

Public poll reveals support for sow stalls

When evaluating the value of survey results, one must consider the context of the question, and the organization posing it.

By Sheri Monk

On June 27, the Center for Consumer Freedom, a U.S.-based organization, released the results of a survey on the Canadian public's opinion on sow stalls. The survey was conducted through the center's project called 'Humane Watch,' which seeks to discredit the Humane Society of the United States (HSUS). The survey found that 63 per cent of those polled actually supported the stalls, with 26 per cent very much in favour, and 37 per cent somewhat in favour.

While on the surface, the poll might seem like a small victory for proponents of stall housing, the context of both the organization and the survey is required. The question posed was, 'One reason farmers use individual stalls for pregnant pigs is that pregnant pigs can be violent and aggressive with weaker pigs when housed in group pens. Pigs in group pens suffer more injuries and can be bullied away from food. The two largest veterinarian associations also say that individual housing stalls for pregnant pigs are a humane option and offer the farmer the ability to apply individual feed and medicine to pigs. Knowing this information, are you in favour of the use of individual stalls or against the use of individual stalls?'

Will Coggin, senior research analyst for the Center, admits that it's difficult to accurately obtain public opinion if the general public isn't very acquainted with the issues in question.

"It's good from an education point of view that the public knows that it's not easy, and farmers are certainly doing the best they can, and they are not purposely trying to treat their animals in a bad way."



As part of the ongoing campaign by Humane Watch against the Humane Society of the United States, billboards like this one in Manhattan are placed to gain as much exposure as possible.

It's a difficult issue. Most consumers want to eat meat, and they want to believe that they are responsible consumers who care about the humane treatment of farm animals. But what most consumers know is how much they want to pay for meat, and how to prepare it. As such, it's easy to pose a leading question to obtain a somewhat predictable answer.

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Western Hogiournal HOT ISSUES CONTINUED

Agriculture is a complex industry, and it's difficult to educate the consumer on the nuances of animal care. Likewise, it's a safe bet to assume that if surveyed, most livestock producers wouldn't be aware of the current issues facing the engineering sector, but if asked, the safety of professional engineers would be important to them.

"Farmers shouldn't be pressured to change vet-approved procedures just to please a small group of radical vegan agitators who will never eat a slice of bacon." – Will Coggin, Center for Consumer Freedom

However, public opinion polls – no matter how uninformed the public may be – are constantly used to lobby retailers, policy makers and producers to change livestock production. And Coggin says in the U.S., lobbying efforts are intense.

"Here it's really an ongoing war. It's a really big fight, and it's basically being waged at the retail level. You have groups like the Humane Society of the United States pressuring retailers to ask their suppliers to phase out the use of these stalls. It's one part communications campaign with the retailers and the public in the U.S., and it's a little bit legal as well," Coggin explained. "HSUS and other animal rights advocates are trying to go to states that don't have a lot of pork production to get a state law passed that bans them, presumably in hopes of trying to seek a federal law that bans them as well."

Canada's unique process of developing codes of practice for the treatment of farm animals helps circumvent the highly-charged environment Coggin refers to. However, as pork producers know, Canada's methodology isn't without controversy or strife.

In the U.S., it's clear the hyperbole isn't limited to one side of the debate, and the Center for Consumer Freedom has come under fire for posing as a consumer organization while being significantly funded by the food, restaurant and tobacco industries.

"Swine veterinarians and Canadian farmers know what's humane for their animals. Farmers shouldn't be pressured to change vet-approved procedures just to please a small group of radical vegan agitators who will never eat a slice of bacon," said Coggin in news release.

Poll results (Canada)

Very in favour of stalls	26%
Somewhat in favour of stalls	37%
Somewhat against the stalls	8%
Very against the stalls	7%
Don't care enough to comment	14%
Don't know/refused	8%



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Big box retailers spur grocery consolidation

Will Sobeys continue the Safeway tradition of sourcing Canadian?

By Sheri Monk

A major shake-up happened in the Canadian retail world when it was announced in June that Canada Safeway was to be purchased by Sobeys in a landmark \$5.8 billion deal. The move will make Sobeys the second-largest grocery retailer in Canada, and its new market position will put them head-tohead with Loblaw.

"We knew something was going to happen, we just didn't know with who. We knew somebody was going to get bought, and we knew it was going to happen soon, but we didn't know who. Was it going to be Sobeys? Was it going to be Loblaw? Was it going to be Safeway? Was it going to be Overwaitea?" commented Kevin Grier, senior policy analyst with the George Morris Centre.

Industry analysts might not have been shocked, but the Safeway name is a very traditional brand in the Canadian marketplace, and consumers and media across the country took notice of the news. But Canadian shoppers have proven they're anything but traditional as they've moved their dollars to mega-retailers.

"The traditional grocers have to react. Sobeys reacted by buying Safeway, Loblaw reacted by buying Shopper's Drug Mart, and it's probably not over yet." – Kevin Grier

"To me it all goes back to Target and WalMart. The general merchandise category has been taking billions of dollars of food sales away from grocery, and the general merchandise is really WalMart," said Grier. "So now you've got Target, and WalMart has been expanding. Target is growing and it's



The entrance of a new Target store in Calgary.

getting better, and WalMart knows it and so it's expanded floor space, and this is really all this is about. The traditional grocers have to react. Sobeys reacted by buying Safeway, Loblaw reacted by buying Shopper's Drug Mart, and it's probably not over yet."

For many years now, the U.S. has been known as the country where the big get bigger, and the small get swallowed. And while WalMart – the original big box – may be number one for grocery market share in the U.S., the rest of the picture isn't as cut and dried.

"WalMart is number one by a long shot, but their grocery industry is less consolidated than ours – it's much more regional-based whereas ours is more national. Our top three have about 80 per cent of share, and their top three have nowhere near that," explained Grier.



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See for yourself what is behind Canada's world leading swine genetics For more information, please contact CCSI or WSTA The ongoing grocery wars in the U.S. have been intense, and they're not showing any sign of letting up. In fact, Grier says that could have been the reason why Safeway let go of its Canadian interests.

"It was probably a decision they needed to make for the sake of cash because of the battle that they're in down there. The U.S. grocery business has been a real war zone compared to ours and they probably needed the cash."

Despite the consolidation (or perhaps because of it), the grocery business in Canada is lucrative. And if Target was going to go tête-à-tête with Walmart, which was already wellestablished in Canada, it was going to have to be competitive.

"I think the Canadian grocery market has been low-hanging fruit. It's been a profitable place to be over the last few years, margins have been good, and Target saw it

as a good place to be," Grier said.

It will be interesting to see play out. WalMart is known in the marketplace as being the low-end, low-cost, one-stop shopping solution. In order to achieve that goal, WalMart had to add a grocery section. Shoppers flock to the store for the price points and the convenience – not necessarily for the service or quality.

"They're forever tied to price – that's what they are," said Grier. "Costco – that's another one that falls under the general merchandise category that's stealing grocery business, and they've got about a 10 per cent share."

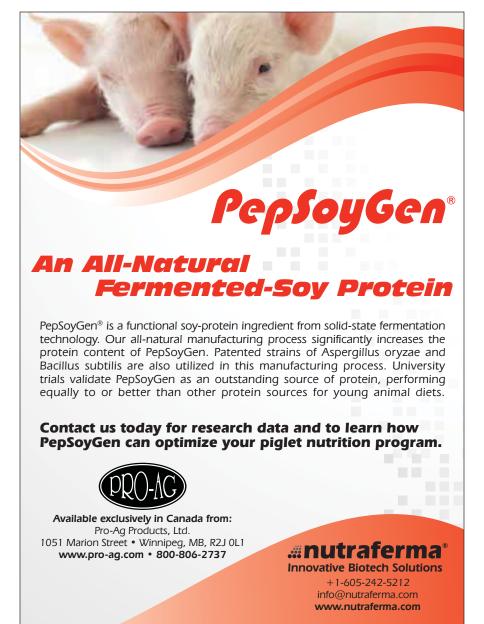
Meanwhile, Loblaw has added general merchandise elements to its inventory in an effort to battle back on the onestop-shop front. In contrast, Safeway and Sobeys (and other smaller grocery stores) have focused on being high-service and high-quality orientated. The top three grocery retailers in Canada will now be Loblaw, Sobeys and Metro.

"Safeway probably had a five per cent share of the market compared to Loblaw's 27-ish, Sobeys' 13-14, and Metro's 12," said Grier. This means that Sobeys will be sitting with approximately a 19 per cent share in the Canadian grocery category.

"They're a Maritime powerhouse," said Grier. "They just grew, and grew and grew."

What remains to be seen is the market impact Target will represent, and how Sobeys' expanded portfolio will be wielded in the marketplace. Will Sobeys retain their higher-end appeal? Will Safeway retain its branding identity, or will all the stores become Sobeys? Will Safeway be rebranded as a lower-cost alternative, or become even more gourmet-focused? The speculation about what their street presence will become is captivating, but for livestock producers, the questions are more behind-the-scenes.

"Safeway was known as Canadian – especially with beef. They were known to sell Canadian product in the West. In the East, not so much at all. Out here we buy U.S. product as well as Canadian without batting an eye," Grier said. "So the question will be whether or not Sobeys will continue that. One thing we do know is that Sobeys is consolidating all of their buying in Ontario, so there won't be a lot of buying done out of Safeway anymore. You might not even see the Safeway banner anymore." ■







Alberta Farm Animal Care (AFAC) working for producers and animals

Sometimes people mistake AFAC for an animal rights organization. It's important to know the difference.

