



# **3<sup>rd</sup> Mountain Livestock Farming Systems Meeting**

**Clermont-Ferrand France  
5/7 June 2024**

**PROGRAMME  
BOOKLET**



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# The European Federation of Animal Science (EAAP)

The main aims of the EAAP are to promote, by means of active co-operation between its members and other relevant international and national organisations, the advancement of scientific research, sustainable development and production systems; experimentation, application and extension; to improve the technical and economic conditions of the livestock sector; to promote the welfare of farm animals and the conservation of the rural environment; to control and optimise the use of natural resources in general and animal genetic resources in particular; to encourage the involvement of young scientists and technicians. More information on the organisation and its activities can be found at [www.eaap.org](http://www.eaap.org).

## Former Presidents

1949-1961	A.M. Leroy (France)
1961-1967	R. Trehane (United Kingdom)
1967-1972	J.M. Rijssenbeek (The Netherlands)
1972-1978	J.H. Weniger (Germany)
1978-1984	E.P. Cunningham (Ireland)
1984-1990	A. Roos (Sweden)
1990-1996	A. Nardone (Italy)
1996-2000	P. Solms-Lich (Germany)
2000-2004	A. Aumaitre (France)
2004-2008	J. Flanagan (Ireland)
2008-2012	K. Sejrsen (Denmark)
2012-2016	P. Chemineau (France)
2016-2020	M. Gauly (Germany)

## Council members

### President

- Isabel Casasús (Spain)

### President - elect

Jöel Berard (Switzerland)

### Vice-Presidents

- Peter Sanftleben (Germany)
- Hans Spooler (the Netherlands)

## Members

- Peer Berg (Norway)
- Sam de Campeneere (Belgium)
- Gunnfríður Elín Hreiðarsdóttir (Island)
- Nicolò Macchiotta (Italy)
- Olga Moreira (Portugal)
- Klemen Potocnik (Slovenia)
- Diana Ruska (Latvia)

## FAO Representative

- Badi Besbes

## Auditors

- Zdravko Barac (Croatia)
- Georgia Hadjipavlou (Cyprus)

## Alternate Auditor

- Jeanne Bormann (Luxembourg)

## Secretary General

- Andrea Rosati

European Federation of Animal Science has close established links with the sister organizations American Dairy Science Association, American Society of Animal Science, Canadian Society of Animal Science and Asociación Latinoamericana de Producción Animal.



# Welcome to MLF 2024 in Clermont-Ferrand

On behalf of the French Organising Committee, we are very delighted to invite you to attend the Mountain Livestock Farming Systems Meeting co-organised by the European Federation of Animal Science (EAAP), VetAgro Sup and INRAE to be held in Clermont Ferrand, the capital of the Auvergne, from June 5th to 7th, 2024.

The general topic of this Congress will be Adaptation of mountain livestock farming to climate change. Different sessions will be jointly organised to cover various areas of knowledge related to Interaction between farming systems and wildlife, Product quality and mountain farming, and several other topics.

## Scientific Committee

Mauro Coppa - University of Turin  
Giulio Cozzi - University of Padua  
Claire Morgan-Davies - Scotland's Rural College (SRUC)  
Manuel Schneider - Agroscope  
Matthias Gauly - University of Bolzano  
Peter Dovc - University of Ljubljana  
Minja Zorc - University of Ljubljana  
Vibeke Lind - Norwegian Institute of Bioeconomy Research (NIBIO)  
Thomas Zanon - University of Bolzano  
Oystein Holand - Norwegian University of Life Sciences (NMBU)  
A. Bernues - Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA)  
Caren Pauler - Agroscope  
Paolo Silacci - Agroscope  
Bruno Martin - INRAE  
Fabienne Blanc - VetAgro Sup  
Gilles Brunschwig - VetAgro Sup

## Organization Committee

Gilles Brunschwig - VetAgro Sup  
Mauro Coppa - University of Turin  
Bruno Martin - INRAE  
Fabienne Blanc - VetAgro Sup  
Andrea Rosati - EAAP  
Federico Liguori - EAAP

# Local Organizers



With nearly 850 staff spread over 20 Units in 8 locations, the Clermont-Auvergne-Rhône-Alpes Centre of INRAE (The French National Institute for Agriculture, Food and Environment) is widely anchored in the region. Our teams implement research projects characterized by a broad disciplinary representation, as close as possible to the concerns of society. They are involved in numerous international research networks in the fields of plant genetics, animal husbandry and human nutrition.



