Co-funded by the European Union

GEAVET TRAINING PROGRAMME FOR CSA
FOCUS ON LIVESTOCK SMART SKILLS & IT/POSTHARVEST SKILLS

PRACTICAL MODULES

20th April 2026

UYSTO

OVERVIEW OF THE PROGRAMME

- To equip TVET students with practical skills and knowledge needed to succeed in modern agriculture under changing climate conditions.
- The Programme focuses on hands-on learning that helps students understand how to increase agricultural productivity while protecting the environment and using resources efficiently.
- Students will learn practical climate-smart practices in crop and livestock production, soil and water management, efficient use of inputs, and the application of appropriate technologies.
- The Programme also introduces learners to climate information services, digital tools, and simple innovations that support better farm planning and decision-making.

CONT'

- The training Programme will be built around three core pillars;

  1. *Sustainably increasing agricultural productivity and incomes,*
  2. *Strengthening adaptation and resilience to climate change, and*
  3. *Reducing and/or removing greenhouse gas emissions where possible.*

- The delivery mode will follow a blended approach, combining online learning through an e-learning platform with on-site practical activities and farm-based tasks

- Overall, the Programme prepares TVET students to become skilled agricultural practitioners, entrepreneurs, and extension support personnel who can apply climate-smart solutions, reduce environmental impacts, and contribute to resilient and sustainable food system

OVERALL LEARNING OBJECTIVES

- Understanding of climate change concepts and their impacts on agriculture at local and regional levels
- Principles of climate-smart agriculture and the three core pillars: productivity, adaptation, and mitigation
- Knowledge of sustainable crop and livestock production practices
- Awareness of greenhouse gas sources in agriculture and basic mitigation options
- Understanding of soil, water, and natural resource conservation techniques
- Familiarity with climate information services, seasonal forecasts, and their use in farm planning
- Understanding of EU-aligned TVET standards and good agricultural practices
- Knowledge of agribusiness, value chains, and income diversification under climate-smart systems

PEDAGOGICAL CONTENTS/LEARNING UNITS

Module 1: Practical;

- Use methane gas-reducing feed activities,
- Hydroponic fodder production
- Feed and feed management

Module 2: Practical;

- Use of climate data for farm decision-making,
- Early warning seasonal forecast
- Use of low GHG emission food processing

MODULE I: OVERVIE

- This module provides learners with hands-on experience in climate-smart feeding practices aimed at improving livestock productivity while reducing methane emissions.
- The module focuses on practical application of methane-reducing feed strategies, hydroponic fodder production, and efficient feed and feed management systems.
- Learners will gain practical skills in producing and utilizing quality feeds, formulating balanced rations, and managing feeding systems that enhance feed conversion efficiency and animal health.

UNIT I.I: USE OF METHANE GAS REDUCING FEEDS

Learning Objectives:

Students will know;

- The biological processes of rumen fermentation and methane production
- The role and importance of hydrogen dynamics in methanogenesis
- The major categories of methane reducing feed interventions
- Feed Quality Identification and assessment
- The relationship between feed digestibility, animal performance and greenhouse gas

UNIT I.2 HYDROPONIC FODDER PRODUCTION

Learning Objectives:

Students will know;

- Different ways of producing fodder without planting directly into the soils.
- Alternative ways of producing livestock feed in the most limited time and space.
- Know the requirements of hydroponic fodder processes.
- Nutritional values fodder.
- Nutrient solution preparation.
- Types of hydroponic systems available.
- Environmental control like understanding of regulating and balancing of the temperatures, humidity and light, how they affect the growth.
- Procedures of enterprise establishment.

UNIT I.3 FEED MANAGEMENT

Learning Objectives:

Students will know;

- The basic principles of animal nutrition, nutrient requirements, and feed types.
- Locally available Ugandan feed resources and how they contribute to balanced rations.
- Proper methods for feed processing, storage, and quality control.
- The concept of feed conversion ratio (FCR) and production efficiency.
- How Precision Feeding and Precision Livestock Farming (PLF) tools support decision-making in grazing and feeding management.
- Common challenges in Ugandan smallholder systems, including seasonal feed shortages and forage quality decline.

MODULE2 : OVERVIE

- This module introduces learners to the practical use of climate data for informed farm and food processing decision-making.
- Participants will learn how to interpret and apply climate information, including weather data, early warning systems, and seasonal forecasts, to plan agricultural production, harvesting, storage, and food processing activities.
- The module also emphasizes climate risk management, helping learners anticipate and respond to climate-related hazards such as droughts, floods, and temperature extremes.
- In addition, learners will be exposed to low greenhouse gas (GHG) emission food processing practices, focusing on energy-efficient technologies, improved processing methods, and waste reduction strategies

UNIT 2.1 USING CLIMATE DATA FOR FARM DECISION-MAKING IN UGANDA

Learning Objectives:

Students will know;

- Understand basic climate data types (rainfall, temperature, season onset/ending)
- Know where to access reliable climate information in Uganda (UNMA, extension services, SMS).
- Know how climate patterns influence planting, grazing, animal health, and input timing.

UNIT 2.2 EARLY WARNING AND SEASONAL FORECAST

Learning Objectives:

Students will know;

- The concept of Early Warning Systems (EWS) and their four key components: risk knowledge, monitoring & forecasting, dissemination & communication, and preparedness & response
- How climate variability and climate change influence extreme weather events and disasters
- The role of climate information services in climate change adaptation and disaster risk reduction among communities.
- Regional and national challenges such as limited infrastructure, low literacy levels, mistrust of forecasts, and communication barriers

UNIT 2.3: USE OF LOW GHG EMISSION FOOD PROCESSING

Learning Objectives:

Students will know;

- The sources and impact of greenhouse gas emissions in food processing.
- Identify climate-smart and energy-efficient food processing techniques.
- Apply renewable energy and waste management strategies to reduce emissions.
- Integrate sustainability into food value chains through green innovations.

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END OF THE PRESENTATION

THANK YOU

Name of the Partner Organization presenting (if needed)

Q & A