GEAVET TRAINING PROGRAMME FOR CSA

GEAVET TRAINING PROGRAMME FOR CLIMATE-SMART AGRICULTURE (CSA):

KENYA

MODULE 2

ADDITIONAL INFORMATION – ALIGNMENT WITH EUROPEAN UNION POLICY FRAMEWORKS

ENGLISH VERSION

GEAVET Project n° 101129027

Open Educational Resources

Precision Soil Testing, Climate Data Use, and Digital Decision Support in the Kenyan Context

Precision soil testing and climate-informed agricultural decision-making align strongly with several European Union (EU) policy frameworks that promote sustainable agriculture, soil protection, climate resilience, and digital innovation. Although these frameworks are European, their core principles—nutrient efficiency, soil restoration, data-driven management, and farmer-led innovation—are directly applicable to Kenyan farming systems, vocational education and training (VET) institutions, and smallholder-focused extension programmes. These priorities address urgent challenges in Kenya, including soil degradation, climate variability, and inefficient input use.

European Green Deal & European Climate Law

The European Green Deal (EGD) and the European Climate Law commit the EU to climate neutrality by 2050 and a 55% reduction in greenhouse gas emissions by 2030. Agriculture plays a central role in achieving these targets through reduced emissions, efficient resource use, and sustainable food systems. Precision soil testing supports these objectives by reducing unnecessary fertiliser application, thereby lowering emissions associated with fertiliser production and use. By enabling targeted, need-based nutrient management, soil testing helps farmers move away from blanket fertiliser recommendations toward more efficient and environmentally responsible practices. In Kenya—where nutrient mining, soil acidity, and misapplication of fertilisers are widespread—this approach supports sustainable intensification while reducing costs for smallholders.

Farm to Fork Strategy

The Farm to Fork Strategy aims to create fair, healthy, and environmentally sustainable food systems by reducing nutrient losses, limiting agrochemical dependence, and strengthening evidence-based farm decision-making. Soil testing directly contributes to these goals by helping farmers apply only the nutrients required by their soils and crops, reducing pollution and input waste. It also supports circular economy principles by guiding the use of organic inputs such as compost and manure based on measured soil needs. In the Kenyan context, this improves productivity and food security while lowering reliance on costly external inputs.

EU Soil Strategy for 2030

The EU Soil Strategy for 2030 focuses on restoring soil health, increasing organic matter, combating erosion, and preventing land degradation. Precision soil testing aligns with these goals by identifying key soil constraints—such as low organic matter, nutrient depletion, and acidity—which are common across Kenya's intensively

cultivated and high-rainfall regions. Soil diagnostics guide corrective actions including liming, balanced fertilisation, and organic matter incorporation, improving soil structure, fertility, and water-holding capacity. These outcomes strengthen long-term resilience and mirror the Soil Strategy's emphasis on living, functional soils.

EU Climate Adaptation Strategy

The EU Climate Adaptation Strategy emphasises climate-resilient food systems supported by climate data, early-warning systems, and adaptive planning. Training learners to interpret seasonal forecasts, integrate climate data into farm planning, and combine this information with soil test results directly reflects these priorities. In Kenya, where rainfall variability and extreme events strongly affect yields, this integrated approach reduces risk, improves adaptive capacity, and supports climate-smart agriculture consistent with EU adaptation goals.

Digital Europe Programme & EU Data Spaces

EU digital strategies promote the transformation of agriculture through data-driven tools, open data platforms, and accessible digital advisory services. The use of mobile soil-testing applications, digital climate tools, and farm data systems in Kenyan training programmes mirrors these priorities. Learners develop practical skills in data interpretation and digital decision-making, aligning with the EU's vision of modern, technology-enabled agriculture supported by farmer-friendly innovations.

EIP-AGRI (European Innovation Partnership for Agricultural Productivity and Sustainability)

EIP-AGRI promotes farmer-led innovation, multi-actor collaboration, and practical solutions tailored to local conditions. Precision soil testing reflects this approach by fostering collaboration between farmers, extension officers, laboratories, and VET trainers. Practices such as group soil sampling, shared interpretation of results, and peer learning closely resemble EIP-AGRI Operational Groups. This model aligns well with Kenyan learning systems, which rely on demonstration, cooperation, and locally generated knowledge.

Circular Economy Action Plan

The EU Circular Economy Action Plan promotes efficient resource use, recycling of organic materials, and waste reduction. Soil testing supports circular systems by guiding the productive reuse of farm residues, compost, and manure, ensuring nutrients are returned to soils where they are most needed. This contributes to reduced waste, improved soil fertility, and more sustainable production systems, while also supporting Farm to Fork objectives related to food loss reduction.

UN Sustainable Development Goals (SDGs 2, 13, and 15)

Precision soil testing and climate-informed agriculture contribute directly to the UN 2030 Agenda by: improving food security and productivity (SDG 2), enhancing climate resilience and reducing emissions (SDG 13), and restoring soil health and preventing land degradation (SDG 15).

Together, these outcomes demonstrate that EU-aligned practices are not only relevant but highly valuable for Kenyan agricultural training, ensuring consistency with international sustainability standards while addressing local development needs.

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