Training Course on Cold Chain Management and Logistics for Agricultural Products

Professional Development Training Course Outline

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

Course Introduction

Training Course on Cold Chain Management and Logistics for Agricultural Products is designed to equip agribusiness stakeholders with practical, innovative, and sustainable strategies for preserving perishable agricultural commodities. With global demand for quality food safety rising, managing post-harvest losses through efficient cold chain logistics is vital for improving profitability, extending shelf life, and maintaining food quality. This course is tailored to support supply chain actors, logistics companies, government agencies, and producers to adopt state-of-the-art temperature-controlled storage, transport, and distribution solutions.

By focusing on supply chain optimization, energy-efficient refrigeration, traceability, and digital innovations, the course addresses the core challenges facing developing and developed agribusiness markets. Participants will gain knowledge on critical control points, risk mitigation, regulatory compliance, and integrated cold chain systems for various agricultural commodities. Real-world case studies and interactive modules ensure an engaging and applicable learning experience aligned with agricultural value chain efficiency and food security goals.

Programme Curriculum

Training Course on Cold Chain Management and Logistics for Agricultural Products

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Course Objectives

1. Understand fundamentals of cold chain systems in agriculture.
2. Identify temperature-sensitive agricultural products and their storage needs.
3. Analyze logistics and distribution strategies for perishables.
4. Explore cold storage technologies and refrigeration best practices.
5. Evaluate cold chain infrastructure gaps and solutions.
6. Implement real-time monitoring and IoT-based tracking systems.
7. Apply HACCP, GMP, and ISO standards in cold logistics.
8. Design cost-effective and energy-efficient cold chains.
9. Promote sustainability and green logistics in agriculture.
10. Examine case studies on post-harvest loss reduction.
11. Strengthen risk management and contingency planning.
12. Develop skills in route optimization and supply chain mapping.
13. Enhance decision-making using cold chain data analytics.

Target Audiences

1. Agribusiness professionals
2. Agricultural exporters/importers
3. Cold chain logistics companies
4. Smallholder farmer cooperatives
5. Food safety inspectors
6. Government agriculture officials
7. Agricultural researchers and consultants
8. Warehouse and transport managers

Course Duration: 10 days

Course Modules

Module 1: Introduction to Cold Chain Logistics

- Overview of cold chain systems
- Importance in agricultural sustainability
- Key components of a cold chain
- Impact on food quality and safety
- Temperature sensitivity of agricultural produce
- **Case Study:** Mango export cold chain in Kenya

Module 2: Agricultural Product Classification

- Categories of perishables
- Temperature requirements by product
- Classification for export standards
- Handling protocols
- Spoilage indicators
- **Case Study:** Chilled dairy distribution in India

Module 3: Cold Storage Infrastructure

- Types of cold storage (chillers, freezers, CA rooms)
- Site selection and layout design
- Maintenance and operations
- Power backup solutions
- Refrigerant safety and regulations
- **Case Study:** Modular storage success in Ethiopia

Module 4: Refrigerated Transport Systems

- Types of refrigerated vehicles
- Temperature mapping during transit
- Fuel efficiency strategies
- Last-mile cold transport
- Maintenance best practices
- **Case Study:** Fish cold transport in Norway

Module 5: Packaging and Handling

- Cold chain-compatible packaging materials
- Insulation techniques
- Labelling and coding standards
- Pre-cooling and packing procedures
- Damage and contamination control
- **Case Study:** Tomato crate handling in Mexico

Module 6: Cold Chain Technologies

- IoT-based tracking devices
- RFID and GPS for monitoring
- Wireless sensors and cloud platforms
- Automation in cold storage
- Digital inventory systems
- **Case Study:** IoT in banana export logistics

Module 7: Compliance and Standards

- HACCP principles in cold logistics
- ISO 22000 and food safety certification
- National and international transport laws
- Recordkeeping and documentation
- Traceability tools
- **Case Study:** EU compliance by Moroccan exporters

Module 8: Cold Chain Risk Management

- Identifying cold chain failure points
- Risk mitigation strategies
- Emergency protocols
- Risk communication and reporting
- Resilience planning
- **Case Study:** Supply chain disruption recovery in Brazil

Module 9: Cost and Efficiency Optimization

- Cost breakdown of cold chain logistics

- Energy-saving technologies
- Reducing product loss costs
- ROI of cold chain investments
- KPIs for performance evaluation
- **Case Study:** Solar cold rooms in rural Uganda

Module 10: Sustainability in Cold Chain

- Environmental impacts of refrigerants
- Green logistics practices
- Lifecycle assessments
- Carbon footprint reduction
- Eco-certifications
- **Case Study:** Green packaging innovation in Thailand

Module 11: Logistics and Distribution Planning

- Route optimization tools
- Fleet management strategies
- Scheduling for freshness
- Urban vs. rural distribution models
- Traffic and weather challenges
- **Case Study:** Flower export logistics from Ecuador

Module 12: Human Resource and Training

- Staff roles and responsibilities
- Training and certification needs
- Occupational safety in cold environments
- Behavior-based food safety
- Retention strategies
- **Case Study:** Workforce development in Philippines agrologistics

Module 13: Market Access and Trade Facilitation

- Export/import documentation
- Sanitary and phytosanitary measures
- Cold chain audit readiness
- Trade agreements and regulations
- Customs cold chain protocols
- **Case Study:** Avocado export to Europe from Peru

Module 14: Data and Analytics in Cold Chains

- Cold chain data points and KPIs
- Real-time data dashboards
- AI-driven predictive maintenance
- Quality control data analysis
- Decision-support systems
- **Case Study:** AI use in grape cold storage in Chile

Module 15: Innovations and Future Trends

- AI and machine learning applications
- Blockchain for food traceability
- Mobile cold storage solutions

- Robotics in warehouses
- Future of autonomous cold transport
- **Case Study:** Blockchain for vaccine cold chains in Ghana

Training Methodology

- Interactive lectures and multimedia presentations
- Group discussions and simulation exercises
- Practical site-based case analysis
- Hands-on demonstrations of cold chain equipment
- Expert guest lectures and panel sessions
- Pre and post-training 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
16 Nov 2026	27 Nov 2026	Online	$2,000
16 Nov 2026	27 Nov 2026	Physical	$3,000
16 Nov 2026	27 Nov 2026	Physical	$6,000

Start Date	End Date	Location	Price
16 Nov 2026	27 Nov 2026	Physical	$6,000
16 Nov 2026	27 Nov 2026	Physical	$12,000
16 Nov 2026	27 Nov 2026	Physical	$9,000
16 Nov 2026	27 Nov 2026	Physical	$12,000
16 Nov 2026	27 Nov 2026	Physical	$12,000

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

Register Online Now

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