

Is long ageing of cured ham producing value added? The learning processes of the producers of Corsican *prisuttu*

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ADDITIONAL KEYWORDS

Dry cured ham.
PDO.
Corsica.
Long ageing.
Up-market.

SUMMARY

Among meat products of Corsican pig production benefiting recently of a PDO, the prisuttu (dry cured ham) leads to the main value production stakes. Such changes imply that the prisuttu can't be no more sold in the year as a long ageing is able to express its aromatic potential. How producers cope with these new perspectives and what are the main difficulties they are facing? We made an enquiry with a sample of 21 producers of the Corsican mountain area showing a large diversity of situations. Questions concerned the selection of animals, the characteristics of the green hams, the processing and the ageing, the marketing activity. The results obtained show several changes compared to the previous period. Pig rearing is partially in compliance with the code of practices of the PDO. Selection of the carcasses shows a priority for the heavier ones for producing prisuttu. Enlarging the ageing is progressively obtained according to the demand for this type of product. Marketing modalities changed a lot, with less pieces and more cutting sold, together with the search of fairs and local markets, and prices doubled or more. Main difficulties faced in recent years concern the standardization of the plants, implementation of traceability and search for new marketing circuit for ensuring high level of price. The transition toward an up-market orientation is partially observed and the expected dynamics thanks to PDO are not yet real. It lacks a strategic reflection for helping the producers to invest in the chains where their efforts on animals, processing an ageing could be better valorised.

L'affinage long des jambons secs produit-il de la valeur ajoutée? Les apprentissages des producteurs de *prisuttu* corse

RÉSUMÉ

Parmi les produits porcins corses bénéficiant récemment d'une AOP, le prisuttu (jambon sec) représente la plus forte valeur ajoutée. L'AOP exige que le prisuttu ait plus d'un an pour exprimer son potentiel. Comment intégrer ces perspectives et quelles difficultés rencontrées? Nous avons mené une enquête auprès d'un échantillon de 21 producteurs représentatif de la diversité des situations. Les questions concernent le choix des animaux, les jambons frais, la transformation et l'affinage, la mise en marché. Les résultats montrent une évolution sensible dans la période récente. Les porcs sont partiellement élevés selon le cahier des charges de l'AOP. La sélection des carcasses privilégie les plus lourdes pour produire le prisuttu. La durée d'affinage augmente progressivement selon la demande. Les modalités de mise en marché montrent plus de coupe et de tranchage, et l'exploration des foires et marchés, pour un doublement des prix, voire davantage. Les difficultés rencontrées sont la mise aux normes des ateliers, la traçabilité et la recherche de nouveaux circuits pour hausser les prix de vente. La transition vers le marché du haut de gamme n'est que partielle et les dynamiques espérées du fait de l'AOP se font attendre. Il manque une réflexion stratégique qui aiderait les producteurs à investir afin de mieux valoriser leurs efforts sur les animaux, la transformation et l'affinage.

MOTS-CLÉS SUPPLÉMENTAIRES

Jambon sec.
AOP.
Corse.
Affinage long.
Haut de gamme.

INFORMATION

Cronología del artículo.
Recibido/Received: 15.01.2017
Aceptado/Accepted: 30.06.2017
On-line: 15.01.2018
Correspondencia a los autores/Contact e-mail:
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INTRODUCTION

The main features of the local context of pig production in Corsica are well known: smallholders rearing their animals in sylvo-pastoral systems with *Nustra-*

le pig breed (a local Mediterranean breed with slow growing and high adiposity). The animals to be slaughtered in winter are pasturing chestnuts and acorns in the forests during the finishing period in autumn (Molenat & Casabianca, 1979). Deriving from the ancient

rural structures, breeders are also processors mainly in on-farm processing and direct selling (Casabianca *et al.*, 1994), with a lot of informal activity (including on-farm slaughtering) (Gabbriellini, 2011).

Among the meat products of Corsican pig production benefiting recently of a Protected Designation of Origin (PDO), the *prisuttu* (dry cured ham) leads to the main value added production stakes. During the previous periods, producers used to sell the hams after a short ageing (less than 1 year). Within a year, the pig was slaughtered and the hams were sold. Such short process led to choose only the lighter green hams to be processed into dry cured hams in order to speed up the whole process. And the heavy green hams were deboned and the meat was processed into sausages whose reduced ageing allowed short term income (Coutron-Gambotti *et al.* 1999a).

When preparing the PDO specification, a large debate among the producers focussed on the type of local resource to be included (Casabianca & Matassino, 2006). On-farm consumption product was considered as a reference for the traditional specialty product. As a matter of fact, the producers still had some pieces with long ageing (more than 1 year) for ensuring high level of aromatic compounds for some special family occasions (for example bedding banquet). They decided that long ageing was fitting better the expectations for the future PDO typical product than a short ageing even being the current practice. In the same period, as research unit, we established new references for reducing salt content that stimulate both lipolysis and proteolysis (and not only lipolysis when the ham is too much salted), giving the possibility to obtain a more typical *prisuttu* (Coutron-Gambotti *et al.* 1999b).

