

Abstract 38:

Variation in birthweight, feed intake, breeding value, behaviour and skin lesions accounts for less than 45% of variation in growth rate in a multi-suckling system for pigs

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Previously, variation in the growth rate of piglets in a multi-suckling system was observed to be large. The aim of this study was to explain this variation during three periods: week 2-4, 4-6, and 6-8 of age. Three batches of 5 sows and 4 focal piglets in each litter were studied. In each period, several traits were recorded for all focal piglets. Multiple regression analysis was conducted on growth rate after correcting for sex and batch, using 12 explanatory variables: birthweight, the estimated breeding value for growth rate from birth to slaughter, intake of sow and piglet feed, contacting feed during sow feeding times, the presence at front and middle pairs of teats, the presence at rear pairs of teats, the frequency of ingestive, positive, negative and explorative behaviour during the day and skin lesions. Forward selection was used to select variables that significantly affect growth. Results showed that variation in 12 variables accounted for less than 45% of variation in growth rate in each period. In week 2-4, birthweight, positive behaviour, and contacting feed during sow feeding times jointly accounted for 24.2% of variation in growth rate; in week 4-6, piglet feed intake and the presence at rear teats jointly accounted for 19.9% of its variation; in week 6-8, piglet feed intake accounted for 25.9% of its variation. In conclusion, individual differences in growth in early lactation are majorly owing to individual differences in birthweight and behaviour, while in middle and late lactation are majorly owing to solid feed.