The AI4SoilHealth project has received funding from the European Union’s Horizon Europe research and innovation programme under grant agreement No. 101086179.
TOPICS

This conference focuses on the urgent need for common soil health indicators, technology, and standards. This event aims to connect EU Agencies and Programs, researchers, farmer associations, technology leaders, and business intelligence/entrepreneurs to develop tools, protocols, standards, and datasets for measuring, monitoring, and increasing soil health across the European continent. Please note that this is the first version of the programme, and the agenda will be updated in the next weeks.

Specific topics of interest include:

- Soil health indicators
- Pan-EU soil health assessment
- In-situ measurement of soil health
- Soil organic carbon
- Soil-climate-agriculture
- Technology demonstrations
- Soil biology
- Earth Observation data for monitoring soil health
- Soil spectroscopy
- eDNA and similar topics

POSTER SESSIONS

Explore the latest advancements in soil health at our poster session. Featuring a diverse range of topics, this session showcases research on soil health indicators, monitoring techniques, and innovative technologies. From Earth observation to soil spectroscopy and AI, discover how cutting-edge approaches are being used to assess and improve soil health across Europe. Engage with researchers and learn about projects focused on everything from carbon sequestration to soil biodiversity and more.

DISCUSSION PANELS

The Soil Health Now! Conference will feature three expert discussion panels focusing on key challenges and opportunities in the field of soil health. These interactive sessions will bring together diverse perspectives to foster dialogue and collaboration:

- Day 1 - The Soil Revolution: How Earth Observation, Spectroscopy, and AI are Changing Soil Use Forever
- Day 2 - Europe’s Innovation Paradox: How Can We Turn Soil Health Research into Thriving Businesses?
- Day 3 - The Next Generation of Soil Tech: Affordable, Accessible, and Farmer-Focused

Moderators will guide the conversation, encourage audience participation, and help synthesize key takeaways from each panel.
## Day 1 - April 8, Tuesday

### SOIL HEALTH NOW!

8 - 10 of April, 2025
Wageningen, The Netherlands

| Time      | HUGOTECH                                                                 | EXPERT ROOM 7                                                                 | EXPERT ROOM 11                                                                 |
|-----------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 08:00 - 09:00 | Registrations                                                             | Welcome Plenary (HUGOTech)                                                    |                                                                                   |
| 09:00 - 09:30 |                                                                                       |                                                                               |                                                                                   |
| 09:30 - 10:00 | **Keynote:** To be Confirmed by Panos Panagiotopoulos                     |                                                                               |                                                                                   |
| 10:00 - 10:30 | **Keynote:** To be Confirmed by Madlene Nibusbaum                          |                                                                               |                                                                                   |
| 10:30 - 11:00 | **Keynote:** "Monitoring, reporting and verification of soil health - what can we learn from the soil carbon experience" by Pete Smith (Online) |                                                                               |                                                                                   |
| 11:00 - 11:30 |                                                                                       | Coffee Break (Break Area, 1st floor)                                          |                                                                                   |
| 11:30 - 12:00 | **Keynote:** To be Confirmed by Tobias Bendel                             |                                                                               |                                                                                   |
| 12:00 - 12:30 | **Discussion Panel:** The Soil Revolution: How Earth Observation, Spectroscopy, and AI are Changing Soil Use Forever |                                                                               |                                                                                   |
| 13:30 - 14:00 |                                                                                       | Lunch (W-Invite, Ground floor)                                                |                                                                                   |
| 14:00 - 14:15 | **Oral Talk:** "Advancing circular agriculture: The Waste4Soil Project for sustainable fertilizer development from food processing residues" by Vera Proskynopoulou |                                                                                   |                                                                                   |
| 14:00 - 14:30 | **Oral Talk:** "Using evidence chains to predict nature’s contributions to people (IPCC) under conventional and organic farming systems across Europe" by Els DIeht   |                                                                                   |                                                                                   |
| 14:30 - 14:45 | **Oral Talk:** Developing Robust MRV Systems for Carbon Farming: Insights from the MARVIC and Credible Projects by H. Xu |                                                                                   |                                                                                   |
| 14:45 - 15:00 | **Oral Talk:** "Spapotential prediction of soil organic carbon density for Europe (2000–2022) in 3D+T and its uncertainty" by Xiaoyang Tian | **Workshop:** "Soil Health-governance: tools and methods to enhance soil literacy and facilitate the decision-making processes" by Anna Laura Vannuccini |                                                                                   |
| 15:00 - 15:15 | **Oral Talk:** "Mapping Soil Issues in Southwest Europe for Sustainable Land Management Solutions" by Ana Romero Freire | **Oral Talk:** "Expanding access to soil data: SoilHive strategy to promote global collaboration" by Ester Miglio | **Oral Talk:** "The quality paradigm and selecting soil indicators" by David Robinson |
| 15:15 - 15:30 | **Oral Talk:** "Pan-European mapping of ponding time as soil health indicator for absence of compaction and structure formation" by Peter Lehmann, Annette Wania | **Oral Talk:** "Probability-based stratified sampling for both mapping and estimating the population parameters of the soil health indicators at field scale" by Jasmin Feter | **Oral Talk:** "Exploring key VNIR–SWIR bands for predicting nickel in an urban soil using eXML" by Mahsa Nahostinmohammadi |
| 15:30 - 16:00 |                                                                                       | Coffee Break (Break Area, 1st floor)                                          | **Oral Talk:** "Soil health monitoring of non-agricultural areas – gaps identification" by Agnes Hauska Klimkowicz-Pawlas |
| 16:00 - 16:15 | **Oral Talk:** "Soil4Africa: a continent-wide soil information system for monitoring and assessment of soil health in Africa" by Bas Kempen | **Workshop:** "Soil spectroscopy as a near real time tool to monitor soil health indicators" by Tomislav Hengl | **Demo Session:** "A cutting-edge molecular tracking technology for microbial-based products used in agriculture" by Lorena Centeno, Eligio Melisó |
| 16:15 - 16:30 | **Oral Talk:** "Comparison of SOC trends from national soil monitoring networks and soil carbon maps" by Laura Sofia Harbo |                                                                                   | **Demo Session:** "Sieves: a free smartphone application for measuring soil aggregate stability" by Jason Ackerson |
| 16:30 - 16:45 | **Oral Talk:** "In-situ soil health indicators beyond physio-chemical properties" by Luc Epelde | **Demo Session:** Agrocores: Advancing In-Situ Soil Health Assessment and Sustainable Land Management through Soil Spectroscopy by Matteo Poggio |                                                                                   |
| 16:45 - 17:00 | **Oral Talk:** "Enhancing Nutrient Efficiency: Adsorption and Release Kinetics of Vineyard Prunings Biochar" by Olga Donoghue |                                                                                   |                                                                                   |
| 17:00 - 17:30 | **Poster Session**                                                              | **Internal Meetings**                                                          | **Internal Meetings**                                                            |
| 17:30 - 18:00 |                                                                                       |                                                                                   |                                                                                   |
| 18:00 - 20:00 | **Happy Hour - Drinks and Bites (W-Invite, Ground floor)**                       |                                                                                   |                                                                                   |
## Day 2 - April 9, Wednesday