VetAgro Sup is an institution of higher education and research (ESR) under the aegis of the French Ministry of Agriculture and Food. It is the only establishment in France that trains veterinarians, agricultural engineers, and veterinary public health inspectors. It also runs educational and research programmes centred on the essential theme of global health, addressing issues at the intersection of human, animal, and environmental health.



Agro-ecosystems face multiple challenges such as climate change, declining biodiversity, and the shift towards agro-ecological practices. Adapting to this evolving landscape requires addressing economic, societal, and environmental concerns. The International Research Center for Sustainable Agroecosystems aims to enhance the resilience and sustainability of agricultural systems, focusing on cereals and grazing livestock. The International Research Centre – IRC-SAE project on sustainable agro-ecosystems brings together 19 research units INRAE, Université Clermont-Auvergne, CNRS, VetAgro-Sup, involving 259 scientists.

## **EAAP Working Group on Mountain Livestock Farming**

The EAAP Working Group on Mountain Livestock Farming joins forces and competences to identify emerging areas of research and encourage collaboration among researchers from different countries and disciplines. It wants to be a welcoming platform for discussion on livestock production in mountain areas in a broad and transdisciplinary perspective. The experts want to contribute to the dissemination of relevant outcomes by organizing conference sessions within EAAP, meetings and joined events with other related initiatives that will enable researchers and stakeholders to contribute and exchange their new knowledge, experiences and innovations.

# VetAgro Sup campus

VetAgro Sup is an institution of higher education and research (ESR) under the aegis of the French Ministry of Agriculture and Food. It runs educational and research programmes centred on the essential theme of global health, addressing issues at the intersection of human, animal, and environmental health.

With 260 years of history and 10 years of multidisciplinary that is unique in France, VetAgro Sup is the only French institution to train veterinarians, agricultural engineers and veterinary public health inspectors in a global approach to health issues. At the heart of the challenges facing the living world, the school develops its training, research and expertise activities on its two campuses as part of a One Health approach, at the interface of human, animal and environmental health. VetAgro Sup has strong academic ties. It has officially partnered with the University of Lyon and the University of Clermont Auvergne and Associates, which is classified as I-Site establishments.

VetAgro Sup possesses expertise that it parlays into support for major economic players at the national, European, and international level. It specialises in the domains of food, animal health, the agricultural sciences, and the environmental sciences. The quality of the institution's educational programmes has been recognised by the American Veterinary Medical Association (AVMA), the European Association of Establishments for Veterinary Education (EAEVE), the Commission des Titres d'Ingénieur (CTI), and the World Organisation for Animal Health (OIE).

In 2017, VetAgro Sup joined the Consortium of Universities for Global Health and thus positioned itself as an institution working at the interface between human, animal, and environmental health. The consortium's objective is to employ a multidisciplinary approach to improve the well-being of animals, the Earth, and humans.

At the national level, VetAgro Sup is a member of Agreenium, a body that has brought together 3 research institutes and 14 institutions of higher education in the agricultural sciences.

**Educational programmes:** VetAgro Sup is training veterinarians, agricultural engineers, and veterinary public health inspectors to confront global health challenges.

**Research:** Research is the foundation of VetAgro Sup's work. It serves as the basis for the institution's curriculum and promotes the dissemination of knowledge, thus helping to tackle major scientific challenges in public health and the life sciences.

**Expertise:** With its 17 technical platforms, VetAgro Sup is driving the development of new technologies in the institution's fields of expertise.

The Lempdes agronomy campus, on the periphery of Clermont-Ferrand, is dedicated to training agronomy engineers.

Covering an area of more than 11,000 m<sup>2</sup>, the campus features a collaborative self-catering facility and a student residence.

8 student associations and numerous clubs bring the campus to life, and it also boasts a conservatory orchard and several outdoor patios and gardens.

# Industry Members Club



EAAP started in 2023 a new initiative to create closer connections between European livestock industries and the animal science network. Therefore, the “EAAP Industry Club” was shaped with the specific aim of bringing together the important industries of the livestock sector with our European Federation of Animal Sciences. All companies dealing with animal production (nutrition, genetic, applied technologies, etc.) are invited to join the “EAAP Industry Club” because industries will have opportunity to increase their visibility, to be actively involved in European animal science activities, and to receive news and services necessary to industries. In addition, through the Club, industries will enlarge their scientific network and will receive specific discounts on sponsoring activities.

