Les métabolites du sang ombilical sont des bons indicateurs de la vitalité des porcelets issus des truies hyperprolifiques

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Blood cord metabolites as an indicator of piglet vitality in hyperprolific sows

For hyperprolific sows, piglet vitality at birth is particularly influenced by the quality of the farrowing process; the longer the process, the greater the risk piglets will be deprived of oxygen (hypoxia). This study was aimed at sampling umbilical cord blood to better characterize the newborn piglet's metabolic condition at birth. One-hundred-and-ninety-five (195) piglets born from 70 hyperprolific sows, (LWxL)x(PxL), in a French commercial herd and assessed for vitality (from (0) stillborn to (3) active), live weight, rank at birth, cord status and the presence of meconium. Also, their cord blood was sampled within the minute following birth for Na, K, Cl, P, Ca, HCO3, total proteins, urea, uric acid and creatinine. Relationships between piglets' status and their blood profile were established using Anova (SPSS 17.0). All values were in keeping with the scientific literature except for phosphorus, which was lower. Vitality 0 piglets had higher glucose and P, and lower HCO_3 than the more vigorous piglets; Ca and urea were higher ($p<0.05$) for vitalities 0 and 1 compared to vitalities 2 and 3. Glu and P as well as K cord blood contents were higher for piglets born in the last third of the litter, in which it is often reported more weak pigs are born than in the first two thirds of the litter. Stillborn piglets also displayed a typical profile, as did piglets with a broken cord. When combined with information about the presence of meconium, the cord integrity, rank at birth and live weight, piglet vitality was well correlated with the cord blood profile.