Free versus microencapsulated organic acids in medicated or not medicated diet for piglets

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Aim of the study was to investigate the growth performance of weaned piglets fed either a medicated or not medicated diet supplemented with either a blend of formic and lactic (64/36) acids (FL, 11 kg/ton) or a microencapsulated blend of organic acids and flavors (T) (1 kg/ton, Tetracid® S, EU patent 1391155B1, Vetagro srl, Italy). 480 three-week old SCAAPAG x Goland piglets were fed four diets (4 pens of 30 piglets per diet): FL or T with or without the medication (M) comprising colistin 180 ppm + amoxicillin 600 ppm for the 1st phase and chlortetracycline 1000 ppm + sulphadiazine 1250 ppm + trimetoprim 250 ppm for the 2nd phase. The piglets received a two-phase diet (I: 18% CP, 1.3% Lys, 7.5% CF and 2600 kcal/kg NE; II: 18% CP, 1.2% Lys, 5.6% CF and 2400 kcal/kg NE). All data were analysed by ANOVA. After 49 days, animals fed the medicated diets had higher feed intake (+24.5% for group FL+M vs FL−M and +22.3% for group T+M vs T−M; Pb0.01) and lower mortality (overall 1.2% for the medicated diets fed animals vs 9.2% for the non-medicated ones). Final weights were: 26.8±1.0 kg, 25.7±0.8 kg for FL+M, T+M, 20.9±0.7 kg, 21.6±0.8 kg for FL−M and T−M, respectively (Pb0.05). The medication resulted in maintaining animals in good health status. The microencapsulation technique allowed to lower the acids dose to be included in the feed by ten fold at least maintaining the same effects that a high dose can give without medication.

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