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Effects of γ-aminobutyric acid on aggressive behaviour, jejunum villus morphology, serum biochemical indicators and hippocampal neuropeptide mRNA levels in piglets at weaning with mixing

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Supplementary Online Material (SOM)

Table S1. Piglet diet composition (as-fed basis)

Ingredient	(%)	Nutrient composition	(%)
Corn	50.81	crude protein	20.76
Soybean meal	19.00	digestive energy (Mcal/kg)	14.18
Extruded soybean	9.00	calcium	0.72
Fish meal	4.00	total phosphorus	0.53
Whey powder	12.00	available phosphorus	0.41
Soy oil	1.68	digestible lysine	1.32
Salt	0.30	digestible methionine	0.37
Dicalcium phosphate	0.86	digestible threonine	0.78
Calcium carbonate	0.50	digestible tryptophan	0.22
Choline Cl	0.1		
L-Lysine HCl	0.57		
DL-Methionine	0.22		
L-Threonine	0.31		
Tryptophan	0.10		
Vitamin-mineral premix[a]	0.55		

[a]Vitamin-mineral premix provided the following per kg of diet: 12 000 IU vitamin A, 3200 IU vitamin D3, 80 IU vitamin E, 32.5 mg vitamin K, 2.5 mg vitamin B1, 6.5 mg vitamin B2, 5 mg vitamin B6, 0.05 mg vitamin B12, 45 mg niacin, 20 mg pantothenic acid, 1.5 mg folacin, 195 mg Cu, 0.3 mg I, 30 mg Mn, 0.3 mg Se, 150 mg Fe, 150 mg Zn

Table S2. Definition of observed behaviours

Behaviour	Definition
Fight	Bouts of vigorous biting and head-knocking occur. Both pigs engage with the other, each apparently trying to injure the other. Winners were identified when the other pig turned away and then moved away, avoiding the winner (D'Eath 2002).
Bully	The actor engages in close social contact with the recipient, including bouts of biting and head-knocking. The recipient moves away without retaliation (similar to fighting, but there is no attempt to fight back by the recipient) (D'Eath 2002).

REFERENCES

D'Eath R.B. (2002): Individual aggressiveness measured in a resident-intruder test predicts the persistence of aggressive behaviour and weight gain of young pigs after mixing. Applied Animal Behaviour Science, 77, 267–283.