



Sow Housing Strategies: Mixing Well With Others

By Geoff Geddes, for Swine Innovation Porc

Until there's e-Harmony for hogs, sows must adjust to whomever they're penned with. While they rarely complain, the wrong mixing strategy can give producers plenty of grief.

As part of the project *Optimizing flooring and social management of group housed, gestating sows*, researchers examined which sow mixing strategies after weaning provide the best results for reproductive performance, low economic risk and sow well-being.

"This research is tied in with the trend towards group housing of sows, which is where the industry is headed and a requirement under the revised code of practice by 2024," said Dr. Laurie Connor, Professor, Department of Animal Science in the Faculty of Agricultural and Food Sciences at the University of Manitoba.

"A critical aspect of group housing is the actual mixing of sows post-weaning, as they move from individual stalls to a pen environment.

Our goal was to provide information on mixing strategies and determine if producers looking at barn conversion or construction could get by with fewer stalls, thereby greatly reducing costs."

Time trials

Like many things in life, success with sow mixing is largely about timing. Since there are three points in the production process where mixing is considered safe in terms of ensuring pregnancy, this project mixed sows at each of the three points to compare results:

at weaning, right after breeding but when sows are no longer in heat, and at four weeks post-breeding after confirmation of pregnancy (late mixing).

"We wanted to study the animals in groups from a number of standpoints including social welfare, productivity, differences in farrowing rates, litter sizes and lameness. By collaborating with the Prairie Swine Centre, we were able to run tests using three different housing systems to ensure we were simulating real world conditions. These included partially-slatted floors with Electronic Sow Feeding (ESF) systems, straw-bedded floors with ESF systems and fully slatted floors with walk-in/lock-in free access stalls."

Early vs late: How do they rate?

While their analysis of the results is not yet complete, it appears there were no significant differences among the three groups in terms of production and reproduction. This tells Dr.



Colour-coded pigs for behaviour observation.
Photos: University of Manitoba



Sow using rope enrichment. Photo: University of Manitoba

Connor that producers can mix sows right at the time of weaning and achieve outcomes similar to those reached using stalls.

“Obviously there can be savings in labour costs when sows are bred in stalls, but as far as sow performance is concerned, both early and late mixing are viable options. Interestingly, in one system, we did find slightly higher pregnancy rates and fewer still born piglets in the early mixing group, so that’s something that warrants further study.”

Multiple choices

At a time when there is much stress and uncertainty around the code and group housing, the results should better equip producers to make critical choices.

“By giving producers valid, scientific comparisons, they have the tools to really inform their decisions. If they don’t want stalls and are willing to invest in the extra labour and

management required by early mixing, they can expect that reproductive performance need not be negatively affected and they won’t necessarily have increased aggression.”

On the other hand, if they wish to delay mixing, they can rest assured that farrowing rate, pregnancy rate and litter size won’t be compromised.

“We’re not saying one strategy is better than another; rather, we are providing options.”

Researchers are also updating a mathematical model to determine the economic risks related to sow mixing strategies. A cost-benefit analysis of the different post-weaning sow grouping times carried out with this mathematical model will provide producers with a valuable decision-making tool based on economic risk assessments.

And whether you’re dealing with e-Harmony or the code of practice, your next decision could make all the difference.

Learn more...

For more information about the work described in this article, please contact Dr. Laurie Connor at Laurie.Connor@umanitoba.ca.

You may also find additional resources related to the project *Optimizing flooring and social management of group housed, gestating sows* by consulting our website:

www.swineinnovationporc.ca/research-animal-welfare

Publication of this article has been made possible by Swine Innovation Porc within the Swine Cluster 2: Driving Results Through Innovation research program. Funding is provided by Agriculture and Agri-Food Canada’s AgriInnovation Program and by provincial producer organizations.

