

# EUROPEAN SENSORY SCIENCE SOCIETY



## WORKGROUP PDO

### Report Workshop Rome - 17th November 2015

#### Introduction

The meeting was proposed during the last meeting in Copenhagen on September 9<sup>th</sup> 2014 with the aim of :

- discuss the results of the survey of sensory analysis for official control.
- define the final framework and protocol for the consumer survey to be run across the different nations.

The meeting was kindly hosted by the *Council for Agricultural Research and Economics. Research Center on Food and Nutrition, CRA NUT, Rome*. The host was dr. Fiorella Sinesio whose help and commitment has been essential for the success of the event.

#### Program:

- Welcome and introduction (*Mario Zannoni & Fiorella Sinesio*)
- Presentation: United Kingdom (*Margaret Everitt*)
- Presentation : Ireland (*Tracey Larkin*)
- Results survey methods and accreditation - Spain (*Patxi Pérez Elortondo*)
- Results survey methods and accreditation - Italy (*Mario Zannoni*)
- Results survey methods and accreditation - France (*Ronan Symoneaux*)
- Discussion survey methods and accreditation

#### Coffee Pause

- Preliminary results consumer survey (*Luis Guerrero*)
- Results of EU project GILearn (*Beatriz Villegas*)
- Discussion survey consumers

WG PDO Management meeting: program for 2016

#### Minutes of the meeting

#### **Presentation: United Kingdom (*Margaret Everitt*)**

According to the Department for Environment, Food and Rural Affairs (DEFRA) as of September 2015, 63 food products and 1 non-food product (native Shetland wool) in the UK have protected name accreditation.

The value of having Protected Name accreditation is growing amongst producers as they become increasingly aware of the benefits that it affords.

As part of the application process, producers are required to define the sensory details under the 'organoleptic information' section. Producers are proud and passionate about their product/s but their interpretation can be prone to subjectivity and result in the sensory descriptions being vague and or quirky

Sensory assessments are in the main informal and rely on the product knowledge of a few experts, typically 2 to 3, to approve the sensory quality.

Consumers' awareness of the importance of speciality foods and provenance is increasing as their demand for local, fresh, good quality produce grows. However the relevance of the PDO logo and guarantee it signifies about quality and authentication is not widely understood.

More effort is demanded to communicate the value of PDOs to the consumers acting at different levels: retailers, television and university courses.

### **Presentation : Ireland (*Tracey Larkin*)**

Sensory Food Network Ireland is a national network of excellence, promoting integration and ensuring sustainability for all sensory science activities on the island of Ireland. The network comprises 10 leading institutions from Ireland with expertise in sensory science.

Ireland has 5 product with PDO-PGI status: Imokilly Regato cheese, Timoleague Brown Pudding, Clare Island Salmon, Connemara Hill Lamb, Waterford Blaa/Blaa (bread).

Oriel Sea Salt and Oriel Sea Minerals have requested an application to PDO status.

PDO producers find it hard to see any marketing benefit especially when so few Irish consumers know of the schemes.

The Food Lit sensory laboratory did some descriptive and difference evaluations of PDO in comparison with non-PDO competitors.

### **Results survey methods and accreditation - Spain (*Patxi Pérez Elortondo*)**

According to 2013 data of the Spanish Ministry of Agriculture, in Spain the PDO/PGIs (non wines) are 176. The largest number of PDOs and PGIs (non wines) comprises oil, cheeses, vegetables, fruits, fresh meat and products of bakery and pastry. The number of PDO/PGI wines totals 131, plus 16 spirit drinks.

Today in Spain, after 15 year of experience and 200 evaluations of sensory analysis panels, the Spanish accreditation body (ENAC) have 15 technical experts qualified (from universities, technological enterprises, CSIC and official or private panels) for the evaluation of the sensory analysis practices in accreditation ISO 17065 and/or ISO 17025 schemes.

