

Extending the useful life of commercial refrigerated beef parts, vacuum packed, up to 84 days, for export purposes

Summary

The exportation of refrigerated beef meat, from Catalonia to distant markets, is an activity that generates a strong interest in the sector to access a market volumes and better margins. For some of the countries of major interest, buyers require a shelf life of packaged chilled meat of, at least, 84 days. Currently, the main competence comes from American companies, where the law allows them to use the concept called "intervention", which consists in sanitize meat with chemicals. This practice is not authorized in E.U. Thus, it is necessary to innovate and find alternatives to achieve this challenge. In this operating group, different actions have been carried out that have a strong impact on the shelf life and the microbiological analyzes carried out show that the objective of 84 days has been achieved in all the pieces of the study

Objectives

The goal, therefore increasing the shelf life of refrigerated beef, is to provide the sector of tools to make it competitive and global benchmark. Ensuring that companies have the capacity in terms of organization, knowledge, hygiene, packaging and logistics that allow them to compete internationally in the market for packaged chilled beef, with the possibility of offering practical shelf-life equal to or greater to 84 days.

Achieving this target is based on three pillars that must be optimized simultaneously: (1) Hygiene and food safety (2) Packaging (materials, systems) and (3) Logistics cold.

Description of project activities

WP1: Actions in the slaughterhouses

WP2: Review and optimization of the operations in the participants cutting plant

WP3: Actions in storage, transportation and commercial distribution.

- WP3.1: Influence of temperature during commercial life

- WP3.2: Commercial availability of logistics alternatives to low temperature transport and remote monitoring systems for "online" transport temperatures.

- WP3.3: Monitoring of real export batches, with a simultaneous study of the commercial life in mirror samples at IRTA-Monells, reproducing the real conditions of the controlled batches.

The WP3 has been the one that has had more impact in the whole project. A MAERSK container from the MARTIKO company, located in J. VINYAS, was used reproducing the real conditions of transport (temperature, humidity, light and air velocity). The container was filled with kilos of meat, of the different pieces of the study and, periodically, these pieces were extracted to carry out microbiological analyzes.

WP4. Documentation and dissemination of results:

A summary poster has been made with images, a YouTube video, and an explanatory Power Point, which has been disseminated through different channels, for example: social networks partners, PATT Presentation in Vic 2017, news media, etc.

Final results and practical recommendations

WP1: Actions in the slaughterhouses

- o Manual of good practices from farm output to stunning, for livestock farmers, transporters and slaughterers.
- o Manual of good practices (generic, but focused on obtaining a long commercial life) of all the usual abattoir operations.

WP2: Review and optimization of the operations in the participants cutting plants

- o Generic report on best practices in the cutting room, focusing on food safety, cross contamination and the extension of commercial life.
- o Recommendations on specifications of materials and packaging equipment.
- o Comparative study of materials and packaging technologies in relation to the commercial life of packaged refrigerated fresh cow meat.

WP3: Actions in storage, transportation and commercial distribution.

- o Report on the influence of the temperature during the commercial life, and of the initial contamination, in the commercial life of packaged refrigerated fresh-beef.
- o Simple commercial predictive model based on initial contamination and conservation temperature
- o Report on the experiences of remote monitoring of temperatures.
- o Report on the commercial life of real export batons with remote monitoring of temperatures

Conclusions

The purpose of this operating group, while increasing the commercial life of 84 days vacuum fresh vacuum meat, has been achieved very satisfactorily. This makes it possible for this product to be transported to new markets (whether national or international) and, therefore, there is an increase in demand and, consequently, production in the primary sector and throughout the chain of transformation. It has provided the necessary tools to the sector so that it is competitive and referring to the world level, adapting to the new demands of the market to be able to compete at the first level with other countries exporting beef.

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Keyword-category

Farming / forestry competitiveness and
Food quality / processing and nutrition
Supply chain, marketing and consumpt

Territorial scope

Province

Lleida
Girona
Barcelona

County

Alt Empordà

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

Vídeo Youtube: https://youtu.be/h4uxwQB_xbs

Fitxa DARP

Fitxa resum amb imatges (penjada a les webs dels socis)

PPT resum Jornada PATT Vic 2017 (penjada a les webs dels socis)

Notes de premsa

Pàgina web del projecte

https://youtu.be/h4uxwQB_xbs

<http://www.grupvinas.com/ca/news/?i=3>

<https://carnica.cdecomunicacion.es/noticias/23483/irta-anafric-carnia-y-grup-vinas-amplian-a-84-dias-la-vida-util-de-la-carne-de-vacuno-ensasada>

<http://noticiadelaciencia.com/not/25877/se-extiende-a-84-dias-la-vida-util-de-la-carne-de-vacuno-ensasada-para-ampliar-los-mercados-de-exportacion/>

https://www.segre.com/noticies/economia/2017/09/27/ampliada_84_dies_vida_util_la_carn_bovi_28992_1107.html

<http://www.vacunodeelite.es/se-extiende-a-84-dias-la-vida-util-de-la-carne-de-vacuno-ensasada-para-ampliar-mercados/>

<https://www.agrodigital.com/2017/09/27/se-extiende-a-84-dias-la-vida-util-de-la-carne-de-vacuno-ensasada-para-ampliar-los-mercados-de-exportacion/>

Other project information

Projecte period

Starting date (month-year): Novembre 2015

End date (month-year): Setembre 2017

Project status: *Finalised*

Approved budget

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Funding source UE: 86.000,00 €

Own funds: 81.428,57 €

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Basic regulation: Ordre ARP/258/2015, de 17 d'agost, per la qual s'aproven les bases reguladores dels ajuts a la cooperació per a la innovació a través del foment de la creació de grups operatius de l'Associació Europea per a la Innovació en matèria de productivitat i sostenibilitat agrícoles i la realització de projectes pilot innovadors per part d'aquests grups, i es convoquen els corresponents a 2015.

Id. projecte: 40 2015