Table 2 *The effect of sex and dietary lysine (Lys) restriction during the finisher period on growth performance and serum parameters of heavy pigs.*

	Sex		Level of standardized ileal digestible Lys (g/kg)				RSD[a]	*P*-value[b]	
	Barrows	Gilts	6.3	5.6	4.2	3.2		Sex	Lys
Productive traits									
Body weight (kg)									
At the beginning of grower period	26.9	29.7	28.2	28.4	28.2	28.4	0.70	<0.001	0.815
At the beginning of finisher period	89.6	88.7	89.5	89.9	88.4	88.9	2.07	0.190	0.398
At slaughter	129.0	129.3	130.7	129.1	128.7	128.2	2.52	0.739	0.145
Grower period									
Length (days)	71	71	71	71	71	71			
Average gain (g/day)	884	832	864	867	848	853	27.6	<0.001	0.393
Finisher period									
Length (days)	43.5	50.6	41.1	42.5	49.2	55.3	5.00	<0.001	<0.001[L]
Average gain (g/day)	928	826	1014	949	833	712	80.8	<0.001	<0.001[L]
Average feed intake (g/day)	3613	3048	3575	3426	3292	3030	248.4	<0.001	<0.001[L]
Feed conversion ratio (g/g)	3.93	3.76	3.53	3.62	3.95	4.27	0.269	0.055	<0.001[L]
Serum metabolites at slaughter (mg/dL)									
Urea	35.9	33.7	44.0	36.0	29.4	29.7	3.67	0.065	0.001[Q]
Triglycerides	32.2	30.2	30.1	29.8	29.6	35.2	6.41	0.335	0.180

[a] Residual standard deviation.

[b]; L: linear effect; Q: quadratic effect. No significant interaction (sex x Lys) was found.

[c] It was calculated by the difference between the CP intake and the ideal protein requirements except when the CP intake was lower than the ideal protein requirements, then it was calculated by the difference between the daily supply of CP and that of ideal protein.

570 **Table 3** *The effect of sex and dietary lysine (Lys) restriction during the finisher period on carcass characteristics of heavy pigs.*

	Sex		Level of standardized ileal digestible Lys (g/kg)				RSD[a]	*P*-value[b]	
	Barrows	Gilts	6.3	5.6	4.2	3.2		Sex	Lys
Carcass weight (kg)	98.2	99.1	99.4	99.3	99.0	96.9	2.331	0.251	0.076
Carcass yield (%)	76.1	76.5	76.0	76.9	76.6	75.6	0.759	0.082	<0.001[Q]
Carcass length (cm)	86.2	87.6	87.2	86.5	87.2	86.9	1.262	0.001	0.517
Ham length (cm)	39.8	40.1	39.7	39.7	40.2	40.0	0.581	0.089	0.224
Ham circumference (cm)	77.4	77.6	78.0	77.9	77.4	76.8	1.190	0.509	0.118
Fat depth at 3rd-4th last ribs (mm)	25.1	23.3	24.1	23.8	24.4	24.1	1.784	0.001	0.909
Fat depth at *Gluteus medius* muscle (mm)	20.5	18.6	19.7	19.0	19.5	20.0	1.826	0.002	0.635
Weight of left trimmed lean cuts (kg)									
Ham	13.6	13.7	13.8	13.9	13.7	13.3	1.21	0.275	0.003[L]
Shoulder	7.47	7.50	7.53	7.50	7.45	7.46	0.623	0.602	0.803
Loin	3.38	3.63	3.59	3.66	3.48	3.28	0.376	<0.001	0.022[Q]
Total	24.4	24.8	24.9	25.1	24.6	24.0	2.49	0.042	<0.001[L]
Yield of left trimmed lean cuts (% carcass)									
Ham	13.8	15.4	13.9	17.0	13.8	13.8	9.49	0.309	0.356
Shoulder	7.63	7.59	7.57	7.62	7.54	7.71	5.342	0.487	0.101
Loin	3.44	4.05	3.61	4.46	3.52	3.39	2.492	0.131	0.230
Total	24.9	25.4	25.1	25.9	24.8	24.8	6.78	0.274	0.324

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572 [a] Residual standard deviation.

573 [b] L: linear effect; Q: quadratic effect. No significant interaction (sex x Lys) was found.

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578 **Table 4** *The effect of sex and dietary lysine (Lys) restriction during the finisher period on meat characteristics of heavy pigs*[a].