The Industries that already joined the “EAAP Industry Club” are:



## The Club gives:

Visibility • Company name and logo at EAAP website and all relevant documents • Slides with name and logo at Official Events • Priority links with EAAP Socials • Invite, through EAAP dissemination tools and socials, people to events organized by your company • Information disseminated through a brand new Industry Newsletter • Networking • Joining the Study Commissions and Working Groups • Suggest topics to be considered for Annual Meetings Scientific Sessions • Organize Professional Panel through the EAAP platforms • Economic Benefits • One free registration to each Annual Meeting and at every meeting organized by EAAP • Five individual memberships at no cost • Many possible discounts (-30%) to increase company visibility through: EAAP Newsletter, EAAP website, EAAP Annual Meetings and workshops • Support young scientist by sponsoring scholarships named by the company • Co-Organize and sponsor webinars

Make yourself more visible within the livestock industry via the animal science network!

For more information please contact [eaap@eaap.org](mailto:eaap@eaap.org)



# YoungEAAP



## What is the YoungEAAP?

YoungEAAP is a group of young scientists organized under the EAAP umbrella. It aims to create a platform where scientists during their early career get the opportunity to meet and share their experiences, expectations and aspirations. This is done through activities at the Annual EAAP Meetings and social media. The large constituency and diversity of the EAAP member countries, commissions and delegates create a very important platform to stay up-to-date, close the gap between our training and the future employer expectations, while fine-tuning our skills and providing young scientists applied and industry-relevant research ideas.

## Committee Members at a glance

- Ines Adriaens (President)
- Jana Obsteter (Vice President)
- Giulia Gislón (Secretary)

YoungEAAP promotes Young and Early Career Scientists to:

- Stay up-to-date (i.e. EAAP activities, social media);
- Close the gap between our training and future employer expectations;
- Fine-tune our skills through EAAP meetings, expand the special young scientists' sessions, and/ or start online webinars/training with industry and academic leaders;
- Meet to network and share our graduate school or early employment experiences;
- Develop research ideas, projects and proposals.

## Who can be a Member of YoungEAAP?

All individual members of EAAP can join the YoungEAAP if they meet one of the following criteria: Researchers **under 38 years of age** OR within **10 years after PhD-graduation**.

Just request your membership form ([ines.adriaens@kuleuven.be](mailto:ines.adriaens@kuleuven.be)) and become member of this network!!!

# The Auvergne-Rhône-Alpes region

The Auvergne-Rhône-Alpes region covers an area of 69 711 km<sup>2</sup> in the central-east part of the south of France. It is characterised by diverse natural resources and topographies (including high mountains to the east and volcanos to the west), climates, cultures, folklore, architecture, and languages. The region accounts for 11.9% of the French economic output. It hosts 48500 farms (with an average of 59 ha), including 51.9% of them for the production of animal products and 10.4% with both plant and animal production. About 20% and 13% of the farms concern the production of beef and milk respectively, and 11% are with sheep, goats or other herbivores. This places the Auvergne-Rhône-Alpes region 3rd in place amongst the other French regions in agriculture. The region had 13% of organic farms, 30% with other labels or quality signs and 30% with short supply chains.



# About Clermont-Ferrand



Clermont-Ferrand, capital of the Auvergne region, is a university town in central France, located at the foot of the Limagne fault and the Puys chain, a natural site listed as a UNESCO World Heritage Site since 2 July 2018. Clermont-Ferrand's Gothic cathedral, built from lava stone, and the Romanesque basilica of Notre-Dame du Port, with its remarkable mosaics, are just a stone's throw from the fountains and statues of the huge Place de Jaude.

France's leading university and research centre, with over 40,000 students – a quarter of the municipal population (150,000 inhabitants) – and 6,000 researchers, it is the first city in France to join UNESCO's learning city network. Clermont-Ferrand has a long industrial tradition and is home to Michelin, one of the world's two largest tyre manufacturers. It is also well positioned in the pharmaceutical, agri-food and aeronautical industries. It is home to three competitiveness clusters.

The Clermont-Ferrand International Short Film Festival is the second largest film festival in France after the Cannes Festival. Clermont-Ferrand is home to a number of famous people, including Vercingetorix, king of the Celtic Arvernes, Pope Urban II, who led the first crusade in 1095, and Blaise Pascal, the French mathematician, physicist, inventor, philosopher, moralist and theologian.

We welcome you and wish you an exceptional stay in Clermont-Ferrand!

# Useful information

## Official language

The official language of the EAAP annual meeting is English. No translation will be provided.

## Passport and visa

France is part of the European Union, which means that all other EU country nationals can travel to France without a visa. Additionally, there is also a list of non-EU countries who also enjoy visa-free travel to France, provided that their stay is less than 90 days, including the US, Australia, New Zealand etc. More details on short-stay visa can be found here:

<https://www.diplomatie.gouv.fr/fr/venir-en-france/demander-un-visa-pour-la-france/le-traitement-des-demandes-de-visa/article/le-portail-france-visas>

## Official invitation and certification

An official letter will be sent upon request to assist in meeting administrative requirements. However, this invitation implies no obligation, financial or otherwise, by the EAAP organising committee. A certificate of attendance will be available for all the registered participants.

