PSIX-8 Effects of an algae-clay complex-based feed additive and diet formulation regimen on finishing pig growth performance and carcass characteristics.

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This study evaluated the effect of an algae-clay-complex-based feed additive (ACC, Olmix Group, Brehan, France) and diet formulation regimen on growth performance and carcass characteristics of finishing pigs. A total of 1,188 pigs (PIC 337×1050, initially 49.5 kg) were used in a 90-day study. There were 27 pigs per pen and 11 replications per treatment. Dietary treatments were arranged in a 2×2 factorial with main effects of ACC (none or 0.10% until 100 kg body weight and 0.05% thereafter) and dietary formulation regimen (High vs Low). High diets were formulated to maximize growth with added fat and no dried distillers grains with solubles (DDGS). Low diets were formulated to contain approximately 150 kcal/kg less net energy (NE), 30% DDGS, no added fat, and were formulated 0.10% below the standardized ileal digestible (SID) lys requirement based on the SID Lys:NE ratio as estimated in the High diets. Data were analyzed using the GLIMMIX procedure of SAS. There were no ACC × formulation interactions (P >0.220) for growth or carcass characteristics. Overall, ADG was greater (P=0.027) for pigs fed diets with ACC compared with those fed diets without ACC with no change in ADFI or G:F (P >0.180). This was a result of late finishing (d 56 to 90) ADG and G:F increase (P< 0.019) for pigs fed diets with ACC compared with those fed no ACC. Also, pigs fed High diets had improved (P< 0.047) ADG, ADFI, G:F and final body weight compared to pigs fed Low diets. For carcass characteristics, pigs fed High diets tended to have greater (P=0.067) loin depth and had greater (P< 0.001) carcass weight than pigs fed low diets with no evidence for differences between the control and pigs fed ACC (P >0.05). The addition of ACC resulted in improved ADG and G:F in late finishing, but did not affect carcass characteristics.

Table 1. Effects of diet formulation and Algae-clay-complex-based feed additive (ACC) on growth and characteristics of finishing pigs[1]

Diet type:	High		Low			Probability, *P* <		
Item ACC:	No	Yes	No	Yes	SEM	ACC × Diet Type	Diet Type	ACC
BW, kg								
d 0	49.3	49.3	49.6	49.6	0.88	0.815	0.093	0.938
d 90	134.5	135.9	126.8	128.1	1.19	0.907	0.001	0.070
Overall (d 0 to 90)								
ADG, kg	0.95	0.97	0.87	0.89	0.007	0.911	0.001	0.027
ADFI, kg	2.55	2.56	2.57	2.61	0.021	0.559	0.047	0.228
G:F g/kg	375	379	338	340	3.123	0.643	0.001	0.180

[1] (ACC, Olmix Group, Brehan, France).

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