Training Course on Composting and Vermiculture for Farm Waste Management

Professional Development Training Course Outline

Category	Agriculture	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

With growing concerns over environmental sustainability and farm productivity, the importance of effective organic waste management has never been more crucial. Training Course on Composting and Vermiculture for Farm Waste Management empowers farmers, agripreneurs, and environmental advocates with eco-friendly, low-cost techniques to turn farm waste into nutrient-rich compost and vermicompost. Emphasizing circular agriculture, soil regeneration, and climate-resilient farming, the course integrates hands-on learning with scientific knowledge to maximize agricultural productivity while minimizing waste.

This program combines sustainable farming practices, vermiculture technology, and waste-to-wealth innovations to address waste mismanagement and soil degradation. By understanding the biological and microbial processes of composting and the role of earthworms in waste decomposition, participants will gain practical skills in organic farming, zero-waste agriculture, and carbon-smart farming. The course supports the global transition toward green agriculture and regenerative soil health practices for long-term food security and environmental protection.

Programme Curriculum

Training Course on Composting and Vermiculture for Farm Waste Management

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Course Objectives

By the end of this training, participants will:

1. Understand the fundamentals of organic waste management in agriculture.
2. Identify types of farm waste suitable for composting and vermiculture.
3. Learn the science of aerobic and anaerobic composting.
4. Understand the biology and lifecycle of composting worms.
5. Construct low-cost composting and vermiculture units.
6. Develop skills in manure management and waste segregation.
7. Monitor and troubleshoot composting systems effectively.
8. Apply compost and vermicompost in crop production to improve yield.
9. Promote soil fertility and microbial activity through compost use.
10. Explore business opportunities in organic fertilizer production.
11. Understand the role of composting in climate-smart agriculture.
12. Incorporate zero-waste and circular economy models on farms.
13. Create community-based composting projects for sustainable waste solutions.

Target Audiences

1. Smallholder and commercial farmers
2. Agricultural extension officers
3. Organic farming advocates
4. Environmental conservation groups
5. Agripreneurs in green businesses
6. Local government and municipal waste managers
7. Students and researchers in agriculture and environmental science
8. NGOs promoting sustainable development

Course Duration: 10 days

Course Modules

Module 1: Introduction to Composting & Vermiculture

- Definition and importance of composting
- Overview of vermiculture and its benefits
- Environmental impact of poor farm waste disposal
- Global best practices in farm waste recycling
- Tools and materials for composting
- **Case Study: Successful rural composting initiative in India**

Module 2: Farm Waste Identification & Classification

- Types of biodegradable vs. non-biodegradable waste
- Segregation techniques at the farm level
- Carbon to nitrogen ratio explained
- Ideal materials for composting
- Handling hazardous or non-compostable farm waste

- **Case Study: Farm waste audit in Kenya and solution implementation**

Module 3: Composting Principles & Processes

- Aerobic vs. anaerobic composting
- Microbial roles in decomposition
- Factors affecting composting (moisture, temperature, etc.)
- Compost maturity indicators
- Odor control and moisture balance
- **Case Study: Efficient composting with indigenous microbes in Nepal**

Module 4: Vermiculture Basics

- Earthworm biology and habitat
- Types of composting worms (Eisenia fetida, etc.)
- Vermiculture unit construction
- Feeding and maintaining worm beds
- Harvesting vermicast
- **Case Study: Urban vermiculture project in the Philippines**

Module 5: Building Composting Systems on Farms

- Site selection and preparation
- Low-cost compost bin designs
- Layering techniques and turning schedules
- Inoculation with microbial cultures
- Rainwater management
- **Case Study: School-led composting system in Tanzania**

Module 6: Vermicompost Production Techniques

- Selecting starter worm colonies
- Bedding materials and feedstock
- Moisture and temperature regulation
- Preventing worm predators and diseases
- Safe harvesting and packaging
- **Case Study: Women-led vermicompost enterprise in Uganda**

Module 7: Compost Quality Assessment & Use

- Testing pH, moisture, and nutrient content
- Parameters for marketable compost
- Application rates for different crops
- Field trials and observation
- Storage and transportation
- **Case Study: Use of compost in rice production in Vietnam**

Module 8: Soil Health and Organic Matter Enhancement

- Soil structure and microbial life
- Role of humus and organic matter
- Reversing soil degradation with compost
- Enhancing water retention and root development
- Crop rotation and compost synergy
- **Case Study: Soil regeneration project in Burkina Faso**

Module 9: Troubleshooting Composting and Vermiculture Issues

- Common composting failures (smell, pests, etc.)
- Dealing with excess heat or slow decomposition
- Worm escape and mortality causes
- Diagnosing nutrient imbalances
- Restoration techniques
- **Case Study: Adaptive learning in Ghanaian permaculture farm**

Module 10: Climate Change Mitigation through Composting

- Reducing methane emissions from open dumps
- Composting as carbon sequestration
- Climate-smart agricultural practices
- Biochar integration in composting
- Renewable energy use in compost systems
- **Case Study: Carbon credit project using composting in Ethiopia**

Module 11: Business Models in Organic Fertilizer Production

- Feasibility studies and market analysis
- Branding and value addition
- Quality certification and standards
- Packaging, labeling, and pricing
- Distribution channels and marketing
- **Case Study: Youth-led compost business in Nigeria**

Module 12: Community-Based Composting Systems

- Organizing farmer cooperatives
- Shared infrastructure and responsibilities
- Local leadership and participation
- Revenue-sharing models
- Monitoring and accountability
- **Case Study: Village composting cooperative in Malawi**

Module 13: Policies and Legal Frameworks

- National waste management guidelines
- Compost quality and safety standards
- Registration and compliance
- Licensing and inspection
- Advocacy and lobbying
- **Case Study: Municipal compost regulation in South Africa**

Module 14: Integrating Composting in Agroecology

- Synergy with agroforestry and permaculture
- Pest control through compost teas
- Natural soil amendments
- Mulching and erosion control
- Farm design for zero waste
- **Case Study: Agroecology compost integration in Brazil**

Module 15: Monitoring and Evaluation of Compost Projects

- Baseline data collection
- Indicators for success

- Beneficiary feedback tools
- Impact assessment and reporting
- Continuous improvement practices
- **Case Study: Long-term compost impact study in Rwanda**

Training Methodology

- Interactive lectures with real-life videos and visuals
- Hands-on field demonstrations and group practicals
- Expert facilitation and Q&A sessions
- Peer-to-peer learning and local solution sharing
- Case study analysis and project development workshops
- On-farm and community compost system simulations

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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