



Practical enrichments for growing pigs on commercial farms

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Pigs need to be able to express natural behaviours such as rooting, chewing, exploring and nest building. Most commercial barns have limited space and a relatively barren environment which limits these natural behaviours, leading to stress, abnormal behaviours and potentially compromised welfare.

Providing environmental enrichment, which is the introduction of stimuli or modifications to the environment to better meet the pigs' behavioural and physiological needs, can help address these issues.

Both the Canadian Pork Council's pigCARE program and the Code of Practice for the Care and Handling of Pigs require enrichment at all stages of production. While the current guidelines are broad, stricter requirements are likely in the updated Code of Practice. At the 2026 Prairie Swine Centre (PSC) Producer Meetings, Miranda Smit (PSC) and Martyna Lagoda (WCVM) shared practical enrichment strategies for growing pigs.

Species-appropriate enrichments are effective at satisfying pigs' natural motivation to root and chew. Characteristics that make enrichments effective include destructibility, malleability, chewability, edibility, rootability, odour, cleanliness, and novelty. Size and placement also matter. Pigs should be able to grip the object with their mouth, and hanging enrichments should be low enough that pigs do not need to lift their heads unnaturally. Novelty can be maintained by rotating objects or adding scents. One example is spraying enrichments with a citrus-scented solution such as Phytozen (Probiotech International Inc.).

Seeing pigs chew on or interact with a piece of enrichment does not mean pigs' behavioural needs are being met. For example, pigs may chew on chains when no other enrichment is available, but chains lack many desirable characteristics needed to satisfy pigs' behavioural needs. They are not destructible, edible or odorous and do not provide novelty, so they may not fully satisfy chewing motivation. It is like being hungry and having a craving for something sweet, but instead of finding a cookie or a muffin, all you find are dry salty crackers. You may still eat them if you are hungry, but it will not satisfy your craving for something sweet!

“Pigs provided with toys required fewer doses of medication than pigs housed with chains.”

The effectiveness of enrichment can be measured through behavioural and physiological indicators. Positive signs include lower stress levels measured through reduced blood cortisol levels, lower inflammation and medication use as indicators of better immunity, calmer social behaviour and less harmful behaviours such as tail biting as indicators of satisfied behavioural needs.

Results were presented from two research trials; one performed at a commercial farm and one at Prairie Swine Centre. The

goal was to identify practical, low-labour enrichments for growing pigs from weaning to slaughter. Three enrichment treatments were compared:

- Control group - Chains only
- Static group – a combination of commercial toys (EasyFix Luna, PorkyPlay and EasyFix Astro) which stayed in the pen throughout the growth period and were sprayed once a week with Phytozen to maintain novelty
- Renewable group – a combination of rope, cardboard and wood, replaced once a week

What did we find?

Enrichment did not affect body weight on either farm. Pig removal rates, which included pigs found dead, pigs euthanized and pigs moved to the sick pen, were similar among enrichment groups in the nursery phase. In the grow-finish phase, however, pigs housed with only chains had the highest removal rates on both farms, although differences were not statistically significant. At the commercial barn, 7.62% of pigs in the chains group were removed during grow-finish, compared to 4.65% in the toys group and 6.12% in the renewable group ($P=0.18$). At PSC, total (nursery + grow-finish) removal rates were 14.2% for chains, 8.3% for toys and 5.8% for renewable enrichments ($P=0.10$).

Medication use showed clearer differences. On both farms, pigs provided with toys required fewer doses of medication than pigs housed with chains. The renewable group was similar to the chains group on the commercial farm, and similar to the toys group on the PSC farm (Figure 1).



Miranda Smit presenting in Lethbridge, Alberta at the 2026 PSC spring producer meetings.

Carcass data from the commercial farm showed higher average carcass weight in the chains group, likely because higher pig removal created more space and less competition at the feeder for the remaining pigs. However, when total carcass weight per group was calculated, the toys group produced about 2,000 kg more carcass weight than the other treatments. Enrichment did not affect other carcass traits.

