

# IMPROVING THE QUALITY OF LIFE OF PIGS

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Compared to pigs living in the wild, pigs reared in commercial farms have limited space and a relatively barren environment, which restricts their ability to perform natural behaviours. There has been an increased interest

in society to improve the quality of life of pigs. This interest has resulted in conversations on how to improve animal welfare, which has resulted in changes to regulatory regulations. This includes the transition to group sow housing by 2029, as outlined by the National Farm Animal Care Council's (NFACC) Code of Practice for the Care and Handling of Pigs.

## GOALS AND BENEFITS OF ENRICHMENT

The term environmental enrichment describes the changes (modifications or additions to the environment) designed to improve the living conditions of the pigs by allowing them to express a wider range of natural behaviours. The Code of Practice for the Care and Handling of Pigs (NFACC, 2014) requires that "Pigs must be provided with multiple forms of enrichment that aim to improve the welfare of the animals through the enhancement of their physical and social environments." The Canadian Pork Council's PigCARE program also states, "Two or more enrichment options must be provided to pigs at all stages of production." Enrichment provides an outlet for expression of exploration, foraging, and play behaviour, which in turn decreases aggression, competition and stress, allowing for healthier and well-adapted pigs. Growing evidence suggests that these benefits continue beyond the period in which the enrichments are given.

## TYPES OF ENRICHMENT

When talking about environmental enrichment, most people think about objects or substrates added to a pen, such as a chain, toy, or straw - these are all forms of physical enrichment. It is a common misunderstanding that simply introducing additional objects into the animals' surroundings constitutes 'enrichment'. The term should only apply to enrichment that is biologically meaningful to the pigs in question by stimulating natural behaviours and improving animal welfare.

There are other forms of environmental enrichment, such as human interaction. We can group enrichments into the following categories:

**Physical enrichment** – altering enclosures or adding accessories like objects, substrates or permanent structures (nest boxes)

**Social enrichment** – indirect (olfactory, visual, auditory) or direct contact with other pigs or humans

## BENEFITS OF PROVIDING ENRICHMENT:

- To increase the range and number of natural behaviours
- This includes exploration, rooting, and play behaviour
- To reduce severity or frequency of abnormal and damaging behaviours
- This includes tail and ear-biting, belly nosing, sham chewing, and fighting
- To increase positive use of environment/space
- To increase the animal's ability to cope with physiological and behavioural challenges
- This includes stressful events such as weaning and health challenges such as a disease outbreak
- To improve growth performance (feed intake, weight gain and feed efficiency)
- To improve reproductive performance (better birthing, less stillborn piglets, less piglets laid on)
- To reduce stress and fearfulness in the animals
- To improve the health of the animals
- This includes a reduction in lesions, injuries, lameness and gastric ulcers, and an improvement in gut health and the immune system
- To increase handleability of the animals

**Nutritional enrichment** – presenting novel, varied food types, or changing the method of food delivery

**Occupational enrichment** – enrichment that encourages exercise and psychological enrichment that provides animals with control or challenges (devices)

**Sensory enrichment** – auditory, olfactory, visual, tactile and taste stimuli

## CHARACTERISTICS OF IDEAL PHYSICAL ENRICHMENTS

- Destructible
- Malleable/Deformable
- Edible
- Chewable
- Odorous
- Clean



## SIMPLE CRITERIA FOR CHOOSING ENRICHMENT: THE SIX S'S

When choosing physical enrichment for your swine barn there are six key factors to consider. Enrichment items should be safe, sanitary, simple, soft and suspended, with the site chosen also being an important aspect. Additional information is found below.

### SAFE

- No sharp edges
- Not poisonous wood or wood that may have been preserved
- No staples or fixings in wood
- No materials that may be toxic to pigs
- No treated rubber (tires, boots)
- Not able to trap limbs or body parts
- Fragments of broken down object do not pose safety risk
- Not able to be used to damage the pen or injure pen-mates

### SIMPLE

- If too complex can lead to vice due to frustration
- A number of simple items is better than one complex item and allows more pigs to gain access at one time

### SANITARY

- No fouled materials
- Can be easily cleaned or sterilized to prevent disease transmission

### SOFT

- Should be malleable to promote novelty – pigs enjoy objects that they can gradually destroy

### SITE

- Do not place over lying, feeding or drinking areas
- Dinging areas or open areas are the optimal position
- Maintain novelty by switching sites

### SUSPENDED

- Avoids fouling
- More pigs can gain access if the item is suspended in a central location
- Hang at snout or eye level

## RECOMMENDED PRACTICES FOR SUCCESSFUL USE OF ENRICHMENT

When providing enrichment in your barn, you should take these practices into consideration in order to see the most benefits.

- Access to a range of novel suspended toys (cloth strips, rubber, and straw dispensers) should be provided continually and the pen floor should have free toys.
- Physical enrichment like straw, sawdust, hay, wood, peat, mushroom compost, or a mixture of such should be provided if it can be used safely and does not negatively affect the animals' health.
- Provide a number of enrichments and disperse throughout pens to mitigate aggression due to social status
- Rotate enrichment so that a novelty factor remains and benefits are seen
  - o Rotation schedule will depend on the type of enrichment, but should be around 1 to 3 times per week
  - o Replacing chewed-up ropes with new ropes maintains interest if rotating toys is not an option
- Adjust object size to the size of the pigs so that it can fit in their mouth
- Monitor enrichment objects to ensure they don't cause health problems (e.g. strangulation, choking, poisoning, obstruction of the digestive tract, transmission of pathogens) or compromise food safety

## CONCLUSION

Overall, the purpose of enrichment is to improve the living conditions of pigs, by encouraging the expression of a wider range of normal pig behaviours. From a practical viewpoint, it is providing objects, materials, or interaction for proper investigation and manipulation in order to keep pigs occupied to prevent future damaging behaviours. While implementing enrichment on-farm is simple in nature, the proper selection, installation and maintenance of enrichments has also shown to positively impact the bottom line of your operation. Lack of enrichment is known to result in more problematic behaviours such as tail-biting and belly-nosing and therefore we need practical and cost-effective solutions that producers can implement.

