

Comparisons of meat quality and muscle fibre characteristics on multiple pig breeds and sexes using principal component analysis

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Table S1. Description of the batches used in this study

Order of Batch	B	D	L	LYD	M	Y	Total
1	-	6	12	30	-	12	60
2	-	38	-	-	-	-	38
3	-	50	-	-	-	-	50
4	-	23	-	-	-	-	23
5	-	30	-	-	-	-	30
6	-	-	30	-	-	-	30
7	-	-	30	-	-	-	30
8	-	-	20	-	-	-	20
9	-	4	13	30	-	13	60
10	-	4	13	-	-	13	30
11	-	-	-	-	-	29	29
12	-	-	-	-	-	20	20
13	-	20	-	-	-	-	20
14	47	-	-	-	-	-	47
15	44	-	-	-	-	-	44
16	30	-	-	-	-	-	30
17	33	-	-	-	-	-	33
18	20	-	-	-	-	-	20
19	30	-	-	-	-	-	30
20	12	12	-	-	12	12	48
21	-	10	16	16	-	26	68
22	-	-	-	-	51	-	51
23	-	-	-	10	-	-	10
24	-	-	-	37	-	-	37
25	-	-	-	20	-	-	20
26	-	-	-	12	-	-	12
27	-	-	-	-	52	-	52
28	-	-	19	-	-	-	19
29	-	-	-	40	-	-	40
30	30	-	-	-	-	-	30
31	-	-	-	30	-	-	30
32	-	-	-	45	-	-	45
33	-	-	-	15	-	-	15
34	-	-	67	-	-	186	253
Total	246	197	220	285	115	311	1,374

Table S2. Simple statistics for meat quality traits and muscle fiber characteristics of the *longissimus dorsi* muscle

	Number	Mean	SD	Min	Max
Meat quality traits					
pH _{45 min}	1225	6.09	0.34	5.31	8.81
pH _{24 h}	1228	5.68	0.19	5.05	6.61
Lightness (<i>L</i> *)	1279	47.33	3.42	32.72	59.50
Redness (<i>a</i> *)	1279	7.08	1.59	3.54	38.70
Yellowness (<i>b</i> *)	1279	2.90	2.79	0.61	95.58
FFU (mg)	1327	46.97	47.69	3.50	496.00
Drip loss (%)	1326	3.87	2.47	0.44	16.68
Cooking loss (%)	955	25.98	9.27	0.21	46.84
NPPC color score	1063	2.67	0.71	1.00	6.00
NPPC marbling score	1062	2.22	0.83	1.00	6.00
Muscle fiber characteristics					
<i>Cross sectional area of muscle fiber</i>					
Mean area	832	4,118	812	2,342	7,119
Type I area	753	3,029	805	0	7,589
Type IIA area	747	2,674	828	1,111	12,688
Type IIB area	747	4,616	944	2,420	8,522
<i>Proportion of muscle fiber area</i>					
Proportion of type I area	753	7.14	3.07	0.00	18.80
Proportion of type IIA area	747	7.87	3.13	0.30	19.86
Proportion of type IIB area	747	84.99	4.37	70.92	96.48
<i>The density of muscle fiber</i>					
Sum	832	252.4	50.7	140.0	427.0
Type I	753	24.0	11.4	0.0	74.6
Type IIA	747	29.5	13.1	1.6	82.3
Type IIB	747	194.0	43.2	92.0	375.8

Abbreviations: FFU, filter-paper fluid uptake; NPPC, national pork producers council.

Table S3. Chart of principal components by different breed and sex

Breed	Sex	Combination	Meat quality		Muscle fiber characteristics	
			PC1	PC2	PC1	PC2
Landrace	CM	LC	-	-	-	-
	F	LF	-2.1102	-0.0678	1.37015	-0.6678
	M	LM	-3.8458	0.50948	0.74147	-2.8829
Yorkshire	CM	YC	1.81528	-0.8769	0.16989	-1.2958
	F	YF	-0.188	0.4537	1.61177	-1.611
	M	YM	0.1521	0.54376	1.01931	-1.2702
Duroc	CM	DC	-	-	-	-
	F	DF	0.86331	0.6097	2.29317	0.55047
	M	DM	-0.5027	-0.4517	4.01551	3.38757
Berkshire	CM	BC	3.23811	-1.9706	1.47683	0.57869
	F	BF	2.92223	-2.1301	1.88509	0.5473
	M	BM	-	-	-	-
Meishan	CM	MC	-2.9702	-1.1561	-3.4334	0.10925
	F	MF	-2.4323	-1.236	-3.3582	1.38173
	M	MM	-	-	-	-
LYD	CM	CC	1.59624	2.85462	-4.0275	0.60183
	F	CF	1.46206	2.91785	-3.7641	0.57081
	M	CM	-	-	-	-

Abbreviations: PC, principle component; CM, castrated male; F, female; M, male; LYD, crossbred Duroc × (Yorkshire × Landrace) pig.