

# National Sow Housing Conversion Newsletter

October 2014 Vol. 1, Issue 1



## SIP Swine Cluster 2 Funding Announcement

Final contracts for Swine Innovation Porc's Swine Cluster 2 program were signed in June, providing support for a four year project documenting barn conversions to group housing. The National Sow Housing Conversion Project (NSHCP) is directed by Dr. Jennifer Brown, a Research Scientist in Ethology at Prairie Swine Centre, and includes research partners from the University of Manitoba, Manitoba Pork and CDPQ. The goal of the project is to document barn conversions at four sites across Canada, including planning, construction, management decisions, staff training, changes to the sow herd and production levels both before and after.



"Barn conversions and new builds for group housing represent a huge cost to the pig industry", says Dr. Brown. "Our goal is to put together the best possible information, in terms of barn layout, sow management, and cost of construction, to help Canadian producers who are considering this investment." While countries in the EU have banned stall use except during breeding and early pregnancy (embryo implantation) as of January 2013, the new Canadian Code of Practice encourages the use of group housing systems, but does not totally ban stall use. The EU deadline resulted in reports of poor implementation in some countries, with last minute renovations resulting in lost production and poorer welfare in sows. By not having a deadline, Canadian producers can properly consider their options, and choose the right time for them depending on their situation and financial capability.

The project participants include leading researchers in the science of sow management, and will draw from barn design and management concepts developed in European countries over the past 20 years. "Due to poor market conditions, very little barn construction work has been done in North America over the last 10 years", says project participant and CEO of the Prairie Swine Centre, Lee Whittington. "By documenting top-notch barn conversions here in Canada, we will develop new expertise and can provide builders and producers with the information they need for successful conversion to group housing."

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In addition to funding from AAFC, the project is supported by provincial pork organizations, Alberta Pork, Sask Pork, Manitoba Pork and Ontario Pork. By taking a consistent and science-based approach on this issue, the Canadian pork industry demonstrates a pro-active approach to sow management that will have long-term benefits to sow welfare and production, while strengthening domestic and export markets.



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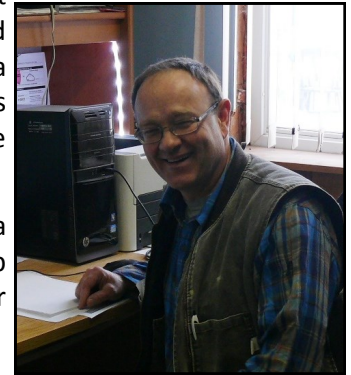


PRAIRIE  
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## Producer Profile: John Van Engelen, Hog-Tied Farms

John Van Engelen and his family own and operate Hog-tied Farms, Ltd. a 250 sow, farrow-to-finish herd located in Thedford, Ontario. John has been a leader in innovative pork production for many years, with barn improvements including installation of a state-of-the-art ventilation and heat recovery system, autosort finishing, and most recently starting the transition to group sow housing, using ESF and automated heat detection. John is an enthusiastic advocate of the pork industry, he is a regular speaker at industry events and over the years has participated in numerous research projects in collaboration with the University of Guelph. In 2010, John received the Premier's Award for Agri-Food Innovation Excellence.

John excels at observing his pigs and adjusting management to suit their needs. As a participant in the NSHCP, the full transition of Hog Tied Farms existing stall barn to group housing will be documented in 2015, and this information will be made available to other producers.



## Group Housing Options

When switching to group housing one of the major considerations is which of the many feeding systems to choose. Feeding systems can be divided into two categories: competitive and non-competitive. Competitive systems provide all sows within a group access to feed at the same time, whilst not providing full body protection to the sows. Thus individual sows may be able to obtain a greater quantity of feed over others through aggression. Non-competitive feeding systems provide sows with an individual enclosed feeding space, and thus sows cannot obtain more feed through asserting aggression. Each type of system has advantages and disadvantages, and the suitability of a system will depend on the individual barn layout and management. Some of the pros and cons of the most commonly used competitive and non-competitive systems are listed below.

### **Competitive Feeding Systems:**

#### **Floor Feeding**



- | Pros   | Cons  |
|--|---|
| <ul style="list-style-type: none"><li>• Lower capital cost to install compared to other group systems</li><li>• No sow training is required</li><li>• Best suited for smaller herds with hands-on management</li></ul> | <ul style="list-style-type: none"><li>• Increased management required to reduce competition at feeding</li><li>• Increased risk for sow removal (up to 15%) due to loss of condition/injury</li></ul> |

#### **Non-Gated or Shoulder Stalls**



- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Increased protection compared to floor feeding, can reduce sow movements at feeding and improve feed distribution</li><li>• Use with liquid or trickle feeding reduces sow displacement during feeding</li></ul> | <ul style="list-style-type: none"><li>• Increased pen space required to ensure adequate space behind the stalls</li><li>• With open stalls dominant sows are still capable of displacing subordinate sows</li></ul> |
|--|---|

Shorter stalls will utilize space better, but provide less protection than longer stalls. Longer stalls have been found to be more beneficial for reducing injury and sow movement during feeding.

