

## Pre-and post-weaning growth in relation to creep feed consumption of individual piglets

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Consumption of creep feed pre-weaning is thought to stimulate food intake and growth after weaning (Bruininx *et al.*, 2004). Creep feed intake has traditionally been assessed on the basis of average intake per piglet, which is erroneous because it assumes that all piglets in a litter eat the same amount of feed. Coloured markers can be used in the feed to distinguish between piglets eating different amounts of creep feed by assessing how many times faeces of each piglet is stained with the marker. (Bruininx *et al.*, 2004). In this study we determined whether creep feed intake of individual piglets could be determined qualitatively during lactation using a dye related to post-weaning performance.

Six Large White X Landrace sows and their litters were used. Litter size was equalised to 10-11 piglets per sow within 36 hours of farrowing. At day 12 of lactation, a creep feed containing a dye (Indigo carmine, 5 g/kg of diet) was introduced. The occurrence of dye in the faeces and the weight of all piglets were assessed on day 19, 23, 27 and 31, when piglets were weaned. Post-weaning growth rates were determined on days 34, 38, 45, 59 and 109. Piglets were categorised in lactation as 'good-eaters', 'moderate-eaters' and 'small-eaters' according to the number of times that coloured faeces were observed (4, 2-3 and 0-1, respectively, for 'good', 'moderate' and 'small eaters'). The ANOVA analysis of Statview 5.0 for Windows (SAS Inc.) was used.

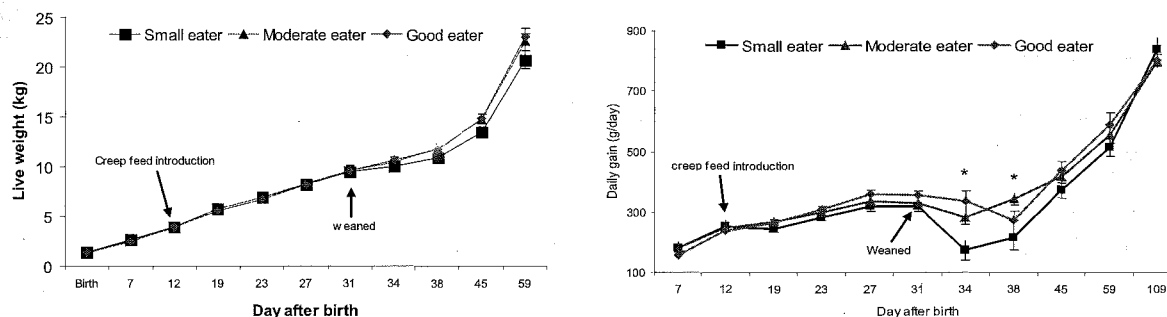


Figure 1. Effect of creep feed consumption on the pre- and post-weaning performance of pigs.

Piglets with variable creep feed consumption did not differ in birth weight. Piglets categorised as good-eaters at the end of lactation had numerically lower daily gains in the first 12 days of lactation (238, 248 and 253 g/day for good, moderate and small-eaters, respectively,  $P > 0.05$ ). However, after the introduction of creep feed on day 12, the average daily gain of good-eaters increased to reach 356 g/day on day 31, which was 40 g/day higher than the small-eaters ( $P < 0.05$ ). After weaning on day 31, the growth rate of small-eaters was significantly decreased ( $P < 0.01$ ), most likely due to the fasting of this group. The live weight difference between good-eaters and small-eaters was in excess of 2 kg ( $P > 0.05$ ) up to 4 weeks after weaning. On day 109, however, the differences in weight between three groups had disappeared (63, 62 and 63 kg for good, moderate and small-eaters, respectively). The results suggest, albeit without a statistical significance due to a small number of animals used, that creep feed intake during lactation has no effect on growth rate but piglets not consuming creep feed suffer a growth-check up to four weeks after weaning. These data also suggest that a qualitative technique based on the frequency of faecal staining can be used to distinguish piglets eating different amounts of creep feed.

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### References

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