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TITLE

SPECIFIC DIETARY AMINOACIDIC PROFILE MIGHT IMPROVE GROWTH PERFORMANCE OF PIGLETS FROM GILTS IN THE POST WEANING PHASE

Carlos Pineiro¹, Joaquín Morales¹, Gema Montalvo¹

¹ *PigCHAMP Pro Europa. C/Dámaso Alonso 14, 40006, Segovia, Spain*

CONTENT

Background/Objective

Production results of piglets susceptible to poor performance can be improved by adjusting feeding, especially at early stages. In particular, specific amino-acid profile to optimize gut integrity and immune system maturation can be applied to these susceptible piglets. This study aims in the quantification of this association.

Materials/Methods

In this study, an individual follow-up of 64 piglets from 28 to 63 days of age was conducted to evaluate dietary amino acid (AA) profile on the productive performance of more sensitive piglets. Primiparous pigs (PP) were included as problem-pigs and compared with multiparous pigs (MP), included as healthy and high-growth potential pigs. A factorial design was applied with 2 main effects: susceptibility to disease (PP vs MP) and AA profile in feeds (high lysine-HL vs high tryptophan/threonine contents-TT), resulting in four experimental treatments. Data were analysed by ANOVA and treatment group means were separated using Tukey's test.

Results

In nursery period, MP pigs tended to show higher average daily gain (ADG) (21.0%; P=0.08) and showed higher average daily feed intake (ADFI) (21.9%;P=0.02) than PP pigs, while feed conversion ratio was not affected. As a result, at the end of the nursery period MP pigs showed higher BW (21.2%;P=0.03) than PP pigs. Dietary treatment did not ADG and ADFI. Parity x feed effect did not reach significance in the whole nursery period, but in prestarter phase TT feed improved ADG (34.8%) in PP pigs compared with HL feed, while in MP pigs HL feed promoted higher ADG than TT feed (8.9%) (P parity x feed < 0.05).

Discussion/Conclusion

This result observed in the immediate post-weaning phase supports the experimental hypothesis and a specific AA dietary profile in the post-weaning phase might improve growth performance in pigs more susceptible to disease, such as PP pigs.

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