**Gated Stalls (Walk-in Lock-in, Free Access)**



- Balances the benefits of group housing with the protection of stalls
- Least competitive feeding system
- Each sow has a protected feeding place – ensuring sows can consume all of their daily allowance of feed.
- Little sow training is required
- System requires the highest space requirement – to accommodate loafing area behind the stalls
- Sows may not utilize loafing area
- Individual feed curves are not possible - portions have to be manually increased

A cafeteria system—a less common system, where several groups of sows are rotated through the same gated stalls for feeding—reduces the space requirement, but requires additional labour or automation.

**Electronic Sow Feeder (ESF)**



- Individual feeding curves can be met
- Efficient space utilisation: ≥60 sows share one ESF, leaving flexible space to accommodate sows.
- A well designed pen with functional areas works favourably with sow behaviour
- System can accept add-ons, enabling automated heat detection, sow sorting. The future will bring more possibilities, such as potential for automated lameness detection.
- Animals need to be trained to use the ESF
- Aggression can occur near entrance gate to the ESF
- Equipment can fail – a backup feeding plan is advisable.
- System heavily reliant on employees accurately entering animal information
- Feeders are high capital cost

For more detailed information on group sow feeding systems, including sow management, visit Manitoba Pork’s website at: <http://manitobapork.com/manitobas-pork-industry/animal-care/tools-for-group-housing/> or the Prairie Swine Centre’s website at <http://www.prairieswine.com/national-sow-housing-conversion-project-2/>. The Prairie Swine series, ‘The Science of Ethology’ also provides a comprehensive overview of group sow housing systems with a focus on the scientific understanding of sow behaviour in each of the various systems. The complete Science of Ethology series can be found at <http://www.prairieswine.com/the-science-of-ethology/>. Paper



copies are also available on request.

## The New Code of Practice- Explained

The new Code of Practice for pigs has been released, and includes some important changes to sow housing requirements that all producers should be aware of.



A new Canadian Code of Practice for the Care and Handling of Pigs was released in March 2014. All producers should be aware of the new requirements, and we can expect to see these code requirements in future

ACA specifications.

Section 1.1.2 of the new Code describes housing and handling facilities for gestating gilts and sows, and gives the following requirements:

*“For all holdings newly built or rebuilt or brought into use for the first time after July 1, 2014, mated gilts and sows must be housed in groups. Individual stalls may be used for up to 28 days after the date of last breeding and an additional period of up to 7 days is permitted to manage grouping. Time in stalls can only be extended to protect the welfare of individual sows on the advice of a competent stockperson.*

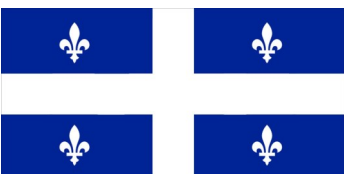
*As of July 1, 2024, mated gilts and sows must be housed:*

- in groups\*; or
- in individual pens; or
- in stalls, if they are provided with the opportunity to turn around or exercise periodically, or other means that allow greater freedom of movement. Suitable options will be clarified by the participating stakeholders by July 1, 2019, as informed by scientific evidence.

*If housed in groups, individual stalls may be used for up to 28 days after the date of last breeding, and an additional period of up to 7 days is permitted to manage grouping.”*

### **What does this mean for you?**

#### Provincial Sow Housing updates



Producers in Quebec are leading the country in terms of group housing installations and renovations. Numerous producers have already made the transition to groups, and other projects are in the planning stages. Sebastien Turcotte with the Centre de Développement du Porc du Québec (CDPQ) is completing a study documenting eight barn conversions in Quebec. The project will also study the effectiveness of different forms of enrichment used on farms, and will be completed in October 2014. A second project will bring together experts on group

**For all barns in which the gestation holding area is newly built, rebuilt, or brought into use for the first time (i.e. after a change of use ) after July 2014, sows cannot be housed in stalls after 35 days gestation.**

Breeding stalls are allowed for up to 28 days after the last breeding, with an additional 7 days in stalls is permitted if required to help manage grouping of the sows. After this period (28 -35 days), sows must be moved into non-stall housing. This means group housing or a pen large enough that the sow can turn around easily.

The total time individual sows are allowed to be kept in stalls can be extended further into gestation for valid medical or behavioural reasons, for example, if a sow was being severely bullied in the group system. The decision to extend a sow’s time in stalls is to be made by a competent stockperson

#### **What if I don’t building new or renovate?**

If your stall gestation unit is in good working order you can continue to house sows in stalls. However, as of July 1, 2024, barns operating with gestation stalls will be required to provide sows with the opportunity to turn around or to exercise periodically. What constitutes adequate exercise is currently undefined, and guidelines, based on scientific evidence, will be given by July 1, 2019.

If repairing or replacing individual stalls, remember to consult the recommended guidelines for determining individual stalls sizes in gestating gilts and sows. The full Code of Practice can be found at: <https://www.nfacc.ca/codes-of-practice/pigs>

## Provincial Sow Housing updates, con't

housing from Europe and Canada to present two workshops for producers on group sow housing in February 2015.

