

EVENT RECAP

Name: SOILS, WHERE FOOD BEGINS

Organisers: European Compost Network ECN and Vlaco

Location: Online

Date: 05/12/2022



On December 5th, 2022, the European Compost Network teamed up with Vlaco and co-hosted the webinar “Soils, where food begins”, this year’s campaign for the celebration of World Soil Day. The event came at a relevant and appropriate time, since the European Commission is currently working on a proposal for a Soil Health Law, to be presented to EU legislators in the first half of next year.

European soils are facing a lot of pressure caused by unsustainable management, pollution, climate change and other drivers, often leaving them in bad ecological conditions. For these reasons, the webinar shed some light on the threats and risks posed by soil degradation, ultimately undermining the quality and quantity of the many fundamental ecosystem services that healthy and well-functioning soils provide. In particular, the potential role of organic waste-derived soil improvers and fertilisers was debated, as one of the nature-based solutions which could reverse the negative trends currently affecting the fertility of European soils. Relevant information on European soils condition and on the effects of compost and digestate use from case studies were provided, reiterating the importance of research in order to compile more specific data and base future EU legislation and recommendations on this evidence.

Unlocking the potential of recycled organic waste for soil health

Alberto Confalonieri from CIC, the Italian composting and biogas association, and also ECN chair of the task group Soil Organic Matter, opened the discussion by outlining the state of the art and the outlook of the bio-waste sector in Europe, predicting a potential increase in collection and recycling of the organic waste stream fostered by the implementation of new EU regulation. Quality assurance was presented as a pre-condition for placing compost and digestate on the EU market, with several countries developing their own quality assurance schemes (QAS) together with the pan-European QAS developed by the ECN. Subsequently, he presented the results of long-term, full-scale, open-field trials where the effects of the application of compost on different soil health indicators were observed. Most of the analysis showed an increase in soil organic matter, more long-lasting nutrient availability and higher microbial activity compared to untreated and mineral fertilization, whilst also highlighting the contribution of applied waste-derived organic soil improvers in reducing soil compaction and soil acidification. Soil pollution was also analysed during some of the case studies, where no accumulation of contaminants and heavy metals was observed except for a small increase in Zinc due to high compost dosage, which is nonetheless a micro-nutrient element. In its conclusions, Alberto called on the EU institutions to promote compost and digestate in the upcoming Soil Health Law as sustainable solutions for soil management.

The role of organic fertilisers in sustainable soil management: benefits and risks

During the second presentation, Rainer Baritz, coordinator of the Thematic Working Group Soil at the European Environment Agency, presented the latest report on the brand new Zero Pollution Monitoring report, where past and future trends of soil pollution were also assessed. Evidence has shown that Europe lags behind in soil protection, nonetheless, the situation could partly improve henceforward thanks to the advancements in the implementation of the EU Soil Strategy for 2030, and soil being awarded the same legal protection granted air and water with a future dedicated law. The report identifies a large variety of threats and evaluates the risks faced by soils. The expert continued his speech showing, supported by a report published by the European Joint Programme Soil (EJP Soil), the positive impacts of organic fertilisers and soil improvers on land, mentioning them as nature-based, sustainable land management solutions suitable for tackling soil degradation. However, the need to extract a higher amount of detailed data to lead site- and farm-specific implementation was stressed, since the current recommendations are too generic to operate as a guide for sustainable soil management at regional level. Finally, open questions for further discussion on organic fertilisers and soil improvers were raised on topics such as costs, potential of contaminants, nutrient levels, and education of farmers.

Compost makes soils more fertile: is this scientifically proven?

To close the event, Dennis Konnerup, Assistant Professor at Department of Food Science at Aarhus University, brought to participants' attention the preliminary outcomes of the SOILCOM project, but before that he focused on the role that healthy soils play in achieving targets of different sustainable development goals (SDGs). Soil health has indeed environmental social and economic implications, affecting not just farmers but society as a whole. According to the on-going study, which comprises four different trials, the influence of compost in soil properties was already evident. The scholar explained how the application of compost favoured the accumulation of soil organic matter along with macro and micronutrients. Physical improvements in soil structure were also observed, specifically in terms of water infiltration, water holding capacity and soil bulk density.

Event outcomes and recommendations

The event brought together more than 100 participants among experts, practitioners, public authorities and stakeholders from all over Europe, proving to be a good forum for debate. Here are some key takeaways:

- European soils are degraded, the EU is trying to ameliorate their condition by putting forward a dedicated framework for soil health;
- Organic recycling potential can be further fostered through mandatory separate collection by 2023;
- Quality assurance of compost and digestate resulting from organic waste recycling is a pre-condition to guarantee safety and to place them on the market;
- Compost and digestate can help maintain and restore basic soil functions, including increase in soil organic matter content, nutrient availability and biomass activity;
- Further evidence shows that secondary raw materials produced from biowaste do not pose risks of contamination if appropriately certified and applied to soil;
- Data is essential to inform future policy developments;
- Future EU legislation must include sustainable land management solutions like waste-derived organic soil improvers and fertilisers to tackle climate and environmental pressures;
- Policymakers and relevant authorities must continue cooperation with experts, stimulating knowledge-sharing and research.

The presentation of ECN Chair of TG Soil & Organic Matters, Alberto Confalonieri can be accessed [here](#), Rainer Baritz's presentation can be accessed [here](#) and the ECN position paper on the Soil Health Law [here](#).

We will upload the presentations of the speakers on our website in the coming weeks. If you haven't had the chance to follow the webinar, you can watch the recorded seminar on our youtube channel [here](#).