RELATIONSHIPS BETWEEN GENOTYPES AND CARCASS TRAITS OF PIGS

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Objectives

- Evaluation of carcass composition of three different pig genotypes
- Studying the relationships between carcass traits of pigs

Material and methods

- White Meaty (WM) x (Hampshire x Pietrain – PN), n = 78, WM x Landrace, n = 66, WM x (Yorkshire x PN), n = 55 were used
- Day after slaughter, dissection of half sides to twelve carcass parts was done
- Average backfat thickness (BF), weight of shoulder (WSH), of loin (WLOI), of ham (WHAM), of belly (WBEL), of tenderloin (WTEND), of lean meat (WLM) and of prime meaty cuts (WPMC) were determined
- Portion of shoulder (PSH), of loin (PLOI), of ham (PHAM), of belly (PBEL), of tenderloin (PTEND), lean meat content (LMC) and correlations between carcass traits were calculated (SAS 8.2.)

Trait	WM x (HA x PN)	WM x LA	WM x (Y x PN)
Carcass weight (CS), kg	89.00	86.17	85.73
Average BF, mm	28.82[a]	25.54[b]	26.78[b]
WSH, kg	5.95[a]	5.54[b]	5.61[b]
WLOI, kg	7.33[a]	6.81[b]	6.75[b]
WHAM, kg	10.95[a]	10.55	10.31[b]
WBEL, kg	4.68[a]	5.02[b]	4.98[b]
WTEND, kg	0.63[a]	0.72[b]	0.66[a]
WLM, kg	18.82	18.25	17.99
WPMC, kg	29.54[a]	28.64	28.31[b]
LMC, %	56.70	56.80	56.65

[a, b] P<0.05 min.

Trait	WM x (HA x PN)	WM x LA	WM x (Y x PN)
PSH, %	13.49[a]	12.91[b]	13.10[b]
PLOI, %	16.63[a]	15.86[b]	15.77[b]
PHAM, %	24.84[a]	24.59	24.08[b]
PBEL, %	10.60[a]	11.67[b]	11.61[b]
PTEND, %	1.42[a]	1.68[b]	1.55[c]

[a, b, c] P<0.05 min.

Phenotypic correlations between carcass traits

	CS	BF	LMC	WLM	WPMC
WSH	0.79[a]	0.33[a]	0.01	0.67[a]	0.80[a]
WLOI	0.69[a]	0.44[a]	-0.35[a]	0.38[a]	0.75[a]
WHAM	0.85[a]	0.17[c]	0.19[b]	0.85[a]	0.88[a]
WBEL	0.60[a]	0.22[b]	-0.37[a]	0.26[a]	0.63[a]
WTEND	0.33[a]	-0.24[a]	0.22[b]	0.42[a]	0.33[a]

[a] P<0.001 [b] P<0.01 [c] P<0.05

Conclusion

- different carcass composition dependent on pig genotype
- suitability of all three genotypes for commercial production