## Liability and insurance

The organizing committee cannot accept liability for personal accidents or loss of/or damage to private property of participants and accompanying persons. Participants are advised to acquire their own personal travel and health insurance for their trip.

## Health and emergency

In case of emergency, landline or mobile phone users should call 112, the European emergency number to be sent for the relevant department.

## Currency

The currency in France is the Euro (€).

## Local time zone

The local time in France is GMT +1 hour.

## Climate

The climate in France is temperate. The climate in Clermont-Ferrand in June is favorable. The climate here in June is warm. The high seasonal average is 23°. In the morning, the thermometer dips to 15°. This means that the average temperature in Clermont-Ferrand in June is 19°.

## Electricity

In France, the most common types of plug are C, E and F. The CEE 7/16 (2.5 A - 250 V) “europlug” socket is used for connecting low-power appliances. This model fits into a type C socket with two round holes, without grounding. France operates on a 230V supply voltage and 50Hz.

## Transport to and from the meeting venue

**Free shuttle** bus service will be offered to regional meeting delegates to get to the VetAgro Sup agronomy campus, east of Clermont-Ferrand, departure at 7:45 from the bus station.

The Clermont-Ferrand bus station is located at Place des Salins, 9 avenue de la liberation 63000 Clermont-Ferrand.

The Clermont-Ferrand bus station is accessible by streetcar from the “Maison de la culture” stop on streetcar line A.

Clermont-Ferrand bus station is accessible by bus lines 5,8,9,10,13,B stop “Salins Pasteur” and line 4 stop “Salins Coubertin”.

Departure at 8am from the Clermont-Ferrand SNCF station parking lot.

The SNCF station parking lot is located at 17 Rue Pierre Sémard, 63100 Clermont-Ferrand - The station is served by lines B, 3, 4, 35 and 36.

Public transportation is also available: line 36 or 35, stop at LEMPDES MARMILHAT. Bus service every 15 to 30 minutes.

<https://www.t2c.fr/votre-trajet/votre-itineraire>

## Travel

### By plane

Clermont-Ferrand Auvergne airport is in Aulnat (8km east of Clermont-Ferrand city center). Buses and cabs take you to the city center.

### By road

Clermont-Ferrand is served by 2 main routes: North-South, with the A71 freeway from Paris and the A75 freeway from Montpellier, and East-West, with the A89 freeway from Lyon to Bordeaux.

From the north (Paris): A71

From the east (Lyon): A89

From the west (Bordeaux): A89

From the South: A75

# Information for participants

## Registration desk

The registration desk will be open in the Espace Darpoux, on the VetAgro Sup agronomy campus, from 8:30 am on Wednesday June 5.

## To authors

If authors do not wish to give permission to have the pdf presentation or poster available on the EAAP website, they must inform EAAP before June 15th (after the conference) by sending an email to [eleonora@eaap.org](mailto:eleonora@eaap.org). After this date, EAAP will assume permission and include your presentation/poster on the EAAP website.

## Posters

Physical boards and/or tripods will be available in the salle Henri Pourrat - Espace Darpoux for poster presentations (portrait format, A1 size).

## Theatre presentation upload desk

Besides the registration desk, there will be an upload desk for the theater presentations, where the support team will assist all participants.

All presenting authors are requested to upload their presentations and mount their posters on Wednesday, 5th of June, from 9:00 – 12:00.

Please bring your presentation on a portable USB drive.

Please prepare your poster in portrait format, A1 size.

Meeting rooms are equipped with MS Windows computers. Therefore PowerPoint presentations (\*.ppt; pptx) are preferred.

When preparing a presentation, according to the time schedule, consider approx. 3 min. for questions/ discussion at the end of each presentation.

## Conference website

The EAAP 2024 Regional Meeting website is available and optimized for smartphone navigation. It contains comprehensive information about the conference and venue program.

