

Supplementary Materials

Table S1. Percentages of Apulo-Calabrese and crossbreed pigs showing the different behaviours during loading, unloading, and lairage with the P values of the differences between percentages.

Check point	Measurement	Apulo-Calabrese (%)	Crossbreed (%)	P (Fisher Exact Test)
Loading	Slipping	2	8	0.363
	Falling	2	2	0.980
	Reluctance to move	10	34	0.004
	Turning back	6	6	0.980
	Overlapping	10	16	0.555
	Vocalization	12	38	0.003
Unloading	Slipping	2	6	0.618
	Falling	0	0	---
	Reluctance to move	2	10	0.205
	Turning back	2	8	0.618
	Overlapping	0	6	0.243
	Vocalization	0	10	0.057
Lairage	Lying	94	94	0.984
	Sitting	0	0	--
	Standing	6	6	0.984

Table S2. Loadings of the PCA performed on blood parameters.

Blood parameters	PCA loadings		
	PC1	PC2	PC3
Creatine Kinase, CK (U/L)	0.005	-0.274	-0.218
Cortisol (mg/dL)	0.125	-0.256	-0.389
Glucose (mg/dL)	0.134	-0.109	-0.587
Lactate (mg/dL)	0.261	0.331	-0.340
Albumin (g/dL)	0.397	-0.236	0.229
Albumin/globulin, Alb/glob	-0.055	-0.350	-0.168
Total protein (g/dL)	0.430	0.006	0.295
Urea (mg/dL)	0.145	0.431	0.017
Creatinine (mg/dL)	0.389	0.094	-0.157
Aspartate aminotransferase, AST (U/L)	-0.050	-0.406	-0.099
Alanine aminotransferase, ALT (U/L)	0.272	-0.286	0.296
Alkaline phosphatase, ALP (U/L)	0.048	-0.327	0.151
Sodium, Na (mEq/L)	0.412	-0.061	0.036
Potassium, K (mEq/L)	0.363	0.089	-0.162

Table S3. Effects of measuring time (T), genetic type (GT) and their interaction (T x GT) on least square means (L.S.M.) and standard error of means (S.E.M) of meat quality traits of Apulo-Calabrese and crossbreed pigs

Meat quality traits	Apulo-Calabrese						Crossbreed						S.E.M.	T	GT	T x GT
	L.S.M. at different time <i>postmortem</i> (h)															
	0.75	3	6	24	72	144	0.75	3	6	24	72	144				
pH	6.20	5.91	5.56	5.57	5.54	-	6.12	5.80	5.53	5.45	5.46	-	0.0256	<0.0001	0.0583	0.5221
L* (brightness)	-	-	50.5	52.1	52.8	54.0	-	-	53.3	56.1	56.2	56.3	0.6064	<0.0001	<.0001	0.0095
a* (redness)	-	-	7.00	6.10	6.80	6.70	-	-	4.4	4.20	4.90	4.60	0.2663	<0.0001	<.0001	0.0359
b* (yellowness)	-	-	6.82	7.26	9.69	8.72	-	-	6.33	7.24	9.43	8.03	0.2269	<0.0001	0.2403	0.0316
Drip loss (%)	-	-	-	4.16	-	-	-	-	-	4.78	-	-	0.2296	-	0.3568	-
Cooking loss (%)	-	-	-	19.51	18.17	18.18	-	-	-	18.67	17.63	18.15	0.5186	0.0286	0.2089	0.1896
Shear force (N)	-	-	-	4.25	3.90	3.48	-	-	-	3.91	3.85	3.31	0.0702	<.0001	0.0645	<.0001

- : not measured

Table S4: Loadings of the PCA performed on meat quality traits.

	PCA Loadings			
	PC1	PC2	PC3	PC4
Carcass weight	0.016	0.231	0.110	0.295
pH 1 h	-0.209	-0.045	0.057	0.196
pH 3 h	0.186	0.050	-0.154	-0.292
pH 6 h	0.228	-0.012	-0.102	-0.364
pH 24 h	0.118	0.276	0.278	-0.140
pH 72 h	-0.179	-0.256	-0.227	0.061
L* 6 h	0.270	0.113	-0.159	-0.133
L* 24 h	0.269	0.164	0.174	-0.157
L* 72 h	-0.214	-0.257	0.054	-0.114
L* 144 h	0.244	0.210	-0.181	0.091
a* 6 h	0.090	-0.394	0.007	-0.074
a* 24 h	0.122	-0.409	0.104	-0.043
a* 72 h	0.165	-0.368	0.103	0.159
a* 144 h	0.156	-0.363	0.077	0.111
b* 6 h	0.219	-0.107	-0.257	-0.148
b* 24 h	0.214	-0.098	0.393	-0.171
b* 72 h	0.284	-0.137	0.080	0.183
b* 144 h	0.281	-0.095	-0.023	0.084
Cooking loss 24 h	0.185	-0.011	-0.157	0.344
Cooking loss 72 h	0.162	0.007	-0.323	0.085
Cooking loss 144 h	0.122	0.030	0.137	0.031
Shear force 24 h	-0.014	-0.037	-0.110	-0.340
Shear force 72 h	-0.142	-0.049	-0.312	-0.143
Shear force 144 h	-0.119	-0.063	-0.267	-0.263
Drip loss	0.329	0.029	0.015	0.011