

## ANIMAL WELFARE

**Title:** Effect of Feeding System Failures on Grow-Finish Performance and Welfare - **NPB #04- 179**

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**Abstract:** Out-of-feed events are a growing industry problem as production systems struggle with feed delivery to remote sites, feed flow issues from bulk feed storage devices and equipment failures in facilities. Two experiments were conducted to examine the impact of repeated out-of-feed events on grow-finish pig performance and welfare. In Exp. 1, pigs were out-of-feed for a 20 hr period either never or on 1 random day each week for a 16 week trial. In a 2x2 factorial design, diets were either 1266 or 1019 microns in addition to never or weekly out-of-feed. Repeated out-of-feed events reduced daily gain for the first 8 weeks of the experiment by 0.15 lb/d, with no effect the second 8 weeks. Overall, weekly out-of-feed events reduced daily gain 0.07 lb/d compared to never being out of feed. There was no effect of out-of-feed events on feed conversion efficiency or pig welfare as measured by bi-weekly skin lesion and tail-biting scores. Reducing the diet particle size 250 microns improved feed conversion efficiency by 3.1% for the entire grow-finish period, and there was no interaction between particle size and out-of-feed events.

In Exp. 2, pigs were out-of-feed for 20 hr 0x, 1x, 2x or 3x times every 2 week period on random days. Similar to Exp. 1, increasing the number of out-of-feed events resulted in a decrease in daily gain for the first 8 weeks. However, in the second 8 weeks of the experiment, there was no effect of any out-of-feed treatment on daily gain, daily feed or feed conversion. Overall, there was a linear decrease in daily gain with increasing out-of-feed events with no effect on feed conversion. Similar to the first experiment, there was no impact of out-of-feed events on pig welfare as measured by bi-weekly skin lesion and tail-biting scores.

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