



ONTARIO PORK

## **Ontario Pork Research Final Report OP 19-007 Executive Summary**

**Tim Blackwell and John Van de Vegte, Reporting Date: July 21, 2020**

### **Introduction:**

The ratio of the number of pigs per feeder space in nursery and finisher barns has been associated with optimizing productivity in growing pigs and minimizing vices. Currently recommendations in Ontario regarding the ratio of pigs to feeder space range from 1 to 2 inches per pig. In Europe the recommendation is 3 inches per pig. These recommendations are made without reference to pen design or pen utilization. Identifying current pig to feeder space ratios and feeder utilization rates in Ontario nurseries and finishing barns will improve our understanding of swine feeding behaviour and may lead to improvements in swine productivity and welfare on Ontario swine farms.

### **Objectives:**

Objective: #1. To examine the range of ratios of pigs per feeder space on a cross-section of Ontario nursery and finisher barns considering feeder design, pen design, and management factors.

Objective #2. To test potential intervention strategies to influence pig behaviour in order to optimise feeder space and pen utilization.

### **Materials and Methods:**

Objective #1: Establish the pig to feeder space ratio (in inches of feeder space per pig) for 16 nursery and 10 finishing barns in Ontario recording feeder design, pen design, management, and feeding system. Forty-eight hour video recording of feeder utilization will be compared between barns.

Objective #2: In barns where access to feed appears restricted either due to pig to feeder space ratios or pen design, intervention strategies to improve feeder utilization will be attempted with producer consent.

### **Results and Discussion:**

There was a consistently observed behaviour of pigs to eat in groups. Pigs commonly approached the feeders in groups of 3 to 7 pigs and left the feeders together. Feeder space measured in inches per pig varied ten-fold in the 16 nursery barns studied and five-fold in the 10 finishing barns studied.

### **Conclusions:**

In this study, pigs seldom ate alone and normally ate in groups of 3 or more pigs. This was most evident in the nursery but was also observed in finishing barns. This behavioural trait may relate to the safety that pigs find in being in a group. Video recording of feeding behaviour demonstrated that feeders tended to be either fully occupied (or over-stocked) or were completely unoccupied. It may be more in concert with normal pig behaviour to have 50 pigs in a finishing pen with 4 feeder holes (allowing up to four pigs to eat together) rather than a pen of 25 pigs with a two-hole feeder allowing no more than two pigs to eat together. This study did not compare average daily gain and feed efficiency between farms with differing feeder arrangements due to the large number of farm-specific factors that influenced these production variables.