Piglets suckling anterior teats during lactation grow faster but then show a reduced rate of growth


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The anterior teats of sows contain more protein and DNA (Kim et al., 2000) and produce up to 200% more milk than the posterior teats (Algers et al., 1990). As a consequence, piglets suckling from anterior teats drink more milk and are generally heavier at weaning (Pluske et al., 1996; Kim et al., 2000). However, the subsequent post-weaning performance of piglets that suckled anterior or posterior teats has not been reported. The purpose of this study was to determine the performance of pigs before and after weaning based on their teat (suckling) order during lactation.

Six Large White x Landrace sows and their litters were used. Litter size was equalised at 10 to 11 piglets per sow within 36 hours of farrowing. On day 12 of lactation a creep feed was introduced to all litters. On days 24 and 27 of lactation, the teat (suckling) order of piglets was assessed during two to three consecutive sucklings. Piglets were categorised as suckling from either the anterior teats (teats 1-4) or posterior teats (teats 5-7) (Pluske et al., 1996). The numbers of piglets in each group were 37 and 19 respectively. Piglet live weight and growth rates were determined on several occasions between birth and 59 days of age. Weaning occurred at 31 days of age. The ANOVA analysis of Statview 5.0 for Windows (SAS Inc.) was used for statistical analysis.

![Figure 1. Pre- and post-weaning performance of piglets suckling from different teats on the udder.](image)

The mean birth weight of piglets suckling from anterior and posterior teats did not differ (1.38 and 1.26 kg, respectively). Piglets suckling the anterior teats grew 40 g/day more than piglets suckling the posterior teats up to weaning (278 g vs. 237 g/day, respectively; P<0.01). After weaning, the growth rate of piglets suckling anterior teats decreased by 67 g/day to day 34, but started to recover from day 38. In contrast, piglets suckling posterior teats maintained their growth rate after weaning. Between weaning and day 59, piglets that drank from posterior teats grew 40 g/day faster than piglets that suckled from the anterior teats (P>0.05). Consequently the live weight difference at weaning between piglets suckling from anterior and posterior teats disappeared by day 59. On day 109, live weights of anterior and posterior suckling piglets were not different (63 and 61 kg, respectively, P=0.323). Piglets drinking milk from the anterior teats grew faster to weaning because anterior teats produce more milk (Pluske et al., 1996), but the benefit of being a heavier piglet at weaning was not related to subsequent growth rate after weaning. Curiously, the consumption of more milk in lactation may limit the intake of creep feed and this in turn can exacerbate the after weaning growth check. However, these differences disappear over time.

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References