

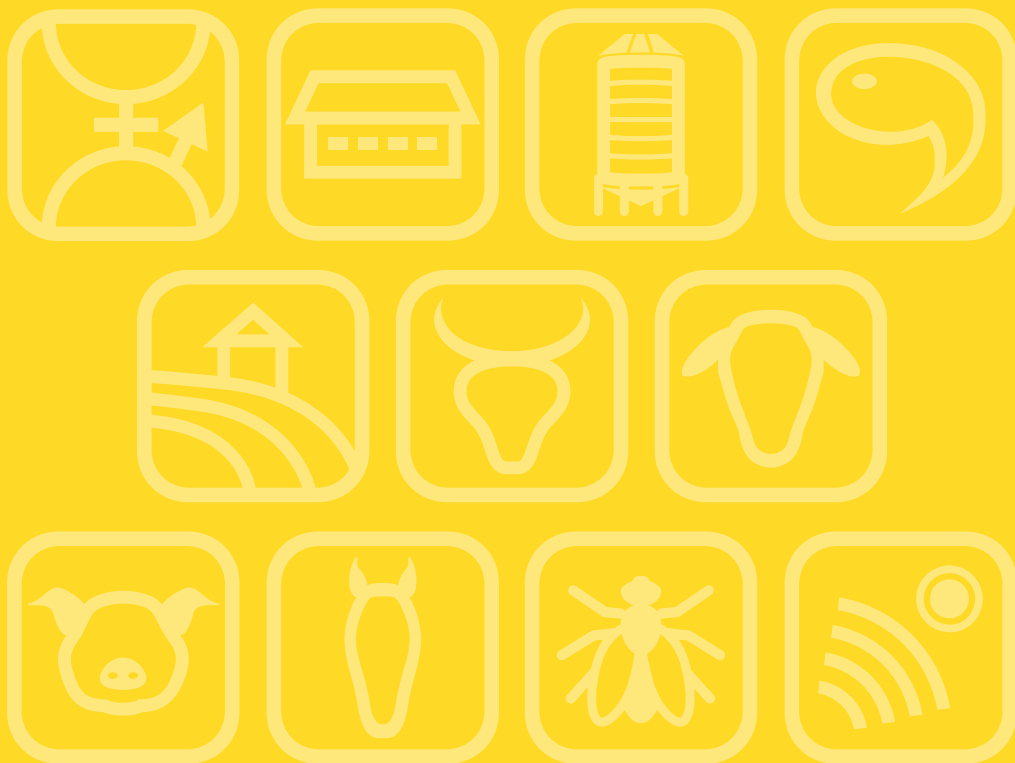
**Farmer views of best climate change adaptation strategies for sheep farming in the Mediterranean**

*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. Laurette<sup>3</sup>, A. Abuoul Naga<sup>4</sup>, E. Salah<sup>4</sup> and A. Tenza-Peral<sup>1</sup>*

*<sup>1</sup>CITA-IA2, Montañana, Zaragoza, Spain, <sup>2</sup>ESAK-INRAT, Boulifa le Kef, Ariana, Tunisia, <sup>3</sup>INRAE-UMR SELMET, L'Institut Agro, Montpellier, France, <sup>4</sup>APRI, Dokki, Cairo, Egypt; [dmartin@cita-aragon.es](mailto:dmartin@cita-aragon.es)*

Climate Change (CC) impacts on agriculture will exacerbate in the next decades by a decrease of rainfall and increase of temperatures and extreme events. Pasture-based sheep farming systems in the Mediterranean basin are particularly vulnerable as they depend on local feed resources, which are directly damaged by CC. Research has been on livestock adaptation strategies, usually follows top-down approaches not accounting for the experiential knowledge of farmers, limiting its applicability at farm level. This work aimed to analyse farmers views about CC impact and the effect of periodic events of food shortage (FS) and heat stress (HS) on animal and farm performance, to determine the usual practices deployed to overcome these periodic events and the best herd and farm management strategies to adapt to CC. Data were collected through face-to-face surveys to 228 farmers in Egypt (n=47), France (34), Spain (45) and Tunisia (101), covering representative sheep farming systems in 5 different Köppen climatic regions. CC scenarios were developed for each region based on the IPCC projections. All farmers recognize that CC is real, however, most think that it is a natural and human-induced process or even just a natural process (Egypt). Perceived risk is lower in the most extreme arid and semi-arid regions and in irrigated farms. Anyhow FS and HS are generally perceived as increasingly important problems. Farms traditionally overcome periodic FS events mainly providing animals with food stuff produced on farm and kept for shortage periods, increasing purchased feed and/or modifying grazing schedules. 90, 75 and 50% of French, Tunisian, Spanish farmers respectively reported recent farm changes to adapt to CC. Modification of grazing, lambing and sowing periods (France and Spain), breed substitutions (Tunisia), improvements in farm buildings (all) were reported. Farmers identified three potential strategies named feed maximization, feed supplementation and herd downsizing, which feasibility varies across systems, countries and climatic regions.

# Book of Abstracts of the 73<sup>rd</sup> Annual Meeting of the European Federation of Animal Science



**Book of abstracts No. 28 (2022)**

**Porto, Portugal**

**5 – 9 September, 2022**