# CONTEXT PROFILE





FARMER Gian Mario Costaggiu Farm Bonacossu



INNOVATION Combined use of rationed, rotational and freegrazing in beef farms



MAIN DOMAIN OF THE INNOVATION Improvement of grassland management



**AGROCLIMATIC AREA** Mediterranean South



**CLIMATE** Mild winter



Sand

NOT
-----

MANAGEMENT Pasture beef



**TECHNICAL** 











FINANCE/INVESTMENT Mid

MARKET Local-rural

SOCIAL Part-time farmer



## **CONTEXT PROFILE**

Case Study: IT_14	Agroclimatic Zone								
Item (Key Innovation Elements)	Alpine	Atlantic Central	Atlantic North	Atlantic South	Boreal	Continental North	Continental South	Mediterranean North	Mediterranean South
Rotational grazing of beef cows the year around	+	+	+	++	+	+	+	+++	+++
Grazing management is different for annual crops (rotational grazing), natural pastures (ration grazing) and stubbles/dry vegetation (free grazing). In 'typical' farms, free grazing is the only management used with beef cows.	++	++	+	+	+	+	+	+++	+++
Paddocks are enclosed with wire fences and electric fences in the plain areas of the farm	+++	+++	++	++	++	++	++	+++	+++
Cow-calf line (Limousine breed- no seasonal births)	+++	++	+	+	+	+	+	+++	+++
Supplementary Feeding: Integrating animal rations with grain-legume seed mixtures according to seasonal needs, ensuring animals receive adequate nutrition and improving their weight gain.	+++	++	+	+	+	+	+	+++	+++



+++ Strong transferability ++ Slightly limited transferability ++ Very limited transferability

Generic information/not relevant



Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission . Neither the European Union nor the European Commission can be held responsible for them.

## **Implementation Gaps**

- Oversowing with adapted species and varieties, especially legumes, to improve productivity of semi-natural grasslands.
- When are grasslands oversown?
- Is there drinking water available all the time? What type of water troughs are used in the temporary grasslands?

### **Research Gaps**

- Characterization of permanent grasslands (yield and quality, persistence) and contribution to ration from shrubs and trees (quantity and quality);
- Check of animal growth and health;
- Assess soil quality and health.
- Assess the profitability of the system
- How to deal with desertification and drought

- shrubs;
- grazing;
- the farms:
- (hunting, wood...)



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission . Neither the European Union nor the European Commission can be held responsible for them.

## **Suggestions to Adapt**

• Use of virtual fences, when possible;

• Integration of ration with fodder trees or

• use of GPS collars or ear tags during free

• provide fresh water also in remote areas of

• use local adapted breeds;

• Increase the diversity of the system

• Consider raising other breeds with less health problems and easier births

## **COST-BENEFIT ANALYSIS**

#### **INVESTMENT COSTS**

Total initial investment costs at start up:

- Initial authorisation costs (e.g. sanitary, veterinary, etc.)
- Initial advisory costs
- Initial buildings and machineries
- Initial certification costs
- Initial working capital (personal qualification, marketing and promotion, etc.)

#### **ON-GOING COSTS**

On-going advisory costs	low
On-going certification costs	low
On-going buildings and machinery costs	low
On-going working capital	mid

#### **BENEFITS RELATIVE TO ORIGINAL SYSTEM**

#### • Economic

Reduction in energy consumption (electricity; fuel consumption)

Reduction in input use (fertilizers; pesticides; feed) etc.

Payback period

Product value added

Additional farm income through agroecological/agri-environmental payment schemes

• Environmental

Animal feed self-sufficiency increase

Biodiversity increase

Improved nitrogen cycling

Soil regeneration

Animal health and welfare improvement

• Social

Workload reduction

Engagement of young generation



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission . Neither the European Union nor the European Commission can be held responsible for them.

mid	
mid	
low	
low	
low	
high	

none or low
high
high
mid
not applicable/not known

mid
high
mid
mid

none or low

## Literature

## English

- Buisson, E., De Almeida, T., Durbecg, A., Arruda, A.J., Vidaller, C., Alignan, J.F., Toma, T.S., Hess, M.C., Pavon, D., Isselin-Nondedeu, F. and Jaunatre, R., 2021. Key issues in Northwestern Mediterranean dry grassland restoration. Restoration Ecology, 29, p.e13258.
- Psyllos, Georgios, Ioannis Hadjigeorgiou, Panaviotis G. Dimitrakopoulos, and Thanasis Kizos. 2022. "Grazing Land Productivity, Floral Diversity, and Management in a Semi-Arid Mediterranean Landscape" Sustainability 14, no. 8: 4623. https://doi.org/10.3390/su14084623
- https://zaguan.unizar.es/record/106265
- Christel Vidaller, Chloé Malik, Thierry Dutoit (2022) Grazing intensity gradient inherited from traditional herding still explains Mediterranean grassland characteristics despite current land-use changes. Agriculture, Ecosystems & Environment, Volume 338, 108085. https://doi.org/10.1016/j.agee.2022.108085.
- Miguel Castillo-Garcia, Concepción L. Alados, Javier Ramos, David Moret, Olivia Barrantes, Yolanda Pueyo (2022) Understanding herbivore-plant-soil feedbacks to improve grazing management on Mediterranean mountain grasslands. Agriculture, Ecosystems & Environment, Volume 327, 107833. https://doi.org/10.1016/j.agee.2021.107833.



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission . Neither the European Union nor the European Commission can be held responsible for them.