Conference website: <https://mlf2024.eaap.org/>

### Session 1.

### Adaptation of mountain livestock farming to climate change

Room: Amphi Darpoux  
Chair: Cozzi / Martin / Blanc  
Session Type: Theme session

#### Theatre Session 1

- 10:00 CAP and livestock: challenges and perspectives  
*invited* W. Burtscher - Director General, DG AGRI, European Commission
- 10:45 Ecological issues of mountain farming  
*invited* D. McCracken - Head of Department of Integrated Land Management, SRUC
- 11:30 Empirical evidence of trade-offs between strategies for climate change mitigation and adaptation in French mountain dairy cattle farming systems  
MA. Magne, MO. Nozieres-Petit
- 11:45 What strategies should be adopted, for water management, to ensure the sustainability of mountain cheese production in the face of climate change?  
M. Cremilleux, C. Berthelot, Y. Bitkova, H. Brives
- 12:00 A framework to study the resilience of dairy herds to climate change from on-farm data  
H. Lisse, C. Chassaing, L. Barreto-Mendes, F. Blanc
- 12:15 Does biodiverse mountain grassland reduce enteric methane emissions?  
M. Bouchon, M. Coppa, E. Rispal, Y. Rochette, B. Martin, C. Martin
- 12:30 Effect of slaughter age on environmental efficiency on beef cattle in marginal area including soil carbon sequestration: a case of study in Italian Alpine area  
T. Zanon, E. Sabia, M. Gauly, A. Braghieri, C. Pacelli

#### Poster Session

- 01.08 Exploring the role of traditional management practices to cope with climate change in mountain areas  
E. Muñoz-Ulecia, D. Martín-Collado, A. Bernués, A. Tenza-Peral, I. Casasús, D. Villalba
- 01.09 Plant-based methane inhibitors for cows in mountain grassland regions: land requirements to realize effects  
M. T. Dittmann, F. Leiber, B. Tonn
- 01.10 What future for Comté PDO systems ? An exploratory study of a multi-actor, multi-stakeholder territory  
A. Regache, M. Elvira, A. Sarlat, C. Rambaud, L. Ribeiro, E. Corre, M. Charpentier, B. Mahjoubi, I. Akli, L. Cousin, S. Davenel, B. Rage, A. Vedrine, A. Michaud
- 02.06 Dog predation on flocks of sheep in wolf-free areas: a synthesis based on surveys realised in France  
G. Brunschwig, A. Pinot, E. Brosse-Genevet, L. Garde
- 02.07 Livestock management systems affecting the likelihood of predations by large carnivores in the North-Eastern Italian Alps  
P. Sartor, M. Franchini, A. Zuliani, S. Bovolenta, D. Pasut, S. Filacorda, G. Cozzi
- 03.09 Beef-on-dairy crossbreeds' evaluation for high-quality meat production in Switzerland's mountains.  
P. Silacci, I. Morel, C. Joye, S. Dubois, S. Lerch
- 03.10 Quality of Parmigiano Reggiano milk, the role of grass in mountain farms  
L. Deiana, D. Bochicchio, A. Garavaldi, D. Valcavi
- 03.11 Impact of grass-based diet on vitamin B content in cow milk  
L. Auzance, J. Ronholm, B. Martin, C. Delbes, I. Verdier-Metz, M. Bouchon, MC. Michalski, M. Duplessis, M. Popova, B. Graulet
- 03.12 QUALITY OF MILK PRODUCED BY ANIMALS GRAZING ON MOUNTAIN PASTURE IN THE NORTH OF ITALY  
M. Povoletto, L. Monti, V. Pelizzola, D. Benedini, G. Cabassi
- 03.13 Deciphering microbial communities of three Savoyard raw milk cheeses along ripening and regarding the cheese process  
C. Lecaude, N. Orioux, S. Chuzeville, A. Bertry, E. Coissac, A. Bonin, N. Colomb-Boeckler, B. Mathieu, J. Vindret, C. Pignol, S. Romand, C.

