

ClieNFarms Practice Abstracts

Mitigation GHG through higher efficiency by feeding sheep according to their nutritional requirements, with a low-input production system

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Feeding value tables for ruminants' feeds are freely available (e.g. <https://www.feedipedia.org>; <https://www.feedtables.com>; Burlacu et al., 2001 - in Romanian) and include data on evolution upon vegetative stages. However, in the Romanian sheep production system, most farmers do not optimise diets or monitor daily nutrients' supply, leading to over- or underfeeding relative to the animal's production potential. This results in low feeding efficiency and a higher-than-necessary carbon footprint per production unit.

The underfeeding is common, especially in late summer / fall months, when grassland quality declines and is not compensated with appropriate supplements. The problem is worsened by poor irrigation infrastructure, unimproved pastures and high incidence of droughts/heatwaves. Moreover, many farmers lack specific knowledge and access to nutritional advice.

To address this, the project developed diet typologies tailored to Romanian systems, feeds, and climate. These were promoted using farmer-friendly tools. One key method involved intuitive graphics to assess current nutrient supply versus genetic potential and required intake for different milk yields. Even partial supplementation (e.g. with cereals or protein concentrates) significantly increased yields for low-carbon-footprint farms adopting this approach.

Within a low-input system, alignment of feeding to the nutritive requirements of the sheep may lead to reductions of GHG emissions / kg of milk of more than 15-20%.



Figure 1 : “Burnt” grassland, in mid-September, in Romania.



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