Submitted by AFAC

Animal welfare is a top priority, not just for consumers, but for producers as well. For the last 20 years Alberta Farm Animal Care (AFAC) has provided a coordinated approach for the livestock industry to work together, promoting responsible, humane livestock care and welfare. AFAC seeks to ensure that livestock care needs are met and that we are continually improving based on new research and insight into production methods. Another goal for AFAC is to bring education and awareness to consumers. AFAC assures the public that producers have the best welfare



of their animals at heart and helps to provide a better understanding of the practices that producers use and how they may impact the animals. It must be understood that AFAC is an animal welfare group, and is not an animal rights group. For more information on the difference between animal welfare supporters versus animal rights activists, see the sidebar.

Alberta Farm Animal Care consists of a 17 member Board of Directors that is composed of all of the major livestock commodity groups in Alberta. Academic institutions, other major livestock players such as Northlands and the Calgary Stampede, veterinary clinics, and individuals are also included in the membership of AFAC. Working with these members, AFAC has completed key projects aimed towards improving animal welfare in the industry and educating and engaging with the public. Some AFAC projects and programs include: the ALERT Line, the Canadian Livestock Transportation (CLT) certification program, humane handling guides, public and industry connection events and programs such as the Stampede Cattle Trail, the Livestock Care Conference, and the Emergency Livestock Handling Trailers and Training program.

The ALERT line (1-800-506-CARE) is a telephone response line that may be used by producers or the general public to report livestock care concerns. The ALERT line works alongside the Alberta SPCA and RCMP livestock investigators, as needed, to help livestock before they are in a situation of distress. Rural community members, producers, and veterinarians make up a resource team that evaluates incoming reports and



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Western Hogournal Faces and Places

Animal Welfare vs Animal Rights: Practicing Animal Welfare Everyday

Originally published on the "Let's Talk Farm Animals" blog at http://www.letstalkfarmanimals.ca/ by Patricia Grotenhuis, and used with permission.

- Many people are familiar with the term "animal rights", and hearing it can bring up images of activist groups on parade. Animal rights supporters don't believe humans have a right to use animals for any purpose. Activists are not usually interested in finding solutions but prefer to focus on problems and dramatic examples to generate funds and support. A term that is heard less often in the general public is animal welfare, although this is the phrase that refers to what farmers and researchers are doing every day.
- Whether it's helping a cow have a calf on your birthday or checking on your chickens before you open your Christmas presents, caring for animals has been at the core of what farmers do every day for generations.
- Animal welfare principles are as follows: humans have a right to use animals but also have a responsibility to treat them humanely. People who practise animal welfare are looking out for the animal and doing everything possible for that animal's well-being. Livestock depend on farmers for everything – 24/7 – and it's something farmers don't take lightly. We're also consistently striving for continual improvement in farm animal care based on new and proven science.

(Continued on Page 42)

helps to offer advice on challenges regarding livestock care. The line and resource team are in place to help with concerns about the treatment or neglect of livestock, as well as to help producers who may be experiencing difficulties caring for their animals.

The CLT program was created by AFAC in 2007 and has since grown into a national program through funding and support from the livestock and poultry industry and the Canadian Agriculture Adaptation Program. This program is designed to ensure people who handle and haul livestock are aware of applicable laws and regulations and appropriate handling techniques for moving livestock. The certification sessions have been classroom-based to date, and are soon to be offered online as well. Modules for cattle and sheep, hogs, equine and poultry have been developed through support and collaboration with national and provincial commodity groups. Many trucking companies and delivery points such as feedlots and processors now require CLT certification. This certification is not just limited to drivers, it can also be beneficial to all parts of the livestock industry with dispatchers and animal handlers also taking advantage of the educational opportunity.

AFAC has worked with many commodity groups to produce a number of booklets containing guidelines for the care and transportation of unfit animals. These Humane Handling Guidelines (HHGs) exist for horses, dairy cattle, beef cattle, sheep, and hogs. The HHGs are currently being updated and converted to online versions. Hard copies of the HHGs may be requested from the AFAC office for personal, professional, or educational use.

For more than 10 years, AFAC has hosted the annual Livestock Care Conference (LCC), a leading event of its kind. The major focus at this conference has been to interact with producers, academia, government, industry professionals, and students on issues of animal care. The LCC is a two-day event with the first day composed of meetings, a post-secondary student event, and the AFAC Annual General Meeting and the second day covering the main conference agenda. The LCC main agenda includes experts from different fields speaking on current and emerging trends in animal care, staying ahead





of the issues, and addressing concerns from different parts of the supply chain, including retailers, as well the public and consumers. There is a major focus at the LCC on engaging with youth through our post-secondary student program, "Meet the Experts". The LCC provides a forum for students to connect with industry, learn from experts in the field, and engage in discussion on livestock care throughout the conference. The 2014 conference will take place on March 26 and 27 at the Four Points Sheraton Edmonton South. This conference will revolve around the relationship between producers, retailers, and consumers. More information may be found at lcc.afac.ab.ca. Questions or requests for information regarding becoming a sponsor or registering for the 2014 conference may be sent to lcc@afac.ab.ca.

Working with the livestock industry, AFAC has grown to be the collective voice of livestock welfare in Alberta. Good welfare means good business, and serves to cultivate positive public opinion.

AFAC administers the Emergency Livestock Handling Equipment Trailer Program throughout Alberta. The trailers are designed to aid in emergency situations where loose livestock need to be contained, and when human and animal safety might be in danger such as during fires, floods, livestock truck rollovers, or barn roof collapses. In November 2012, through the federal/provincial/territorial Growing Forward funding program, AFAC designed and equipped five emergency livestock handling equipment trailers. Four municipalities and the Alberta SPCA received these trailers. These trailers, as well as three others developed outside of the project are now part of the larger Trailer Program in the province. Along with the release of the trailers a Livestock Handling Equipment Trailer Training Course was initiated through the Emergency Training Centre of Lakeland College in Vermilion, AB. In February and March 2013, approximately 40 trainees from all over Alberta attended pilot versions of the two-day course. Attendees included first responders, ag fieldmen, RCMP, and veterinarians. Feedback from participants indicated the course

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- Researchers are always trying to find ways to make farm animals more comfortable through improvements to housing and handling. These studies are very important to farmers, and have led to countless improvements over the years. While I was in university, I worked at a dairy research facility where studies were being conducted on animal welfare. I also worked as a student writer in the university's office of research, and through that job learned of welfare trials being conducted with different species at the other research farms.
- Farmers follow the results of these studies closely and adapt their practices when superior methods of caring for their animals are identified.
- Major findings, such as the amount of space each animal needs, lead to changes in the Codes of Practice, which are internationally recognized models of responsible animal care. These Codes of Practice manuals are made available to farmers to ensure they have a reference when they are concerned about the best way to perform a job, or are making improvements to housing and handling facilities. They are currently being updated to reflect new advances in animal care and research. For more on the Codes, see www.livestockwelfare.com.
- Farmers depend on animals for their livelihoods, • and the healthier and more comfortable an animal is, the better they will perform for the farmer. Following welfare guidelines and laws makes sense to farmers both from an ethical standpoint, and a business standpoint.



was extremely valuable and the interaction with others to share experiences was a key strength. While the current trailer program is a strong example of being proactive and prepared, there is still more work to do to safeguard animal and human welfare in situations where these trailers might be used. AFAC plans to secure further funding to create a communications plan for the trailer program, further develop training for livestock emergency situations and co-ordinate more trailers throughout the province.

Working with the livestock industry, AFAC has grown to be the collective voice of livestock welfare in Alberta. With that in mind, AFAC strives to connect with the livestock industry to create projects and programs that will address industry needs with respect to matters of animal welfare. Good welfare means good business, and serves to cultivate positive public opinion.



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Maximizing carcass loin depth can pay off

Paying close attention to a few critical factors can result in higher carcass value

By Bernie Peet

Most pork processors in Canada have carcass loin bonus programs which reward higher loin depth because the loin is the most valuable part of the carcass. This is especially true if the processor exports to Japan, where buyers demand large loins. Loin depth also contributes to the formula for calculating carcass lean percentage, which is used to determine index and price. Even though backfat has about five times the influence on this calculation, a large eye muscle can still have a worthwhile effect. Producers can maximize their loin bonus, carcass lean content and value per hog by paying attention to the factors that influence loin depth. In doing this, an added benefit is that taking measures to improve loin depth will often also reduce backfat, which has an even greater economic value.



Loin depth is influenced by genetics, nutrition and environment. Photo by Bernie Peet.

Genetics the biggest influence

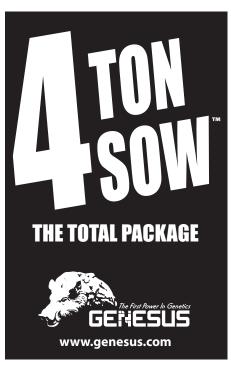
Breeding stock, especially the sire line, must have the genetic potential for high lean tissue growth in order to achieve good loin depth. It is impossible to force the pig to perform beyond its genetic potential, even when nutrition and management are optimized. There are very significant differences between the commercial sire lines available to producers, so selection of a supplier with proven achievements in this area is important.

With the high quality genetics available to producers today, it should be possible to achieve a loin depth of 64-65mm at an average carcass weight of 95kg.

Lysine needed to fuel growth

In order to grow a large loin eye muscle, pigs with a high genetic potential for lean growth require an adequate supply of lysine. Optimizing the lysine-to-energy ratio in growing and finishing rations is essential in order to achieve a high loin depth. My experience suggests that, in some cases, diet specifications are not adequate to realise the growth potential of today's genetics, especially in farms with a high health status. Also, I have seen a number of situations on clients' farms where loin depth did not meet expectations based on the results of other producers with similar genetics. In most





cases, increasing the lysine-to-energy ratio in the growing and finishing rations led to a marked increase in loin depth.

