Are My Pigs Eating?

R. Gauvreau and A.D. Beaulieu

Denise Beaulieu

SUMMARY

The objective of this project was to demonstrate to swine producers the proportion of piglets who actually consume some feed during a 48 hour period. We focused on piglets in the farrowing crate offered creep feed (supplemental feed to milk during lactation) or on piglets early post-weaning.

INTRODUCTION

Recent trials conducted at the Prairie Swine Centre, Inc. have confirmed the importance of feed intake by the piglet immediately post-weaning and/or consumption of creep feed in the farrowing room. We have also demonstrated that more than half of the piglets may not consume either creep feed, or the starter diet immediately post-weaning. However, in commercial barns, where producers typically measure feed disappearance, piglets are maintained in groups, which makes it difficult to determine which piglets are actually consuming feed. In order to estimate which piglets consume some of the food offered during a specified time period, we have developed a technique where we incorporate non-toxic, food grade dye into the ration. We then used this technique on commercial farms, to demonstrate to participating swine producers, and swine producers in general, that a proportion of pigs in a pen may not be accessing feed during a 24 to 48 hour period. Producers may adopt and use this method periodically on farm to determine if management changes affect the proportion of piglets accessing the feed.

EXPERIMENTAL PROCEDURE

Dyed pellets were created using a basic dog biscuit recipe (flour, eggs, milk, sugar) with added "Brilliant Blue" (FD & C Blue #1) at 10% mass ratio. Brilliant Blue is non-toxic, and is not completely absorbed in the gastrointestinal tract, and thus can be visualized in the feces. Pellets were broken up to be a similar size to a crumble diet, so they could be easily mixed into a given ration. All dyed pellets were prepared in a cleaned and disinfected lab in Prairie Swine Centre, and then transported to participating farms in new pails.

Hog producers were contacted via email or phone and, if interested in the project, filled out a questionnaire about creep feeding and weaning details. Producers contacted included commercial barns, multiplier facilities, genetics facilities, and private colonies/producers. Producers were added to the project on a first response first serve basis.

Participating producers mixed the dye pellets into the creep feed or starter diets, depending on which was being assessed for consumption. A detailed instruction list was provided when the pellets were delivered. The pellets were mixed into the feed at a 5% by mass ratio, meaning the brilliant blue would be present in a 0.05% by mass ratio (0.5 g Brilliant Blue would be present in 1kg of mixed creep or starter diet). Previous work in our barn showed that this concentration allowed for an accurate assessment of which pigs were consuming feed due to the visible change in feces colour.

"Dyed diets were available for the pigs to consume for a total of 48 hours."

The dyed diets were typically available for the pigs to consume for a total of 48 hours. When creep consumption was being examined, the dyed pellets were added to the farrowing rooms in the last week with the sow. Twenty-four hours later, an anal swab was performed by gently inserting a cotton swab into the anus of individual pigs to determine if that piglet could be classified as an "eater" or "non-eater". An "eater" would show evidence of blue or green feces, while "non-eaters" would have the yellow or brown coloured feces. Approximately 200 pigs were evaluated at each production facility.

RESULTS AND DISCUSSION

Farrowing Rooms

The relative number of "eaters" vs "non-eaters" for evidence of creep-feed consumption is shown in Figure 1, compared to similar data collected at PSC for pigs just prior to weaning, at day 21 or day 28. The PSC data is based on over 2000 piglets, while about 220 piglets were swabbed at each producer facility. Piglets on the producer farms were weaned at about 21 days of age. As shown, only 20 to 40 % of piglets had evidence of creep feed consumption. Although difficult to extrapolate data among farms, our experience at PSC shows that creep feed is more likely to be consumed in piglets weaned at a later age.

Nursery

Figure 2 shows the proportions of piglets showing evidence of consumption of the phase 1 diet immediately post-weaning. The data for PSC represents 24 hours post-weaning, while at the producer farms the dye was in the phase 1 diet for about 48 hours post-weaning. It is possible that this is why there is a difference between PSC data and commercial facilities, as piglets on commercial farms were given a longer opportunity to adapt and consume the feed.

CONCLUSION

Typically 40 to 50% of piglets do not consume creep feed in the farrowing room and about 20% do not consume phase 1 diet within 48 hours post-weaning. Producers should observe piglets to identify potential problems (crowding, feeder access) which might alleviate the problem. If feed or management changes occur, producers can repeat the assessment to determine if the change has been positive or negative relative to the number of "eaters" previously determined. It is important that producers conduct this test at their own facility and use it to set a "benchmark".

ACKNOWLEDGEMENTS

This project was supported by the Agricultural Demonstration of Practices and Technologies (ADOPT) initiative under the Canada-Saskatchewan Growing Forward bi-lateral agreement. We thank the participating producers who allowed us into their facilities to perform the assessment. Program funding for Prairie Swine Centre, Inc. from Sask Pork, the Manitoba Pork Council, Alberta Pork, and Ontario Pork is gratefully acknowledged.