There are 115 products certified according ISO 17065 (using also sensory evaluation): 84 wines, 2 spirits drinks, 14 oils, 15 other food (8 cheeses, butter, 2 hams, sobrasada (raw cured sausage), saffron, paprika, vinegar). Sensory laboratories accredited in Spain are 28 ( at 18-10-2015), 20 of them accredited for the application of the official sensory method for the quality categorization of olive oil. Other specific food products evaluated in accredited laboratories are: 1 ham, 2 cheeses, 1 asparagus, 1 pepper, 1 young red wine and 1 cider.

In sensory analysis of PDOs there are various needs:

- *Development of harmonized technical criteria:*
  - Standardization of vocabulary and definitions of attributes (ex. wine sensory analysis).
  - Resolve the ambiguity of the sensory descriptions (specifications of PDO products).
  - Have sufficiently defined and non-generic tasting sheets.

- Define standard methods to evaluate the sensory quality in a specific and rigorous way.
- Training, monitoring and control of panel procedures.
- *Technical needs:*
- Reference materials.

The oils employ the official COI method for the sensory quality categorization of olive oil, but none of the 20 accredited sensory laboratories in Spain include in their scope of accreditation the evaluation of specific descriptors of the PDO oils including in their sensory requirements of certification. The wines employ the OIV competition sheet which is rather problematic because is generic and the quality categories of each sensory parameter are not sufficiently and objectively defined. The Idiazabal cheese employs a scorecard with 8 sensory parameters. For each sensory parameter, the “top” sensory situation plus a quality grading scores relating to the different sensory situations in the product are defined (a 1-7 quality scale is used: the 1-3 range covers the defects, 4-6 range covers situation not fully correct and 7 points is the top score, fully correct). According to this approach, characteristics of typicality or key desirable descriptors of the product should be considered in the “top “ sensory situation.

In relation to how sensory results guarantee the compliance, in wine and also in some cheeses, a minimum overall quality score is considered on the basis of a mathematical weighting of the various categories of quality of the sensory parameters. For Idiazabal cheese instead there are sensory quality limits for each of the 8 sensory parameters evaluated.

In general, a formal training of panelists is carried out only by the accredited panels.

The reason to use the sensory analysis is mainly due to the need of PDO certification. Some certification bodies complain that there are not enough accredited laboratories available.

After experience of ENAC evaluating panels for PDO/IGP products certification in Spain, technical deficiencies related to the design and testing method, the selection and training of the assessors and the activities for the quality control of the results have been identified. As consequence, the need to develop harmonised technical criteria and references, together with their dissemination (agro-food producers and distribution, Government and society) becomes increasingly urgent.

### **Results survey methods and accreditation - Italy (*Mario Zannoni*)**

In Italy we have 521 PDO –PGI wines. The sensory evaluation for the DO compliance is carried out by commissions of tasters by the local chambers of commerce (decree n. 295/2011). This system is considered obsolete, but it is still in use.

The Italian PDOs other than wine are 274 (46 oils). Italian PDOs without oils are 228.

The answers to the questionnaire showed that all the PDO oils use the sensory analysis as foreseen by the EU regulations. Among the other 228 products we have 14 products (15 considering the Aceto Balsamico di Modena PGI) which use the sensory analysis as a tool for the PDO certification (i.e. 6.1% (6.6%) of the total number). Two more bodies use sensory analysis for quality evaluation, but not for certification purposes. It is possible, but rather unlikely , that other PDOs using sensory analysis exist in Italy.

Most products are controlled by means of organoleptic tests done by inspectors of the control bodies during inspections.

Among PDOs using sensory analysis we have:

47 oils and fat. (all oils and 1 fat), 5 cheeses, 4 cured meat products, 2 fruit and vegetables, 2 other products.

The bodies in charge of sensory analysis for oils are 12 chambers of commerce and 2 public authorities plus 8 private control bodies (46 PDOs). Among the bodies dealing with other products we have: 3 certification (control) bodies, 2 accredited labs appointed by certification bodies, 2 non accredited labs appointed by certification bodies and 2 consortium labs under control of certification bodies.

The most common systems of scoring use a QDA sheet; in one case using general compliance scoring (4 PDOs use it) and in another using accepted range of intensities of descriptors (5 PDOs). The average number of analysis per year is 90 and in half of the cases the training and control of the panel performances follows the ISO norms.