Because nutritional requirements for growing pigs are so dependent on genetics, it is best to obtain nutrition specifications from your breeding stock supplier. In some situations, increasing lysine levels beyond these recommended levels will improve loin depth still further and this can be determined by on-farm trials. However, increasing lysine becomes uneconomic when the pig's genetic potential for lean growth is reached. A good nutritionist can assist in formulating diets that maximize loin depth without wasting expensive protein.

Health and environment are key factors

Any factor that results in reduced growth rate, especially at the nursery and grower stage, will reduce carcass loin depth. Health problems, overcrowding, insufficient access to feed or water and deficiencies in the diet may all lead to slower growth. For example, on one client's farm a postweaning scour led to reduced nursery growth rate. The farm's veterinarian identified an E. coli problem and recommended suitable treatment. When the problem was solved, loin depth increased from a disappointing 59.3mm to a figure of 63.7mm, while backfat was reduced by 1mm.

Deficiencies in the environment may also be a cause of inadequate nursery growth rate. Examples of this would be incorrectly calibrated air inlets causing drafts, a malfunctioning controller resulting in variable temperature or inadequate heating capacity leading to sub-optimum temperatures in winter.

It is impossible to force the pig to perform beyond its genetic potential, even when nutrition and management are optimized.

Nutrition plays a major part in determining growth rate in the nursery. Research has clearly shown that growth in the first week after weaning has a huge effect on subsequent growth. Therefore feeding a highly digestible starter diet during the first 7-10 days after weaning will not only reduce days to market, but have a significant effect on carcass quality. Conversely, the use of lower quality diets for newly weaned pigs will reduce carcass loin depth.

Gilts have bigger loins

The carcasses of gilts have lower backfat and higher loin depth than those of barrows. The backfat for barrows at a carcass weight of 95kg is about 1.5mm more than gilts, while the loin depth advantage for gilts may be up to 3mm. Although the lower loin depth in barrows has a far smaller effect on carcass index than the higher backfat, it is still worth attempting to improve it. Loin depth for barrows may be optimized by



Diet and feed intake in the nursery have a large effect on carcass loin depth. Photo by Bernie Peet.

penning and feeding them separately, using a diet with a lower lysine to energy ratio than the gilt diet. Similarly, the loin depth of gilts will be enhanced by feeding a higher lysine diet that meets their better potential for lean growth.

In summary, the most important factors influencing loin depth are genetics, dietary lysine level and growth rate from weaning to slaughter, especially at the nursery and grower stages. Careful attention to these areas will pay dividends in terms of increased loin bonus payments, improved index and higher carcass value.



Interactions between sow temperament and housing system influencing sow longevity

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With the move towards group sow housing systems in North America, developing management practices that optimise sow performance and longevity in these systems will be critical to the success and long-term profitability of swine operations. A variety of group gestation systems have been developed, each a different level of competition that sows must cope with. How well an individual sow copes in each system will depend on the housing type and management, but also on the animal's individual temperament.

Two key temperament characteristics in animals are known as the active/passive and confident/fearful dimensions.

Traits related to these characteristics are considered important for influencing how an individual responds to, and copes with, environmental challenges. This study aimed to better understand the effects of the gestation housing environment on sow behaviour, the interactions between housing environment and sow temperament and their influence on sow welfare and longevity. A better understanding of these interactions may help determine optimal management strategies for sows in different group housing systems, and whether the selection of sows based on temperament may be beneficial.



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Study design

Studies took place at the University of Manitoba's Glenlea swine research unit, which uses electronic sow feeders (ESF) in two identical 50 sow, farrow to finish barns. One barn houses gestating sows on partially slatted concrete floors, and the other has straw bedded pens, otherwise the two farms are identical in building layout, pen design, sow management and genetics, enabling a controlled comparison of conventional and alternative floor systems. Sow behaviour and productivity were monitored over two gestations.

A total of 284 sows were studied, 138 in the unbedded system, 146 in the straw bedded system, and over a range of parities (0-9, average 2.9) representative of the herd demographics. A total of 12 breeding groups were studied (6 per system), with group sizes ranging from 21-30 sows. Sows were transferred to group gestation pens at 35 days gestation (week seven), where they remained until seven days before (week 16). Measures of sow condition, body injury and lameness were taken over the course of each gestation to determine how each sow was coping in the system. Individual sow body weight, backfat depth and body condition score (BCS) was measured at week 8 of gestation and at week 20. Sows were gait scored from 0 (not lame) to 3 (severely lame) to assess lameness at four time points, (weeks seven, eight and 16 of gestation, and week 20 at weaning, following breeding). Additionally, at weeks eight and 16 of gestation, sows were assessed for body injury by examining scratches and lesions on the body.

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Temperament testing

The temperament of sows was assessed using specially designed test pens at 8 weeks of gestation, using four behavioural tests: 1) the open door test (ODT); 2) the novel object test (NOT); 3) the pig approaching human (PAH); and 4) human approaching pig test (HAP). The tests are described as follows: ODT: The time taken for pigs to exit a test pen is measured after the door is opened, up to a maximum time of three minutes (Fig. 1).

NOT: The time taken for a pig to contact unfamiliar objects placed in a pen is measured, along with the total frequency and duration of contacts with novel objects (Fig. 2).

PAH: Pigs are placed individually in a test pen. A human enters the pen and stands in a set location, away from the pig, for a maximum of three minutes, the time taken for the pig to make contact with the human, the number of contacts made, and the duration of time the pig spends within one metre of the human is recorded (Fig. 3).

HAP: Pigs are placed individually in a test pen. A human, unfamiliar to the pig, enters the pen and approaches the pig slowly. The response of the pig is recorded on a scale of 1-4, (1fearful, 4 – pig allows human to approach and interacts), (Fig. 4).

The ODT and NOT are considered indicators of the active-passive dimension of temperament, with active animals being quicker to exit the test pen, and to approach and make contact with





Figure 1. Open Door Test(ODT)



Figure 3. Pig Approaching Human (PAH)



Figure 2. Novel Objects Test (NOT)



Figure 4. Human Approaching Pig (HAP)

unfamiliar objects than passive individuals. The PAH and HAP tests were used to evaluate the confident fearful dimension, with more fearful individuals taking longer to approach a human in the PAH, or actively avoiding human interaction in the HAP test. This relationship is shown in table 1.

Results

Sow behaviour

Sows in the concrete and straw bedded housing systems showed significant differences in their behaviour during the ODT, NOT and HAP tests. Overall, sows in the straw bedded system showed more active temperament traits, being faster to exit the home pen in the ODT (P<0.0001), and making contact with objects more frequently in the NOT test (P<0.001), compared to sows housed in the concrete system. Sows housed in the straw bedded system also had a lower HAP score, which could indicate more fearful behaviour, or alternatively these sows were just not interested in the human.

Factor analysis, a data reduction technique, was used to analyse the behavioural responses of sows and compare the sow temperament characteristics between the two housing environments. This analysis indicated that in straw bedded systems, the active/passive temperament dimension was more important (accounted for the greatest amount of variation),

Table 1 Relationship between pig behaviour and temperament

	Behaviour response		
Test	Active	Passive	
ODT	fast	slow	
NOT	fast to contact	slow to contact	
Test	Calm	Fearful	
PAH	fast approach	slow approach	
HAP	high score	low score	

while in the concrete system, the confident/fearful dimension was more important.

Sow condition, injury and lameness

Sows housed in the straw bedded system had a significantly higher body injury score throughout gestation than sows in the concrete system (P<0.001). Across both systems, younger sows had higher levels of body injury score than older sows (P<0.001). Sows housed in the straw bedded system had a greater reduction in BSC over lactation, as measured from weeks 20 to 16, than those housed in the unbedded system (P<0.001). Younger sows showed a greater reduction in sow BCS than older sows (P<0.001), over weeks 20 to 16. Over the course of the study, a greater number of sows became lame in the concrete system than in the straw bedded system (Table 2). The incidence of lame sows was also positively correlated to the severity of body injury score measured at eight weeks of gestation in the concrete system (P<0.005), but not in the straw-bedded system.

Relationships between sow temperament and sow longevity

The severity of body injury as measured at 16 weeks of gestation was positively correlated to different temperament dimensions across the two systems. In the concrete system, body injury was related to active/passive traits, with active sows having more injuries (P<0.05), and in the straw-bedded system, body injury was related to confident/fearful traits, with confident sows having higher injury scores (P<0.05). In the straw-bedded system, but not the concrete system, passive sows had a greater reduction in BCS during lactation (P<0.05) than active sows. There was no relationship between temperament and the incidence of lameness in sows in either of the ESF systems.

The bottom line

Individual sows vary in temperament, and these traits can be successfully determined through simple on-farm behaviour tests. Housing environment has a strong influence on the behavioural responses of sows, and can interact with temperament to influence how well sows cope under different management systems. In both of the housing systems studied here, temperament traits were correlated to the severity of body injury score. Body injury scores are a measure of aggression between sows, and the results indicate that temperament is thus linked to aggressive behaviour. This finding is in agreement with previous research. However, it is interesting to note that the temperament traits related to injury score differed between the two housing systems, providing further evidence for the importance of the interaction between housing and temperament. Floor type in the two housing systems also had a significant influence on the incidence of lame sows. This demonstrates the importance of floor type in sow longevity, and the value of using alternative floor types that provide greater comfort to sows, such as straw or rubber. With continued research, our understanding of the interaction between sow temperament and housing system will improve, and specific handling and management protocols

concrete part-slatted ESF housing systems over one gestation.			
Straw-bedded ESF	Not lame	Lame	Total
Frequency	99	41	140
Percent (%)	35.7	14.8	50.5
Part-slatted ESF	Not lame	Lame	Total
Frequency	78	59	137
Percent (%)	28.2	21.3	49.5
Total (frequency)	177	100	277
Total (%)	63.9	36.1	100

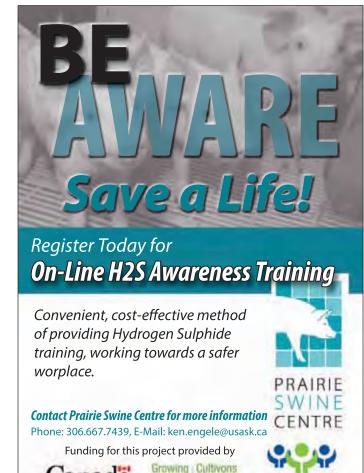
for sows under different housing environments could be developed. In addition, genetic selection of sows with more suitable temperament types can become a component of sow replacement schemes, helping to reduce aggression and improve production and longevity in group housing systems.

