Swine Innovation Porc

Handled with Care: Research Targets Pig Comfort

By Geoff Geddes, for Swine Innovation Porc

If you thought your first apartment lacked elbow room, try fitting in with 40 squealing pen-mates. While economics are a limiting factor when it comes to pig housing, science is focused on balancing comfort and affordability. As part of that effort, researchers took a closer look at space allowance for nursery pigs and producer options for converting to group sow housing.

Optimum Space Allowance for Nursery Pigs

The revised "Code of Practice for the Care and Handling of Pigs" has prompted a number of research efforts, including one on the under-studied area of how space allowance impacts nursery pigs. Standard practice on farm is to allow less room for weaners versus grower-finishers, and while that seems logical based on body size, it bears further scrutiny.

To that end, scientists evaluated six space allowances for nursery pigs in two phases. Phase 1 – conducted in a research lab - compared space effects in large and small pens. Though there was no impact on average daily gain (ADG), less space led to more sitting time for weaners. Because such activity has been linked to feelings of crowding, discomfort and stress, it was a red flag around the issue of animal welfare.

During week 5 of the study, when space allowance was at its highest for nursery pigs, there was less overlying. Researchers inferred from this that overlying is a behavior pigs would rather avoid, but are sometimes forced to adopt in the face of crowding.

In phase 2, pigs were tested at commercial farms and showed similar reactions to different space allowances as was seen in phase 1. Most notably for producers, this phase revealed a clear impact on ADG from varying available space, with less crowding linked to greater gains.

The key takeaway from testing was to confirm the code's space allowance (k = 0.0335) as the proper figure to use on farm. Though many aspects of the code have prompted debate, producers can feel secure in following the space allowance provided, knowing it will maximize gains, reduce behavior issues and enhance animal welfare.

Pig pen during the study on the impacts of space allowance in the nursery. Source: Prairie Swine Centre

National Sow Housing Conversion Project

In the rapidly evolving pork sector, continuous learning spawns continuous earning, so staying informed on the latest trends and technology is critical. This is especially true when it comes to game changers like the move to group housing mandated by the revised "Code of Practice for the Care and Handling of Pigs". As producers face renovating their current barns or erecting new ones, success hinges on informed decisions, and that's where the National Sow Housing Conversion Project comes in.

By studying barns that have already undergone conversion to group housing, as well as ones that are currently making the change, the project sought to gather ideas and options for producers. Most notably, researchers examined feeding system choices and found that electronic sow feeding (ESF) was the top pick among early adopters. Not only does it afford more control over individual feeding, but ESF also feeds the most sows per square foot compared to other options.

Above: Researcher working with a producer. Right: ESF feeders . Source: Doug Richards, Prairie Swine Centre

Though competitive feeding systems are less expensive to install, they are harder to manage and require dedicated feeders and gilt training rooms to be successful. This is the sort of information that is vital for producers as they form their plan around group sow housing.

In addition, the project created a website (groupsowhousing.com) and photo gallery offering images of farm and barn layouts, renovation descriptions and management tips. To further assist producers, newsletters have been distributed covering everything from the science behind group housing to the pros and cons of different feeding systems. Work is also underway to provide vital costing data to producers as they crunch the numbers on construction or renovation.

Group housing has its benefits, but simplicity is not one of them. If the National Sow Housing Conversion Project can help cut through the complexity and aid in decision making, it will be time and money well spent.

Dealing with change like the revised code is never easy; fortunately, scientists and pork producers have something in common: the greater the challenge, the more they excel.

For more information about these projects, you may contact Dr. Jennifer Brown from Prairie Swine Centre at: jennifer.brown@usask.ca.

Additional resources related to these projects may also be found on our website at:

www.swineinnovationporc.ca/animal-welfare

The work presented in this article was part of Swine Innovation Porc's Swine Cluster 2: Driving Results Through Innovation research program. Funding was provided by Agriculture and Agri-Food Canada's AgriInnovation Program, provincial producer organizations and industry partners.