*Petite, P. Taberlet, C. Charles, N. Bel, A. Hauwuy*

- 03.14 What is the effect of switching from a corn-based to a grass-based forage system on the contribution of dairy products to the human nutritional requirements?  
*L. Rey-Cadilhac, B. Martin*
- 03.15 Relationship between milk intrinsic quality and the environmental impact of dairy farms  
*M. Lepoivre, C. Laurent, B. Martin, PM. Grollemund, R. Botreau, F. Monsallier, S. Hulin, P. Gerber, C. Chassard, M. Coppa*
- 03.16 Transfer of dioxins and dioxin-like PCBs in beef meat from Swiss mountainous area: a model-based risk assessment  
*A. Tiercin, Z. Sallembien, A. Vaille, S. Lerch*
- 03.17 Modelling quality traits of Asiago cheese from mountain or lowland feeding systems  
*S. Segato, G. Riuzzi, B. Contiero, F. Gottardo, G. Cozzi*
- 03.18 Feed supplementation to dairy goats' diet in a mountain grazing system: the role of anise (*Pimpinella anisum*) to improve antioxidant activity in cheese  
*P. Iommelli, N. Musco, V. Tufarelli, L. Pietro, F. Infascelli, R. Tudisco*
- 04.06 Population monitoring for milk quality, coagulation parameters and metabolic status as well as economic revenues from milk sales of six local dual-purpose cattle breeds in Italian Alpine Area  
*T. Zanon, M. Gauly*
- 04.07 Characterization of meat and meat products from the Italian Alpine breed Pecora Ciuta  
*A. Lopez, V. M. Moretti, B. Marcolli, M. Greco, F. Bellagamba*
- 04.08 Characterization of the milk of two local breeds of cows: the Bretonne Pie Noir and Froment du Léon  
*C. Hurtaud, R. Chaabouni, B. Graulet*
- 04.09 Changes in metabolic and inflammation plasma biomarkers during the transition period in Ottonese cows reared on Apennine mountain  
*F. Piccioli-Cappelli, L. Cattaneo, M. Mezzetti, A. Minuti, E. Trevisi*
- 04.10 Exploring the behavioral genetics of cattle grazing for the sustainable use of the Swiss Alps  
*C. A. Moreno Garcia, M. K. Schneider, C. M. Pauler, M. Svensk, H. Zhou, J. Hickford*
- 05.06 Timing of parturition in (semi) domestic reindeer herds and their reproductive success along an environmental gradient - insights from measures of plant phenology  
*Ø. Holand, B.J. Bårdsen*
- 05.07 Transhumance and shepherd training: Knowledge transfer to maintain alpine pastoralism  
*D. Mettler*
- 06.05 Regulating unwanted plants on mountain pastures by good pasture management  
*C. M. Pauler*
- 06.06 Forage qualitative investigation of mountain pastures in northern Italy  
*C. Pornaro, P. Piergiovanni, R. Cassini, S. Macolino, G. Marchesini*
- 07.08 Exploring Perceptions and Demand for Sustainable Alpine Wool: A Survey of Consumers and Shepherds in the Lanzo Valley (N-W Italian Alps)  
*V. M. Merlino, C. Costamagna, L. M. Battaglini, P. Cornale*
- 07.09 The school of pastoralism in Italy (SNAP), outcomes of the initial experiences  
*L. Battaglini, F. Di Meglio*
- 07.10 Animal-based welfare assessment in alpine dairy farms  
*G. Cozzi, I. Lora, F. Gottardo*
- 07.11 IMPORTANCE OF THE KATUNS, AS PARTICULAR CHARACTERISTIC OF MONTENEGRO, FOR ITS ECONOMY AND SOCIETY  
*M. Markovic, D. Radonjić, B. Markovic, O. Kopitović, M. Đokić*
- 07.12 Phenolic compounds and forage quality affect methane production potential from Swiss alpine summer pastures  
*B. Tonn, M. Schneider, C. Pauler, A. Steiner, M. Dittmann, F. Leiber*
- 07.13 Facing the change: assessing dairy farmers' responses to a potential tie-stall ban in the context of Northern Italy  
*F. Rigo, L. Magrin, K. C. Baydas, O. Martinic, F. Gottardo*
- 07.14 How can sustainability of Norwegian sheep farming be improved?  
*L. Grøva, R. Bergslid, N. Elshani, O. Flaten, M. Koesling, H. Steinshamm*
- 08.08 Characterisation of cattle habitat selection in mountain areas with GNSS tracking collars  
*M. J. García-García, F. Maroto-Molina, E. Padrón-Tejera, M. Palacio*
- 08.09 BOVIEX 4.0: Technological Improvement in Extensive Cattle Production in Spain.  
*C. Marcos Valtierra, J. M. Gallardo Bolaños*



## Session 2.

## Interaction between farming systems and wildlife

Room: Amphi Darpoux  
Chair: Holand / Brunschwig  
Session Type: Theme session

### Theatre Session 2

- 15:00 The coexistence between livestock and large carnivores: costs and benefits  
*M. Franchini, M. Corazzin, S. Bovolenta*
- 15:30 Characteristics of wolf predation on cattle in high-value-added breeding territories  
*M. Virapin, S. Jabouille, E. Sturaro, G. Brunschwig*
- 15:45 CDPNews: Knockledge Transfer und exchange to support coexistence between carnivores and agriculture  
*D. Mettler*
- 16:00 Cross-transmission of resistant nematodes between wild ibex and transhumant sheep in French Alps  
*G. Bourgoin, C. Beaumelle, C. Toigo, R. Papet, S. Benabed, M. Beurier, L. Bordes, A. Brignone, N. Curt-Grand-Gaudin, M. Garel, J. Ginot, P. Jacquiet, C. Christian Miquel, MT. Poirel, A. Serafino, E. Vannard, G. Yannic*
- 16:15 Dandelion density: an index to susceptibility to water vole ?  
*M. Buronfosse, H. Lisse, G. Couval, A. Levret, F. Gillet, V. Lattard, A. Pinot*