The challenge addressed by our study was to consider that the PDO implies a lot of changes and, by the way, the Corsican producers are engaged into a transition process. A strong shift from a domestic product embedded in the rural habits toward an up-market food in search of customers willing to pay high prices. Producers must undergo a strong learning process in a very short period of time. Such a transition is facing a set of obstacles and brakes which we decided to study. Our main questions were: How producers cope with these new perspectives induced by the PDO? And what are the main difficulties they face?

MATERIAL AND METHODS

A sample of 21 producers of the Corsican mountain area has been interviewed. These producers originate from several traditional areas in Corsica, and we tried to gather the largest diversity within the sample in order to represent the variety of situations we can observe in the whole region. We used the typology proposed by Relun *et al.* (2015) that allows to take into account the various ways to rear the pigs and to manage their breeding. Our sampling is covering all the types, with most farmers inside the PDO and some outside, from the most controlled management to the most extensive one.

All along 2015 and early 2016, semi-directive questionnaire has been managed by us, focussing on all the changes induced by long ageing of hams.

Questions concerned the 4 following themes:

The selection of animals for producing *prisuttu*, genotypes (*nustrale* breed) and modes of rearing being compulsory for the PDO.

The characteristics of the green hams, long ageing requiring heavy carcasses to be implemented.

The process and the ageing of hams, in particular the modalities of salting and the use of fridge, and the control of hams during the ageing.

And the marketing activity, the presentations of the product, the occasions for selling, and the use of particular brands (PDO and/or own brand).

We mixed both multiple-choices questions with open questions in order to implement a comprehensive approach about the main difficulties confronted by the producers and the perspectives they envisage for their activity.

RESULTS

PIGS AND GREEN HAMS (TABLE I)

The local breed is now mandatory in PDO specification. Even if our sample still shows a great diversity, we observe that the *Nustrale* pig breed became more frequent in the production units of Corsica during the last ten years.

Concerning the slaughtering practices, the situation seems excellent with quite all the producers declaring the use of official slaughterhouses. But in reality, as the on-farm slaughtering is illegal, a lot of farmers practice this informal activity for a fraction of their animals, but they don't declare it.

As shown by the increasing weight of the green hams, the conditions for a long ageing seem to be more frequent.

The same observation can be made for the pH measurement. The distribution of pH meters within the Corsican producers increased a lot during the recent

Table I. Answers on pigs and green hams (number of farmers giving the answer) (Réponses sur les porcs et les jambons verts (nombre d'agriculteurs donnant la réponse)).

The use of Nustrale pig breed

Pure breed = 13, both types = 4, selected exotic breed or cross-bred = 4

The use of official slaughterhouses

Exclusive use declared by the farmers = 19, both on-farm and slaughterhouse = 2

The weight of green hams

Increasing weight = 12, selecting the heavier green hams = 6, no change = 3

Measuring pH before salting

Yes = 17, no = 4

period. This new practice is important for ensuring the right evolution of the green hams.

PROCESSING AND AGEING (TABLE II)

The capacity of the farmers to invest in modern plants seems quite good. Farmers realized that such investment was a necessity for improving their possibility to produce high level products.

Controlling the quantity of salt captured by the green hams by the use of cells and/or short salting increased a lot during the period.

Within the last 20 years, the major part of the producers enlarged the period of production, being part of the PDO or not. The new reference for the dry cured ham in Corsica changed dramatically.

A majority of the producers try to monitor the evolution of their pieces, using horse bones at early stages for some or only at the selling moment for others. Such a practice is totally new.

Table II. Answers on processing and ageing (number of farmers giving the answer) (Réponses sur le traitement et le vieillissement (nombre d'agriculteurs donnant la réponse)).

The plants standardisation

New investment = 17, hired = 1, no change = 3

Cells for controlled salting and/or short salting

Yes = 17, no change = 4

Ageing the hams more than 1 year

Yes = 16, no = 5

Use of ham checking

Along the elaboration = 5, when selling = 13, never = 3

MARKETING CURED PRISUTTI (TABLE III)

The ancient way to sell the entire pieces is still used by all the producers, testifying that this presentation is remaining very frequent. But two third of our sample is combining the presentation in pieces with cuts or slices, representing an important change for the producers. And more than half of our sample is using the vacuum machine giving the possibility to enlarge the consumption of their cuts or slices.

The ancient way of on-farm selling for marketing their products is remaining very frequently. But, at the same time of direct selling, a great part of our sample is marketing with at least one mediator between them and the final consumer. However, Corsica being an island, the possibility to market outside of the island supposes to receive an official authorization and only few of the producers obtained this costly paper (increased requirements).

As ancient prices were from 10 to 15 €/Kg, observed current prices are from 28 € up to 150 €/Kg. So, the prices have doubled or more for all the farmers, some of them having very high prices.