### **Results survey methods and accreditation – France (Ronan Symoneaux)**

An official text from INAO defines the rules for the committee of tasting of PDO product (INAO-DIR-CAC-2, 2013). Tasters are chosen from three different groups: technicians, bearer of memory, product users. The panel shall have at least 5 tasters and they have to be trained to recognize the specificity of the products and the main defects.

The survey showed that the tasting committees used 5 to 20 (mainly) professionals and technicians. The sampling is done all the year long.

Tasting methodology is defined by the PDO Organizations and different scales are used.

The *honey of Corsica* has an approach close to wine and other alcoholic beverages:

–Minimum of 5 tasters trained mainly on defects recognition by PDO organisation via a external company

–Performance test to validate tasters

–Evaluation of the conformity on several attributes.

For *oils and butter* the tasting committee is accepted with 5 persons but some Producers Organizations (PO) prefer 15 to 20

-Training by PO on recognition of defects with performance tests done by Control Organism (CO) with replicates and evaluation of consensus and repeatability.

-Blind test with sometimes introduction of some outliers (industrial products)

-Fat products and number of products.

For *fresh meats* there are different procedures for the carcasses and on the meat due to difficulties because of the complexity of fresh meats evaluation.

For the evaluation of *ham from Corsica* 15 tasters trained by PO are employed (but without performance evaluation). Around 100 samples a year, randomly sampled.

All the PDO *cheeses* use a tasting committee with 8 to 12 (sometimes more) tasters per sessions.

Training is organized by the PDO organization (except for one interviewed PDO).

There are several strategies for performance evaluation of the experts.

There is a high variability in sampling (number of samples, samples from batches or from volume of production etc.). Methods are decided by PDO organizations.

Conclusion

- The INAO regulation allows an (incomplete) harmonization of practices between the PDOs.

- The sensory methods are mainly based on recognition of defects and quality perception with comments and rarely on total sensory characterization

- The consensus between tasters is used and often preferred than statistical analysis

- The recruitment of tasters is really a problem to solve

- The analysis of tasters' performance is done in several ways but in general it is carried out which is positive. Nevertheless it is difficult to evaluate the level of accepted performance. We do not have enough information about how the sensory tests are carried out in practice.

It is difficult to harmonize practices among groups of products presenting such diversity and variability.

## **Notes about sensory evaluations of Austrian PDO/PGI**

*(information provided by Elisabeth Buchinger)*

In Austria there are 14 PDO/PGI products (6 cheeses).

10 products are evaluated on their sensory quality.

The evaluation is done by different panels of producers and experts. In one case also consumers are included .

## **First results survey methods and accreditation - Switzerland**

*(information provided by Patrizia Piccinali)*

In Switzerland there are 21 PDO and 12 PGI registered.

Sensory evaluation of conformity to the descriptions stated in the specifications is carried out by experts groups.

The experts are designated by the producers' associations.

Products are tested on appearance, odour, flavour and texture criteria.

These criteria are evaluated on score cards where a minimum score has to be achieved for the product to be allowed to carry the DOP denomination.

Experts mostly undergo internal trainings.

For the Gruyère cheese 2-3 experts are used for testing. Products are tested on opening; texture & colour; flavor & odour; exterior & shape & storage suitability. For each of the 4 categories a maximum of 5 points can be obtained. Compliance is expressed on a 20-point scale. A minimum of 18 points is requested to pass the examination.

For the Kirsch (spirit) 5 panelists are employed. They use a consensus test blind 3-digit code – Categories comprise: visual, odour quality & intensity, fruit flavor typicality and intensity, mouthfeel, harmony, balance, complexity. Compliance is expressed on a 100-point scale. A minimum of 80 points is required.

## **Discussion**

Symoneaux: in France there are INAO guidelines but the scorecard are prepared with different approaches, as happens in Italy and Spain. We do not know if the ISO norms are followed by the panels. INAO charged the Control Bodies to verify the correctness of sensory testing of PDOs.