Acknowledgements

Canada

Table 2 The ineide

Specific project funding for this work was provided by the Canadian Swine Research and Development Cluster. Strategic funding was provided by Sask Pork and the Manitoba Pork Council.

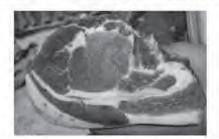


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Should you pay a bonus?

Production increases when staff are welltrained and have incentives to improve

By John Gadd

A bonus is a payment incentive scheme. They involve complex issues, and are difficult to get right and are therefore sometimes effective, but sometimes can be counterproductive. Bonus schemes are now an important part of employment in the retail and industrial sectors. However, many people feel they are being grossly abused in the banking and commodity trading sectors. Bonus-related performance is easy to measure in the retail area, but much more difficult in our field of livestock production where many variables outside the owner's control are involved. This said, our agricultural world is lagging behind in this area, and we must move with the times.

The ones that have worked best are when individuals are rewarded:

- On the team reaching targeted levels
- From which individuals get a proportionate share
- Which has been agreed beforehand
- A bonus must never compensate for a less than reasonable salary or wage.

Other considerations are:

- Performance records must be seen by the recipients to be adequate and understandable, such as in graphical form and compiled by a trusted and proficient farm recorder who is not a participant in the bonus scheme.
- Co-responsibility. By this I mean between the different sections of the farm whose efficiency of any one department affects the others, and between them and the manager/owner. The manager must make his subordinates believe that any problems –and successes lie at the manager's door as well as their own. The manager must be seen as the team leader to ensure the bonuses are reached and not just he or she who must be obeyed.
- Time. A whole year to assess the bonus is too long, causing disinterest. Quarterly is usually too short for administrative purposes, so six monthly payments have worked best.
- 'How are we doing?' sessions. These are part of good farm practice anyway, but the manager should touch on bonus subjects so as to keep the interest in the incentive alive.

Setting targets

The target is the keystone on which a bonus depends and can be difficult to get right. Many managers and owners get it wrong to start with, but experience lends adjustment to the eye. They start off by trying to assess how much of their budgeted income can be made over to a farm bonus. But preset fiscal goals can be affected by market forces outside the farm's control. So it is preferable to base targets on physical performance, but using the more useful profit-oriented terms - MTF, REO, Weaning Capacity, Absolute Mortality etc. which are no less accurate than the FCR, ADG, pigs weaned/sow/year and % mortality, which they replace. Nevertheless from the manager/ owner's position, the size of the bonus can be based on what improvements in retained margin before tax can be made from predicted achievement over target, as long as the bonus does not swallow more than 10 per cent of it. Only in the most prolonged profit troughs due to circumstances outside the farm's control will this safety margin be breached to inflame cash-flow difficulties. In such critical times the staff will understand rather than face the alternative of some of them having to be laid off.

Targets are based on the owner's decision but should be tied as far as possible to the best likely profit-earning sectors of the farm – such as conception rate, and numbers born alive.

The` one-off` incentive

There is often scope for individual targets based on areas needing improvement at any one time. These 'one-offs' are a good idea, but often managers are too impatient in setting incentive goals. For example, it is much more productive to set an achievable goal rather than something unrealistic. Example – instead of "Let's try for two extra pigs weaned/sow by this time next year" try "Let's go for half a pig more by March, another half by July and a half again by the autumn". This doesn't strain credulity and is much nearer to what could happen in real life.

Back-up support

But there is one important addendum to this approach – the manager must supply the worker or their section head with a personal aide-memoire to remind them of the critical stepping stones they need to check out so as to be sure of their bonus.

The scaled bonus

A target increase from pigs born-alive per litter or numbers weaned, or weight of pigs weaned per litter, or meat sold per tonne of feed fed in the grow-out barns, are easy to calculate. Some managers have designed a sliding scale where the full bonus is based on 100 per cent achievement and there is a progressive reduction as the achievement lessens, usually by 25 per cent increments, across the fixed bonus period. This again, as above, is a series of graduated cliffs to climb – or hasten to get away from once climbed! Both are incentives.

So should you try a bonus scheme? Yes, if you can execute it properly. ■



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Making sense Of pigs' senses

By Nancy Lidster

We've just come through the public comment period for the proposed Canadian Code of Practice for pigs. The handling portion focuses on using the flight zone and point of balance to move pigs. It contains a couple of points related to pigs' vision – don't approach in the blind spot and keep non-essential people out of sight. Touch would be involved in the use of restraint, aggressive handling and electric prod use. There is no reference to hearing or smell.¹

Appendix K: "Pig Vision & Flight Zone" depicts the flight zone, balance point, and blind spot of a pig² and while nothing else was used, its source, "Pig Vision and Management / Handling"³, contained some ideas worth discussing. The authors of that paper tell us that a pig relies primarily on smell and hearing to situate it in its surroundings, and uses sight to complement information gathered by sound and smell. In contrast, humans rely primarily on vision and use sound and smell to complete the information obtained through our vision.

According to the authors, when humans sense a problem they typically stop and look for the cause, whereas a pig will stop and sniff the floor. They recommend that we avoid changes in floor surfaces, strange objects, variable light to encourage the pigs to stop sniffing. They recommend moving small groups of between five and seven animals so that when some animals do stop, you can threaten and excite the ones closest to you enough to get all pigs moving again.

There is one key statement I want to address in this article: "It is important to keep in mind that the personnel that handle the animals are always playing the role as a threat factor for the animals, this is what gets them to keep moving."³ This is the basic premise for using the flight zone and point of balance to move pigs.



For advertising contact James Shaw at 416-231-1812 or jamesshaw@rogers.com

Question: Is the threat of a handler necessary to keep pigs moving?

Situation: We collected video of 48 sows being moved to farrowing. One person released 12 sows in gestation at a time, and then followed behind them while another person received and penned sows in the farrowing room. We had one of the cameras mounted on the farrowing room door pointed towards gestation.

Observations: All sets of 12 sows followed a similar pattern coming down the hallway. It began with four or five sows moving at a brisk walk or trot the full length of the hallway with their heads up, bodies forward, and little or no stopping or sniffing. Front sows often jostled for the lead.. Front sows were followed by a second group at some distance but well ahead of the final sows.

The final sows out of each group of 12 were followed by the handler. For the most part he gave sows space, but carried his board broadside and repeatedly clunked it down on the floor as he walked. Even though this was a relatively low level of threat and no sows balked or refused to move, there were few instances when there wasn't at least one sow stopped and nosing around.

Was the head down and sniffing all about smell?

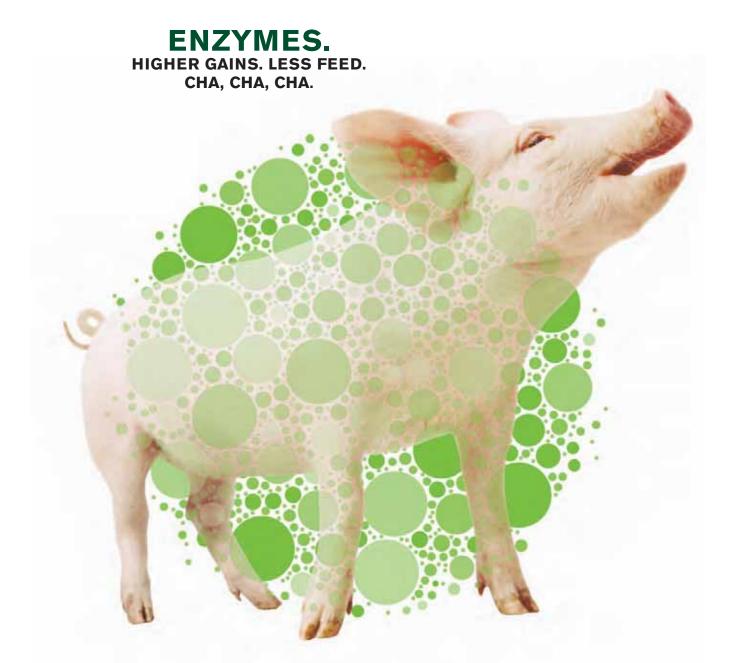
Pigs shift their bodies if they can to see pressure. When they can't see a threat they listen for it. Much of the sniffing was done with sows' heads turned to the side suggesting that their attention was back.

In his book, Moving 'Em, Burt Smith doesn't offer a porcine example, but does say that many grazing animals can see virtually 3600 around them when their head is down grazing but with their heads raised, the horizontal range is reduced to, in the example of sheep and goats, about 2900.⁴ Do pigs put their heads down in part, to keep better track of their handler?

The reference paper³ recommends moving small groups premised on expectations that:

- handlers have to threaten pigs to make them move
- pigs stop and sniff whenever we move them

In our example, sows closest to the handler and most influenced by his presence, noise, and threat spent the most time with their heads down, stopping, and nosing around.



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Front animals that were nowhere near the handler kept their heads up and kept moving forward.

Small groups can work well if we don't rely on threat to move them. If the handler had carried his board quietly at his side and just followed the sows along without distracting them, they could have moved just as easily as the front sows. He could pressure if one stopped, but then leave them alone and let them move.

