier to less healthy groups to support internal biosecurity.

In grower-finisher rooms, monitor feeder access, stocking density, hernias, medication withdrawal periods and pigs approaching market weight. When preparing for shipping, feed withdrawal is commonly planned for 12 to 18 hours before slaughter, based on transport and lairage time. Animals should not be without feed for more than 24 hours.

### Consistency is key

Consistency is important, using the same route, sequence and the same basic checklist each day, while recording exceptions and follow-up actions is key to walking the room. A methodical approach reduces the chance that an issue will be missed during a busy morning.

The best walking the room strategies combine animal observation with barn maintenance. They identify a pig that needs treatment, a feeder that needs adjustment, a drinker that is leaking, an inlet that is blocked or a room that is beginning to develop an air-quality problem.

Small problems rarely remain small when they are ignored. By walking every room calmly, checking every pen and responding promptly, pork producers can protect animal welfare, improve health and growth, reduce waste and keep critical barn systems working as intended.

## When issues arise...

Numerous factors can contribute to the stress of animals, which can manifest behavioural problems such as tail, side, and ear biting, belly nosing or sucking, vulva biting, bar biting and chronic aggression.

- Ensure animals are at proper stocking densities – if necessary, remove animals from the pen.
- Ensure adequate availability of clean, fresh water.
- Ensure all animals are eating a diet appropriate for their stage of production.
- Check environmental temperature, humidity, air quality, and air movement.
- Ensure the pen is comfortable, clean, and dry.
- Ensure that there is an adequate amount of enrichment or switch out to an alternate form of enrichment.
- Treat and/or isolate animals with injuries (tail bites, side bites), or isolate notable problem animals. Sometimes it's better/easier to remove the bully from the pen rather than the pigs being bitten. You will need to observe the pen well to discover Who the bully is.

## Common issues with ventilation systems

### Incoming air

- The air intake system is hindered, usually by soffits being blocked. This is an issue during winter months, when a buildup of snow and ice can occur on the outside of the building
- Air distribution
- Poor air distribution could result from the blockage or improper setting of inlets.
  This could be due to an issue with the control system, or due to environmental factors such as a buildup of ice
- Drafts due to improper inlet setting or cracks in the building

### Outgoing air

- Incorrect fan settings or low fan power are common causes of altered air flow.
  Assess air quality by scent, humidity, and dust build up.
- Fan power may be changed by wind speed
- Dirty blades can reduce ventilation efficiency by up to 30%. Completing scheduled maintenance can help avoid this issue.
- Operator issues
- Operator error can also cause issues with ventilation. Understanding how your ventilation system works is important for proper functioning.

# Personal Profile



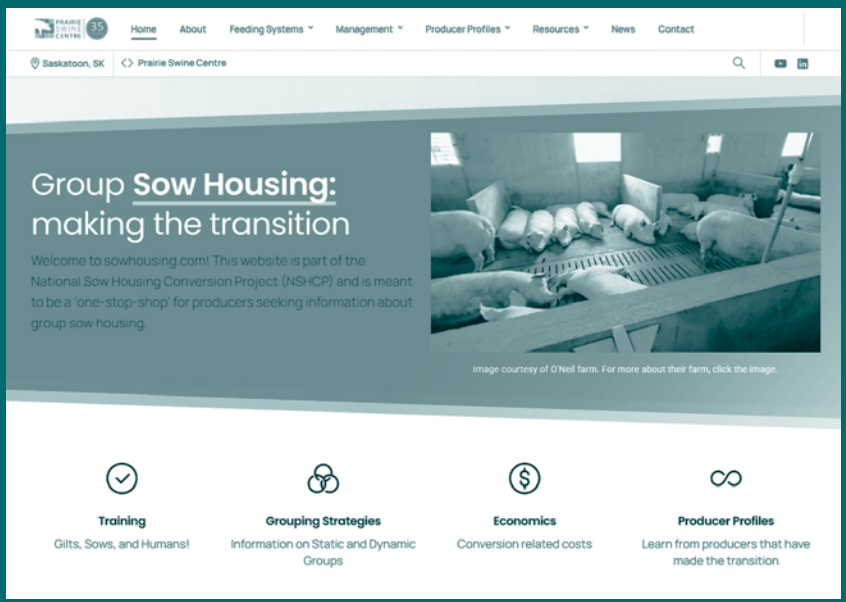
## Ke-Vaughn C. Chantilou
## M.Sc Student

Ke-Vaughn Chantilou is from the beautiful and vibrant island of Jamaica, where his enthusiasm for animal science began at an early age. He obtained his Bachelor of Science in Animal Science in 2020 from the College of Agriculture, Science & Education in Port Antonio, Jamaica. Throughout his undergraduate studies, Ke-Vaughn gained extensive hands on experience at the college's livestock farm, working with dairy & beef cattle, small ruminants, poultry, and swine, while also developing skills in crop production and horticulture.

After completing his degree, Ke-Vaughn entered the workforce in greenhouse production and construction, applying his practical training to real world agricultural environments. His quest to continue to grow professionally led him to travel to several countries, gaining diverse experience that eventually opened the door to new opportunities in Canada.

Driven by his passion for animal science and nutrition, Ke-Vaughn is now pursuing his M.Sc. in Animal Nutrition at the University of Saskatchewan under the supervision of Dr. Atta Kofi Agyekum. His research examines the benefits of precision feeding using blend feeding technology in growing pigs, including nutritional strategies for pigs with varying growth rates and split-sex feeding at the Prairie Swine Centre. Ke-Vaughn aspires to continue into a Ph.D., with the goal of making meaningful contributions to the swine industry and the broader agricultural community globally.

# 2029 is right around the corner. Looking to make the conversion?




# Coming Events

**Sask Pork Symposium**
November 3-4
Saskatoon, Saskatchewan

**Alberta Pork AGM**
November 19
Calgary, Alberta

**Prairie Livestock Expo Winnipeg**
December 16
Winnipeg, Manitoba

**Banff Pork Seminar**
January 5-7, 2027
Banff, Alberta

**Manitoba Swine Seminar**
February 3-4, 2027
Winnipeg, Manitoba

PRAIRIE SWINE CENTRE

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