Results indicate the renewable enrichments may not have performed as well because the rope and cardboard were destroyed within a few days. Since enrichments were only

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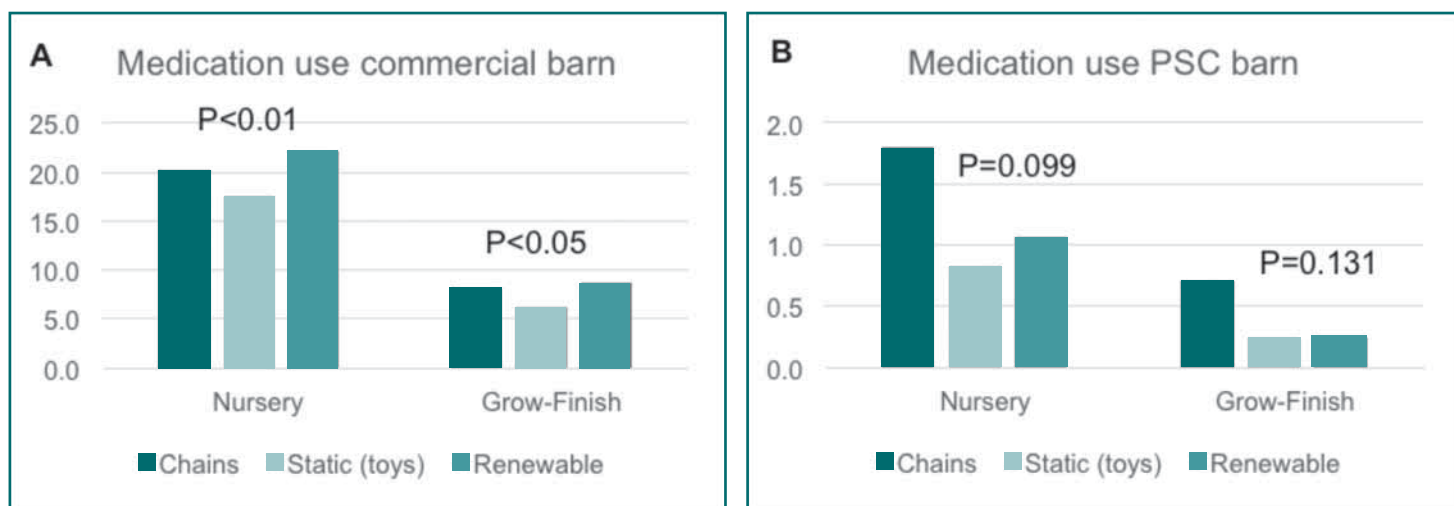


Figure 1. Medication use (# doses per pen) at the commercial barn (A) and the PSC research barn (B)

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replaced once per week, pigs were left with only chains for part of the week. This inconsistency may have caused frustration. Replacing materials more often may improve results.

Handling ease was also evaluated. Researchers measured the time needed to move pigs between rooms and administer Improvest injections. Enrichment did not affect these measures. At PSC, pigs were also given a handleability score during weighing: 1 = no issue getting into the scale, 2 = pig hesitates before entering the scale, 3 = pig tries to escape or refuses to enter the scale. The renewable group had the poorest handleability scores during the grower and finisher phases. The researchers suggested this may have been linked to frustration caused by switching from highly desirable rope in the nursery to less desirable wood later in life.

Skin lesion data from PSC supported this explanation, as there were more pigs with skin lesions in the renewable group than the other two groups, but only in the finisher phase. Tail lesion scores and pen mate ear and tail manipulation followed a similar pattern. During the nursery phase, renewable enrichments resulted in the fewest lesions and manipulation behaviours, suggesting rope effectively satisfied chewing motivation. However, scores worsened during the grower phase when wood replaced rope. No differences in skin or tail lesions were observed among enrichment groups at the commercial farm.

What is the optimal amount of enrichment?

A common question is how many pigs can share one enrichment. This has not been scientifically defined and likely depends on the enrichment type and how many pigs can interact with it at once. The commercial farm used one enrichment per 24 pigs, while PSC used one per nine pigs. Both farms saw improvements in medication use and pig removal compared to chains alone. However, only PSC showed improvements in skin, ear and tail lesions. This suggests that a ratio closer to one enrichment per nine pigs may be more effective for reducing harmful behaviours.

In conclusion, pigs that only had chains as enrichment had the highest removal rates and greater medication use than the toys group. Static toys appeared to perform better than renewable enrichments because they remained consistently available and attractive, while rope and cardboard disappeared quickly, and the wood was not as desirable. The results highlight the importance of providing enrichments that are engaging, durable and consistently accessible throughout the pigs' lives. For enrichment ideas, you can check out the 'Quality of Life' handbook available at the Prairie Swine Centre website at <https://www.prairieswine.com/2025/01/22/quality-of-life-handbook-the-use-of-environmental-enrichment/>.