If the handler had used his broadside, clunking board but on groups of between five and seven sows instead of 12, he would have needed twice as many trips plus time for the extra back-hauls. He'd have missed the benefits of front sows moving themselves and had virtually all sows dawdling along to sniff every turd, puddle, and excuse along the hallway. He'd have been convinced that he had to move sows is in small groups. Multiply his extra time by two for the fellow waiting in the farrowing room.

Summary:

Pig handling extends beyond pigs' vision, blind spot, flight zone, and point of balance.

Pigs' efforts to see pressure can conflict with the point of balance. Distant conversations can stop pigs as can physical contact. Herd behavior can hurt as easily as help us.

Whether moving large groups or small, handlers need to understand the full range of pigs' senses and responses.

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³Dalmau, A., Llonch, P. & Velarde, A. (2009) What the Experts Say: Pig Vision and Management/Handling. Available at: http://www.pig333.com/what the experts_say/pig-vision-andmanagement-handling_981/ Accessed: July 10, 2013.

⁴Smith, Burt (1998) Moving'Em. A Guide to Low Stress Animal Handling p44 ISBN 0-9662704-3-6

Story Ideas? Press release? Comments? Email the editor! sherimonk@gmail.com

Colony takes group housing to a new level

Gold Spring Colony's swine production facility gets a gold star for group housing

By Dr. Dawn Magrath, Innovative Veterinary Services, Lethbridge, Alberta

Gold Spring Colony is still under construction, but their swine production facility is in full swing. When Miltow Colony, the home site, began planning for their new daughter colony, it was clear that a group sow housing system would be the priority. However, a lot of consultation was made with experienced industry representatives to make the whole farm very low stress for all ages of pigs.

Population of the new barn began in late 2012, with gilts and boars arriving in weekly or bi-weekly batches. Each gilt was given an electronic tag on arrival and this immediately allowed her number to be read by any of the tag detectors at the feeders and boar stations. The tag is read by the Electronic Sow Feeder (ESF) station once she places her head into the feeder. Each day, every sow/gilt in the herd is allocated a daily feed intake amount and this is delivered in small quantities once her tag is read. If the sow decides she has had enough to eat before her daily ration is consumed, she can come back and have the remaining balance for supper.

The sows are extremely content and calm. Muscle tone and body condition is excellent, and aggression is minimal in



these large groups. Sow mortality is almost zero and culling percentages due to lameness have been extremely low, despite concrete flooring. This is no doubt due to diligent management by the team at Gold Spring. Tim, Arnie and John have been very receptive to advice and recommendations and are extremely proud of their hog facility.

CONTINUED ON PAGE 56



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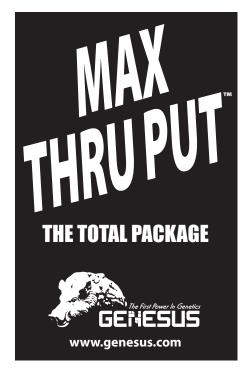
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The breeding herd is segregated into two groups by parity. Maiden gilts and bred gilts are housed in a separate area and are kept as a group until they farrow. There is a 'teaser' boar in the room and when he gets a visit, a tag reader logs the gilt's number and this allows Tim to check the gilt, record her heat cycle and then program the computer to a feeding curve. The feeding program is set to "flush" the gilts 10 days prior to their next heat



cycle. This "flushing" effect is very effective in gilts, and has allowed an appreciation of large litter sizes in the first parity, which we know can also affect the lifetime production of that female.

Sows take a shower prior to being moved to the farrowing quarters. A special room was designed to allow several sows to shower at once and Tim says, "This is one of the best things we built." I agree that it's something that is almost essential when dealing with loose sow housing as you may find sows are a little dirtier compared to a stall facility. Traditional farrowing pens are utilized, although they are a little more generous in size than the average pen. Sows are placed into the pen approximately 5-7 days prior to farrowing and Arnie feeds each sow individually several times a day. Heat lamps and mats are available for babies as soon as they arrive, and litters are split-suckled as required. Piglets are weaned typically at 28 days of age as large groups split into male and female are placed into a warm nursery with climate controls, and plenty of food and water at the ready. The pigs stay in the same groups they are weaned into until they reach market weight. Lowstress facilities are also incorporated right up to the finisher barn, where pigs



are sorted automatically by a scale system within their pen. As they travel across the scale to reach the feeders, they are sorted out into a "market ready" pen according to their weight. No handling or force is required, meaning pigs stay calm and are allowed to grow to their full potential.

At weaning, sows are moved to individual weaning pens in the breeding barn. The breeding barn is bright and sows have plenty of visibility and contact with boars. All mating is natural with live boars, so having the large pens is really nice as the floor stays nice and dry. I can see that farms that utilize artificial insemination, (A.I.) may be reluctant to use this type of system because it is far easier to walk down a row of sows in stalls to A.I. them than walk into pens to do so.

P1+ sows, once they are bred, are then moved to the larger gestation room. This room is much larger, and houses many more girls than the gilt room. Boars are present here too, to aid in the detection of sows returning to estrus, which has been minimal to date. Tim notes that several sows have had to be re-trained to the ESF system after being weaned, but by paying close attention to records and monitoring sows by walking through the groups several times a day, he can make sure that everyone eats each day.

If a sow needs to be removed from the large group, for example due to lameness or being bullied, there is a bank of individual pens that they can be placed in, to allow for recovery and special attention. We have been fortunate not to have to use these pens too often.

Muscle tone and body condition is excellent, and aggression is minimal in these large groups. Sow mortality is almost zero and culling percentages due to lameness have been extremely low, despite concrete flooring.

Each farrowing, nursery and finisher room is completely washed, disinfected and dried between batches. All-in-allout rooms are an important consideration when building a single-site production facility as it can really help control and minimize spread of disease. It's the next best thing to multisite production, and some actually say it's even better than three-site production.

The considerations for best animal care don't stop there. The load-out handling facility and loading ramp are prime examples of going the extra mile to reduce stress, especially during a potentially stressful event. The handling facility is

CONTINUED ON PAGE 58



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a continuous swing, tub chute that allows for loading small numbers of pigs at a time, whilst still being efficient and allowing the next group to get ready. This is important in reducing the time the hogs that were loaded first are on the truck, until the very last one is loaded.

The split level ramp chute is something I have not seen at any other farm. Care was taken to ensure that the area would be bright and welcoming for the pigs, as well as provide a stressfree loading experience for pigs and handlers. Tim and Arnie both told me that without the advice they had from people who had experience with group sow housing and in particular ESF systems, things may not have gone so smoothly. "It could have been a disaster," said Tim; "We realized before the first gilt arrived, that getting the right help would be crucial".

I can't say enough about the long, arduous hours that both Tim and Arnie have put into this barn already. Training gilts to go through an ESF system is not a five-minute job. Some gilts take up to seven days to train to this type of system, but Tim and Arnie didn't fail a single one. There was a 100 per cent success rate of getting these girls through. That's dedication for you!

I look forward to the transition of the industry over time to sow housing systems similar to this one. I don't believe we have the perfect design for the North American climate yet, and that's part of the reason I disagree that a forced deadline is in the best interest of our swine industry. I am sure that each and every year there will be better designs and progression with sow housing, so why not let the industry transition naturally? One thing I know for sure is that our producers want to do the right thing! They care about the pigs they raise, they are proud of the pork they produce, and that speaks volumes in everything they do. ■





Every tail has a tale to tell

What makes pigs bite tails, and what can be done about it?

By Jane Jordan

Tail biting only affects a small proportion of pigs, but in the UK tail biting is a contentious welfare issue. British pig industry journalist Jane Jordan reviews current thinking and discovers some interesting theories on gender, genetics and uniformity...

Modern genotypes are highly bred – finely tuned to grow fast and perform efficiently and as red meat producers, they're at the top of their game. Given these circumstances, stress to some degree cannot be avoided and will manifest one way or another no matter how 'high-welfare' a production system might be. Tail biting is a classic reaction, but what triggers it is not always easy to identify.

The stressors that culminate in tail biting will affect different pigs in differing ways, which is why incidents tend to be sporadic and numerous studies and anecdotal observations clearly indicate it is not 'system specific'. Tail biting can occur in semiintensive and intensive situations, in both bedded and slatted production systems, with environmental conditions seen as major contributing factors.

"Factors such as the genotype, physical size, and health will affect how many pigs are stressed enough in each pen to turn to tail or ear biting, or other antisocial behaviours such as aggression. Similarly, the response of bitten pigs plays a role in whether those that do the biting actually continue to do it," says Dr Nina Wainwright, welfare projects co-ordinator at the British Pig Executive (BPEX).

Dr Wainwright studied the incidence of tail biting in finishing pigs in a project funded by BPEX and Royal Society for the Prevention of Cruelty to Animals (RSPCA) in 2007. The three-year project involved more than 100 pig production units. It identified a number of potential risk areas including:

- Environment and atmosphere of accommodation
- Meteorological effects (weather/climate)
- Transport and mixing
- Health (herd status and individual)
- Feed and water access
- Nutrition diet composition
- Enrichment quality and quantity of items/toys, was it provided at all times or only at certain stages



BPEX's work instruction sheet on tail biting and docking procedures.

- Pen space layout and design
- Pig indicators activity patterns and tail posture/ behaviours associated with the likelihood of tail biting
- Genetics breed/genotype

The information provided a platform for the development of a Husbandry Advisory Tool (HAT) that is now used to help stockmen, managers and vets identify factors that activate tail biting and how they could be minimized.

CONTINUED ON PAGE 60



A lengthy issue

Health status seems to have significance and the BPEX/RSPCA project noted a significant reduction in tail biting incidents following the introduction of PCV2 vaccination. This suggests that the stress associated with disease could be another important factor.

