IMPACT OF RUNTING ON COLOSTRUM INTAKE, SURVIVAL CHANCES AND DEVELOPMENT

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Introduction

Runt pigs are intrauterine growth retarded animals characterized by low birth weights (BW). They have higher mortality rates, reduced daily gain and pork quality and increased feed conversion rate. Colostrum intake (CI) is negatively correlated with BW and litter size. For current breeds, a minimum BW of 1.13 kg is needed for normal survival chances.

The objective of this study was to investigate the relation between low BW, CI, mortality and development.

Material & methods

All piglets from 22 litters were identified at birth and weighed at birth, 24 hours, days 14, 28 and 63. CI was determined (Devillers method). Mortality information (weight, date and reason) was recorded. CI, body weight, average daily gain (ADG) and mortality incidences for low BW piglets (below 1.13 kg) were compared to the others. For statistical analysis, breed and parity were included as block effects and litter size as covariate.

Results

A third of the piglets had a low BW. Their CI was lower per piglet (169 vs 269g), but not per kg (188 vs 194g). Their mortality rate was continuously over 4 times higher. Their pre-weaning mortality was 46%, mainly due to low viability and crushing. CI of piglets that died was lower when compared to the survivors irrespective of BW. Although CI per kg of the surviving low BW piglets was comparable to the other piglets, their ADG was always lower resulting in lower weaning (6.27 vs 7.63 kg) and nursery weights (15.66 vs 19.87 kg).

Discussion & Conclusion

Independent of the underlying cause, failure to consume sufficient colostrum leads to poor survival chances. Low BW clearly predisposes piglets for poor CI. Even when piglets below 1.13 kg consume

sufficient colostrum, they still fail to develop like their heavier littermates, indicating that runt pigs are negatively impacted well beyond birth.