Title: Factors affecting the behavior of early-weaned piglets - NPB #02-169

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Abstract: The behavior of early-weaned piglets is characterized by a delay in the onset of feeding, excessive drinking, and the development of behavior problems such as belly nosing or sucking on the ears or tails of pen-mates. Although the specific causes of these behaviors are unknown, they are thought to be related to the piglets’ experiences on the sow and their desire to suck or massage the udder. This project involved two experiments aimed at examining the relationships among feeding, drinking, nursing and post-weaning behavior in early-weaned piglets.

In the first experiment, we attempted to determine whether nursing behavior of individual piglets on the sow was related to their tendency to perform nosing behavior post-weaning. Fourteen litters totaling 162 piglets were observed at 4, 7 and 10 days of age for sucking and massage, and individual piglets within litters were ranked as “high” (n = 14) or “low” (n = 14) “nosers” for the amount of time they spent performing these behaviors on the sow. The piglets were then weaned at 14 days of age, their behavior was videorecorded on days 5, 9, 11, 13, 16, and 18 post-weaning and the percentage of time individual piglets spent belly nosing was determined. There was no relationship between pre-weaning nursing behavior and the amount of time that piglets spent belly nosing post-weaning (P>0.10). Weaning weight was not associated with either pre- or post-weaning behavior (P>0.10). However, there was a relationship between belly nosing and average daily gain post-weaning, with those piglets that spent more time belly-nosing having lower weight gains (P<0.01).

In the second experiment, we examined how playback of sow nursing grunts and type of drinker in the nursery affected piglet behavior and performance. A total of 352 piglets were weaned at 14.5 ± 0.8 days of age into pens of 8 piglets each. Half of the pens were located in a room in which recorded sow nursing vocalizations were broadcast from speakers at hourly intervals while the other half were housed in another room without additional sound (control). Within each of the two rooms, half of the pens were outfitted with bite nipple drinkers and the other half with water bowls. Behavior, feed intake, water usage and weight gain were recorded for three weeks post-weaning. The broadcast sound vocalizations had no effect on either piglet behavior (P>0.05) or performance (P>0.05).
However type of drinker affected behavior, feed intake and water usage. During the first 48 hours post-weaning, piglets with nipple drinkers spent more time at the drinker (nipple=26.1 minutes; bowl=14.5 minutes; P<0.01), used three times more water (nipple=2.1 liters; bowl=0.7 liters; P<0.01), and had lower feed intake (nipple=44.4 grams; bowl=61.7 grams; P<0.05) than piglets provided water bowls. Over the course of the trial, piglets with nipple drinkers performed more belly nosing than those drinking from bowls (nipple = 2.0 % of the time; bowl = 1.1 % of the time; P<0.01). Although water usage remained over twice as high for piglets with nipple drinkers throughout the trial, there were no overall differences in feed intake or differences in average daily gain.