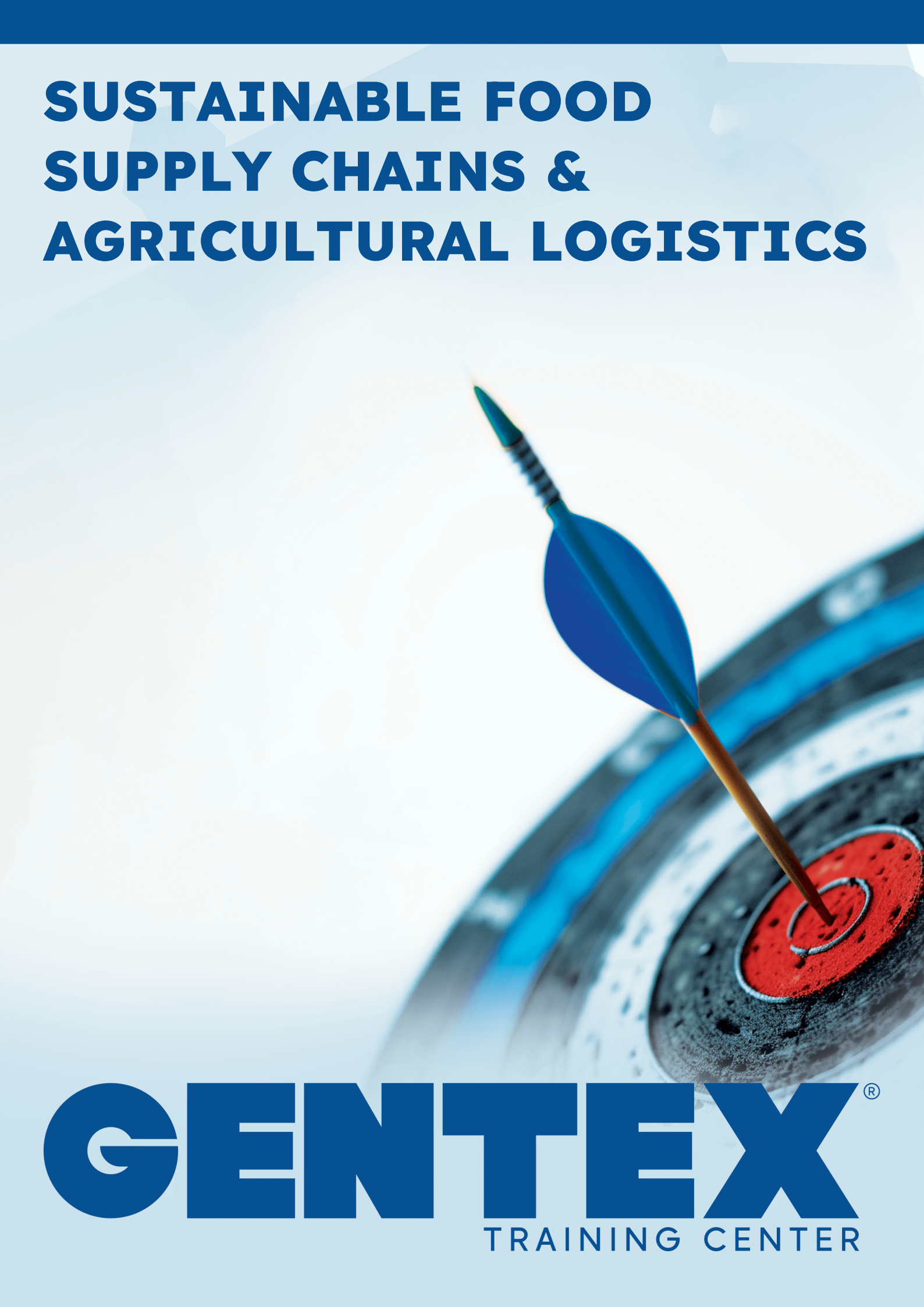
SUSTAINABLE FOOD SUPPLY CHAINS & AGRICULTURAL LOGISTICS



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Introduction

Food loses value the moment it leaves the field, and much of that loss is avoidable. Poor temperature control, slow handling, and fragmented transport turn a good harvest into waste before it reaches a shelf. Sustainability adds a second demand: less energy, less packaging, less loss. This Sustainable Food Supply Chains & Agricultural Logistics Training Course gives agri-food supply chain, logistics, and quality professionals a complete working method for both. Participants learn cold chain design, harvest and post-harvest handling, food safety compliance, distribution network planning, traceability, and loss and waste measurement.

Sustainable Food Supply Chains & Agricultural Logistics Course Objectives

- Apply food supply chain structures from farm to retail and food service.
- Design cold chain operations with temperature control and monitoring.
- Plan harvest logistics, collection centres, and primary handling.
- Apply food safety standards: HACCP, ISO 22000, and GLOBALG.A.P.
- Apply traceability and lot identification across the chain.
- Apply Codex Alimentarius and HACCP principles to distribution.
- Reduce food loss and waste with measurement and cause analysis.
- Apply packaging, palletisation, and handling practices for fresh produce.
- Apply sustainability measures: energy, water, and emissions reduction.
- Measure performance with shelf life, loss rate, and cost per case.

Course Methodology

- Facilitated sessions built on real cold chain records, loss data, and distribution plans.

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- Case workshops on temperature excursions, produce rejections, and recall events.
- Cold chain, shelf life, and loss calculation exercises with live data.
- HACCP and traceability documentation practice labs.
- Group exercise on a food supply chain sustainability and loss reduction plan.

