Optimization of fattening pigs: feeding and product quality

Summary

Yields of fattening pigs produced in Catalonia evolve, implying changes in their nutritional requirements. For this, four Catalan pig selection companies decided to carry out this project, in which the direct characterization of the crosses produced with their pure lines has been approached. The data obtained with the experimental device have allowed to model the growth, protein deposition and consumption, to be able to calculate the specific nutritional requirements by crossing and sex. This task has been carried out with types of pig oriented to obtain lean carcasses, but also with alternative types more focused on the production of quality meat. On these alternative crosses different meat quality characteristics have been analysed.

Objectives

-Development of new models for growth, protein deposition and consumption for the pig crosses actually produced in Catalonia. This information is essential to provide an adjusted feeding plan to the genetic background of each pig type.
-Determine the optimal slaughter weight of each of the types of pigs analysed.
-Study the meat quality from crosses aimed to produce lean carcasses.
-Assess alternative types of crossed pigs using genetic lines with a high content of intramuscular fat, as an option for the production differentiated pork quality.

Description of project activities

-Production of six batches of piglets, four "lean" type and two with a higher percentage of intramuscular fat.
-The six lots have been evaluated at the IRTA Pig Evaluation Center. The evolution of the intake, growth and body composition of the animals of each group has been controlled.
-The six batches have been sacrificed to commercial slaughterhouse: The quality characteristics of carcass, meat and sampling have been measured.
-Analysis of data and characterization of each genetic type, at the level of fattening and of the quality characteristics of carcass and meat.
-The amount and composition of intramuscular fat of the alternative crosses, whose objective is the production of meat of differentiated quality, has been analysed.
-Creation of the website of the ACBPS web site for dissemination of the project and the results obtained. www.acbps.org

Final results and practical recommendations

-For each crossing, sex and origin, fattening performances are available, adjusted to two final weights, 105 kg and 117 kg. This information allows economic optimization of the slaughter weight.
-Models of growth, protein growth and feed consumption have also been calculated by sex, crosses and origin. These allow to evaluate the nutritional needs of each type of pig.
-The quality of the carcass and the meat has been characterized, of the crossings oriented to the production of carcasses with a high percentage of lean.

-The participating companies have data on the production parameters, meat quality, carcass quality and nutritional quality of crossbred "meat quality type animals" and using differentiated diets. It seeks to satisfy local market demands.

Conclusions

With the proposed methodology it has been possible to calculate the models, by crossing and sex, that are necessary to feed in a more adjusted way the different crosses of pigs.

There is an important effect of the date of slaughter on the quality of the meat of the pigs belonging to crossings directed towards the production of lean pigs. It is necessary to improve the handling in the abattoir especially in these types of pig.

The combination of the current genetics with an adequate diet and management, gives the possibility of obtaining a really different product, adapted to local markets. This specialization can compensate for the extra cost that these productions normally have.

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Keyword-category

Animal husbandry and welfare

Territorial scope

Province	*County*
Lleida	Selva
Girona	Osona

Barcelona

Noguera
Bages

Project dissemination *(publications, seminars, multimedia...)*

-Poster amb objectius i resultats a la fira internacional de la Producció Animal de Saragossa (FIGAN)
-Sessió tècnica dels resultats del grup operatiu a ACPS
-Sessió tècnica a la fira Q de Balaguer.
-Jornada a Vic

Pàgina web del projecte

www.acbps.org

Other project information

Projecte period

Starting date (month-year): Novembre 2015

End date (month-year): Setembre 2017

Project status: *Finalised*

Approved budget

Total Budget:	**277.421,41 €**
Funding source DARP:	*113.999,99 €*
Funding source UE:	*85.999,99 €*
Own funds:	*77.421,42 €*

With the support of:

Id. projecte: 46 2015