

Understanding and Improving the Sustainability of Agro-ecological Farming Systems in the EU



There are rules on national level regarding nutrient management in farms, to avoid water and air pollution, while using compost comes with strong advantages for soil and plant health, as an alternative to synthetic fertilisers, thus reducing the dependence on external inputs and the associated costs; it can also present farmers with an opportunity to gain extra income from selling it as a professional product. However, in Romania the practice of composting is underdeveloped and traditionally used in the form of applying fresh/insufficiently fermented and improperly stored manure sourced from one's own farm and/or from neighbouring farms. An integrated policy package of financial and technical assistance could take this practice to a new level.

Small-scale farming in Transylvania and Maramures has historically produced a rich rural landscape with mosaic patches of semi-natural grasslands maintained by traditional grazing and scything. Our case study in the UNISECO research project pivots around the dilemma and challenge of increasing the economic competitiveness of this farming system through a range of agro-ecological practices, including composting, and market and policy incentives that would support these practices and break down existing barriers to sustainable farming.



With regard to composting, the problem we identified is a deficient policy framework to support this practice on a wide scale and in accordance with obligations imposed by legal provisions (i.e. the Nitrates Directive transposed in the national Code of Good Agricultural Practices). The proper management of compost requires initial extra costs for adequate on-farm facilities and an increased complexity in how ingredients are stored, handled and in how compost is then applied on the field.

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There is a lack of public funding and public infrastructure to support this type of management, production and usage of compost, which could even be transformed into a new business avenue for larger farms. There is also a lack of awareness/understanding and proper skills to avoid negative environmental impacts (greenhouse gas emissions and water pollution) amongst farmers, and an insufficient level of diffusion of information and training provided by national authorities with regard to the obligatory aspects of, and the correct management of compost.

AN INTEGRATED SOLUTION TO FILL THE GAPS

The solution we identified in our case study workshops, to meet the needs of farmers in their composting practice is an integrated package of new policy tools for investments and knowledge-building:

- → A dedicated funding measure (EAFRD or another source) for on-farm manure storage platforms and equipment, which can be also turned by the farms into an additional business avenue, and a dedicated funding measure for investments by local Town Halls into public composting and selling facilities;
- → A wide-scale use of a simplified fertilisation plan in small farms, and a mandatory coupling of fertilisation plans with regular soil testing and monitoring in large farms, which could be part of an IT app for nutrient management, integrating details about the farm, results of soil studies, crops used and production targets, indications on limits and requirements relevant to nutrient management;
- → Transfer of knowledge and good practice, going beyond classic trainings to stimulate peer-to-peer dissemination and the power of example (demonstration farms), through the emerging AKIS system; this system should cater to different classes of farms (from small to very large) and should also be structured at commune level, adapted to local realities and deploying multi-disciplinary expertise including on the adaptation of practices to local climatic conditions, plant health, soil health, ecosystem services.

POTENTIAL OUTCOMES

The compost promotes the growth and health of plants and roots and adds organic matter to the soil, while reducing dependence on external, synthetic fertilisers. Beyond the demonstrated benefits for soil and plants, from a farmer's perspective, this practice comes to serve a relevant and important need - the optimisation of expenses in the medium-long run, for an improved economic performance.

FURTHER INFORMATION

Case study page: https://uniseco-project.eu/case-study/romania

Small-scale farming in Transylvania. Preserving the high farmland biodiversity while improving economic viability (story map): https://tinyurl.com/26r95b7k

National platform for assistance on nutrient management: https://infonitrati.apanoastra.ro/

ABOUT UNISECO:

UNISECO is a European research project aiming to develop innovative approaches to enhance the understanding of socioeconomic and policy drivers and barriers for further development and implementation of agro-ecological practices in EU farming

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UNISECO in the EIP-Agri projects database:

https://cordis.europa.eu/project/id/773901 https://zenodo.org/communities/uniseco-h2020/

https://ec.europa.eu/eip/agriculture/en/find-connect/projects/understanding-and-improving-sustainability-agro

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