

Comprehensive improvement of pork meat through productive strategies at farm level and innovative, online NIRS tools for classification at slaughterhouse level

Leader:

Matadero Frigorífico del Cardoner, SA

Other recipient members:

Agropecuària Catalana, SCCL; Catalana de Pinsos, SA; IRTA

Other non-recipient members:

Lenz - Instruments, SL

Coordinator:

IRTA

Web:

www.mafrica.com

01. Rationale

This Operational Group has been created as an opportunity to address the need of some companies producing Duroc pigs to improve the quality of the carcass and meat, as well as to achieve homogeneity in the batches of these pigs of differentiated quality. The result is intended to increase both customer satisfaction and the economic performance of the sector.

To evaluate the different factors that can affect the final quality parameters in the slaughterhouse, tests have been carried out on experimental and commercial farms, taking into account aspects open to improvement such as genetics, breeding and fattening, sex, feed, suppliers, etc. The aim of these actions has been to find a homogenised system for breeding Duroc pigs in order to obtain homogenised carcasses and pieces in the slaughterhouse.

Specifically, in order to achieve the main objective of improving

the sensory and nutritional quality of the pig meat and to ensure regular and homogeneous production, different strategies have been proposed: increasing intramuscular fat up to levels of 4%, quantitative improvement of the fatty acid profile, reduction of variability in order to obtain constant and homogeneous quality throughout the chain, quantification and classification of meat quality by means of NIRS equipment at the slaughterhouse, and integration of genetic typology, production farm and slaughterhouse data.

The characterisation of the loins obtained has made it possible to know whether the actions and measures implemented are efficient in achieving the established objectives.

02. Results and conclusions

Through the creation of the Operational Group and the establishment of actions, it has been possible to evaluate those parameters that affect the homogeneity of the final product. In this regard, the tests carried out have made it possible to detect which of the paternal lines are the most suitable for achieving the objectives set by the slaughterhouse. Tests have also been carried out under commercial conditions and on experimental farms showing that fattening conditions, as well as immunocastration and feeding criteria, can affect the final homogeneity of the product. This evidence suggests that a homogenisation of the rearing process of animals from different suppliers to the slaughterhouse substantially improves the homogeneity of the final product.

One of the strategies studied was the immunocastration of female animals, which has had a positive impact on intramuscular loin fat and has made it possible to reduce the difference with regard to castrated males.

The use of a large amount of data at different levels (production, slaughter, final quality) has made it possible to establish the best breeding and fattening parameters for the animals in order to obtain an economically sustainable production and, at the same time, to improve the final quality of the product.

The tests carried out in the Operational Group have made it possible to conclude that the strategies evaluated (genetic selection, feeding and immunocastration) have succeeded in improving the quality of the meat produced by the company Porc de Palou.



Photo: Operational Group.