| Time          | HUGOTECH | EXPERT ROOM 7 | EXPERT ROOM 11 |
|---------------|----------|---------------|---------------|
| 08:00 - 09:00 |          | Registrations |               |
| 09:00 - 09:30 |          | Welcome Plenary (HUGOTECH) |               |
| 09:30 - 10:00 |          | Keynote: "Creating a business case for soil health in food and ag value chains" by Anne-Sophie Leroy |               |
| 10:00 - 10:30 |          | Keynote: To be Confirmed by Anouk Schoorts |               |
| 10:30 - 11:00 |          | Keynote: "Soil improvement meets social innovation" by Geert van der Veer |               |
| 11:00 - 11:30 |          | Coffee Break (Break Area: 1st floor) |               |
| 11:30 - 12:00 |          | Keynote: "What lies beneath: using biodiversity to understand and measure soil health" by Kat Bruce |               |
| 12:00 - 13:00 |          | Discussion Panel: Europe's Innovation Paradigm: How Can We Turn Soil Health Research Into Thriving Businesses? |               |
| 13:00 - 14:00 |          | Lunch (W-Invite, Ground floor) |               |
| 14:00 - 14:15 |          |               | Oral Talk: "Soil water repellency in natural and semi-natural habitats is influenced by carbon and prokaryotic communities" by Anne-Catherine Stoergaard Danielsen |
| 14:00 - 14:30 |          | Oral Talk: "Potential soil biodiversity indicators for soil health assessment" by Lucas Gomes | Oral Talk: "Benchmarking soil organic carbon (SOC) concentration provides more robust soil health assessment than the SOC/clay ratio at European scale" by Chris Fennelly |
| 14:30 - 14:45 |          | Oral Talk: "How to use microbial data as soil health indicators - experiences from Denmark" by Sebastian Gutarrez | Oral Talk: "Symbiotic microorganisms as a tool for recovering soil health in heavily polluted sites" by Mario Penuige-Lopez |
| 14:45 - 15:00 |          | Oral Talk: "Fertilize to feed the crop or build soil health?" by Anne Hoek van Dijke | Oral Talk: "Influence of cover crops on the enzymatic activity of vineyards in a semi-arid climate (SANCHO/THIRST project)" by Juan Pedro Martin Sang |
| 15:00 - 15:15 |          | Oral Talk: "Bridging the Gap: A Multilevel Approach to Soil Health Assessment across Various Land Uses" by Nikias Schmucker | Oral Talk: "Soil monitoring: standardised protocols for the assessment of biodiversity and ecosystem services [Soil Health and Restoration Evaluation, SHARE protocols]" by Giles Ross |
| 15:15 - 15:30 |          | Oral Talk: "High-resolution soil quality products for Europe" by Laura Poggio | Oral Talk: "Soil-X-Change: Fostering cross-border knowledge exchange and co-creation on sustainable soil and farm management" by Barbara Pålpl |
| 15:30 - 16:00 |          | Coffee Break (Break Area: 1st floor) |               |
| 16:00 - 16:15 |          | Oral Talk: "A commercial-scale embodiment of in situ VIS/NIR reflectance spectroscopy for commercial-scale soil C MRV: The Yard Stick promise made real" by Jason Ackerson | Workshop: "Accessing and using Soil Health Data Cube" by Yu-Feng Ho |
| 16:15 - 16:30 |          | Oral Talk: "Promising Preliminary Spectral prediction of Soil Health Indicators in the SoilSAfrica Project" by Nondumiso Zanéle Solilo | Workshop: "Soil spectroscopy as a near real time tool to monitor soil health indicators" by Tomislav Hengl |
| 16:30 - 16:45 |          | Oral Talk: "A Physics-Based Spectroscopic Approach for Rapid Estimation of Soil Properties Essential to Soil Health: Particle Size Distribution and Water Retention Curves" by Sarem Forouz |               |
| 16:45 - 17:00 |          | Oral Talk: "Tracing the Roots of Land Degradation: EO-Based Identification of Climate and Anthropogenic Drivers" by Mustafa Serkan Isik |               |
| 17:00 - 17:30 |          | Poster Session | Internal Meetings |
| 17:30 - 18:00 |          | Internal Meetings | Internal Meetings |
| 18:00 - 20:00 |          | Dinner (W-Invite, Ground floor) |               |
#SOILHEALTHNOW!

