

Fatty acid profile of *m. longissimus dorsi* in indigenous Krškopolje pigs and hybrids 12

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Objective

- Compared the fatty acid composition of *m. longissimus dorsi* (LD) in indigenous Krškopolje pigs (KP) and hybrid 12 (H12) – crossbreed between slovenian landrace (♀) and slovenian large white (♂)



Conclusions

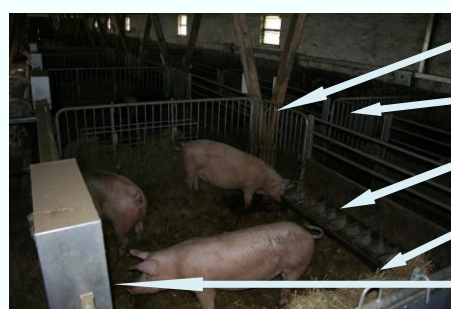
- IMF: increasing SFA ☹ & MUFA ☺
decreasing PUFA ☹ & n-6/n-3 ☺
- Sex: Gilts had lower n-6/n-3 than barrows ☺
- Genotype: KP had more n-3 fatty ☺ acids & lower n-6/n-3 ratio ☺
- Group: Older pigs had better nutritional quality than younger one ☺

Material

- 24 KP and 24 H12; six per pen:

H12 ♂	KP ♀	H12 ♀	KP ♀
H12 ♀	KP ♀	KP ♂	H12 ♂

- The same rearing condition and feeding regime
- Hay *ad libitum* & commercial diet



Entrance

Passageway

Feeding trough

Hay rack

Nipple

- Pigs were slaughtered at two different weight

Methods

- Intramuscular fat content, Weibull and Stoldt method (AOAC, 1997)
- Fatty acid composition (Park and Goins, 1994)
- Statistical analysis, GLM, SAS/STAT

Results

		Saturated fatty acids (SFA)			Monounsaturated fatty acids (MUFA)		
		Total SFA	C16:0	C18:0	Total MUFA	C16:1n-7	C18:1n-9
Intramuscular fat	Reg. coef.	1.91±0.46	1.32±0.30	0.34±0.22	7.03±0.84	0.62±0.17	6.43±0.78
Group	Younger	34.73±0.27	21.92±0.18	11.11±0.13	42.36±0.50	3.07±0.10	38.44±0.46
	Older	33.93±0.27	21.34±0.18	10.91±0.13	41.78±0.50	2.86±0.10	37.98±0.46
		Polyunsaturated fatty acids (PUFA)					Ratio
		Total PUFA	n-6	C18:2 n-6	n-3	C18:3n-3	n-6/n-3
Intramuscular fat	Reg. coef.	-8.9±1.0	-8.3±0.9	-5.2±0.6	-0.62±0.07	-0.02±0.03	-0.65±0.20
Sex	Barrows	23.5±0.7	21.6±0.6	15.7±0.4	1.86±0.05	0.70±0.02	11.47±0.13
	Gilts	23.7±0.5	21.7±0.5	15.5±0.3	1.94±0.04	0.71±0.02	11.06±0.10
Genotype	Krškopolje pig	23.3±0.8	21.1±0.7	15.6±0.5	2.05±0.06	0.78±0.02	10.11±0.15
	Hibryd 12	24.0±0.7	22.1±0.7	15.6±0.5	1.75±0.05	0.63±0.02	12.43±0.14
Group	Younger	22.9±0.6	21.0±0.6	15.4±0.4	1.83±0.04	0.70±0.02	11.43±0.12
	Older	24.3±0.6	22.2±0.6	15.8±0.4	1.97±0.04	0.72±0.02	11.10±0.12
Genotype	KP*younger	22.1±0.9	20.5±0.8	15.1±0.6	2.00±0.06	0.80^a±0.03	9.96^c±0.17
	KP*older	24.4±1.1	22.2±1.0	16.1±0.7	2.10±0.08	0.77^{ab}±0.03	10.26^b±0.22
* Group	H12*younger	23.7±0.9	21.9±0.9	15.7±0.6	1.66±0.07	0.59^c±0.03	12.91^a±0.19
	H12*older	24.2±0.9	22.3±0.8	15.6±0.6	1.84±0.06	0.66^{bc}±0.03	11.95^a±0.17

Green, bold – $p < 0.05$; green, bold, italic – $p = 0.0580$; normal – $p > 0.10$