"It is difficult to pinpoint any specific reason why tail biting occurs or why only certain pigs do it. The main underlying reasons can be different even in buildings in the same unit. Even pigs managed in high-welfare situations, that are assumed to be 'less stressed' can be affected," says Dr Wainwright.



A classic example of a stage 2 bitten tail in a male pig – some degree of amputation/ cannibalism

Another theory suggests that even if there were no tails to bite, certain pigs would continue to chew whatever objects they could. Surprisingly, bedding is irrelevant as this stereotypic behaviour could be just a need for 'physical comfort', like a child sucks its thumb.

Another influencing factor is tail length. The more variable range of tail lengths within in a group, the greater the chance of biting – and it occurs in both docked and undocked situations. The difference between one tail and another seems to stimulate interest and pigs just have to investigate. A pen housing pigs with full length tails may not be as fascinating to certain individuals as one housing docked pigs with varying tail lengths.

Tail docking does not address the causes of tail biting, only the symptoms, but achieving uniformity throughout the finishing herd is vitally important to minimize risk.

Docked tails should be of a standard length as instructed by assurance schemes. Staff who perform the task must be consistent in their application. Good communication between the management team and stock people will ensure everyone understands why this is so important and what implications may arise if tails are not all the same length.

Gilt tendency

Research published by Irish agriculture and food development authority Teagasc in 2011, revealed that female pigs were more inclined to bite than male pigs. The study, led by Dr Laura Boyle at Moorepark's Pig Production Development Unit, County Cork, scored tails of 36,963 pig carcasses from six Irish slaughter houses (see table 1).

The survey showed almost 60 per cent of tails had been bitten, and boar carcasses had a higher proportion of more severe injuries than gilt carcasses. Of the tails inspected, most scored 1 (52.5%). Lesions were superficial and probably caused by

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www.lumican.com Call us: 1 (877) 844 8552 contact@lumican.com Table 1. Survey of tail lesions seen in pigs in six Irish slaughterhouses

Score	Severity of injury	% pigs affected
0	No evidence of tail biting	41.2
1	Healed or mild lesions	52.5
2	Evidence of chewing and puncture but no evidence of swelling;	5.1
3	evidence of chewing or puncture wounds with swelling and signs of possible infection;	0.62
4	partial or total loss of the tail with signs of severe infection	0.43

Ref. Teagasc, Moorepark 2011

one pig manipulating another's tail in its mouth, with little or no reaction from the recipient. But male carcasses showed a higher proportion of tails scored at 1, 2, 3 and 4, than female pigs, suggesting that gilts were more likely to tail bite rather than be bitten.

Interestingly, this theory is backed by observations from other studies at Moorepark looking at stress-coping mechanisms in weaners. Here pigs were inspected at 56 days of age (around 17kg live weight) for signs of tail injuries. Approximately 29 per cent had bitten tails, although pens of females had a higher proportion of affected animals, than pens of males (33.7% and 24.7%, respectively).

Avoiding risks

Almost all of the pigs in Teagasc's slaughter line survey had docked tails (99.1%). Only 347 carcasses had undocked tails and of these a higher proportion scored 1 or above, when compared with docked carcasses. This suggests that docking to some extent can help to prevent tail biting. However, as most of the pigs in the survey had been docked, and yet still showed signs of tail injuries, the findings indicated a need to improve the management/husbandry of certain production systems.

Pen enrichment can reduce the risk of tail biting and is a specific requirement of farm assurance. However, some herds have found that providing toys actually stimulates biting behaviours.

"Pigs have an inquisitive nature. Stimulation can relieve boredom, but it can also trigger other behaviours that may not be so good from a welfare perspective," says Dr Wainwright.

Another trial at Moorepark observed 224 undocked pigs under good housing conditions that implemented a strict intervention protocol that removed biters and treated injured pigs. The accommodation also provided 'toys' and chains in line with environmental enrichment requirements.

However, the pigs in this study showed a persistently high level of tail-directed behaviour – around 1.2 incidences per pig, per hour or 16.8 incidences per pen, per hour. At least 12 acute outbreaks of stage 2 tail biting – mutilation/cannibalism of the tail – were noted during a nine-week period, and as a result 35 per cent of the pigs suffered some degree of tail amputation by the time they reached 60kg live weight.

The results suggest that if tail docking was abandoned, tail biting could become more prevalent in most of the production systems used by Irish farms, even if housing environments were enriched.



Uniform tails are less likely to stimulate interest. The more variable range of tail lengths, the greater the chance of biting

Practical perspective

Veterinarian Steve Youngs MRCVS of the Oakwood Practice in Norfolk, Eastern England, agrees. He says producers must retain the option to dock tails because for many herds it is a justified means of reducing the risk of tail biting. Only units on

CONTINUED ON PAGE 62

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Western Hog^{journal} Health

specific contracts, where price incentives are given for operating high welfare production, will choose not to dock tails.

"In an ideal world, where all pig units are managed to very high welfare standards, with a high degree of stockmanship and attention to detail at every level, then tail docking may not be necessary. But the



Some pigs just like to bite. Enriching their environment with toys and chains can divert interest away from tails

economic constraints currently faced by the UK production sector makes this ideal very difficult for most commercial herds to achieve," he explains.

Many units are in desperate need of investment, due to a prolonged period of low profitability and a lack of resources, and so tail biting will always be a potential risk in this situation. A number of Mr. Youngs' clients do rear and finish pigs efficiently without docking tails, but these herds are very well managed at every stage.

He says if end-users placed a higher value on the British pig sector and the product it produces, and more money was directed towards the production end of the supply chain, then things could be different. Farmers would be able to upgrade their facilities, invest in new technology and improve the way their pigs are managed.

From a veterinary perspective, Mr. Youngs says UK pig farmers have become more proactive at minimizing the risks and monitoring any potential problems.

"As an industry we are very aware of tail biting due to the structure of our quality assurance schemes which demand regular veterinary visits. This has enabled any potential risks and/or incidents to be acted on swiftly," he adds.

However, occasional flare-ups cannot be ruled out. Tail biting can and does happen and the causes often remain a mystery, so producers must be vigilant. Currently, some new theories are being put forward and there is speculation that certain genotypes are less susceptible to tail biting than others.

Again, this is difficult to prove as there are so many variables.

Could it be that many of these genotypes are more prevalent on farms in certain regions, where straw-based production is more common? Are more of these breeds kept on units that operate high-welfare systems, have exceptional staff and stockmanship skills and/or are linked to specific contracts that dictate which breeds are used and how they are housed and managed?

Many factors are involved, but there may be some element within certain breeding programs that have inadvertently selected pigs to be more laid back. Such genotypes might be inherently better at coping with stress and as a result, have no interest in nibbling tails at all.



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For further information, or to register, please contact Bernie Peet on (403) 782-3776 or (403) 392-3104 or Email: bjpeet@telusplanet.net

PED virus reveals how important biosecurity is

Increasing biosecurity now could prove to be cruicially important down the road

By Dr. Kurt Preugschas, Prairie Swine Health Services, Red Deer, Alberta

Do you think biosecurity is important? Are you doing everything you can to maximize biosecurity on your farm? Have you heard about PED Virus? If you answered "no" to any of these questions, your farm is potentially at risk! Over the past couple of years, there have been several programs addressing the importance of biosecurity. For many of us, biosecurity is sometimes overlooked because it adds cost and takes up our valuable time. Unfortunately, the emergence of Porcine Epidemic Diarrhea (PED) virus in the United States is another example of why biosecurity matters all the time. To prevent PED introduction into Canada and potentially devastate the Canadian swine industry, all stakeholders need to work together and make biosecurity a priority.

What is PED virus?

Porcine Epidemic Diarrhea virus is caused by a unique coronavirus similar to the Transmissible Gastroenteritis (TGE) virus. Clinically the two diseases appear very similar in a naïve herd, an acute outbreak of watery diarrhea in all ages of animals on the farm. Suckling piglets are most affected by the disease causing severe dehydration and mortality up to 100 per cent. In growing pigs there is widespread diarrhea, though mortality rates typically remain low.

Is PED a food safety concern or a threat to other animals?

PED only affects pigs and cannot be spread to other animal species or humans. There is no risk to food safety or public health. However, if PED enters a swine herd, PED can cause significant losses in the herd for the producer.

Is PED in Canada?

No diagnosis of PED has been made in Canada at this time. The first diagnosis of PED in North America was in the United States in May 2013. Since that time it has spread to over 14 states with labs confirming hundreds of positive samples. PED has been present in Asia and Europe for decades, with a recent outbreak in China in 2010. With significant movement of pigs and vehicles throughout North America, all producers need to maximize biosecurity to prevent infection.

Can PED be treated or is there a vaccine available?

Currently there is no specific treatment available for pigs once they are infected. Supportive care such as water and electrolytes can minimize the impact by preventing dehydration. No commercial vaccine is available in North America at this time. TGE vaccines are not effective against PED. There is no cross-protection of immunity between TGE/ PRCV (Porcine Respiratory Coronavirus) and PED.

How is PED virus spread?

When a pig is infected with PED, they shed massive amounts of virus in their feces. PED is spread to other pigs if they ingest any contaminated fecal material (fecal-oral route). Major vectors of spread between farms include live infected pigs, contaminated trucks and trailers, equipment, boots, clothing, mechanical transmission by birds or wildlife and any other possible fomite. As with TGE, PED virus survivability and transmission is enhanced in cold weather. Special attention should be given to washing, disinfecting and drying

CONTINUED ON PAGE 64





Saskatchewan Pork Industry Symposium 2013 November 19-20, Saskatoon, SK

2013 marks the 36th year for Saskatchewan Pork Symposium. Our expert panel of speakers will impart extensive knowledge and hands-on experience in production, animal care, industry competitiveness and improving producer profitability.

