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Regenerative agriculture for soil health

How can regenerative agriculture practices help farmers restore, protect, and improve soil health and productivity?

European agricultural soils face challenges to their capacity to function as a vital living system and provide ecosystem services. These challenges include high erosion rates, high soil density levels, physical and chemical degradation, and biodiversity loss. A Focus Group of 20 experts discussed how regenerative agriculture could help farmers restore, protect, and improve their soils' health and productivity.

The key findings of the Focus Group on regenerative agriculture for soil health are:

- regenerative agriculture provides measurable benefits, offering value to both farming communities and the public
- indicators and tools are available to accurately assess soil health at the field level
- introducing grazing animals into the production system and ensuring their adequate management play a key role in maintaining and improving soil quality
- context-specific knowledge of the appropriate set of practices requires further development and dissemination
- further research into systems that combine minimal tillage with reduced or no herbicide use is needed

The members of the Focus Group on "Regenerative Agriculture for Soil Health" define regenerative agriculture as an approach driven by outcomes and guided by core principles, focusing on the restoration and enhancement of soil health. This approach also seeks to reverse biodiversity loss, restore water cycles, adapt to and mitigate climate change, and improve economic sustainability. The experts identified a range of agroecological practices that can be adapted to specific contexts to achieve these aims, including managed grazing, minimal tillage, permanent ground cover, and agroforestry.

"Soil health is one of the most important assets for not only farmers, but the whole of humanity. It must be regenerated for future generations. Using regenerative methods to improve soil health stabilises productivity for the long term and at the same time increases all other soil functions, like biodiversity, water and nutrient management, as well as carbon sequestration. Let's grow food, soil and people!"

Alfred Grand,
Expert at the EU CAP Network Focus Group
'Regenerative agriculture for soil health'

Regenerative agriculture for soil health

Ideas for Operational Group projects

The experts proposed ideas that could be advanced through Operational Group projects:

- supporting farmers in choosing the right type and management of cover crops to address specific challenges (e.g., nutrient management, soil quality, water management)
- developing no- or reduced-tillage weed control strategies with minimal or no herbicide use
- testing and inventorying practical tools to measure soil (biological) quality indicators at the farm level, allowing evaluation of the effects of specific regenerative agricultural practices
- addressing technical questions in intercropping management, such as species/genotype selection, time of sowing (simultaneous or relay), weed management, harvesting technology, and necessary equipment
- developing methods to integrate grazing animals into crop systems by supporting cooperation between farmers

Knowledge gaps and research needs

The Focus Group experts identified five key research areas that should be tailored to local contexts:

- scaling up regenerative agriculture through enhanced consumer engagement
- evaluating the practicality of soil health indicators for regenerative agriculture
- assessing the impact of regenerative agriculture on the microclimate, particularly with regard to the water cycle and cloud formation, linking vegetation, photosynthesis biomass, and climate
- identifying the best methodologies for connecting farmers with advisors, researchers and decision-makers
- conducting more research on designing cover crop-based systems suited to specific local, pedo-climatic conditions and various production systems

More information

- [Focus Group webpage](#)
- [EU CAP Network Focus Group “Regenerative agriculture for soil health” final report](#)
- [Mini Paper 1: The role of animal husbandry in regenerative agriculture and the potential of livestock grazing to restore soil and ecosystem functioning](#)
- [Mini Paper 2: Reaching hearts and minds: how education reform and more effective dissemination of knowledge can support the mainstreaming of regenerative agriculture in Europe](#)
- [Mini Paper 3: Outcomes and indicators for regenerative agriculture across Europe](#)
- [Mini Paper 4: Value creation through regenerative agriculture](#)
- [Mini Paper 5: Systemic integration of regenerative practices](#)

Inspirational ideas

- [Agricultural cooperative in Slovakia applies regenerative farming to restore soil health and productivity](#)
- [Croatian farm promotes regenerative agricultural practices](#)
- [EIP-AGRI Challenge: Regenerative farming in Denmark](#)

Feedback and questions:

Support Facility Innovation & knowledge exchange | EIP-AGRI
 Koning Albert II laan 15 - 1210 Brussels - BELGIUM
 Tel +32 2 543 72 81
innovation-knowledge@eucapnetwork.eu
<https://eu-cap-network.ec.europa.eu>

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