## Day 3 - April 10, Thursday

| Time          | HUGO TECH                                      | EXPERT ROOM 7 | EXPERT ROOM 11 |
|---------------|-----------------------------------------------|---------------|----------------|
| 08:00 - 09:00 |                                               |               |                |
| 09:00 - 09:30 | Registrations                                 |               |                |
| 09:30 - 10:00 | Welcome Plenary (HUGOTech)                    |               |                |
| 10:00 - 10:30 | Keynote: “The mother of all solutions is the soil” by Maarten van Dam |   |                |
| 10:30 - 11:00 | Keynote: “Monitoring Soil Health in the framework of the future EU soil directive: lessons learned and recommendations from the EJIP SOIL” by Claire Chenu |   |                |
| 10:30 - 11:00 | Keynote: “Monitoring, reporting and verification of soil health - what can we learn from the soil carbon experience” by Fabio Volkmann |   |                |
| 11:00 - 11:30 |                                               | Coffee Break  |                |
|               |                                               | (Break Area, 1st floor) |                |
| 11:30 - 12:00 | Keynote: “Soil Health monitoring from perspective of an entrepreneur” by Sonia Meller |   |                |
| 12:00 - 13:00 | Discussion Panel: “The Next Generation of Soil Tech: Affordable, Accessible, and Farmer-Focused |   |                |
| 13:00 - 14:00 |                                               | Closing Remarks (HUGOTech) |                |
| 13:00 - 14:00 | Lunch (W-Invite, Ground Floor)                |               |                |
| 15:00 - 19:00 | Field Excursion to ‘t Gagel Farm              |               |                |
|               | Departure time from the conference venue is 15.00 |               |                |

**#SOILHEALTHNOW!**
FIELD EXCURSION TO ‘T GAGEL FARM

The field excursion to ‘t Gagel farm on the final day of the public Conference offers a unique opportunity to experience regenerative agriculture in practice. This community farm, located in Lochem, Netherlands, serves as a European model for regeneration, with a mission to facilitate life through agriculture. The farm is part of the Lenteland network, emphasizing the active role of the community surrounding the farm. Participants will have a chance to see firsthand how the farm operates as a community enterprise and a model of regenerative agriculture. The experience will provide a practical perspective on the theoretical concepts discussed during the Conference.

What to expect during the excursion:

Regenerative Agriculture Focus: The farm’s core mission is to facilitate life through agriculture, focusing on ecological, social, and economic benefits. This approach results in vital, pesticide-free food, a thriving community, and healthy soil.

Community Involvement: ‘t Gagel is a community farm where the surrounding community plays an active role. Individuals can become co-owners by purchasing certificates, investing in the farm, and supporting regenerative agriculture for future generations. This model ensures that farmland is available for future generations and supports the growth of other Lenteland farms in the Netherlands.

ERF Residency Program: The farm has an ERF (Eat, Reconnect, Farm) residency program, which brings together talented apprentice farmers, artists, and cooks to develop a new food culture. This program highlights the farm’s role as a learning space.

Lenteland Farm: As a Lenteland farm, ‘t Gagel emphasizes community involvement, offering vegetable subscriptions and opportunities to become co-owners. The community aspect ensures both farmers and consumers are part of a regenerative future.

The field excursion to ‘t Gagel farm is designed to be an immersive and educational experience, highlighting the importance of community-driven, regenerative agricultural practices for the future of soil health. It provides a tangible link between the scientific and technological aspects of soil health and the practical application of these methods in a farm setting.
SOIL DEAL FOR EUROPE PROJECTS

Companies and business solutions that will feature in demo sessions.

COMMERCIAL PARTNERS

Companies and business solutions that will feature in demo sessions.

SOIL HEALTH NOW!
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Wageningen, The Netherlands

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