

Supplementary Material

Table S1: Composition and nutrient levels of the sows' basal diets (air-dry basis; %)

Items	Pregnant sows' diet	Lactating sows' diet
Ingredients		
Corn	37.50	66.00
Soybean meal	9.50	25.00
Wheat bran	14.00	5.00
Barley	25.00	
Soybean hull	10.00	
Pregnant sows' premix ¹	4.00	
Lactating sows' premix ²		4.00
Total	100.00	100.00
Nutrient levels ³		
Digestible energy (MJ/Kg)	12.55	13.87
Crude protein	13.18	16.61
Crude fiber	4.64	2.80
SID Lys	0.48	0.75
SID Met+ Cys	0.43	0.51
SID Thr	0.37	0.53
SID Trp	0.13	0.17
Calcium	0.59	0.63
Phosphorus	0.43	0.51

Note: ¹Pregnant sows' premix provided the following per kg of diets: CaHPO₄·2H₂O 10 g, NaCl 4 g, CuSO₄·5H₂O 80 mg, FeSO₄·H₂O 360 mg, ZnSO₄·H₂O 240 mg, MnSO₄·H₂O 100 mg, MgSO₄·7H₂O 1 g, 1% ICl 50 mg, 1% Na₂SeO₃ 36 mg, 1% CoCl₂ 16 mg, NaHCO₃ 1.4 g, VA 10 000 IU, VD₃ 1 800 IU, VE 20 mg, VK₃ 2.4 mg, VB₁ 1.6 mg, VB₂ 6 mg, VB₆ 1.6 mg, VB₁₂ 0.024 mg, folic acid 1.2 mg, nicotinamide 20 mg, pantothenic acid 12 mg, biotin 0.12 mg, ferrous glycinate 100 mg, choline chloride 1g, phytase 200 mg, fruity 80 mg, limestone 12 g.

²Lactating sows' premix provided the following per kg of the diet: CaHPO₄·2H₂O 10 g, NaCl 4 g, CuSO₄·5H₂O 80 mg, FeSO₄·H₂O 360 mg, ZnSO₄·H₂O 240 mg, MnSO₄·H₂O 100 mg, 1% ICl 50 mg, 1% Na₂SeO₃ 36 mg, 1% CoCl₂ 16 mg, NaHCO₃ 1.4 g, VA 10 000 IU, VD₃ 1 800 IU, VE 20 mg, VK₃ 2.4 mg, VB₁ 1.6 mg, VB₂ 6 mg, VB₆ 1.6 mg, VB₁₂ 0.024 mg, folic acid 1.2 mg,

nicotinamide 20 mg, pantothenic acid 12 mg, biotin 0.12 mg, Lysine 1.5 g, ferrous glycinate 100 mg, choline chloride 1g, phytase 200 mg, fruity 80 mg, limestone 12 g.

³ Energy and amino acids is a calculated value, while the others are measured values. Calculated nutrient levels using values for feed ingredients from the NRC (2012). SID, standard ileum digestible.

Table S2: Composition and nutrient levels of the basal diet for weaned piglets

Items	Prophase nursery diet (35-65 days of age)
Ingredients (%)	
Corn	54.92
Soybean meal	22.00
Wheat bran	10.13
Rice bran	8.95
Premix ¹⁾	4.00
Total	100.00
Nutrient levels ²⁾	
DE/(MJ/kg)	13.50
CP	15.65
Ca	0.46
TP	0.51
Thr	0.79
Ser	0.72
Met	0.31
Ile	0.68
Leu	1.40
Lys	1.36

Note: ¹⁾Premix provided the following per kilogram of diets: enzymic preparation 1.2 g, VA 26 000 IU, VD₃ 10 000 IU, VE 70 IU, VK₃ 10 mg, VB₁ 10 mg, VB₂ 25 mg, VB₆ 10 mg, VB₁₂ 0.075 mg, biotin 0.4 mg, folic acid 5 mg, nicotinamide 100 mg, pantothenic 50 mg, choline 1 600 mg, flavoring agent 500 mg, edulcorant 300 mg, acidulating agent 5 g, Cu (as CuSO₄·5H₂O) 230 mg, Mn (as MnSO₄·H₂O) 97 mg, Zn (as ZnSO₄·H₂O) 218 mg, Fe (as FeSO₄·H₂O) 165 mg, I (as Ca(IO₃)₂) 0.3 mg, Se (as Na₂SeO₃) 0.3 mg, Co (as CoSO₄·xH₂O) 0.4 mg, glucose 2.1 g, antioxidants 0.4 g, antimildew agent 1 g, Ca (as CaHPO₄ and CaCO₃) 3.42 g, P (as CaHPO₄) 1.155 g.

²⁾ Energy is a calculated value, while the others are measured values.

Table S3: The concentrations of short-chain fatty acids (SCFAs) in jejunum and ileum of piglets ($n = 6$, $\mu\text{g/g}$)

Items	Control group	Antibiotic group	Probiotic group	Synbiotic group	SEM	<i>P</i> -values
Jejunum						
Acetate	137.39	112.80	107.73	123.85	13.16	0.878
Butyrate	38.44	51.66	47.28	39.27	5.06	0.778
Ileum						
Acetate	487.96	582.69	501.99	736.08	55.41	0.405
Butyrate	43.89	89.50	63.13	37.94	8.17	0.083

Data are means \pm SEM. Differences were considered significant at ($P < 0.05$).