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RESEARCH PROJECT

GROUND2LIVE

In progress GROUND2LIVE | 31/05/2025 → 30/04/2028

Enhancing Ground Cover on Vegetable Farms: Living Labs for Resource Conservation and Economic Sustainability in Agroecological Systems



Contact our coordinator



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INFO

CONTACT

PARTNERS

Summary

NEED

Transitioning to a sustainable diet prioritizing vegetables over meat is vital for human health and environmental preservation (Willett et al., 2019). This shift requires boosting vegetable production and consumption. However, vegetable farming faces challenges from climate change, including droughts, heatwaves, extreme weather, and biodiversity loss. Intensive cultivation often leads to soil erosion, exacerbated by bare soil between rows. Additionally, nutrient-rich residues can cause winter nutrient leaching after harvest (Congreves & van Eerd, 2015). New management practices are urgently needed to **help farms adapt, conserve biodiversity, and ensure productivity and economic sustainability.**

EXISTING SOLUTIONS: **Cover crops** (CC) offer promising solutions to **enhance soil health and nutrient cycling**, leading to reduced nutrient losses and decreased reliance on external inputs. They contribute to **increased plant, root, insect, and microbial diversity**, crucial for resilient agroecosystems in the face of climate change. However, integrating CCs into vegetable rotations poses **challenges**. In colder regions, time is limited for their establishment after late harvests, while in warmer regions water scarcity hinders CC adoption. Thus, competition with the main crop for water, nutrients, and light in space (intercropping) and time (prior to the main crop) hampers their effectiveness. While various strategies to mitigate competition, such as utilizing specific species combinations and adjusting sowing times and establishment methods, have been explored in scientific contexts, their application by farmers remains limited and fragmented.

AIM

GROUND2LIVE adopts a **living lab (LL) approach** engaging key stakeholders (conventional and organic vegetable farmers, advisors, and scientists) in a collaborative effort to address real-world challenges and explore effective CC management techniques to create **sustainable and climate resilient vegetable production systems** and **improve crop quality**.

NOVELTY

Through this **multi-actor approach**, we seek to **enhance the adoption and success of agroecological (AE) practices** aimed at improving soil quality, optimizing nutrient utilization, and enhancing product nutritional value in intensive vegetable production systems. These AE practices include solutions developed in LLs like integrating ground cover into vegetable crop rotations through under-sowing CCs or intercropping, as well as implementing non-inversion tillage methods to facilitate rapid CC succession. By conducting experiments across a diverse range of soil and climatic conditions, our project will establish LLs in seven European countries, thereby contributing to the transformation of agriculture.



Clover undersown in aubergine. Source: Praxisforschungsnetzwerk Hessen

EXPECTED OUTCOMES

By utilizing the LL approach, we aim for **20% adoption of proposed practices** by project end, **potentially rising to 25% within 5 years post-project**.

IMPACT

Widespread adoption of AE practices by European vegetable farmers will yield significant **improvements in both environmental and economic sustainability**. This adoption will contribute to the creation of climate-resilient agricultural production systems, thus playing a crucial role in **transforming agriculture towards a more sustainable future**.

TEAM

Scientists and farmers from **seven European countries** will enhance results across diverse soil and climate conditions, spanning disciplines of horticulture, biology, food quality, and economics for a systemic investigation of AE practices.



Group picture of the GROUND2LIVE team during the Kick-off meeting in September – October 2025. Source: Morten Möller (2025)

Socials



LinkedIn: [Ground2Live: Posts | LinkedIn](#)

Press release: [Kick-off meeting 30 September - 1 October 2025](#)



Top image: Insect. Source: [Anna Evans](#) on [Unsplash](#)



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