



CIHEAM

International Centre for Advanced
Mediterranean Agronomic Studies
Mediterranean Agronomic Institute of Zaragoza

www.iamz.org



Universidad
del País Vasco

Euskal Herriko
Unibertsitatea



Advanced Course

VALORIZATION OF SHEEP AND GOAT DAIRY PRODUCTS IN THE MEDITERRANEAN. PRESENT TECHNOLOGIES AND MARKET PERSPECTIVES

Vitoria (Spain), 15-19 May 2017

1. Objective of the course

Sheep and goat dairy products are a major part of the Mediterranean culture well adapted to natural resources and traditional know-how. These products face a promising future since they are perceived as differentiated and of high-quality. Furthermore, sheep and goats are generally farmed in extensive production systems, making use of less-favoured rural areas. This type of farming maintains activity in geographical areas that would otherwise be abandoned.

The fact that these products are brought onto competitive markets means that there is a need to take advantage of their specific characteristics and technologies in order to promote them. Producers need useful tools to add value to sheep and goat dairy products by achieving quality certification, strengthening dairy sector organisation and developing innovative products.

The aims of this course are to provide updated information on aspects that influence the quality of sheep and goat dairy products, and to discuss the strategies for powering marketing. By the end of the course, the participants will have gained:

- A holistic view of the Mediterranean sheep and goat dairy products and their technologies.
- Understanding of the importance of properly managing the dairy ecosystem from milk to the final product.
- Insight into the impact of production management and processing technologies in the quality of products.
- Understanding of the characteristics that add value to the products and contribute to the sustainability of these productions and their sociocultural values in the Mediterranean areas.
- Awareness of the consumers' perception and opportunities offered by local and international markets.
- Criteria to explore different strategies to reach markets and be competitive.
- Familiarity with the official safety control and quality labelling certification.
- Hands-on skills and experience on quality testing and processing.

2. Organization

The course is jointly organized by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), through the Mediterranean Agronomic Institute of Zaragoza (IAMZ), and the University of the Basque Country, through the Lactiker Research Group.

The course will take place at the Lascaray Research Center in Vitoria-Gasteiz, and will be given by well qualified lecturers from research centres, universities and private institutions in different countries.

The course will be held over a period of 1 week, from 15 to 19 May 2017, in morning and afternoon sessions.

3. Admission

The course is designed for 25 professionals with a university degree, and is specially targeted at managers in sheep and goat milk production and in the dairy industry, technical advisors and R&D professionals dealing with processing technology and marketing of small ruminant dairy products.

Given the diverse nationalities of the lecturers, knowledge of English, French or Spanish will be valued in the selection of candidates, since they will be the working languages of the course. The Organization will provide simultaneous interpretation of the lectures in these three languages.

4. Registration

Application forms may be obtained from:

Instituto Agronómico Mediterráneo de Zaragoza
Avenida de Montañana 1005, 50059 Zaragoza (Spain)
Tel.: +34 976 716000 - Fax: +34 976 716001
e-mail: iamz@iamz.ciheam.org
Web: www.iamz.ciheam.org

Candidates should send the completed application form to the above address, accompanied by a detailed *curriculum vitae*, stating degree, diplomas, experience, professional activities, language knowledge and reasons for applying to the course. Copies of certificates should be enclosed with the application.

The deadline for the submission of applications is 3 March 2017.

Applications from those candidates who cannot present their complete records when applying, or those requiring authorization to attend the course, may be accepted provisionally.

Registration fees for the course amount to 500 euro. This sum covers tuition fees only.

5. Scholarships

Candidates from CIHEAM member countries (Albania, Algeria, Egypt, France, Greece, Italy, Lebanon, Malta, Morocco, Portugal, Spain, Tunisia and Turkey) may apply for scholarships covering registration fees, and for scholarships covering the cost of travel and full board accommodation.

Candidates from other countries who require financial support should apply directly to other national or international institutions.

Please display on a notice board if possible



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See updated information at

www.iamz.ciheam.org

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6. Insurance

It is compulsory for participants to have medical insurance valid for Spain. Proof of insurance cover must be given at the beginning of the course. Those who so wish may participate in a collective insurance policy taken out by the Organization, upon payment of the stipulated sum.

7. Teaching organization

The course requires personal work and interaction among participants and with lecturers. The international characteristics of the course favour the exchange of experiences and points of view.

The programme has an applied approach. Formal lectures are illustrated with examples and complemented by debates, practical sessions and technical visits. The hands-on practicals on sensory analysis, quality and safety control and processing techniques will take place at the facilities of the University of the Basque Country. Guided visits to the official control laboratory and artisanal and industrial dairies in the area will illustrate their daily operations and procedures.

