

RESEARCHER SET ON REDUCING ANXIETY BY IMPROVING SWINE HOUSING

Towards content pig pens

By Mihiri De Silva

Not every pig survives the journey to the abattoir, with a small proportion succumbing to handling anxiety and unfriendly pen mates back home. To cut losses, the Prairie Swine Centre (PSC) in Saskatchewan is working to make pig pens more contented places.

Animal behaviourist Dr. Harold Gonyou at the University of Saskatchewan, set his sights on improving swine welfare through housing adjustments. His goal is to ensure that a pig's life – from farm to the fork – is as comfortable and stress-free as possible.

“It's important that we produce food for people in a responsible manner,” says Gonyou. “This includes making sure finishing pigs don't suffer from stressful housing conditions.”

A major focus of Gonyou's research is identifying ideal swine group accommodations.

Traditionally, pigs on farrow-to-finish farms are penned in groups of 20 to 40 pigs, with each group developing its own social hierarchy. While producers justify segregation as a means to prevent fighting, Gonyou's work suggests otherwise. He and fellow researchers have found aggression is actually minimized when pigs are housed in larger groups — even with hundreds of animals. It turns out that as the number of animals per pen increases, would-be dominant pigs find it more challenging to establish themselves as the alpha pig (or dominant pig) because they have to compete with so many others. Animals from larger groups also become more socially tolerant of newcomers and merge into other large groups with less difficulty. The result is reduced tail-nipping, scratches and fewer stressed-out pigs.

And besides decreasing hostility, larger pens provide more roaming space and allow pigs to choose the most comfortable places within the room.

When housing pigs in large groups (meaning 1,000 animals or more), handling and sorting can be a challenge as the process can be time consuming and inaccurate. Sorting requires several hours of manual handling, which can be just too much on some animals' nerves. The resulting losses and sickness take a toll not only on swine welfare, but producers and the market.



Pigs during transport. Belts include heart rate monitors. Belted pigs are also equipped with internal temperature sensors, and will be included in meat quality assessment

To address the issue, Gonyou has considered loading and handling techniques that simplify the process for both animal and producers. For commercial-scale farms, incorporating an automatic sorter when separating animals could be the answer.

The sorter instantly weighs animals as they pass through for feeding, channeling them into appropriate compartments based on weight. The advantages include reduced congestion, more efficient feeding, and

calmer animals. Inaccuracies from hand-sorting—such as sending underweight pigs to market or holding onto market-ready swine too long—can be eliminated. Although a pricey tool, Gonyou says automatic sorters make up for cost in the long run by saving producers money and time, while reducing pig agitation, all of which could account for animal losses.

Next on Gonyou's list is ironing out issues with finishing-pig transport to abattoirs. A three-phase swine transport study is underway at the PSC, with collaborators from the universities of Saskatchewan, Manitoba, Guelph and Laval, and researchers at Agriculture and Agri-Food Canada. Gonyou will be identifying stress associated with swine transport, then finding ways to alleviate it, and applying those changes to industry. The detailed study will consider factors such as inclement weather, loading practices, animal density and bedding during travel.

When not busy improving swine quarters, Gonyou serves on the Canadian Pork Council committee. He has also served as President of the International Society for Applied Ethology and as editor-in-chief for the scientific journal *Applied Animal Behaviour Science*.

Others involved with the research have included graduate students Stephanie Hayne, Clover Bench, Thusith Samarakone, Brandy Street and Megan Strawford.

Gonyou's research is funded by Saskatchewan, Manitoba, Ontario and Alberta Pork, the Agricultural Research Fund of Saskatchewan, the Natural Sciences and Engineering Research Council and Agriculture and Agri-Food Canada. i