

Table S1. Results of principal component analysis for the first five principal components (PC).

	Eigenvalues	Variance percentage	Cumulative variance percentage
Nellore bulls			
PC1	3.89	25.90	25.90
PC2	3.37	22.44	48.34
PC3	2.36	15.76	64.10
PC4	1.53	10.22	74.32
PC5	1.38	9.17	83.49
Brangus heifers			
PC1	3.71	24.73	24.73
PC2	2.74	18.26	42.99
PC3	2.69	17.94	60.93
PC4	2.31	15.37	76.29
PC5	1.16	7.72	84.01

Table S2. Coefficients of the eigenvectors (loadings) for the first four principal components for meat quality traits of Nellore bulls.

	PC1	PC2	PC3	PC4
Variable [†]	Tenderness	Meat color 1	Meat color 2	Cooking losses
TE	0.64	0.49	0.33	0.05
JU	0.60	0.48	0.45	0.00
FL	0.60	0.52	0.43	0.00
OA	0.65	0.51	0.44	0.02
L	0.23	-0.19	0.09	0.27
a	0.43	-0.73	0.14	0.42
b	0.31	0.31	-0.66	0.41
CH	0.47	-0.65	0.01	0.48
HUE	-0.07	0.74	-0.58	0.00
pH	0.56	-0.01	-0.33	0.06
SF	-0.71	0.50	0.24	0.07
CL	-0.65	0.28	0.34	0.60
DL	-0.27	0.58	-0.31	0.37
EL	-0.58	0.02	0.54	0.47
PL	-0.33	-0.24	0.45	-0.40

[†] TE = sensory tenderness; JU = juiciness; FL = flavor; OA = overall acceptance; L = lightness; a = redness; b = yellowness; CH = chromaticity; HUE = real color; pH = meat pH; SF = shear force; CL = total cooking losses; DL = drip loss; EL = evaporation loss; PL = purge loss.

Table S3. Coefficients of the eigenvectors (loadings) for the first four principal components for meat quality traits of Brangus heifers.

	PC1	PC2	PC3	PC4
Variable [†]	Tenderness	Meat color 1	Cooking losses	Meat color 2
TE	0.80	0.23	0.09	-0.25
JU	0.78	0.27	0.12	-0.37
FL	0.81	0.27	0.14	-0.31
OA	0.83	0.29	0.12	-0.33
L	0.08	0.53	0.42	0.62
a	0.41	-0.68	0.43	0.32
b	0.42	0.11	0.25	0.85
CH	0.45	-0.59	0.43	0.45
HUE	0.05	0.73	-0.17	0.55
pH	0.19	-0.69	0.06	-0.15
SF	-0.49	0.38	0.53	-0.15
CL	-0.32	0.18	0.82	-0.23
DL	-0.01	-0.13	0.60	-0.07
EL	-0.39	0.28	0.68	-0.24
PL	-0.19	-0.26	0.46	-0.18

[†] TE = sensory tenderness; JU = juiciness; FL = flavor; OA = overall acceptance; L = lightness; a = redness; b = yellowness; CH = chromaticity; HUE = real color; pH = meat pH; SF = shear force; CL = total cooking losses; DL = drip loss; EL = evaporation loss; PL = purge loss.



Figure S1. Small boxes (Brazil Beef Quality Ltd., Piracicaba, São Paulo, Brazil) with divisions used in sensory assays.