16:30 **Coffee break**

## Session 3.

## Product quality and mountain farming

Room: Amphi Darpoux  
Chair: Coppa / Silacci  
Session Type: Theme session

### Theatre Session 3

- 17:00 How to assess animal products quality of mountain livestock farming systems?  
*B. Martin, E. Bailly-Caumette, M. Coppa*
- 17:30 Exploring the heights: Impact of altitude on dairy milk composition  
*T. Zanon, M. Gaulty, M. Alrhoun, L. Holighaus, K. Katzenberger*
- 17:45 Functionality of stable isotopes for mountain areas milk traceability  
*S. Segato, S. Currò, M. Perini, D. Bertoldi, S. Balzan, S. Khazzar, E. Novelli, M. Cardin*
- 18:00 Effects of grassland biodiversity on digestive process, milk composition, and microbiota of dairy cows  
*M. Musati, M. Coppa, C. Delbes, I. Verdier-Metz, M. Popova, V. Niderkorn, M. Bouchon, Y. Farizon, F. Enjalbert, M. Renna, C. Lussiana, A. Nataello, B. Martin, A. Ferlay*
- 18:15 A new look at the microbial diversity of indigenous ferments in Beaufort technology and their influence on the organoleptic qualities of cheeses.  
*B. Polturat, C. Lecaude, V. Flammier, N. Bel, S. Chuzeville, A. Bertry*
- 18:30 Effects of production system on fatty acids and proteomics profile of PDO beef from Arouquesa cattle mountain breed  
*L. Sacarrão-Birrento, S. Alves, S. Silva, C. Venâncio, A. Almeida*
- 18:45 Searching for genotypes adapted to the extensive fattening of beef-on-dairy crosses on pasture  
*R. Eppenstein, F. Leiber*
- 19:00 Ecosystem services of sheep farming in European mountains  
*M. Oetiker José, M. Schneider, B. Reidy, C. Pauler*

## Session 4.

## Local breeds

Room: Amphi Darpoux  
Chair: Pauler / Zanon  
Session Type: Theme session

### Theatre Session 4

- 8:30 Keynote: The relevance and potential of local breeds  
*T. Zanon*
- 9:00 Identity of cows and farmers who milk local breeds in Massif Central.  
*A. Petit, M. Remise, A. Kauffmann, O. Jaffrennou, P. Gerber, P. Cayre, B. Martin*
- 9:15 Using GPS collars to characterize breed variability in cattle grazing behaviour  
*E. Padrón-Tejera, F. Maroto-Molina, M. J. García-García, M. Palacio*
- 9:30 Daily and seasonal movement patterns of Sarda cows  
*M. Acciaro, M. K. Schneider, M. Decandia, V. Giovanetti, C. M. Pauler*
- 9:45 Ecosystem Services provided by Podolian system in marginal areas of Southern Italy: a case study  
*E. Sabia, A. Braghieri, C. Pacelli, A. Di Trana, R. Paolino, A. Coppola*

10:00 **Coffee break**

## Session 5. Transhumance in European mountains – challenges and perspective

Room: Amphi Darpoux  
Chair: Holand / Zanon  
Session Type: Theme session

### Theatre Session 5

- 10:30 A comprehensive view on transhumance in Europe, with challenges and opportunities  
*P. Manzano*
- 11:00 Reindeer herders – the pastoralists of the north - challenges in a changing environment - a Fennoscandian perspective  
*Ø. Holand*
- 11:15 Prediction of reindeer herd productivity using weather-related variables and Normalized Difference Vegetation Index  
*L. Duris, L. Rönnegård, E. Cronvall, S. Adler, P. Sandström, A. Skarin*
- 11:30 Altitude's influence on management practices and sustainability in alpine dairy farms: a case study of Aosta Valley, NW Italy  
*P. Cornale, D. Charles, A. Mimosi*
- 11:45 Pastoralism in France: what research agenda in view of the international year of rangelands and pastoralists (2026)?  
*MO. Nozières-Petit, B. Hubert, C. Aubron, F. Bray, G. Brunschwig, P. Carrère, E. Crouzat, C. Deleglise, JP. Dubeuf, L. Garçon, M. Gisclard, N. Gross, D. Hazard, R. Jarry, M. Jouven, H. Larroque, J. Lasseur, S. Magnani, MA. Magne, M. Meuret, CH. Moulin, M. Moraine, H. Rapey, E. Richard-Frève, B. Trabucco, F. Stark, A. Stokes, P. Veyssset, B. Dedieu*

