Training Course on Biodiversity-Friendly Pest and Disease Management

Professional Development Training Course Outline

Category	Agriculture	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

As global agricultural landscapes face increasing challenges due to climate change, unsustainable chemical inputs, and ecosystem degradation, the need for *biodiversity-friendly pest and disease management* has become paramount. Training Course on Biodiversity-Friendly Pest and Disease Management is designed to equip professionals with cutting-edge, sustainable pest control techniques that enhance ecological resilience, promote integrated pest management (IPM), and reduce dependency on synthetic chemicals. The course blends theoretical frameworks with hands-on practical knowledge to promote ecosystem-based solutions that align with sustainable agriculture and biodiversity conservation goals.

Participants will learn to apply nature-based solutions, agroecological principles, and community-based monitoring tools to effectively manage pest and disease pressures. With a strong focus on environmental stewardship, regenerative practices, and climate-smart agriculture, this course fosters skills that support both productivity and ecological integrity. Through case studies, tools, and field-tested approaches, learners will be empowered to lead biodiversity-friendly agricultural transformation in their respective sectors and regions.

Programme Curriculum

Training Course on Biodiversity-Friendly Pest and Disease Management

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Course Objectives

1. Understand biodiversity-based pest management principles.
2. Identify eco-friendly disease control strategies.
3. Apply integrated pest management (IPM) frameworks.
4. Analyze the impact of climate change on pest dynamics.
5. Promote beneficial insect habitats and pollinator health.
6. Evaluate organic pest control techniques.
7. Implement biological control agents for common pests.
8. Develop community-based pest surveillance systems.
9. Integrate agroecological farming practices.
10. Foster pesticide reduction strategies.
11. Design habitat diversification plans.
12. Enhance soil biodiversity for disease resistance.
13. Use decision-support tools for pest forecasting.

Target Audiences

1. Agricultural Extension Officers
2. Organic and Sustainable Farmers
3. Agroecologists and Environmental Scientists
4. NGO Program Implementers
5. Agricultural Policy Makers
6. Agri-Input Suppliers
7. University Students in Agriculture and Ecology
8. Researchers in Crop Protection and Biodiversity

Course Duration: 5 days

Course Modules

Module 1: Principles of Biodiversity-Friendly Pest Management

- Definition and importance of biodiversity in agriculture
- Key components of ecosystem-based pest control
- Role of natural enemies in pest suppression
- Benefits of reducing chemical pesticide use
- Concept of pest threshold levels
- **Case Study:** Natural pest control in coffee plantations in Kenya

Module 2: Integrated Pest Management (IPM) Frameworks

- Four-tier IPM strategy: prevention, monitoring, intervention, evaluation
- Role of cultural, mechanical, biological, and chemical methods
- Use of pheromone traps and natural repellents
- Pest scouting and identification techniques
- Implementation of action thresholds
- **Case Study:** IPM success in rice farming in the Philippines

Module 3: Biological Control and Natural Enemies

- Classification of biocontrol agents (parasitoids, predators, pathogens)
- Insectary plants and conservation biocontrol
- Mass rearing and release of beneficial insects
- Pathogen-based biopesticides
- Challenges in biocontrol implementation
- **Case Study:** Use of Trichogramma wasps in maize farms in India

Module 4: Agroecological Practices and Habitat Management

- Crop rotation and intercropping for pest disruption
- Use of push-pull strategies in pest deterrence
- Pollinator strips and field margins
- Cover crops and mulching benefits
- Enhancing below-ground biodiversity
- **Case Study:** Habitat management in diversified vegetable farms in Brazil

Module 5: Organic and Botanical Pest Control Methods

- Neem-based and garlic-based biopesticides
- Preparation and application of fermented plant extracts
- Use of soap sprays and natural oils
- Organic certification and residue limits
- Integration with other IPM practices
- **Case Study:** Botanical pesticide use in organic banana production in Ecuador

Module 6: Disease Surveillance and Early Warning Systems

- Use of ICT tools and mobile apps for pest alerts
- Farmer-led pest monitoring groups
- Participatory mapping and recording systems
- Predictive modeling using climatic data
- Institutional support for data sharing
- **Case Study:** Mobile pest reporting networks in East Africa

Module 7: Climate Change and Pest Management

- Shifting pest and disease patterns due to warming
- Increased frequency of invasive species
- Building resilience through diversified cropping
- Climate-smart pesticide application techniques
- Scenario-based planning for pest outbreaks
- **Case Study:** Managing Fall Armyworm under erratic rainfall in West Africa

Module 8: Policy and Advocacy for Sustainable Pest Management

- Reviewing national pesticide policies
- Incentives for biodiversity-friendly practices
- Role of civil society in pesticide regulation
- Promoting farmer field schools and extension services
- Building multi-stakeholder coalitions
- **Case Study:** Pesticide regulation reforms in the European Union

Training Methodology

- Interactive lectures with visuals and real-life case demonstrations

- Hands-on group activities including pest identification and solution mapping
- Field visits or virtual tours to model farms or biocontrol labs
- Use of multimedia tools (videos, infographics, mobile apps)
- Expert guest lectures and Q&A sessions with practitioners
- Capstone group project involving community-based pest management planning

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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com