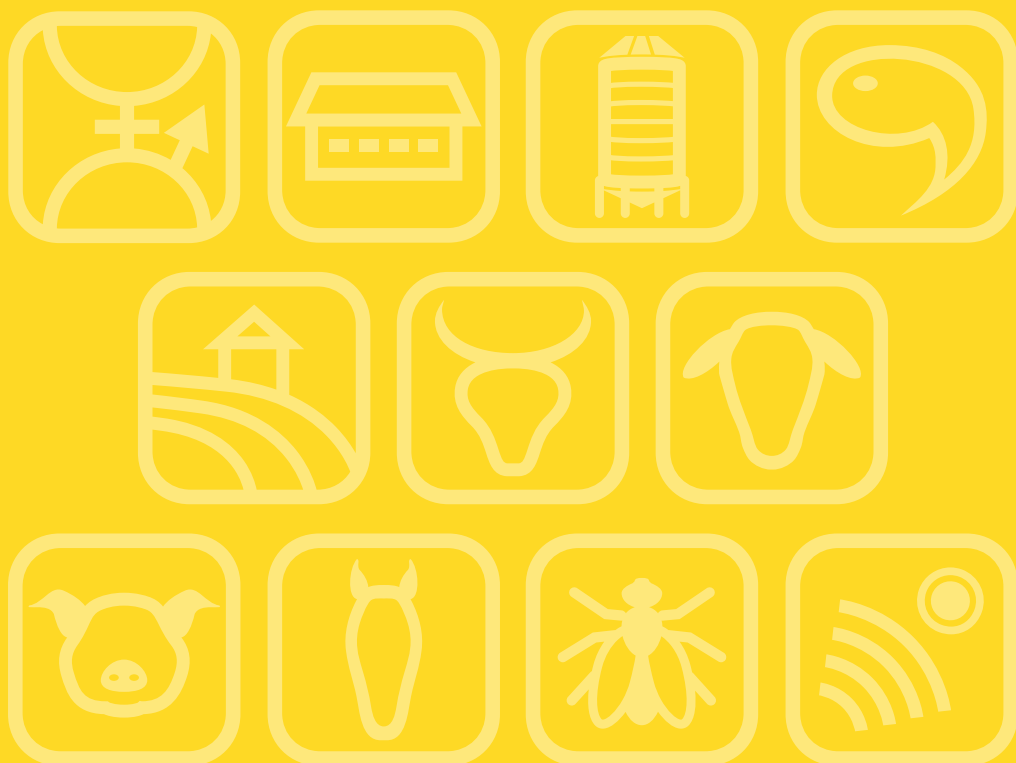


# Book of Abstracts of the 74<sup>th</sup> Annual Meeting of the European Federation of Animal Science



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**Indicators for animal health on agro-ecological dairy farms**A. Ceppatelli<sup>1</sup>, M. Crémilleux<sup>2</sup>, A. Michaud<sup>2</sup> and E. Sturaro<sup>1</sup><sup>1</sup>UNIPD, DAFNAE, Viale dell'Università 16, 35020 Legnaro, Italy, <sup>2</sup>Université Clermont Auvergne, INRAE, VetAgro Sup, UMR Herbivores, Saint-Genès-Champagnelle, 63122, France; andrea.ceppatelli@phd.unipd.it

The agroecological transition, supported by European policies and strategies, can strengthen the sustainability and resilience of farming systems in the face of climate and socio-economic change challenges. This approach considers the farm as a key part of the ecosystem in which it is embedded. Thus, the farm contributes to regulate the health of the system, which is influenced by all the actors involved: environment, farm, productions. Making the most of these interactions and improving their level of health contributes to achieving the highest possible level of sustainability. The present research aims to identify a set of indicators to assess animal health on agroecological dairy farms, adopting a Global Health approach. 18 farms located in the Auvergne-Rhone-Alpes Region (France) rearing dairy cows, goats, and sheep, were monitored over two years. Four rounds of on-site visits were conducted to carry out measurements on the animals (behaviour, nutritional and health status, milk parameters, parasitism). Two lists of animal health indicators were selected by combining statistical analysis on the collected data (Principal Component Analysis) with expert knowledge. For dairy cows, a list with 16 indicators related to animal health, housing, behaviour, feeding, production and reproduction was performed. For sheep and goats, another list with 16 indicators referring to animal health, housing, feeding and production was performed. These indicators were then evaluated on the 18 farms, to assess their level of health. On average, veterinary interventions were low (0.18/animal/year for cows and 0.07 for small ruminants), as was the incidence of lesions (8%), lameness (5%) and dirty animals (7%). However, small ruminants had higher levels of parasitism (*Eimeria* and *Strongles*) than dairy cows (*Parampistome*). Based on the results obtained, the selected indicators can contribute to the definition of agroecological practices within the farms and to the global assessment of their sustainability and resilience. Other farms located in similar territorial contexts (Italian Eastern Alps) will be involved in the network to validate the results.

**Exploring climate change adaptation strategies from the perspective of Mediterranean sheep farmers**D. Martin-Collado<sup>1</sup>, S. Lobón<sup>1</sup>, M. Joy<sup>1</sup>, I. Casasús<sup>1</sup>, A. Mohamed-Brahmi<sup>2</sup>, Y. Yagoubi<sup>2</sup>, F. Stark<sup>3</sup>, A. Lurette<sup>3</sup>, A. Abuoul Naga<sup>4</sup>, E. Salah<sup>4</sup> and A. Tenza-Peral<sup>5</sup><sup>1</sup>CITA-IA2, Avda. Montañana 930, Avda. de Montañana 930. CIF: Q5000823D, 50059, Spain, <sup>2</sup>ESAK-INRAT, Rue Hédi Karray, 1004 Menzah 1 Tunisie, Tunisia, <sup>3</sup>INRAE-UMR SELMET, Campus International de Baillarguet, 34398 Montpellier, France, <sup>4</sup>APRI, Nadi El Said, Dokki, Giza, Egypt, <sup>5</sup>UNIZAR, Calle Miguel Servet, 177, 50013 Zaragoza, Spain; dmartin@cita-aragon.es

Sheep production systems in the Mediterranean region are particularly vulnerable to the impact of climate change (CC) due to their relatively high use of local food resources. Most studies analysing farm adaptation strategies tend to follow top-down approaches without considering the feasibility of their implementation on farms. In this work, which is part of the PRIMA project Adapt-Herd, we investigated farmer perceived CC impact on-farm and their view about the best adaptation strategies to future CC scenarios in representative farming systems in Egypt, France, Spain, and Tunisia. Scenarios of CC were developed for each region based on IPCC projections. Two hundred-five farmers were surveyed face-to-face and asked to point out the actions they would take to adapt to the CC scenarios. Possible actions covered feed, grazing, reproduction and flock management, breeding, and machinery and facilities. Strategies were identified using K-modes cluster analysis. Discriminant analysis was used to determine their preferred strategies across countries, farming systems, farm features, and farmer profiles and perceptions. Five general strategies were identified: (1) farm machinery and facilities (high preference in Egypt, France, and Spain); (2) feed intensification (Egypt and Spain); (3) flock management and feed extensification (France); (4) feed optimization (Tunisia); and (5) general farm adaptation. Besides differences among countries, farmers with irrigation systems perceive the impact of feed shortage, and heat stress on farms to be lower than other farmers and tend to prefer strategies focus on machinery and facilities and feed intensification. Our results show that both farm profile and CC impact perception factors influence farmer's views on adaptation strategies.