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TITLE
IMPACT OF VITALITY ON PIGLET SURVIVAL CHANCES

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CONTENT
Background and Objectives
Placental insufficiency is a major cause of intra-uterine growth restriction that influences birth weight (BW) and the thermo-regulatory capabilities of newborn piglets. For current breeds, a change point for BW of 1.13 kg was determined under which piglet survival chances decrease dramatically. Apart from BW, piglet vitality also plays an important role for survival.
The objective of this study was to investigate the relation between thermo-regulation the first day of life, as a measure of vitality, and survival chances.
Materials & Methods
Between 1 and 24 hours after birth, 1498 live born piglets from 111 litters were identified, weighed and their rectal temperature (RT) measured. Mortality information was recorded daily until weaning. To facilitate the analysis of the relationship between RT and mortality, a piecewise logistic regression model was conducted to determine the breakpoint where the slope changes. The change point was 37.74°C. Mortality incidences, timing and reasons were compared between low RT piglets (? 37.74°C) and the others.
Results
Of all live born piglets, 20.8% had low RT. The survival rate (29.8%) and BW (0.85 kg) of these low RT piglets were considerably lower than the ones of the other piglets (86.4% and 1.22 kg, respectively). Further, the incidences of dead piglets with signs of emaciation (80%), low viable piglets (39%) and piglets which died within 48 hours after birth with empty stomachs (61%) were considerably higher in low RT piglets than in the other piglets (56%, 17% and 19%, respectively).
Discussion & Conclusion
Both BW and RT are important markers for survival chances of a piglet. Low BW predisposes for low RT. While BW cannot be remedied in the farrowing room, a correct temperature management can help piglets with impaired thermo-regulation to get access to colostrum, which is a precondition for survival.