Training Course on Alternative Protein Production (e.g., Insect Farming, Plant-Based)

Professional Development Training Course Outline

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

Course Introduction

As the global demand for sustainable food sources intensifies, alternative protein production has emerged as a revolutionary solution to combat food insecurity, reduce environmental impact, and promote health-conscious diets. Training Course on Alternative Protein Production (e.g., Insect Farming, Plant-Based) provides in-depth knowledge on plant-based proteins, insect farming, cultured meat, and algae-based proteins, empowering participants with practical skills and innovative strategies to thrive in the future of food systems.

With rising concerns around climate change, resource scarcity, and population growth, transitioning to eco-friendly and cost-effective protein solutions is imperative. This training integrates technical, entrepreneurial, and regulatory dimensions of alternative proteins, offering case-driven insights for successful implementation in agribusinesses, startups, research, and policymaking.

Programme Curriculum

Training Course on Alternative Protein Production (e.g., Insect Farming, Plant-Based)

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Course Objectives

By the end of the course, participants will be able to:

1. Understand the global landscape of alternative proteins and future trends.
2. Identify sustainable protein sources including insects, plants, algae, and lab-grown meat.
3. Analyze cost-benefit factors in alternative protein production.
4. Apply biosecurity and food safety standards in alternative protein systems.
5. Evaluate value chains and market dynamics in emerging protein markets.
6. Explore regulatory frameworks and global standards affecting protein innovation.
7. Develop business models for insect farming and plant-based food startups.
8. Apply processing technologies in plant-based meat and dairy alternatives.
9. Formulate marketing strategies for consumer acceptance of new protein sources.
10. Integrate climate-smart practices in protein production systems.
11. Utilize data analytics and AI tools in protein supply chain optimization.
12. Conduct feasibility studies and investment appraisals for scalable models.
13. Network with industry experts and innovators in the protein ecosystem.

Target Audiences

1. Agripreneurs
2. Food technologists
3. Agricultural extension officers
4. Start-up founders
5. Nutritionists and dieticians
6. Policy makers in agriculture and food security
7. Environmental and climate change advocates
8. Researchers and students in agri-food studies

Course Duration: 10 days

Course Modules

Module 1: Introduction to Alternative Proteins

- Definition and classification
- Global demand and sustainability
- Drivers of protein innovation
- Overview of protein alternatives
- Challenges in conventional meat production
- **Case Study:** Beyond Meat vs. Traditional Meat

Module 2: Insect Farming Essentials

- Nutritional profile of edible insects
- Breeding techniques for mealworms, crickets, and BSF
- Facility setup and environmental controls
- Feed formulation and lifecycle management
- Insect farming economics
- **Case Study:** Aspire Food Group – Scaling Insect Protein

Module 3: Plant-Based Protein Production

- Legumes, pulses, and cereals as protein sources
- Plant protein extraction and processing

- Meat analogs: soy, pea, lentil innovations
- Packaging and shelf-life techniques
- Plant-based dairy alternatives
- **Case Study:** Oatly’s Global Expansion Strategy

Module 4: Cultured and Lab-Grown Meat

- Tissue engineering basics
- Bioreactors and scaling solutions
- Ethical and regulatory considerations
- Public perception and marketing
- Future outlook of lab-grown meat
- **Case Study:** Memphis Meats Technology Roadmap

Module 5: Algae and Fungal Proteins

- Spirulina, chlorella, and mycoproteins
- Cultivation techniques and input management
- Environmental benefits and CO2 capture
- Food and feed applications
- Market potential of microalgae
- **Case Study:** Quorn Foods – Mycoprotein in Retail

Module 6: Food Safety and Regulation

- HACCP and GMP in alternative protein production
- National vs. international regulations
- Allergen labeling and consumer rights
- Import/export considerations
- Ensuring traceability and quality control
- **Case Study:** EU Novel Food Regulations and Insects

Module 7: Environmental Impact Assessment

- Emission comparisons: traditional vs. alt-proteins
- Water and land use analysis
- Circular economy applications
- Waste management in production
- LCA tools and reporting
- **Case Study:** FAO Reports on Livestock vs. Insect Farming

Module 8: Nutrition and Health Perspectives

- Digestibility and amino acid profile
- Micronutrient fortification
- Risks: allergens, anti-nutrients
- Consumer health awareness campaigns
- Diet trends: vegan, flexitarian, keto
- **Case Study:** Harvard Study on Plant-Based Diet Benefits

Module 9: Business Models and Startups

- Lean canvas for protein startups
- Funding sources and venture capital
- Revenue models in B2B and B2C
- Licensing and franchising

- Cost control and ROI
- **Case Study:** Eat Just – Scaling Plant Eggs Globally

Module 10: Value Chain Development

- Input suppliers to end markets
- Logistics and cold chain integration
- Value addition and branding
- Inclusive participation: women and youth
- Export opportunities
- **Case Study:** Kenya's Insect Value Chain for Feed

Module 11: Consumer Psychology and Market Trends

- Behavioral economics in food choice
- Tackling the "yuck factor"
- Influencer and digital marketing
- E-commerce for alternative proteins
- Market segmentation and targeting
- **Case Study:** Impossible Foods' Consumer Rebranding

Module 12: Investment and Financing

- Public-private partnerships
- Financial modeling and risk analysis
- Impact investing in agri-food
- Pitching to investors
- Government incentives and policies
- **Case Study:** AgFunder Investment Trends Report

Module 13: Policy and Advocacy

- Creating enabling policy environments
- Lobbying and stakeholder engagement
- Public-private dialogues
- Incentives for innovators
- Regional and international partnerships
- **Case Study:** African Union Agenda 2063 and Food Innovation

Module 14: Gender and Youth Inclusion

- Empowering women in protein innovation
- Youth-led tech startups
- Capacity building programs
- Access to land and capital
- Gender-sensitive programming
- **Case Study:** Akhila Farms: Women-led Cricket Farming in India

Module 15: Digital Tools and Smart Farming

- IoT in production and traceability
- Data-driven decision-making
- Blockchain for supply chains
- Mobile apps for farmer support
- Remote sensing and precision farming
- **Case Study:** Inseco: AI in Insect Farming (South Africa)

Training Methodology

- Interactive lectures and multimedia presentations
- Hands-on practical sessions and live demos
- Real-world case studies and business simulation
- Group discussions and networking events
- Quizzes, assignments, and certification assessments

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
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

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

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

Register Online Now

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