## Session 6.

## Forage systems for mountain livestock

Room: Amphi Darpoux  
Chair: Schneider / Morgan-Davies  
Session Type: Theme session

### Theatre Session 6

- 12:00 Mountain forage production for sustainable ruminant systems in a context of climate change  
*R. Baumont, G. Maxin*
- 12:30 Hay rich in water-soluble carbohydrates increases performance of dairy cows, irrespective of starch degradability supplementation  
*M. Coppa, D. Pomiès, B. Martin, M. Bouchon, JP. Renaud, M. Aoun, B. Deroche, R. Baumont*
- 12:45 Unlocking the potential of Highland cattle: woody plant consumption and feeding preferences in encroached pastures in the Alps  
*G. Nota, M. Lonati, G. Marengo, M. Pittarello, M. Probo, S. Ravetto Enri, M. Svensk, G. Lombardi*
- 13:00 Assessing the agroecological management of grassland-based farming systems in mountain area through indicators  
*E. Benedetti del Rio, A. Michaud, E. Sturaro*

# Friday, 7 June

## Session 7.

## Sustainability and ecosystem services of mountain farming

Room: Amphi Darpoux  
Chair: Cozzi / Gauly  
Session Type: Theme session

### Theatre Session 7

- 8:30 Socioeconomic and environmental sustainability of mountain farming  
*E. Muñoz-Ulecia, A. Bernués, D. Martín-Collado*
- 9:00 Mountain sheep farming: a provider of environmental services  
*S. Throude, C. De Boissieu, B. Nougadère, C. Vionnet, C. Rolland, B. Rouillé, JB. Dollé*
- 9:15 Effects of the farm type on the environmental impact, animal welfare and plant biodiversity of dairy systems in the Eastern Alps  
*M. Berton, S. Bovolenta, M. Corazzin, C. Pornaro, L. Gallo, M. Ramanzin, E. Sturaro*
- 9:30 Ecosystem services and life cycle assessment frameworks provide opposite evaluations of livestock farming systems  
*F. Joly, P. Roche, J. Dewulf, H. van der Werf, L. Boone*
- 9:45 Carbon stocks and milk yields in silvopastoral systems in the Andean Amazon region of Colombia  
*R. Riascos, E. Castro, D. Fanguero, A. Almeida*
- 10:00 Coupled evolution of land cover and extensive livestock in the Spanish Pyrenees  
*A. Prat-Benhamou, M. Romero, J. D. Anadón, L. De la Cruz-Amo, E. Velado-Alonso, D. Fernández-Nogueira, A. Bernués, D. Martín-Collado*
- 10:15 Variation of animal welfare in dairy and fattening beef European farms between lowland and mountain conditions  
*E. Bailly-Caumette, B. Martin, F. Leiber, I. Veissier*

10:30 **Coffee break**

Room: Amphi Darpoux

Chair: Morgan-Davies / Schneider

Session Type: Theme session

**Theatre Session 8**

- 11:00 Using sensors for mountain livestock research and management  
*M. Schneider, C. Pauler, F. Oriani, M. Probo*
- 11:30 Satellite images reveal variable growth patterns in mountain rangelands in response to annual weather variability  
*F. Oriani, H. Aasen, M. K. Schneider*
- 11:45 Implementation of virtual fencing in mountain conditions  
*C. Pauler, P. Fuchs, M. K. Schneider, P. Hervault, C. Umstätter, R. M. Bruckmaier, M. Probo*
- 12:00 MONITORING OF ANIMAL BEHAVIOUR IN ALPINE PASTURE BY DIGITAL SYSTEMS  
*G. Cabassi, D. Benedini, A. Gasparini, R. Fucella, C. Ferrè, N. Pricca, M. Povolo*
- 12:15 GPS collar data from free ranging sheep in Norway: New knowledge for farmers, authorities and reserschers  
*L. Grøva, M. Angeloff, O. Kaasa*
- 12:30 Cost-benefit analysis of digital and precision livestock farming technologies for sheep and goat farms  
*A. McLaren, L. Grova, V. Giovanetti, M. Acciaro, L. Depuille, T. W. Keady, B. McClearn, R. Klein, A. Godo, P. Piirsalu, F. Kenyon, C. Morgan-Davies*
- 12:45 Sm@rt project: Update on evaluation of innovative technologies by sheep and goat farmers  
*V. Giovanetti, M. Acciaro, A. McLaren, L. Grøva, T. Keady, B. McClearn, L. Depuille, R. Klein, A. Godo, P. Piirsalu, C. Morgan-Davies*



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