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## Drinker to nursery pigs ratio: Effects on drinking behavior and performance

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### Introduction

The current drinker to nursery pigs ratio guideline (drinker:pigs) in the UK<sup>1</sup> is 1:15, while in the US<sup>2</sup> it is 1:10. However a ratio of 1:25 is more typical in US pork production. Therefore the objective of this study was to determine the number of visits to a drinker and subsequent effects on performance when pigs were provided either one, two or three drinkers per pen.

### Materials and Methods

**Drinking behavior:** Three treatment groups (1, 2 or 3 cup waterers per pen; resulting in approximate drinker:pig ratios of 1:25, 1:12, and 1:8 respectively) were evaluated. Nine pens (0.22 sq m/pig), housing 23 to 25 gilts per pen were used in a randomized block design. Gilts (EBX – Monsanto Choice Genetics) were 7 weeks of age. Behavior was recorded continually over two consecutive days (November, 2006) from 0700-1300 at 5 frames per second. One day prior to visual recording, all pigs were identified with an individual number placed between their shoulder blades. One 12 V color CCTV camera (Model WV-CP484, Matsushita Co. Ltd., Japan) was positioned over each drinker. Behavior was scored by two trained scientists using Observer 5.0.25 (Noldus<sup>®</sup>) for the total number of visits to the drinker. A pig was considered to be drinking when its head was over the drinker for at least 5 consecutive seconds<sup>3</sup>.

**Performance:** Individual pig weights were taken at placement day 0 and at exit day 42 for calculation of average daily weight gain (ADG).

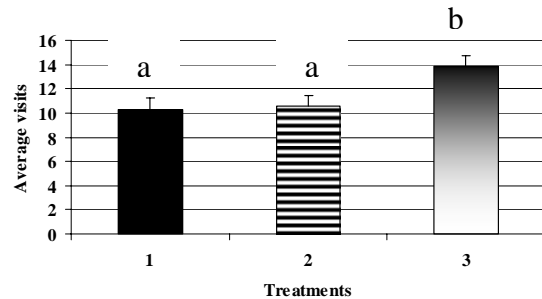
**Statistical Analysis:** All statistical analysis was performed using PROC Mixed (SAS<sup>®</sup>).

### Results

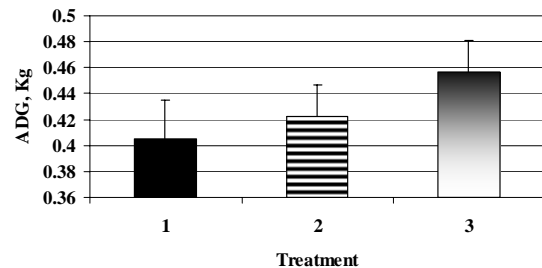
There was no day effect for behavior. Pigs in treatment 3 visited the drinkers more frequently than treatments 1 or 2 ( $P = 0.02$ , Figure 1). Although not statistically different, there was a trend ( $P = 0.06$ ) for pigs in treatments 2 and 3 to

have increased ADG compared to pigs in treatment 1 (Figure 2).

**Figure 1.** Average number of drinking visits per pig from 0700 to 1300 by treatment.



**Figure 2.** Average daily gain by treatment.



### Discussion

This study demonstrated that when pigs were offered more places to drink they visited the drinker more often which tended to increase ADG in nursery age pigs. Further research is required to confirm and quantify performance and economic benefits.

### References

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3. Turner, S. P., et al., 1999. The influence of drinker allocation and group size on the drinking behaviour, welfare and production of growing pigs. Anim. Sci. 68: 617-624.