Perez Elortondo: accreditation may be one way to generate confidence on the good performance of the PDO panels

Everitt: The product complexity and different categories brings a huge variation in the approaches to be considered.

Zannoni: in Italy the accreditation body is not in favor of an overall compliance score.

Ritter: our objective has to be to find the best practice methods, the validity, the reproducibility and practicability of the methods. With discussion reach a consensus with pros and cons of different approaches and then produce guidelines.

Zannoni: I agree totally but in the process we have to involve another actor: the accreditation body.

## **Preliminary results consumer survey (*Luis Guerrero*)**

Main objective of the survey will be to determine consumers awareness, knowledge and image of PDO products.

Secondary objectives are: a) to compare emotional and rational images b) to gain knowledge about the relationship between type of product and image.

During the preliminary work many survey platforms were checked and *Surveygitzmo* was chosen. The test was considered medium for the fatigue and easy for the accessibility.

The test employed 12 questions covering various subjects: emotional, knowledge of logos, rational perceptions, attitude, objective and subjective knowledge of PDOs and behaviour.

A pre-test was performed in Spain and the completion rate was 64% and the average time to fill it was 11 minutes. The results showed the importance of the product quality for the consumers.

## **Discussion**

As a group we are interested to know what is the consumers knowledge of PDOs in Europe.

As a preliminary step, to control if the questionnaires are performing well it will be necessary to contact Luis Guerrero who has the access to the collected data.

Everitt: it would be of interest to include UK in the survey to see how compares with the other countries.

Guerrero: it is a good idea if we include UK and Ireland in the group.

The group agrees to start the survey in January and finish it in February and then do the statistics.

## **Results of EU project GILearn (*Beatriz Villegas*)**

The GILearn project : “Consumer learning to enhance the knowledge of products with geographical indications” has the objective of designing and piloting an innovative online learning program in order to improve the knowledge of European consumers about PDO products. Four institutes in different countries participated with Ainia centro tecnológico (Spain) as coordinator of the project. The project provided online courses for the consumers about Geographic Indications.

The courses were divided in two. An introduction module and a specific training module about one PDO category of products.

176 consumers were involved and 129 finished the course.

At the end it was possible to state an increase in knowledge of the participants because of the decrease of the gap for each critical point of knowledge.

Participants showed interest in the online guided tasting.

## **Management meeting**

Discussion:

Margaret Everitt mentioned that if we want to write guidelines we should check what already exists, e.g. sensory grading for cheese or meat.

Zannoni: guidelines have to be scientific and practical for PDO.

Perez Elortondo: the ISO documents are not known.

Guerrero: It will be useful to do training for producers of PDOs.

Villegas: in this sense try to amplify the project.

Zannoni: to involve producers the best system is to implement the product public competitions, with guidelines how to do it.

Buchinger: good idea to organize a panel for these public competitions.

Guerrero: the government of Catalonia requires that products are defined and under control.

In the meeting we discussed the activities for 2016:

**Main Event:**

Eurosense, Dijon 11-14 September 2016.

In Dijon we have two options:

- a) The last day of Eurosense, prepare a seminar like that of Bern in 2012 presenting the results of the Accreditation survey 2015 and Consumer survey 2015-2016.
- b) Preparing one or two oral presentation for Eurosense about accreditation and / or consumer survey.

The seminar could also be followed by a practical example of sensory testing of PDOs. These options have to be discussed with Pascal Schlich.

If the two above options are not possible we shall at least present two posters (deadline april 1<sup>st</sup> 2016).

We shall have the 5<sup>th</sup> management meeting in Dijon.

**Other events:**

Proposed Round table about accreditation of sensory methods for PDO official control. Reggio Emilia, May (?) 2016. Organized by Mario Zannoni, inviting the Italian accreditation body and the Spanish one.

This event will take place in the afternoon of a day dedicated to sensory analysis. In the morning we have a small symposium about the employ of sensory analysis in PDO certification in Italy.

E3S General assembly, Netherlands 9-10<sup>th</sup> May 2016. In this event we will held the report of WG PDO activity in 2015.