

CONTEXT PROFILE

 ROMANIA



FARMER

Hort, Augustin



INNOVATION

Drone usage for farm management in the mountain area



[Video](#)



MAIN DOMAIN OF THE INNOVATION

Workload reduction



AGROCLIMATIC AREA

Continental south



CLIMATE

Moderate rainfall



SOIL TYPE

Clay



MANAGEMENT

Pasture dairy



TECHNICAL

Easy



FINANCE/INVESTMENT

Low



MARKET

Local-rural



SOCIAL

full-time farmer

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Case Study: RO_04	Agroclimatic Zone								
Item (Key Innovation Elements)	Alpine	Atlantic Central	Atlantic North	Atlantic South	Boreal	Continental North	Continental South	Mediterranean North	Mediterranean South
Drones to inspect the animals	+	++	+	+	++	+	+	++	++
Acces to interent connection	+	++	+	+	++	+	+	++	++

+++ Strong transferability
 ++ Slightly limited transferability
 + Very limited transferability
 × Generic information/not relevant

Implementation Gaps

- The cost of the drone can be a limiting factor for many farmers
- The older farmers may not become familiar with this technology
- Type of camera and its specification should consider the needs of the farm
- Adapted for pastures free from dense woody vegetation only

Research Gaps

- Capacity to respond/identify wildlife threats; capacity to respond with lights/sounds;

Suggestions to Adapt

- The drone must be used if it is needed (several times a day, depending on the wildlife threats or other purposes).

COST-BENEFIT ANALYSIS

INVESTMENT COSTS

Total initial investment costs at start up:	low
• Initial authorisation costs (e.g. sanitary, veterinary, etc.)	low
• Initial advisory costs	low
• Initial buildings and machineries	not applicable/not known
• Initial certification costs	not applicable/not known
• Initial working capital (personal qualification, marketing and promotion, etc.)	mid

ON-GOING COSTS

On-going advisory costs	not applicable/not known
On-going certification costs	not applicable/not known
On-going buildings and machinery costs	not applicable/not known
On-going working capital	not applicable/not known

BENEFITS RELATIVE TO ORIGINAL SYSTEM

◦ Economic

Reduction in energy consumption (electricity; fuel consumption)	not applicable/not known
Reduction in input use (fertilizers; pesticides; feed) etc.	not applicable/not known
Payback period	high
Product value added	not applicable/not known
Additional farm income through agroecological/agri-environmental payment schemes	not applicable/not known

◦ Environmental

Animal feed self-sufficiency increase	not applicable/not known
Biodiversity increase	not applicable/not known
Improved nitrogen cycling	not applicable/not known
Soil regeneration	not applicable/not known
Animal health and welfare improvement	not applicable/not known

◦ Social

Workload reduction	high
Engagement of young generation	high

Literature

English

- Wijesingha, J.; Astor, T.; Schulze-Brüninghoff, D.; Wengert, M.; Wachendorf, M. Predicting Forage Quality of Grasslands Using UAV-Borne Imaging Spectroscopy. *Remote Sens.* **2020**, *12*, 126. <https://doi.org/10.3390/rs12010126>
- Wang, Z.; Ma, Y.; Zhang, Y.; Shang, J. Review of Remote Sensing Applications in Grassland Monitoring. *Remote Sens.* **2022**, *14*, 2903. <https://doi.org/10.3390/rs14122903>