Advocating for agriculture has never been more important than it is for today's producers. **Crystal Mackay** of **Farm and Food Care Ontario** will impart her knowledge of ag advocacy and what it takes to build the trust of the general public.

Dr. Sandra Edwards, University of Newcastle, U.K., brings her broad experience in animal welfare and will look at lessons we can learn from the European swine production models.

Brian Andries, Operations Manager, Prairie Swine Centre, has extensive hands-on experience with gestation and loose sow housing and shares his insights on how these two systems compare. Ben Hofer, a Fox Valley pork producer will explain the process he used in converting his barn to group housing.

Disease surveillance/prevention is critical for profitable pork production. **Dr. Chris Byra** will discuss the role of the **Canadian Swine Health Intelligence Network** in keeping your herds disease free! As well, **Dr. John Harding, U of S Swine Production Medicine** explains the correlation between swine genetics and herd health and how selecting for certain genetic traits can limit diseases.

Adjusting your swine nutrition program to avoid costly mistakes is where **Dr. Mario Ramirez of Gowan's Feed Consulting** can help. He'll provide useful information on developing optimum feeding regimes that capitalize on what's available in the marketplace!

Fat/lean/trim demerits can add up to significantly lower profits over the long term. **Bill Alford** with **H@ms Marketing Services** will offer guidance on interpreting the kill statement to help you receive full value for your hogs. **Dr. Leigh Rosengren of Rosengren Epidemiology** will address antibiotic stewardship and the relationship between regulations, public perception and risk with antibiotic use.

Volatile markets and fluctuating currencies threaten producers' bottom lines. Senior Policy Analyst, **Kevin Grier, George Morris Centre,** analyzes the Canadian hog industry's competitiveness and the shifting balance.

Tina Varughese, President of tWorks, a Calgarybased company specializing in cross-cultural communication and cultural diversity in the workplace, offers Cultural Communications 101 and a separate workshop Day 2 on recruiting and retaining foreign workers for success and sustainability.

Mr. Réjean Nadeau, President and CEO of Olymel, L.P. will offer his insight into production, processing and markets and the issues and challenges for the industry.

Special guest, **The Honourable Lyle Stewart, Saskatchewan Minister of Agriculture**, will speak on behalf of the Province at our evening banquet on November 19th.

The program brochure and registration information will be posted on line mid-September at: www.saskpork.com/html/pork_symposium/index.cfm

The host hotel is the **Saskatoon Inn Hotel and Conference Centre**, 2002 Airport Drive, Saskatoon, SK will hold a block of rooms until October 18th. We encourage you to book accommodations early by calling Reservations at (306) 242-1440 or toll free at 1-800-667-8789.

For additional information contact:

Kim Browne, Symposium Coordinator Sask Pork, 2 - 502 45th Street W., Saskatoon, SK Tel: (306) 343-3506 (direct) Fax: (306) 244-1712 email: info@saskpork.com of trucks and trailers returning from affected areas in the United States. The Canadian swine industry's priority needs to be to prevent PED (and other diseases) from entering Canada.

How to make a definitive diagnosis?

Consult your veterinarian immediately if you suspect PED is in your barn or you are seeing an acute episode of diarrhea in your pigs. Due to the similarity of clinical signs between TGE and PED, the diseases must be differentiated diagnostically. Specific diagnostic tests for PED are available at several labs across Canada. Work with your veterinarian for appropriate sample collection. The best samples are tissues submitted from acutely affected pigs (within 24 hours) for a complete diagnostic testing workup.

How can PED be prevented?

Biosecurity! Biosecurity! Biosecurity! Currently PED virus has not been diagnosed in Canada and we must apply stringent biosecurity practices to keep it this way. The Canadian Swine Health Board (CSHB) has implemented the Canadian Swine Health Information Network (CSHIN) as an early identification tool for new diseases in order to minimize the spread and the negative impact of a new disease.

Biosecurity RISKS for PED

For the Canadian swine herd, transportation vehicles returning from affected areas in the United States pose the highest risk. Dr. Lowe has done a recent study testing the prevalence of PED virus on trucks and trailers at collection yards and slaughterhouses in the Midwest United States. Early results from this study indicate that collection yards and slaughterhouses can be a substantial risk of infection for previously negative trucks and trailers and therefore to farms. Multi-use trailer scrape-off sites in the United States that have trailers with contaminated manure also pose a risk. Washing trucks and trailers with recycled water is another important risk factor. Diligent washing with fresh water, disinfection and drying of trucks and trailers is crucial to kill the virus and prevent spread. International visitors from infected areas could be a vector for the virus. Any incoming material to your barn could potentially act as a fomite carrying PED.

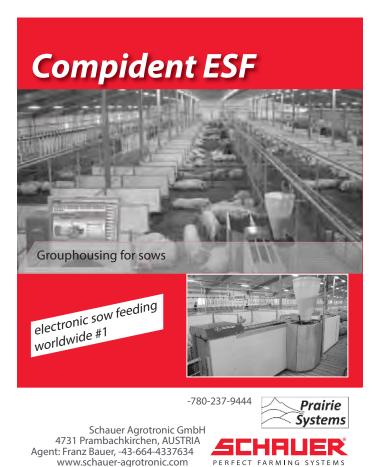
Biosecurity Measures to PREVENT PED

The same best management biosecurity practices that we all know about apply to prevent PED.

- Most important is to review and maximize ALL herd biosecurity protocols!
- Wash (with fresh water), disinfect, and dry all transportation vehicles after each load and pay special attention if the vehicle is going to the United States.

- Sound loading and unloading biosecurity protocols for truck drivers and barn staff.
- Discuss protocols with your transportation company to ensure they are meeting the necessary standards for your farm.
- Danish entry or shower-in facilities used for all staff and visitors for every entry.
- Enforce downtime requirements and maintain a visitors log for visitors and staff that have been abroad.
- Thorough cleaning and disinfection of all incoming material onto the farm.
- Use feed ingredients with known source and quality.
- Minimize the use of communal dead stock disposal systems.
- Quarantine/isolate incoming animals and have a vet to vet consultation regarding the health status of the source farm prior to purchase.

In the best interest of the entire Canadian swine industry, let us work together by maximizing our biosecurity practices to prevent Porcine Epidemic Diarrhea virus from entering Canada. ■





La bataille de la cuisine Française

The battle of the sexes is fought in the kitchen, and the weapons are wine and swine.

By Sheri Monk and Pierre Laberge

Our second cook-off was a spontaneous sort of challenge. Initially, I had purchased two unique cuts of pork at Overwaitea Foods in Sparwood, B.C. – I love that store! I see meat selections there that I've never seen anywhere else!

I brought the two cuts to Pierre's house, and we were to prepare them over the weekend, but life happened, and our weekend schedule just didn't allow for it. And then I learned something new – never leave your meat unattended in a bachelor's refrigerator. Apparently, it was delicious.





Clockwise, from left, Pierre, his son Vincent, his father Jude, his brother Sébastien and his sister-in-law Melanie are served and ready to dig in to the cook-off!

In early August, we flew to Quebec for Pierre's sister's wedding, and on a quiet evening after the event, we decided to hold the cook-off at his parent's house, to be judged by his family. This also gave me an excuse to visit the meat section of another grocery store, which is one of my favourite things to do while on vacation.

The packages that said, "Osso Buco" caught my eye, as I had never even heard the term before. The cut is sliced shank, which I had never had from pork in the past. In fact, I'd only had shank once before, and it was lamb shank that I cooked in my solar oven while camping in Saskatchewan this summer.

With our meat selection chosen, we each scrambled onto the Internet on our iPhones, hurriedly trying to choose a recipe so we could purchase whatever supporting ingredients we would require. In just a few more days, I was leaving for vacation in Arizona, so I was in a Mexicana mood. Without even finding a real recipe, I started filling my basket with cilantro, limes, avocado, Roma tomatoes, green onion, garlic, rice and one can of Mexican beans. Normally, I would prepare them from scratch at home, but I didn't have the luxury of time. I covertly snuck several glances at Pierre's basket and saw potatoes, carrots and a large white onion.

Pork Culture and Trends

Slow Cooked Osso Bucco and garlic mashed potatoes

Ingredients

6 pieces of pork shank 3 carrots 2 tomatoes 1 white onion 3 cloves of garlic 125 ml white wine 75 ml butter 1 bay leaf Rosemary Basil Salt & pepper

Directions

Combine the liquid ingredients with the spices and let this mixture set. While you wait, braise the meat before placing in the slow cooker on the low heat setting. Add the vegetables halfway through your cooking time, which will vary depending on how tender you want the meat, and how long you are willing to wait.

To make the mashed potatoes, you can either peel or leave the peels on before you boil them. Add the three garlic cloves in with the potatoes once they are boiling. Drain, and mash the potatoes together with the garlic, then add butter and a pinch of salt into the blend until a



Pierre's recipe called for braising the meat before setting in the slow cooker. This helps retain the marrow's flavour during cooking.

rich and creamy mix is achieved.

Pierre chose to make slow-cooked osso buco with garlic mashed potatoes paired with a Pinot Noir. Again, I have failed to document the wine well enough, but this time it was because there were plenty of bottles leftover from the wedding. We just selected a couple and placed them on the table, and I neglected to record which ones.

Perhaps because I was so anxious to go on my desert adventure, I just couldn't refuse trying something a little more exotic.