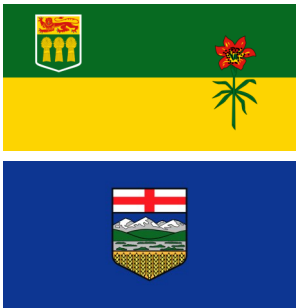


In Ontario, interest in group sow housing is increasing. A number of barn conversions have taken place, including ESF and floor feeding systems, and more renovations are in the planning stages. In early September, OMAFRA swine specialists Doug Richards and Jaydee Smith organised two workshops for producers on group sow housing. The workshops included presentations by three producers: Doug Ahrens, John Van Engelen, and Geert Geene, who have recently built or renovated for group housing. The workshops also featured scientific presentations by Jennifer Brown and Yolande Seddon (Prairie Swine Centre) and Kees de Lange (University of Guelph). Information from the group housing workshops can be found at: <http://www.ontariopork.on.ca/ProductionStandards/AnimalCareResources.aspx>



In Manitoba, Maple Leaf Agri-Farms completed their first renovation to group sow housing in December, 2013. The project involved the conversion of a 1200 sow herd from stalls to group housing with ESF. In September 2014, Maple Leaf staff presented the renovation process and results to pork producers at two public meetings, organised by Robyn Harte (Manitoba Agriculture Food and Rural Development) and Mark Fynn (Manitoba Pork). The presentations by Maple Leaf emphasized the importance of thoroughly evaluating the options and having detailed planning in place before implementing the transition to group housing.

Drs Laurie Connor and Qiang Zhang at the University of Manitoba have recently begun a research project studying mixing times for group-housed sows, optimum flooring types and effective enrichments. The projects are funded through AAFC and Swine Innovation Porc, and will be completed in 2017.



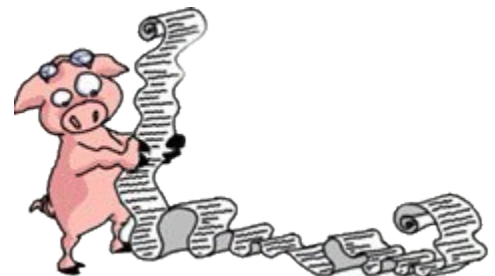
In Saskatchewan and Alberta, producers appear to be more interested in new buildings than in renovations. This may be due to both the larger size of operations, and the age and condition of existing barns. Electronic Sow Feeding systems have been implemented in the majority of new builds and renovations. When implementing ESF, some producers have not been fully aware of the extra time and infrastructure needed to train sows and gilts on the system. In these cases, the training of animals was identified as the most significant hurdle encountered during the transition from stalls to groups.

### **Considering loose housing? We're looking!**

Are you thinking of converting your barn to a group housing system? We can help you make the best choice for your barn.

#### **What the NSHCP can do for you:**

- Provide detailed advice about the group sow housing options that could work for your herd
- Develop a personalized barn plan illustrating the layout options for implementing group sow housing within your existing barn footprint and sow herd size, or with a barn expansion.
- Provide assistance in seeking supplemental funding to assist in infrastructure costs for the conversion.



**The specifics:** We're looking for producers in Alberta or Saskatchewan who are planning to convert their barn to group housing, but have not yet begun the process. We will be documenting the conversion process and sharing the information with other producers.

If interested please contact: Dr Jennifer Brown, Prairie Swine Centre— Tel: 306-667-7442, email: [Jennifer.brown@usask.ca](mailto:Jennifer.brown@usask.ca)

## Group Sow Housing on the Web

As part of the NSHCP, a website providing resources on group sow housing is in preparation and will be launched in early 2015. The website: [www.groupsowhousing.com](http://www.groupsowhousing.com), will showcase farms included in the project with producer profiles, barn layouts, conversion plans and detailed information on the construction process and costs, as well as presenting factsheets and resources on group sow housing.



Videos of the farm sites and interviews with barn owners and managers will provide first-hand information on the experience of producers who have implemented loose housing. Links to a wide range of resources will be included to keep Canadian producers up-to-date on housing innovations around the world.

Web resources: Some good existing website resources on group sow housing can be found at:

Manitoba Pork: <http://manitobapork.com/manitobas-pork-industry/animal-care/tools-for-group-housing/>

Ontario Pork: <http://www.ontariopork.on.ca/ProductionStandards/AnimalCareResources.aspx>

Australian Pork: <http://australianpork.com.au/latest-news/successful-group-housing-systems-for-dry-sows-workshop/>

### NSHCP Activities in Spring 2015

January 19: National Sow Housing Working Group– annual meeting at Banff Pork Seminar

February 1: Website launch– [www.groupsowhousing.com](http://www.groupsowhousing.com)

February 25, 26: Group sow housing workshops in Drummondville and Saint-Agapit, Quebec

April 1, 2: Presentation on Code of Practice, London Swine Conference



Subscription: This newsletter is a biannual publication, released in the fall and spring. The newsletter will cover updates on the NSHCP and provide resources for further information on group sow housing.

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