Training Course on Aflatoxin Management and Control for Food and Feed Security

Professional Development Training Course Outline

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

Course Introduction

Aflatoxins are toxic metabolites produced by certain molds that grow in soil, decaying vegetation, hay, and grains. They pose a significant threat to food and feed safety, public health, and international trade. The contamination of staple foods such as maize, groundnuts, and animal feed contributes to chronic health issues, reduced agricultural productivity, and economic losses in both developing and developed countries. With growing concerns about global food safety and security, aflatoxin control is a critical component of sustainable agriculture and public health protection.

Training Course on Aflatoxin Management and Control for Food and Feed Security is designed to equip stakeholders across the value chain—from farmers to policymakers—with advanced knowledge, tools, and techniques for the prevention, detection, and mitigation of aflatoxins. Participants will explore modern approaches, emerging technologies, and regulatory frameworks aimed at reducing aflatoxin exposure. Emphasis will be placed on food system resilience, risk communication, bio-control strategies, and integrated supply chain practices that enhance food safety and market access.

Programme Curriculum

Training Course on Aflatoxin Management and Control for Food and Feed Security

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Course Objectives

1. Understand the sources and impact of aflatoxins on health, food, and feed systems.
2. Identify high-risk crops and climatic conditions conducive to aflatoxin growth.
3. Apply Good Agricultural Practices (GAPs) to minimize pre-harvest contamination.
4. Implement post-harvest handling and storage techniques for toxin reduction.
5. Utilize bio-control agents like *Aflasafe* in field applications.
6. Conduct rapid aflatoxin testing using mobile and lab-based technologies.
7. Analyze regulatory frameworks and international standards (e.g., Codex Alimentarius).
8. Develop early warning systems and predictive models for aflatoxin outbreaks.
9. Promote risk communication strategies for public health awareness.
10. Integrate aflatoxin control in One Health and food systems approaches.
11. Evaluate economic and trade impacts of aflatoxin contamination.
12. Design community-based interventions for aflatoxin awareness and control.
13. Create actionable policy and institutional frameworks for long-term resilience.

Target Audiences

1. Agricultural Extension Officers
2. Public Health Officials
3. Food and Feed Processors
4. Farmers and Cooperatives
5. Researchers and Academics
6. Quality Assurance Managers
7. Policy Makers and Regulators
8. Non-Governmental Organizations (NGOs)

Course Duration: 10 days

Course Modules

Module 1: Introduction to Aflatoxins and Mycotoxins

- Definition and classification
- Health and economic impacts
- Key sources of contamination
- Global prevalence and burden
- Importance in food security
- **Case Study:** Aflatoxin outbreaks in Kenya and public response

Module 2: Climate Change and Aflatoxin Risk

- Environmental triggers
- Drought and humidity cycles
- Climate-smart agriculture
- Mapping vulnerable zones
- Monitoring tools
- **Case Study:** Predictive modeling in Sub-Saharan Africa

Module 3: Pre-Harvest Management

- Crop rotation strategies
- Resistant crop varieties
- Proper planting schedules
- Soil health practices
- Pest and disease control
- **Case Study:** Pre-harvest GAPs in Nigerian maize farming

Module 4: Post-Harvest Handling and Storage

- Drying protocols
- Hermetic storage solutions
- Sorting and grading
- Storage infrastructure
- Transport best practices
- **Case Study:** Hermetic bags in Uganda maize storage

Module 5: Testing and Detection Technologies

- Rapid test kits
- ELISA and HPLC methods
- Cost-effective screening
- Mobile lab units
- Field testing protocols
- **Case Study:** Portable detection kits in East Africa

Module 6: Bio-Control and Natural Solutions

- Aflasafe application
- Fungal competition mechanisms
- Field deployment
- Community adoption
- Monitoring effectiveness
- **Case Study:** Scaling Aflasafe in Nigeria

Module 7: Regulatory Frameworks and Standards

- Codex standards
- National legislation
- Compliance mechanisms
- Trade and export issues
- Harmonization efforts
- **Case Study:** EU aflatoxin limits and African exports

Module 8: Risk Communication and Public Awareness

- Crafting public messages
- Media and outreach tools
- Community radio programs
- School and youth education
- Stakeholder engagement
- **Case Study:** Awareness campaign in Ethiopia

Module 9: Integrated Supply Chain Management

- Traceability systems

- Stakeholder coordination
- Quality assurance
- Supplier training
- Monitoring protocols
- **Case Study:** Integrated approach in Tanzanian peanut sector

Module 10: Human and Animal Health Impacts

- Acute and chronic exposure
- Cancer and immune effects
- Vulnerable populations
- Feed-to-food transmission
- Mitigation in feed supply
- **Case Study:** Livestock losses due to aflatoxin in Kenya

Module 11: Food Processing and Decontamination

- Heat and chemical treatments
- Binding agents
- Fermentation effects
- Processing losses
- Quality retention
- **Case Study:** Detoxification methods in groundnut oil production

Module 12: Economic Impacts and Trade Barriers

- Direct vs. indirect costs
- Market rejection losses
- Policy interventions
- Incentive structures
- Export readiness
- **Case Study:** Trade loss due to aflatoxins in East Africa

Module 13: Technology Transfer and Innovation

- Tech hubs and innovation centers
- Farmer mobile apps
- Data analytics tools
- Extension services
- Scaling models
- **Case Study:** Tech transfer in Ghana’s agri-sector

Module 14: Community-Based Interventions

- Training and capacity building
- Local champions
- Participatory approaches
- Women and youth inclusion
- Behavior change strategies
- **Case Study:** Rural community-led control in Malawi

Module 15: Policy and Institutional Strengthening

- National aflatoxin strategies
- Inter-agency collaboration
- Budget allocation

- Policy advocacy
- Monitoring and evaluation
- **Case Study:** Aflatoxin policy reforms in Rwanda

Training Methodology

- Interactive lectures and expert presentations
- Group discussions and scenario-based learning
- Demonstrations of testing kits and storage tools
- Field visits to farms and processing centers
- Case study analysis and action planning
- Simulation exercises on contamination response

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
09 Nov 2026	20 Nov 2026	Online	$2,000
09 Nov 2026	20 Nov 2026	Physical	$3,000
09 Nov 2026	20 Nov 2026	Physical	$6,000

Start Date	End Date	Location	Price
09 Nov 2026	20 Nov 2026	Physical	$6,000
09 Nov 2026	20 Nov 2026	Physical	$12,000
09 Nov 2026	20 Nov 2026	Physical	$9,000
09 Nov 2026	20 Nov 2026	Physical	$12,000
09 Nov 2026	20 Nov 2026	Physical	$12,000

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

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