Who Should Take This Course

- Food and agri-food supply chain managers.
- Cold chain and distribution supervisors.
- Quality, food safety, and compliance officers.
- Fresh produce procurement and category staff.
- Warehouse and transport operations staff.
- Sustainability and waste reduction officers.

Sustainable Food Supply Chains & Agricultural Logistics Course Outlines

Day 1: Agri-Food Supply Chain Structure

- Farm-to-fork chain: producers, aggregators, processors, and retailers.
- Fresh, chilled, frozen, and ambient product characteristics.
- Seasonality, harvest cycles, and supply variability.
- Market channels: retail, food service, export, and wholesale.
- Supply chain roles, margins, and value distribution.
- Food security, quality grades, and specification standards.
- Sustainability drivers: regulation, buyers, and consumers.

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Day 2: Cold Chain and Temperature Management

- Cold chain design from harvest to retail display.
- Refrigeration, chilling, and freezing technology basics.
- Temperature mapping and monitoring systems.
- Data loggers, alarms, and excursion investigation.
- Cold store operations, loading, and door discipline.
- Reefer transport and last-mile temperature control.
- Shelf life assessment and remaining-life calculation.

Day 3: Post-Harvest Handling and Packaging

- Harvest timing, maturity, and quality assessment.
- Grading, sorting, and packing operations.
- Pre-cooling methods and their applications.
- Packaging selection for protection and breathability.
- Palletisation, stacking, and unit load design.
- Handling damage causes and reduction methods.
- Labelling, lot coding, and traceability marking.

Day 4: Food Safety, Compliance, and Traceability

- HACCP principles and critical control point design.
- ISO 22000, GLOBALG.A.P., and retailer standards.
- Codex Alimentarius and international food standards.
- Hygiene, sanitation, and pest control requirements.
- Traceability systems and one-step-back-one-step-forward.

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- Recall and withdrawal procedures and mock recalls.
- Regulatory inspection and documentation readiness.

Day 5: Loss, Sustainability, and Performance

- Food loss and waste measurement methods.
- Causes of loss: temperature, handling, timing, and rejection.
- Redistribution, donation, and by-product routes.
- Energy, water, and emissions reduction in cold chains.
- Reverse logistics for returns, crates, and packaging.
- KPIs: loss rate, shelf life, on-time delivery, and cost per case.
- Building a food supply chain sustainability roadmap.

Conclusion

By successfully completing the Sustainable Food Supply Chains & Agricultural Logistics Training Course, participants will have acquired a thorough working knowledge of agri-food supply chain structures, cold chain design and temperature control, post-harvest handling and packaging, food safety and traceability compliance, food loss measurement and reduction, and sustainability performance management. They will leave able to protect product quality from farm to shelf, cut loss and waste with measured causes, and meet food safety obligations with documented evidence. Gentex Training Center delivers this programme with agri-food and cold chain practitioners working in live operations.

FAQs for the Sustainable Food Supply Chains & Agricultural Logistics course

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Q1 What is the "Sustainable Food Supply Chains & Agricultural Logistics" course about?

It is a five-day programme on moving food from farm to customer with quality, safety, and low loss. It covers agri-food chain structure, cold chain and temperature control, post-harvest handling, food safety and traceability, loss reduction, and sustainability performance.

Q2 What are the key benefits of the "Sustainable Food Supply Chains & Agricultural Logistics" course?

Participants protect product quality through correct cold chain and handling practice, cut food loss and waste with measured causes rather than guesswork, and meet food safety and traceability obligations with documented evidence. They also reduce energy and packaging cost while improving shelf life delivered to the customer.

Q3 What skills will I gain from the "Sustainable Food Supply Chains & Agricultural Logistics" course?

You will gain agri-food supply chain planning, cold chain design and temperature management, post-harvest handling, packaging, and traceability management, and food safety compliance, loss reduction, and sustainability performance management.

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Q4 What tools, methods, or standards are covered in the "Sustainable Food Supply Chains & Agricultural Logistics" course?

The course works with farm-to-fork chain mapping across producers, aggregators, processors and retailers, fresh, chilled, frozen and ambient product handling, seasonality and harvest cycle planning, retail, food service, export and wholesale channel analysis, quality grading and specification standards, cold chain design and refrigeration, chilling and freezing basics, temperature mapping and monitoring systems, data loggers, alarms and excursion investigation, cold store operations and door discipline, reefer transport and last-mile temperature control, shelf life and remaining-life calculation, harvest timing and maturity assessment, grading, sorting and packing operations, pre-cooling methods, packaging selection for protection and breathability, palletisation and unit load design, handling damage analysis, lot coding and traceability marking, HACCP principles and critical control point design, ISO 22000 and GLOBALG.A.P. standards, Codex Alimentarius requirements, hygiene, sanitation and pest control, one-step-back-one-step-forward traceability, recall and withdrawal procedures with mock recalls, food loss and waste measurement, loss cause analysis, redistribution and by-product routes, energy, water and emissions reduction in cold chains, reverse logistics for crates and packaging, and KPIs covering loss rate, shelf life, on-time delivery and cost per case.

Q5 How is the "Sustainable Food Supply Chains & Agricultural Logistics" course applied in real-world practice?

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Teams apply it when designing a cold chain for a new export line, investigating a temperature excursion on a chilled consignment, setting up a traceability and mock recall exercise, measuring loss at a packing house, planning pre-cooling for a harvest peak, and reviewing loss rate and cost per case at an operations review.