

Nutritional effects pre-weaning on growth performance, carcass traits and meat quality of pigs

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Table S1. Ingredient composition and nutrient levels of formula milk (as fed basis, %)

Ingredients	Ratio, %	Nutrient content ³	Ratio, %
Whole milk powder	58.00	Crude protein, %	25.30
Whey protein concentrate	25.00	Digestible energy, Mcal/kg	4.40
Casein	5.70	Calcium, %	1.02
Coconut oil	10.00	STTD phosphorus, %	0.67
CaH ₂ PO ₄ (22% P)	0.10	SID-Lysine, %	1.93
Choline chloride	0.10	SID-Methionine, %	0.63
Vitamin mixture ¹	0.10	SID-Arginine, %	0.86
Mineral mixture ²	0.50		
L-Arg	0.06		
DL-Met	0.06		
L-Lys·HCl	0.30		
L-Thr	0.03		
L-Trp	0.05		
Total	100		

¹Per kg of diet: vitamin A, 0.94mg; vitamin E, 20mg; vitamin D3, 10µg; vitamin B1, 1.5 mg; vitamin B2, 5 mg; vitamin B6, 2 mg; vitamin B12, 40µg; vitamin K3, 1 mg; folic acid, 1.50 mg; nicotinic acid, 20 mg; pantothenic acid, 15 mg; biotin, 0.1 mg.

²Per kg of diet: Zn, 90 mg; Mn, 4.0 mg; Fe, 90 mg; Cu, 6.0 mg; Se, 0.3 mg; I, 0.2 mg.

³Nutrient levels were calculated values; STTD: standardized total tract digestible; SID: standardized ileal digestible.

Table S2. Ingredient composition and nutrient levels of experimental diets (as fed basis, %)

	7-11kg	11-25kg	25-50kg	50-75kg	75-100kg
Ingredients	%	%	%	%	%
Corn grain	27.19	35.00	68.57	75.13	78.03
Expand corn	25.00	23.68	0.00	0.00	0.00
Soybean oil	2.50	1.80	3.00	3.00	3.00
Sucrose	2.00	2.00	2.00	0.00	0.00
Wheat bran	0.00	0.00	3.00	3.00	5.00
Whey powder	12.00	7.00	0.00	0.00	0.00
Soybean meal	8.00	12.00	18.20	15.50	10.90
Full-fat soybean	5.00	8.00	0.00	0.00	0.00
Soy protein concentrate	5.00	3.00	0.00	0.00	0.00
Whole milk powder	3.00	0.00	0.00	0.00	0.00
Fishmeal (CP 62.5 %)	4.00	3.00	2.00	0.00	0.00
Plasma protein powder	3.00	1.00	0.00	0.00	0.00
L-Lys·HCl	0.45	0.46	0.42	0.44	0.40
DL-Met	0.15	0.16	0.14	0.12	0.10
L-Thr	0.15	0.16	0.14	0.15	0.14
L-Trp	0.01	0.02	0.03	0.03	0.03
Choline chloride, 50%	0.15	0.10	0.10	0.10	0.10
CaCO ₃	1.00	0.92	0.90	0.89	0.80
CaHPO ₄	0.10	0.40	0.70	0.84	0.70
NaCl	0.30	0.30	0.30	0.30	0.30
Premix ¹	1.00	1.00	0.50	0.50	0.50
Total	100	100	100	100	100
Nutrient levels²					
DE, Mcal/kg	3.58	3.48	3.39	3.40	3.39
CP, %	19.55	18.35	15.68	13.73	12.18
Ca, %	0.79	0.71	0.66	0.59	0.52
STTD, %	0.39	0.34	0.31	0.27	0.25
SID Lys, %	1.36	1.23	0.98	0.85	0.73
SID Met+cys, %	0.74	0.69	0.55	0.55	0.42
SID Thr, %	0.80	0.73	0.58	0.52	0.46
SID Trp, %	0.22	0.20	0.17	0.15	0.13

¹Per kg of diet for 7-25kg BW Period: Fe, 150 mg; Cu, 195 mg; Zn, 150 mg; Mn, 30 mg; I, 0.3 mg; Se, 0.3mg; vitamin A, 12000 IU; vitamin D₃, 3200 IU; vitamin E, 80 mg; vitamin K₃ 32.50 mg; vitamin B₁ 2.50 mg; vitamin B₂ 6.50 mg; vitamin B₆ 5 mg; vitamin B₁₂ 50 µg; nicotinic acid, 45 mg; pantothenic acid, 20 mg; folic acid, 1.50 mg; biotin, 0.15 mg; enzyme preparation and preservatives. per kg of diet for 25-100kg BW Period: Fe, 120 mg; Cu, 17 mg; Zn, 120 mg; Mn, 25 mg; I, 0.3 mg; Se, 0.2 mg; vitamin A, 5512 IU; vitamin D₃, 2250 IU; vitamin E, 24 mg; vitamin K₃, 3 mg; vitamin B₂ 6 mg; vitamin B₆, 3 mg; vitamin B₁₂, 24µg; pantothenic acid, 15 mg; folic acid, 1.20 mg; biotin, 0.15 mg; enzyme preparation and preservatives.

²Nutrient levels were calculated values; STTD: standardized total tract digestible; SID: standardized ileal digestible.

Table S3. Information on primers of the genes used for real-time RT-PCR

Target gene	Primer sequence (5' to 3')	Annealing temperature	GenBank No.
MyHC-1	F:GTTTGCCAACTATGCTGGGG	56°C	NM_213855.1
	R:TGTGCAGAGCTGACACAGTC		
MyHC-2a	F:CTCTGAGTTCAGCAGCCATGA	56°C	AB025260
	R:GATGTCTTGGCATCAAAGGGC		
MyHC-2x	F:TTGACTGGGCTGCCATCAAT	56°C	AB025262
	R:GCCTCAATGCGCTCCTTTTC		
MyHC-2b	F:GAGGTACATCTAGTGCCCT	56°C	AB025261
	R:GCAGCCTCCCCAAAATAGC		
β -actin	F:CCAGCACGATGAAGATCAAGA	58°C	AY550069.1
	F:AATGCAACTAACAGTCCGCCTA		
18S	F:GAGCGAAAGCATTGCCAAG	55°C	AY265350
	R:GGCATCGTTTATGGTCGGAAC		
IGF1	F:GAACTGAAGAGCGTCCACCA	60°C	NM_214256.1
	R:TGCTTGCTCTCCTTACCAG		
IGF1R	F:ATGGATCACAAAGCCCTCGG	60°C	HQ322390.1
	R:CTGCCGCCACTACTACTACG		
GHR	F:GCTGTATGGATCCAGGGCTC	58°C	NM_214254.2
	R:TGCAGAGAGTTCATCCAGGC		
AKT1	F:TCCAGCTTGAGGTCCCGATA	58°C	NM_001159776.1
	R:GCTCTTCTTCCACCTGTCCC		
mTOR	F:GGGGTTTGATCAGGGTCTG	54°C	XM_003127584.4
	R:GACTCATCCGCCCTACATG		