GEAVET TRAINING PROGRAMME FOR CSA

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

KENYA

MODULE I

ADDITIONAL INFORMATION– ALIGNMENT WITH EUROPEAN UNION POLICY FRAMEWORKS

ENGLISH VERSION

GEAVET Project n° 101129027

Open Educational Resources

Feed & Feeding Management, Water Quality Management, and Drip Irrigation Systems in the Kenyan Context

Feed and feeding management, water quality management, and drip irrigation systems are central to sustainable, climate-resilient agricultural production. These topics align strongly with European Union (EU) policy frameworks that promote efficient resource use, environmental protection, climate adaptation, and digitally supported farm management. Although EU-focused, the principles embedded in these frameworks—efficiency, pollution prevention, resilience, and farmer-centred innovation—are directly applicable to Kenyan farming systems, VET institutions, and smallholder training programmes.

European Green Deal & European Climate Law

The European Green Deal (EGD) and the European Climate Law aim to reduce greenhouse gas emissions, improve resource efficiency, and build sustainable food systems. Improved feed and feeding management contributes to these goals by increasing feed conversion efficiency, reducing methane emissions from livestock, and minimising feed waste. Balanced rations and appropriate fodder conservation lower the environmental footprint of livestock systems, aligning with EGD objectives for low-emission agriculture. Water quality management supports the Green Deal by reducing nutrient runoff, protecting surface and groundwater, and preventing contamination from livestock waste and agrochemicals. Drip irrigation systems further contribute by reducing water abstraction, lowering energy use for pumping, and improving water-use efficiency—key components of climate-neutral and resource-efficient agriculture.

Farm to Fork Strategy

The Farm to Fork Strategy promotes sustainable food production through reduced input losses, improved animal welfare, and safer, more efficient resource use across the food chain. Feed and feeding management aligns with this strategy by encouraging precise ration formulation, use of locally available feed resources, and reduction of feed losses. Efficient feeding improves animal health and productivity while reducing reliance on imported or high-impact feed inputs. Water quality management supports Farm to Fork objectives by ensuring safe water for livestock and irrigation, reducing contamination risks, and protecting downstream food systems. Drip irrigation systems reinforce these aims by delivering water directly to plant roots, minimising evaporation and nutrient leaching, and supporting consistent crop quality and yields.

EU Soil Strategy for 2030

The EU Soil Strategy emphasises soil protection, reduced degradation, and improved nutrient cycling. Feed and feeding management contributes indirectly by reducing excess nutrient excretion, which lowers soil and water pollution from manure. Water quality management prevents the accumulation of salts, pollutants, and pathogens in soils used for crop and fodder production. Drip irrigation systems protect soil structure by avoiding surface runoff and erosion, improving infiltration, and enabling precise nutrient delivery through fertigation. In Kenya, where soil degradation and salinisation are growing concerns in irrigated areas, these practices support long-term soil health and productivity.

EU Climate Adaptation Strategy

The EU Climate Adaptation Strategy promotes resilient agricultural systems capable of withstanding droughts, floods, and climate variability. Efficient feed and feeding management increases livestock resilience during feed-scarce periods by improving feed use efficiency and supporting fodder planning. Water quality management ensures reliable access to safe water during droughts and reduces disease risks under climate stress. Drip irrigation systems are a cornerstone of climate adaptation, enabling precise water delivery, reducing drought vulnerability, and stabilising yields in arid and semi-arid regions of Kenya.

Digital Europe Programme & EU Data Spaces

EU digital frameworks support the use of data, sensors, and digital tools to optimise agricultural production. Digital feed formulation tools, water quality testing apps, and drip irrigation controllers reflect these priorities. Training learners to use mobile applications, sensors, and digital monitoring systems aligns Kenyan VET programmes with the EU's vision of data-driven, precision agriculture supported by accessible technologies.

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

EIP-AGRI encourages farmer-led innovation, multi-actor collaboration, and practical problem-solving. Feed optimisation trials, community water testing initiatives, and shared drip irrigation demonstrations reflect EIP-AGRI principles. These practices bring together farmers, extension agents, technicians, and trainers in participatory learning processes, strengthening peer-to-peer knowledge exchange. This approach mirrors how Kenyan farmers adopt innovations—through demonstration, cooperation, and locally adapted solutions.

Circular Economy Action Plan

The EU Circular Economy Action Plan promotes resource efficiency, waste reduction, and recycling of biological materials. Feed and feeding management supports

circularity by using crop residues, by-products, and conserved fodder efficiently. Water quality management enables safe reuse of water where appropriate, while drip irrigation maximises the productivity of each unit of water. Together, these practices close nutrient and water loops, reduce waste, and lower environmental impacts.

UN Sustainable Development Goals (SDGs 2, 6, 12, 13, and 15)

These practices contribute directly to the UN 2030 Agenda by: improving food security and livestock productivity (SDG 2), ensuring clean water and reduced pollution (SDG 6), promoting responsible resource use (SDG 12), strengthening climate resilience (SDG 13), and protecting soils and ecosystems (SDG 15).