In our sample, PDO concerns a majority of the producers, that is not the real proportion in the region (our sample is dedicated to *prisutti* and the farmers selling

Table III. Answers on marketing cured *prisutti* (number of farmers giving the answer) (Réponses sur le marketing prisutti guéri (nombre d'agriculteurs donnant la réponse)).

The presentation of the hams

Selling the whole pieces: Yes = 21, no = 0

Selling after cutting or slicing: Yes = 14, no = 7

Selling under vacuum: Yes = 12, no = 9

The marketing practices

Selling on-farm or neighbouring: Yes = 21, no = 0

Selling in shops: Yes = 17, no = 4

Selling outside of the region: Yes = 3, no = 18

The ham prices

Less than 50 € = 8, From 50 to 100 € = 9, More than 100 € = 4 (only sliced)

The use of brands

Using only PDO = 7, Both PDO and Organic = 1, Partly PDO = 7, No PDO = 6 (1 left)

Use of own trademark : Yes = 4, no = 17

this product are in majority belonging to the PDO body). But official farmers using both pig identification and legal slaughterhouses are mainly PDO producers. Just a few producers have their own brand, with PDO (for 3) or without (for 1).

DISCUSSION

SOME MAJOR CHANGES, BUT ALSO SOME ANCIENT TRAITS REMAINING

Choosing the heavier green hams for processing, and deboning the small ones for processing the meat into sausages became frequent practice while it was the contrary 20 years ago. We observed an increase in the age of the marketed hams, and some units are reaching 2 years old as « reserve » for their top products. So long ageing of the hams has become now a frequent practice.

At the same time, selling the whole piece (and lower prices) to the final consumer is becoming less frequent. But we see that a large proportion of the producers is combining both systems, the new one (cuts, slices, under vacuum) and the ancient one (whole piece).

Similarly, the genotypes can be the *Nustrale* breed for the whole herd or only for a fraction, some producers having a double herd (one with *Nustrale* and another with crossbred animals). The same is observed for the slaughtering (using both on-farm illegal and official slaughterhouse), the branding and the marketing leading the producers to adopt partially the new practices.

So, the evolutions observed are only partial and the expected dynamics due to PDO are not yet spread among all the producers.

MAIN DIFFICULTIES FACED WHEN INCREASING THE AGEING

A large fraction of the producers already chooses the right raw material and uses the right process of salting. They monitor the evolution of the hams and they fill the documents for traceability, they invested in standardisation of the plants. We can see that they

are able to wait for a long time to have some income without expressing any difficulty.

Long aged cured hams need to find new clients and the producers are exploring tourists or local people in search of high quality with new presentations or shops. It seems easier to wait for tourists than to export the products.

ANSWERS TO OUR QUESTIONS CONCERNING VALUE-ADDED AND LONG AGEING

We made a typology of producers according to the prices of sold hams and the answers to our questions, in order to find out the conditions associated to the prices. We found 3 types:

- *High prices (sliced ham > 100 €).*

These 5 producers increased the weight of green hams, prolonged the ageing (> 15 months), use pure *Nustrale* breed, practice ham monitoring, exclusive use of official slaughterhouses, standardised their plant, cutting and slicing hams, they apply use of trade mark or official brand.

- *Intermediate prices (sliced ham > 50 €).*

These 10 producers show incomplete combination of the first set.

- *Low prices (sliced ham < 50 €, ham = 30 €).*

These 6 producers show short ageing (< 12 months), low use of pHmeter, low use of *Nustrale* breed, irregular use of official slaughterhouse, low presence of standardised plant, no use of PDO.

ANSWERS TO OUR QUESTIONS CONCERNING THE LEARNING PROCESSES

We observe that, more or less, the technical learning processes are on the way. In particular, choosing the raw material, changing the salting methods or checking the manufacturing process. Similarly, the concrete conditions of activities are improving. In particular, the frequent use of official slaughterhouses, the standardisation of processing plants and the traceability.

On the contrary, the marketing channels (whole pieces, direct selling) are still embedded in the local and ancient solutions. Exploring up-market channels and searching for the relevant clients seems a more challenging learning process.

CONCLUSION – TRANSITION NOT YET COMPLETED

PDO requirements lead to a kind of formalization of the activities (Belletti et al. 2013). Identifying the pigs, use of official slaughterhouses, investing in processing plants, dealing with control implementation, and paying taxes on income are inducing new costs. Such costs could be compensated by high prices for dry-cured hams.

But, even in the case of PDO products, some archaic traits continue to persist (Lambert-Derkimba et al. 2011). The producers are maintaining ancient practices because on-farm selling is very easy. Corsica is a very touristic place and a demand for authentic

products is very high. Only some producers changed the marketing channel with or without PDO, even with E-market, valorising better the cured hams and showing the way to other actors.

A strategic reflexion is still missing for helping the producers to invest collectively in the chains where their efforts on animals, and on processing and aged *prisuttu* could be better valorised.

ACKNOWLEDGMENTS

Authors want to thank all the producers willing to answer to the questionnaire.

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