

## **Effect of dietary *Passiflora incarnata* on performance and cortisol levels in postweaning piglets reared with intact tail**

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Weaning is the most critical phase in pig farming, characterized by efforts to ensure health, performance and welfare of animals. Despite European Directive 2008/120 prohibits the practice of tail docking, it is still widely applied in intensive farming to avoid tail biting. The aim of the study was to evaluate the effect of a nutritional strategy based on the supplementation of the calming and anti-inflammatory extract of *Passiflora incarnata* on growth performance and physiological indicators in postweaning piglets reared with intact tails. A total of 120 piglets (average body weight:  $9.07 \pm 0.21$  kg) were assigned to two dietary treatments: control diet (CON) and CON supplemented with 1 kg/t of *P. incarnata* (PASS). Individual piglets' weight and pen feed consumption were recorded at day (d) 0 and d-28, and the average daily gain (ADG) and feed conversion ratio (FCR) were calculated. Cortisol was measured (ELISA test) on saliva samples at d-1 and weekly (d-8, d-15, d-23). Performance data were analyzed by ANOVA with dietary treatment as main effect. Cortisol changes over time were assessed by Friedman test, and Mann-Whitney U test was used to assess dietary treatment effect (significant when  $P < 0.05$  and trend when  $P < 0.1$ ). No significant difference between PASS and CON was observed for final body weight (22.49 vs 22.50 kg;  $P = 0.989$ ) and FCR (2.46 vs 2.48;  $P = 0.856$ ). Salivary cortisol values ranged from 2.3 to 5.4 ng/ml. A significant difference ( $P = 0.008$ ) between the two experimental groups ( $5.14 \pm 0.65$  ng/ml CON vs  $2.38 \pm 0.67$  ng/ml PASS) was observed at d-23 and time showed a tendentially significant effect ( $P = 0.055$ ). The unchanged growth performance and the lower level of cortisol suggest the usefulness of *P. incarnata* extract, even if tails lesions and other physiological indicators should be considered.