

Influence of different diets on *in vitam* and *post mortem* performances of “Nero Siciliano” fattening pigs



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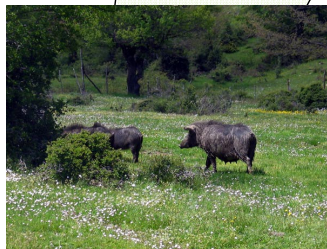
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OBJECTIVE

The objective of this study was to examine the *in vitam* and *post mortem* feeding effects in “Nero Siciliano” fattening pigs fed on different diets.



MATERIAL & METHODS

- 24 “Nero Siciliano” pigs were used
- Animals were assigned to two groups called Acorn (A) and Barley (B), consisting of 12 animals each
- Animals of group A were kept in a wooded area of 12 hectares, and fed with acorn during the fattening period (90 days)
- Animals of group B were reared within an open-air system in the same rural region and fed with germinated barley on a basis of 2.5 kg/pig/d
- The individual weight was recorded and the ADG calculated every month
- After slaughtering (90 days), the thickness of the back-fat was measured and the yield was calculated.
- From loin a sample cut was isolated and dissected into the major tissues. Moreover on Longissimus lumborum muscle (Ll) were determined:
 - At 45 minutes and at 24 hours post-mortem, pH1 and pHU
 - chemical composition
 - weight loss
 - shear force
 - colour parameters L*, a* and b*
- The obtained data were subjected to the GLM procedure of SAS (2001).



RESULTS

Table 1. *In vitam* and *post mortem* traits of Nero Siciliano

	Acorn (A)	Barley (B)	P
ADG (g)	346	465	*
Slaughtering body weight (Kg)	109.93	120.45	**
Yield (%)	80.45	80.96	NS
pH ₁ (45')	6.28	6.12	**
pH _U (24h)	5.77	5.63	**

Table 2. Dorsal fat thickness (Mean value ± SD)

	Acorn (A)	Barley (B)	P
Dorsal fat at the first (1T) thoracic vertebra (cm)	4.05±1.54	4.9±0.86	NS
Dorsal fat at the last (UT) thoracic vertebra (cm)	2.8±0.95	3.71±1.04	*
Dorsal fat at the upper gluteus medius muscle (GM) (cm)	3.23±1.07	3.9±0.86	NS

NS: not significant; * P ≤ 0.05.

Table 3. Tissue composition of the sample cut of Nero Siciliano pigs (Mean value ± SD)

	Acorn	Barley	P
Sample cut weight (g)	967.40±190.35	996.91±301.38	NS
Lean (%)	69.8±3.90	67.74±3.03	NS
Fat (%)	11.6±3.46	9.98±2.23	NS
Bone (%)	18.58±2.35	21.1±1.74	*

NS: not significant; * P ≤ 0.05.

Table 4. Weight loss, WBS and chemical composition of Ll muscle

	Acorn	Barley	SE.	P
Cooking loss (%)	24.6	20.68	0.94	**
WBS (kg f/cm ²)	3.92	3.98	0.16	N.S.
Moisture (%)	72.68	71.72	0.52	N.S.
Crude protein (%)	23.22	23.51	0.18	N.S.
Ether extract (%)	3.04	3.68	0.38	N.S.
Ash (%)	1.06	1.09	0.01	N.S.

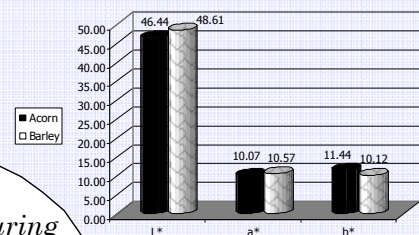


Fig. 1 - Colorimetric parameters in Ll muscle

*The type of diet used during fattening does influence partially the *in vitam* and *post mortem* performances of “Nero Siciliano” pigs.*