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Effect of kalahari melon essential oil and butyric acid on growth performance and protein utilisation efficiency in growing pigs

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The study was conducted to determine the effect of Kalahari melon essential oil, butyric acid and their blend on growth performance and protein utilisation in growing pigs. Forty growing mixed sex pigs, aged 8 weeks were weighed, and randomly allocated to five dietary treatments, NC-negative control (no growth promotant), PC-positive control (growth promotant), EO-Kalahari melon essential oil (0.4%), OA- butyric acid (0.6%) and EOOA Kalahari melon essential oil (0.4%) + Butyric acid (0.6%). Eight pigs were randomly allocated to each dietary treatment and each pig was considered an experimental unit. Dietary treatments significantly influenced growth performance. EOOA had the highest (1.10 ±0.01) ADFI compared to OA (1.07±0.01). NC had the lowest (0.55±0.01) ADFI and was significantly different ($P < 0.05$) from other dietary treatments. ADG was low in NC (0.34±0.01) and high in EOOA (0.62 ±0.01). TWG was low for NC (23.77± 0.67) compared to other dietary treatments. PC, EO and OA had the highest FCR ($P < 0.05$). CWG for NC was low and significantly different ($P < 0.05$) from all dietary treatments. Dietary treatment significantly ($P < 0.05$) affected protein utilisation and growth efficiency. Protein consumed was low in NC (10.10±0.24) and highest in EOOA (20.75±0.24). SGR significantly differed ($P < 0.0005$) for all dietary treatments. NC (28.28±1.04) had a low SGR. Dietary treatment OA (4.39±1.04) and EOOA (4.89±1.04) had the highest SGR. GE was high in EOOA (4.89±0.12) and lowest in NC (3.72±0.12). The findings indicate that essential oils, organic acids and their blend can influence protein, nutrient utilisation and growth performance in growing pigs.

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