Maradiya Samare

Curcumin in feed: sows eat better durring lactation

Resume:

Farrowing is a painful and stressful period for sows that can impair their welfare and piglet survival. Non-steroidal anti-inflammatory drugs relieve this pain, but their peripartum use may cause adverse effects. Protected curcumin, known for its anti-inflammatory and antioxidant properties, could be a nutritional alternative. This study evaluated the effects of a feed additive containing protected curcumin, given in late gestation and/or lactation, on sow performance and on pain and stress indicators. One hundred and twenty sows were assigned to four treatments (30 sows/treatment): curcumin from day 95 of gestation to weaning (150 g/tonne then 75 g/tonne; CUR_GES_LAC), curcumin in lactation only (75 g/tonne; CUR_LAC), meloxicam injection at the onset of farrowing (0.4 mg/kg; ANTI_INFL), and control (CON). Feed intake and performance were monitored from entry into the farrowing unit to weaning. Teat lesions, tear staining and eye redness were scored at entry into the farrowing unit, at farrowing, 7 days after farrowing and at weaning. Saliva was collected before and after farrowing to measure cortisol, haptoglobin, butyrylcholinesterase and adenosine deaminase. Sows receiving curcumin (CUR_GES_LAC and CUR_LAC) consumed more feed between farrowing and weaning than ANTI_INFL and CON sows ($P = 0.001$), with no difference in reproductive performance.

CUR_GES_LAC sows had fewer teat lesions at entry into the farrowing unit ($P < 0.001$); lesions then increased in all groups, with CUR_LAC having the highest score 7 days after farrowing ($P = 0.007$). Eye scores did not differ, except for a higher tear score in ANTI_INFL sows at farrowing ($P = 0.048$). Salivary biomarkers were not affected by treatment but increased in all sows the day after farrowing. Protected curcumin increased lactation feed intake, which could limit body reserve mobilisation and support milk production, with no measurable effect on physiological stress and inflammation indicators. Analysis of pain-related behaviours (video and accelerometers) will clarify its value for sow welfare.