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The future of Mediterranean Livestock Farming Systems: Opportunity and efficiency of Crops – Livestock Integration

Context

Mediterranean livestock farming systems need to adapt with multiple and complex changes in the past and present history of the zone. This project aims to assess the technical, economic and socio-ecological viability of crop-livestock systems in the Mediterranean context to help farmers, local communities, researchers and decision makers in their thinking on future planning for Mediterranean livestock and in designing priorities, rules and policies that could better deal with the socio-environmental issues linked with demographic and land pressure, increasing demand and strong international competition.

Objectives

The main objectives are: 1) identifying efficient crop-livestock systems to better utilise water, soil, crop residues, and rangeland forages (resource utilisation efficiency) and increasing production to meet the rising local demand of safe animal products (socio-economic efficiency); 2) assessing their adaptive capacities, vulnerability and flexibility faced with current stresses/changes; 3) assessing their socio-ecological co-viability and resilience with regard to demographic growth and in a historical perspective; and 4) developing future scenarios and priorities for livestock development in the Mediterranean context in order to increase their capabilities. The project strengthens collaboration and interdisciplinary between and within national teams in the Mediterranean through sharing research methods and databases.

Workplan

To achieve this, the project proposes: (i) identifying, characterising and analysing the efficiency of crop-livestock systems from pastoral and agro-pastoral zones to more intensified areas linked with resource management; (ii) assessing their adaptive capacities to change and socio-ecological sustainability linked with climatic stresses,

Coordinator:

Véronique Alary, UMR SELMET [Tropical and Mediterranean livestock systems], International Centre of Agricultural Research for Development (CIRAD), France, veronique.alary@cirad.fr

Partners:

- Institut Agronomique et Vétérinaire Hassan II (IAV Hassan II), Department of Animal Production and Biotechnology, Morocco
- APRI/ ARC, Sheep & Goats Research Unit, Egypt
- UMR SELMET [Tropical and Mediterranean livestock systems] and GREEN [Renewable resources and environment management], Institut National de la Recherche Agronomique (INRA), France
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natural capital/resources, access to technology, social and political changes (including demography, land tenure, production incentives etc.); (iii) elaborating future scenarios for Mediterranean livestock systems in a research approach based on sharing methods and data between the national teams. The current or potential sustainable intensification processes are generally complex in one agro-ecological zone and depend both on exogenous opportunities (market, incentives, available techniques, knowledge and experience etc.) and on endogenous capacities and representations (capital assets, land access, livelihoods). The main challenge and opportunity of the project is to integrate social and biological sciences within the same framework to develop an integrative and interdisciplinary analytical framework for assessing the socio-ecological resilience of crop-livestock systems in the Mediterranean.