8. Programme

1. Dairy products as a result of breeding practices (2 hours)
 - 1.1. Sheep and goat milk composition
 - 1.2. Effect of breed, animal physiology, health, feeding system, milking and farm management on dairy product characteristics
 - 1.3. Resulting specificities for sheep and goat Mediterranean dairy products
2. Overview of the technologies currently used in the Mediterranean area for sheep and goat milk processing (7 hours)
 - 2.1. Milk storage and processing
 - 2.2. Milk inoculation with starter cultures
 - 2.3. From lactic fermentation to product maturation
 - 2.3.1. Coagulation processes and types of coagulant
 - 2.3.2. Milk or sub-fraction of milk as the exclusive ingredient
 - 2.3.2.1. Acidification: fermented milks including yoghurt, cream, butter, etc.
 - 2.3.2.2. Acidification, renneting, draining, ripening: solid fermented milks, from fresh cheeses to cooked, smoked and pressed ripened cheeses
 - 2.3.3. Milk as one of the main ingredients: dried-fermented milk-cereal mixtures, etc.
 - 2.4. Product preservation and packaging
 - 2.5. Emerging technological practices
 - 2.6. Debate: Technological differences and similarities among Mediterranean countries/regions. Technological specificities as compare to other parts of the world
3. Technology and management of microbial populations and microbial activities: a focus on dairy ecosystems (3 hours)
 - 3.1. Microbial activities and ecosystem dynamics
 - 3.2. Pathogen control in milk and dairy processes
 - 3.3. Domesticated vs. wild microbial strains
 - 3.4. Selecting strains for starter and adjunct cultures
 - 3.5. Culturing strains for inoculation
 - 3.6. Product diversity/standardization
 - 3.7. Processing at small scale (traditional, artisanal) vs at large scale (industrial)
- 3.8. Milk microbial activity
 - 3.8.1. Storage practices
 - 3.8.2. Mixing milk
 - 3.8.3. Raw milk and processed milk (pasteurized, microfiltered, etc.)
4. Characteristics of dairy products impacted by technology (1 hour)
 - 4.1. Nutritional composition
 - 4.2. Sensory characteristics
 - 4.3. Shelf-life
 - 4.4. Safety
5. Adding value to Mediterranean sheep and goat dairy products and market perspectives (7 hours)
 - 5.1. Market overview
 - 5.1.1. Impact of seasonality in the marketing of sheep and goat products
 - 5.1.2. Supply and demand for goat and sheep Mediterranean dairy products: current situation and trends
 - 5.1.3. Which products and suppliers (firms, countries, etc.) are the current competitors and could be future competitors?
 - 5.1.4. Consumer perception and behaviour
 - 5.2. What can add value to these products?
 - 5.2.1. Specific characteristics of the products
 - 5.2.1.1. Nutritional value
 - 5.2.1.2. Health claim
 - 5.2.1.3. Recover traditional old flavour
 - 5.2.1.4. Use of other Mediterranean specific ingredients
 - 5.2.2. Environmental, social and cultural aspects: landscape conservation, creating qualified labour and fixing population in rural and mountain areas
 - 5.3. Different and complementary ways for powering marketing
 - 5.3.1. Quality control and product certification
 - 5.3.1.1. PDO, PGI, organic and other labels
 - 5.3.1.2. Authentication tools
 - 5.3.2. Dairy sector organization, governance and support
 - 5.3.2.1. Association of producers and retailers at different scales, from local to "Mediterranean brand"
 - 5.3.2.2. Reliable dairy chains
 - 5.3.2.3. Support to farmers and processors' initiatives
 - 5.3.2.4. Diversifying activities, technologies and products
 - 5.3.3. Prospecting new markets and distribution channels: from local (km 0) to international
 - 5.3.4. Development of new specific dairy products (ice cream with specific flavour, ready-made meals, etc.)
 - 5.3.5. Format, size, packaging and labelling
 - 5.3.6. Sheep and goat dairy products in gastronomy
 - 5.3.7. Adding value to by-products. Whey management and uses
 - 5.4. Debate: Marketing opportunities and constraints for sheep and goat Mediterranean dairy products
6. Practical work and technical visits (13 hours + group work)
 - 6.1. Practical work
 - 6.1.1. Sensory analysis
 - 6.1.2. Detection of defects in the final product
 - 6.1.3. Preparation of artisanal rennet paste and coagulation study
 - 6.1.4. HACCP case study
 - 6.2. Technical visits
 - 6.2.1. Industrial and artisanal dairy factories
 - 6.2.2. Official control laboratory (*Lekunberriko Esnekari Erakundea*)

GUEST LECTURERS

M. ALBISU, Univ. País Vasco (UPV/EHU), Vitoria-Gasteiz (Spain)
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