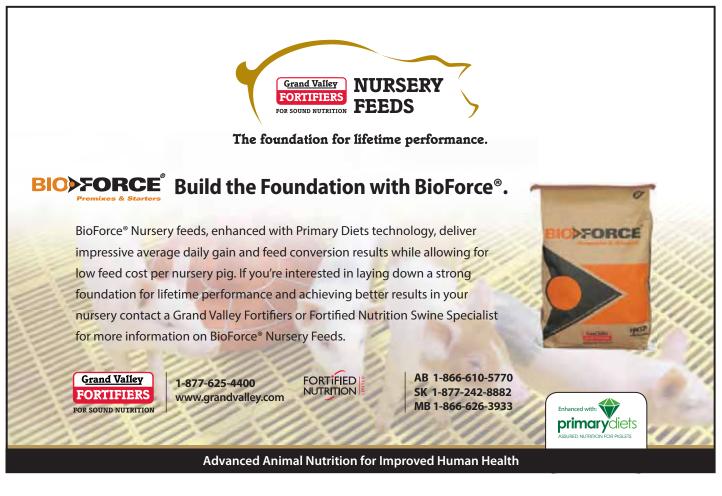
He said

Pierre's Slow Cooked Osso Bucco and garlic mashed potatoes - 9/10

I never had shank before. At first I thought, 'Shank? Isn't it done with lamb? I like lamb!' Reading a bit more about the cut, I thought a slow cooker would be the way to go, and so I called shotgun on the Crock-Pot right away, before we checked out at the grocery store.

We invited my brother and his wife and, along with my father and my son, and they

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Osso Buco Mexicana with refried beans, guacamole and rice.

Ingredients

Sliced pork shank 6 servings of refried beans 2 cups of white rice 4 Roma tomatoes 1 bunch of green onion 1 bunch of fresh cilantro 4 limes 4 garlic cloves 2 ripe avocados 1 bottle of Corona (or any other Mexican beer would do) Olive oil as needed

Directions

This recipe calls for a slow cooker, although I used a stove top pot.

Dice one cup of cilantro, two garlic cloves and zest one lime into a bowl. Lightly brush the meat with olive oil, then generously coat the meat with the cilantro/lime/garlic mix. Season with paprika, black pepper and just a shake of chili power, and place in the pot. Add the bottle of beer, green onion and tomatoes, then set to low heat, leaving the pot covered.



A little cilantro, garlic and lime zest can go a long, long way.

To make the guacamole, I simply mash the avocado, add half of one clove of garlic, and season with a bit of black pepper. Squeeze a tiny bit of lime or lemon juice into the mix to help keep the avocado from browning before it is served, and then wrap and place in the fridge to allow the flavour to set. Some people add diced onion and oil to it as well, but I prefer it simple and smooth.

In order to make up for the canned beans, I made a variation of gremolata, which is a chopped herb condiment usually served with veal shank osso buco. It traditionally calls for diced garlic, lemon zest and chopped parsley, which is served on top of the meat. I exchanged the lemon zest for lime zest, and replaced the parsley with cilantro. The remaining limes were sliced in order to be served with the dish.

For dessert, we served sugar pie, which is the quintessential Quebec treat, and it alone is the reason why I gained five pounds the last time I visited Pierre's family this past Christmas. This time we settled for store-bought sugar pie, and while it was delicious, nothing can compare to his mother Murielle's homemade recipe, which is to die for.

were to be judging with us. The meal turned out to be very cheerful and lively as everyone had an opinion with every bite. Eating some fresh guacamole for the first time, my father said, "I like that green stuff... That's pretty good! Is there more?"

My brother commented on the fact that the meat was falling off the bone. "In a meal like this, it's all about the tenderness of the meat!"



The slow cooking made the pork melt like butter in the mouth. The vegetables added flavour, but didn't present as nicely as they could have, as they should have been added to the dish a little later than when I tossed them in. The mashed potatoes were creamy and had just enough garlic to wonder if any had been added at all. I will do this recipe again!

Sheri's Osso Buco Mexicana 9/10

Sheri went Mexican, adding lime and guacamole on the side. The rice was perfectly cooked and could have been served on its own. While not traditional in any way, the plate was colourful and absolutely delicious. My brother liked my dish better, and his wife liked Sheri's. My father and my son couldn't decide one way or another, and so it was up to Sheri who would win, and who would lose.

She said

Pierre's Slow Cooked Osso Bucco and garlic mashed potatoes - 9/10

As soon as I saw Pierre with the carrots and potatoes, I knew I was in for a challenge. His father is a very traditional eater, and I had no doubt that Pierre was very well aware of this when choosing his recipe. I'm not a huge fan of stew, so I sometimes steer away from recipes that combine typical stew ingredients, even if they are in a novel recipe like the one Pierre was using.

I was pleasantly surprised and delighted by how Pierre's dish turned out. The meat was cooked perfectly, and I deeply regretted not claiming the slow cooker before he did. The overall taste was demure, but not entirely unsophisticated. The white wine added a subtle elegance to the meal, and I couldn't help but score it a solid nine out of 10.

Sheri's Osso Buco Mexicana 9/10

Yup – it was a draw... a Mexican stand-off, if you will. My pork shank was not near as tender as Pierre's, but the flavour was outstanding! The modified gremolata was a perfect garnish for the meat, and complemented the Spanish rice without overpowering it. Pierre's pregnant sister-in-law could not get enough of it, and I was shocked to see even his father enjoying it, and asking for seconds of the guacamole! I would happily prepare both of these dishes again. The meat was inexpensive, and the slow cooker can turn a tougher cut into a gourmet delicacy. Highly recommended, especially for those on a budget, but are craving something different. We did learn however, that there isn't a whole lot of meat on the shanks, and we could have used more for the number of people we were serving. However, a nice big salad and some bread could also fill that gap nicely.

For our next challenge, we are going to try and involve the Passion for Pork bloggers, so stay tuned! If you have a recipe you would like us to try, please send it to sherimonk@gmail. com, and if you've tried one of ours, let us know how it turned out! We would love to publish your results and a photo of your dishes. ■

Pork Culture and Trends

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YOUR DAILY BACON

BY BUDDY SIMMONS

Welcome back to Your Daily Bacon! I thought that we might open this issue's offerings with a venerable pig joke, one of my favourites. Okay, there aren't a lot of pig jokes out there (that are printable anyway) but this one is still a corny – or maybe corn-fed – classic!

A salesman is lost in a rural area and stops at a farm to get directions. As he is talking to the farmer he notices a pig with a wooden leg. "How did the pig get a wooden leg?" he asks the farmer.

"Well," began the farmer, "that is a very special pig. One night not too long ago we had a fire start in the barn. That pig set up a great squealing that woke everyone, and by the time we got there he had herded all the other animals out of the barn and saved every single one of them." Clearly impressed, the salesman asked, "And that was when he hurt his leg?"

"Oh no," said the farmer. "He was fine after that. He's a tough critter, that one. Just a few days later while later I was in the woods out back, a bear attacked me. Well, sir, wouldn't you know it – that pig was right close by, and he came a-runnin' and set on that bear and chased him off. Saved me for sure."

The amazed salesman said, "So the bear injured his leg then?"

"Oh gosh no. He came away without a scratch from that. Like I said, tough critter. Though a few days later my tractor turned over in a ditch and I was knocked unconscious. Well, that pig dove into the ditch and pulled me out before I drowned."

CONTINUED ON PAGE 72



Pork Culture and Trends Continued



BACON BALM – A very handy product since nobody can wait for bacon to cool before eating it. The balm would soothe those scalded lips, but the trick would be resisting the urge to eat the balm as well!

"So that's how he hurt his leg then?" asked the flabbergasted salesman.

"Oh no," answered the farmer. "That pig of mine can swim like a fish."

Incredulous, the salesman stared at the pig in wonder and asked, "So how on Earth did he get that wooden leg?"

"Well," the farmer told him, "When you have a pig this good, you don't want to eat him all at once."

Now, with that out of the way, our roving bacon reporter was on the road again, and provided a few more examples of why bacon is not only delicious, but one of the most versatile pork products you can wish for! This time Sheri was in Canada's most beautiful and historically celebrated places – old Quebec City.

People from all around the world come to Quebec to see its famous Old World charm, imagining how exciting a time it must have been when France made its claim to the New World. The narrow streets and charming stone buildings come right out of the most romantic era of European architecture, and gourmet French restaurants and upscale boutiques tempt even the most frugal sidewalk shoppers.

Of course, even Quebec City is home to souvenir shops – they just happen to be located in very beautiful buildings. Nestled among the hockey jerseys, fridge magnets, RCMP memorabilia, postcards,



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BACON BEANS – Jelly beans have always been a favourite treat – but now they're even better.

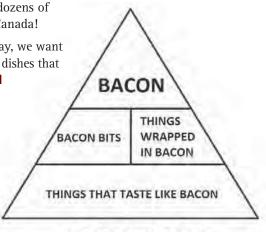
Pork Culture and Trends

maple syrup and candy, faux raccoon fur hats, French t-shirts and posters were dozens of bacon products. I'm beginning to think that bacon must have been invented in Canada!

As always, if you see a cool bacon product, or if you've used bacon in a unique way, we want to hear from you! Next edition we are going to focus on some of the more unique dishes that feature bacon, so please send your photos and recipes to bsimmons@ma.rr.com.



GUMMY BACON – "My parents went all the way to Quebec City, and all they brought back was this Gummy Bacon. I hope they go back soon!"



FOOD PYRAMID

BACON PYRAMID – Proof that for most of us bacon is not just part of a balanced diet, it IS a balanced diet!



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* In the event of high maternal antibodies, vaccination of 3 days of age is not recommended

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Genesus 4 TON SOW -BECAUSE- 30.58 hogs sold per sow x 276 lbs per market hog = 8,440 lbs sold a sow. 1.85 A.D.G. wean to finish - 2.489 feed conversion. Genesus global leader in total lbs and profit produced per sow per year.

THE TOTAL PACKAGE



www.genesus.com

Genesus produces more pigs, better pigs and more profit for you.

*Genesus customer record on file – Genesus Duroc bred to Genesus F1 females