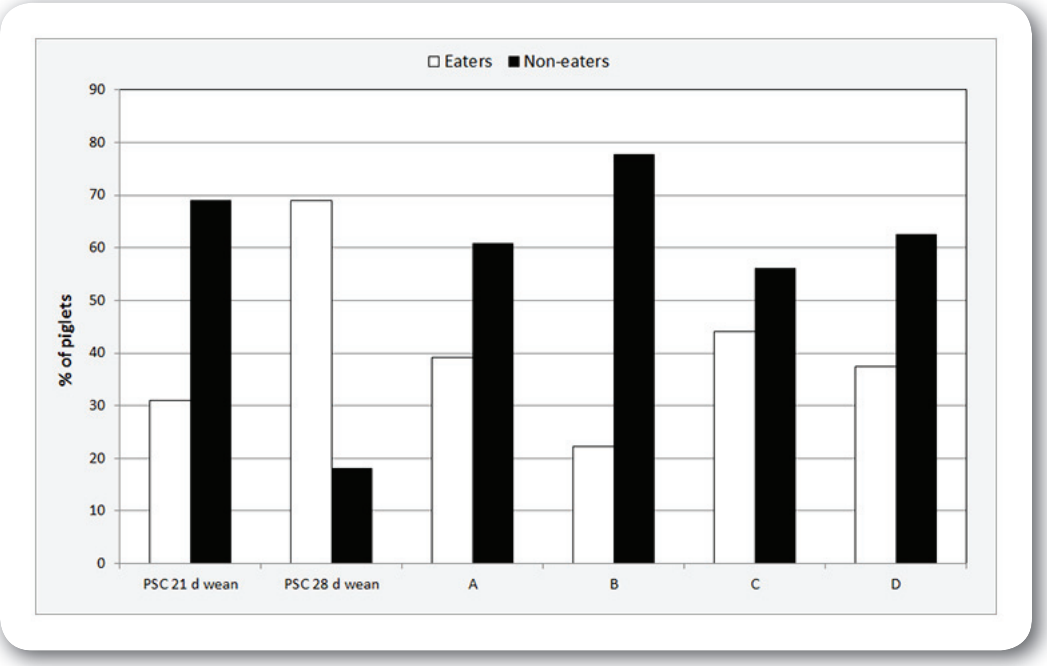

Figure 1: Evidence of creep feed consumption in the 24 hour period pre-weaning at Prairie Swine Centre (weaned at 21 or 28 days of age) and on 4 producer facilities(weaned at 21 days of age).

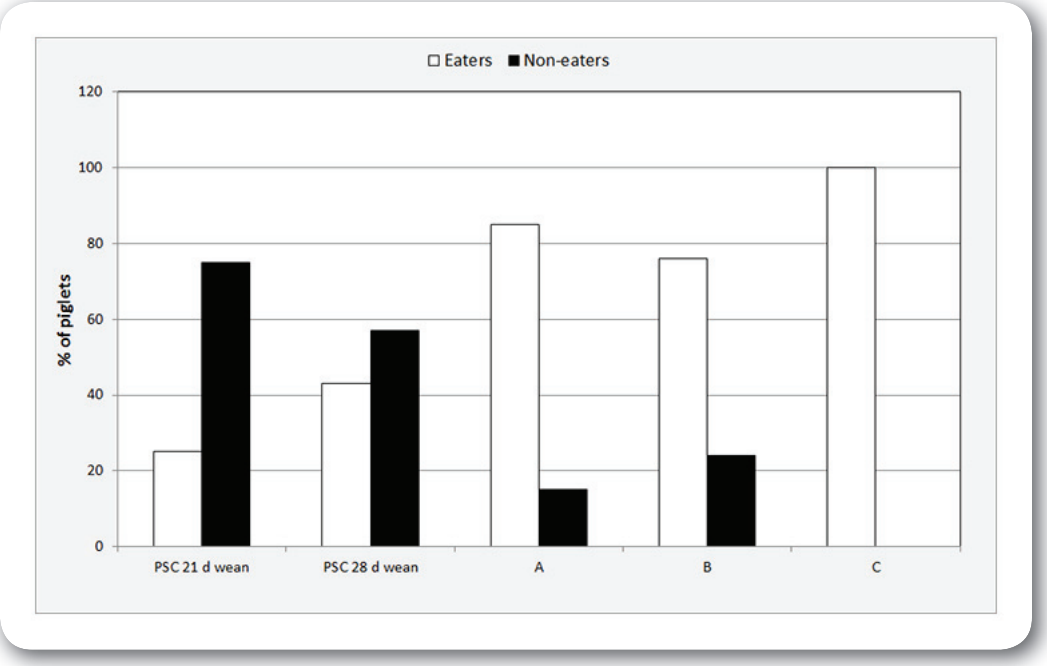

Figure 2: Evidence of phase-1 diet consumption post-weaning at Prairie Swine Centre (weaned at 21 or 28 days of age) and on 3 producer facilities (weaned at 21 days of age). In barn C, all piglets (n = 22) had evidence of consumption.