Training Course on Integrated Nutrient Management for Sustainable Soil Health

Professional Development Training Course Outline

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

Course Introduction

Integrated Nutrient Management (INM) is a sustainable agricultural practice that synergizes organic, inorganic, and biological sources of nutrients to improve soil fertility, crop productivity, and environmental resilience. As modern agriculture faces challenges like declining soil fertility, climate change, and nutrient imbalance, INM emerges as a critical solution for restoring and preserving soil health. Training Course on Integrated Nutrient Management for Sustainable Soil Health is designed to equip stakeholders with actionable knowledge and tools to implement INM practices, enhance nutrient use efficiency, and support agroecological transformation.

This course emphasizes soil health regeneration, climate-smart agriculture, and sustainable farming systems. Participants will gain expertise in nutrient cycling, soil microbiome enrichment, organic farming techniques, precision agriculture, and policy integration. Real-world case studies and practical modules ensure that learners understand how to apply INM practices for increased crop yields, environmental sustainability, and food security.

Programme Curriculum

Training Course on Integrated Nutrient Management for Sustainable Soil Health

Introduction

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Course Objectives

1. Understand core principles of Integrated Nutrient Management.
2. Identify soil nutrient deficiencies using smart diagnostics.
3. Promote sustainable soil fertility through balanced fertilization.
4. Integrate organic manures and biofertilizers with chemical inputs.
5. Analyze nutrient cycles and soil-plant interactions.
6. Optimize nutrient use efficiency via precision agriculture.
7. Enhance carbon sequestration through regenerative practices.
8. Improve soil organic matter through composting and green manure.
9. Adopt climate-resilient nutrient management strategies.
10. Implement policy and institutional frameworks for INM.
11. Evaluate economic and environmental impacts of INM.
12. Promote farmer-led soil health innovations.
13. Develop INM action plans for specific agro-ecological zones.

Target Audiences

1. Farmers & Growers
2. Agricultural Extension Workers
3. Soil Scientists & Agronomists
4. Environmental NGOs & Agri-activists
5. Policy Makers & Government Officers
6. Agricultural Students & Researchers
7. Agri-Tech Professionals
8. Input Suppliers & Agri-entrepreneurs

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of INM

- Concept and scope of Integrated Nutrient Management
- Essential soil nutrients and their roles
- Types of fertilizers: organic, inorganic, bio
- Soil health indicators and testing methods
- Soil fertility mapping techniques
- **Case Study:** INM practices in rice-wheat cropping system in Punjab

Module 2: Organic Nutrient Sources

- Composting techniques and quality standards
- Green manure crops and nutrient contribution
- Vermicomposting and its application
- Farmyard manure and slurry use
- Nutrient release rates from organic inputs
- **Case Study:** Compost use in smallholder farms in Kenya

Module 3: Biofertilizers and Soil Microbes

- Types of biofertilizers (Rhizobium, Azotobacter, PSB, etc.)
- Role of microbial communities in nutrient cycling
- Inoculation techniques and compatibility
- Storage and application practices
- Benefits to crop yield and resilience
- **Case Study:** Biofertilizer adoption in maize farming in Nigeria

Module 4: Chemical Fertilizers – Efficient Use

- Understanding NPK and micronutrients
- Site-specific nutrient management (SSNM)
- Timing and method of application
- Risks of over-application and nutrient leaching
- Fertilizer blends and customization
- **Case Study:** Balanced fertilization in high-value crops in India

Module 5: Climate-Resilient Nutrient Strategies

- Nutrient management under drought/flood stress
- Adaptive fertilization techniques
- Role of cover crops and mulching
- Integration with conservation agriculture
- Promoting carbon-rich soils
- **Case Study:** Drought-resilient INM systems in Ethiopia

Module 6: Precision Agriculture and INM

- Digital tools and sensors for soil nutrient mapping
- Use of drones and GPS in fertilization
- Data-driven nutrient planning
- Remote sensing for crop health monitoring
- Integration of AI and IoT in nutrient management
- **Case Study:** Precision nutrient tech in corn production in the U.S.

Module 7: Policy, Economics, and Institutional Support

- National and global INM policies
- Economic analysis of INM interventions
- Subsidies, incentives, and market linkages
- Farmer collectives and extension models
- Role of research institutions and public-private partnerships
- **Case Study:** Policy-led INM scale-up in Bangladesh

Module 8: Action Planning and Field Implementation

- Steps in designing INM plans
- Community-based nutrient budgeting
- Field demonstrations and farmer training
- Monitoring, evaluation, and feedback systems
- Upscaling and replicability of INM models
- **Case Study:** Community-led nutrient planning in Nepal's hill farming

Training Methodology

- Interactive lectures and expert sessions
- Group-based problem-solving exercises

- Case study analysis and field visit simulations
- Hands-on demonstration of composting, testing kits
- E-learning modules with gamification
- Post-training mentorship and follow-up plans

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
23 Nov 2026	27 Nov 2026	Physical	$6,000

Start Date	End Date	Location	Price
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