

## Nutritional and sensory quality of cooked ham from 135kg lw pigs

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Cooked ham is one of the most commonly consumed pork product in several European countries including Italy. Besides the technological guidelines for the production of cooked ham, genetic and breeding conditions of pigs have an important role on the quality of the final product<sup>(1)</sup>. Pigs in Europe are reared to different slaughter weights. The Italian heavy pig production, with an average slaughter weight of 160–170 kg, is designed to products of Protected Designation of Origin (PDO)<sup>(2)</sup>. Medium-heavy swine represents an alternative for the Italian heavy pig farming. Medium-weight pigs are suitable for fresh meat consumption and the production of cooked ham. In literature, no data are available on cooked ham quality from medium-heavy swine. The quality of cooked ham from two Italian heavy pig genetic type slaughtered at a live weight of 135 kg was investigated. Three hundred pigs balanced for body weight and sex, half TOP D × PIC 1050 (PT) and half Duroc × ANAS F1 (Italian Large White × Italian Landrace) (AD) of initial weight of 60 kg, were selected from two different farms. Pigs fed a commercial diets and were slaughtered at a live weight of 135.4 kg. Twenty pigs per genetic type (10 castrated males and 10 females) were randomly selected and the left thighs were sampled and transformed in cooked ham. Chemical<sup>(3)</sup> and sensory parameters<sup>(4)</sup> were evaluated. Genetic type significantly affect cooked ham chemical composition (Table 1). Sensory evaluation showed no significant difference in texture, flavor, aroma and visual descriptors (Fig. 1).

Table 1. Chemical properties (% of wet weight)

|                 | PT    | AD    | SEM  | P     |
|-----------------|-------|-------|------|-------|
| Dry-matter,%    | 30.2  | 32.1  | 0.33 | 0.005 |
| Crude-Protein,% | 20.19 | 20.26 | 0.30 | 0.904 |
| Ether-extract,% | 6.52  | 7.52  | 0.29 | 0.090 |
| Ash,%           | 2.54  | 2.54  | 0.03 | 0.982 |

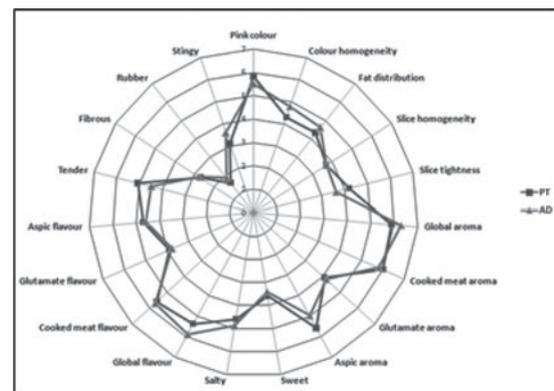


Fig. 1. Cooked ham sensory profile.

The evaluation of chemical parameters of cooked ham represents an important tool to define and characterize this product<sup>(5)</sup>. Genetic type significantly affects some chemical parameters of cooked ham from medium-weight pigs, without affecting sensory parameters.

Further studies are required to better characterize this product and to identify the genetic type more suitable for the production of cooked ham.

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1. Lindahl G, Henckel P, Karlsson AH *et al.* (2006) *Meat Sci* 72, 613–623.
2. Lo Fiego DP, Santoro P, Macchini P *et al.* (2005) *Meat Sci* 69, 107–114.
3. AOAC (2000) *Official Methods of Analysis* (17th ed.) ,Gaithersburg, MD, USA.
4. EN ISO 13299 (2010): Sensory analysis: general guidance to establish a sensory profile.
5. Moretti VM, Bellagamba F, Paleari MA *et al.* (2009) *J Food Qual* 32, 125–140.