



## Researchers Have a Ball Helping Pigs Play

By Geoff Geddes, for Swine Innovation Porc

In theory, entertaining pigs should be easy: Put Charlotte's Web and Babe on the big screen and break out the popcorn. But with animals that are short on attention and big on destruction, it's never that simple. In light of revisions to the Code of Practice for the Care & Handling of Pigs, enrichment as a means of enhancing animal welfare is a higher priority than ever before. That explains the greater emphasis on enrichment in recent research like "Use of accelerometers to automatically assess pig behaviour and welfare."

"Our initial focus was trying to improve and simplify the gathering of data on how pigs relate to enrichment objects in their pen," said Dr. Jean-Paul Laforest, Assistant to the Vice-President - Human Resources at Laval University.

### Lights, camera, observation!

As many researchers (and unfortunate grad students) can attest, the use of live or video observation to measure behaviour and welfare in animals is time consuming and often subject to human error. By inserting an accelerometer – a device that automatically measures physical acceleration of an object – in various items placed in pens, Dr. Laforest hoped to validate the use of this tool to investigate pig behaviour as they interact with their environment.

While technical issues prevented them from properly evaluating the accelerometer, they did gather some important insights on enrichment behavior.

"We had some notable findings around how



Above: Pigs at play. Right: Some of the types of enrichment objects used in the study. Photos: Canadian Centre for Swine Improvement



often animals interact with objects and for how long. For example, they played frequently with a ball, yet only for short periods each time. This may be due to their inability to grasp or manipulate it with their mouth.”

### **Destruction distraction**

In contrast, a short piece of wood was used less often but for longer durations. The patterns of use led researchers to conclude that objects which can be easily manipulated or partly destroyed (like when little pieces of wood break off) tend to stimulate pigs more and keep them engaged longer.

“We tried varying the placement of the objects (suspended from the ceiling versus on the floor) and made them both movable and immovable, but these factors had little influence. It came down to the characteristics of the object itself in determining the level of interest.”

Even cleaning the object regularly - something that was tested in the second part of the project - had no discernible impact on how pigs interacted with it.

One thing that surprised Dr. Laforest and his colleagues was how quickly pigs became bored with enrichment items.


### **Broken engagement**

“We thought we would start seeing a lessening of engagement in 3-4 days, but after a few hours they were already showing disinterest. The one exception was that the piece of wood kept their attention right through the experiment. There may be something in the smell or

taste of the wood that attracts the animals, or just the fact that it can be destroyed.”

As producers digest the revised code and its implications, this study offers some food for thought.

“There’s a lot of focus now on whether we should have different objects to stimulate animals, and this project showed that not all toys are equal; some are more appealing than others. Also, since interest declines quite rapidly, we will have to find ways of changing or alternating the objects to hold their attention. It’s fine to say we should do this or that to enrich animals, but if you put measures in place that have little effect, there’s not much point. All of this will have to be taken into account by industry: what enrichment we are doing, how often, what type and for how long. I don’t think we have all the answers yet.”

And as you weigh your options for pig enrichment, avoiding movies and popcorn is a good place to start. 

#### **Learn more...**

For more information about this research, please contact Dr. Jean-Paul Laforest at:  
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This work was part a larger national project titled *Use of novel technologies to optimize pig performance, welfare and carcass value*. You may find additional resources related to the project by consulting our website:

[www.swineinnovationporc.ca/research-technology](http://www.swineinnovationporc.ca/research-technology)

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