	Sex		Level of standardized ileal digestible Lys (g/kg)				RSD[a]	*P*-value[b]	
	Barrows	Gilts	6.3	5.6	4.2	3.2		Sex	Lys
Quality traits on *Longissimus thoracis* muscle									
Colour traits									
Lightness, L*	57.9	56.6	57.2	57.0	57.1	57.9	2.074	0.045	0.360
Redness, a*	6.18	5.92	5.85	5.90	6.16	6.26	0.429	0.047	0.875
Yellowness, b*	5.10	4.85	4.82	4.69	5.03	5.33	0.817	0.343	0.226
Chroma, C*	8.07	7.72	7.63	7.58	8.04	8.28	0.784	0.145	0.789
Hue angle, Hº	50.9	50.9	50.9	51.9	51.0	49.8	3.667	0.899	0.084
Water holding capacity indicators									
Thawing loss (%)	9.65	9.65	8.71	9.43	10.32	10.19	1.276	0.992	0.359
Cooking loss (%)	23.0	21.4	21.4	22.2	22.3	22.8	5.026	0.362	0.866
Warner-Bratzler shear force (kg)	2.41	2.38	2.54	2.50	2.32	2.40	0.332	0.990	0.439
Chemical composition (%)									
Moisture									
m. *Longissimus thoracis*	71.5	71.5	71.4	71.9	71.5	71.1	1.233	0.869	0.605
m. *Gluteus medius*	72.1	72.1	72.6	72.1	72.0	71.6	0.766	0.998	0.087[L]
Pool of muscles	71.8	71.8	72.0	72.0	71.8	71.4	1.041	0.967	0.268
Protein									
m. *Longissimus thoracis*	23.8	23.9	24.1	24.0	23.5	23.7	0.842	0.716	0.420
m. *Gluteus medius*	23.1	23.4	23.9	23.1	23.1	23.0	0.520	0.089	0.044[Q]
Pool of muscles	23.5	23.6	24.0	23.6	23.3	23.4	0.752	0.602	0.006[L]
Intramuscular fat									
m. *Longissimus thoracis*	3.86	3.55	3.30	3.50	3.83	4.20	0.912	0.301	0.200
m. *Gluteus medius*	3.97	3.69	3.25	3.78	4.12	4.18	0.677	0.229	0.004[L]
Pool of muscles	3.90	3.62	3.26	3.61	3.95	4.21	0.771	0.113	<0.001[L]

579 [a] Measured on thawed samples.

580 [b] Residual standard deviation.

581 [c] L: linear effect; Q: quadratic effect. No significant interaction (sex x Lys) was found.

582 **Table 5** *The effect of sex and dietary lysine (Lys) restriction during the finisher period on fatty acid profile of the intramuscular fat*

583 *from* Longissimus thoracis *muscle of heavy pigs.*

% total fatty acids	Sex		Level of standardized ileal digestible Lys (g/kg)				RSD[a]	*P*-value[b]	
	Barrows	Gilts	6.3	5.6	4.2	3.2		Sex	Lys
C12:0	0.18	0.18	0.18	0.18	0.17	0.18	0.029	0.663	0.977
C14:0	1.33	1.32	1.35	1.29	1.35	1.33	0.121	0.870	0.648
C16:0	24.16	23.66	23.73	23.45	24.24	24.20	0.619	0.022	0.012[L]
C16:1	3.79	3.87	3.85	3.79	3.82	3.85	0.357	0.503	0.983
C17:0	0.24	0.22	0.25	0.23	0.21	0.22	0.048	0.336	0.386
C17:1	0.29	0.29	0.30	0.28	0.30	0.26	0.048	0.996	0.310
C18:0	11.27	10.77	11.05	11.12	11.08	10.85	0.770	0.057	0.887
C18:1	50.51	50.72	50.25	50.80	50.47	50.94	1.023	0.538	0.494
C18:2	5.10	5.60	5.72	5.58	5.11	4.99	0.723	0.045	0.112
C18:3	0.28	0.27	0.30	0.28	0.27	0.26	0.035	0.383	0.123
C20:0	0.18	0.18	0.18	0.17	0.19	0.18	0.029	0.653	0.383
C20:1	0.85	0.85	0.86	0.87	0.84	0.83	0.083	0.854	0.741
C20:4	0.03	0.04	0.03	0.04	0.03	0.03	0.011	0.209	0.874
C20:5	0.14	0.18	0.14	0.17	0.17	0.15	0.052	0.023	0.449
Others[c]	1.65	1.86	1.79	1.77	1.75	1.72	0.315	0.055	0.966
SFA[d]	37.85	36.83	37.26	36.93	37.74	37.43	1.166	0.013	0.478
MUFA[e]	55.91	56.30	55.79	56.28	55.94	56.40	1.208	0.333	0.689
PUFA[f]	6.24	6.87	6.95	6.80	6.31	6.17	0.852	0.033	0.178

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585 [a] Residual standard deviation.

586 [b] L: linear effect. No significant interaction (sex x Lys) was found.

587 [c] The sum of some minor fatty acids.

588 [d] ∑ Saturated fatty acids.

589 [e] ∑ Monounsaturated fatty acids.

590 [f] ∑ Polyunsaturated fatty acids.