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COURSE BROCHURE

Regenerative Agriculture and Soil-Carbon Strategy Training Course

19 – 23 September 2027
Muscat

Regenerative Agriculture and Soil-Carbon Strategy Training Course

Ref: 1548_57054 **Date:** 19 – 23 September 2027 **Location:** Muscat **Fees:** 6500 GBP

Regenerative Agriculture and Soil-Carbon Strategy is a 1-week training course for agribusiness managers, farm operations leaders and sustainability officers who need to turn soil health ambitions into a measurable soil-carbon strategy with monitoring and verification steps. Buyers, lenders and food processors now ask growers to evidence carbon gains in the field, and AI-assisted remote sensing makes that evidence affordable at scale. Jupiter Prime Training delivers this course for leaders shaping that transition.

Why Regenerative Agriculture and Soil-Carbon Strategy Matters Now

Three forces are reshaping farm decisions: food companies setting supply-chain emission targets, carbon markets paying for verified soil organic carbon gains, and satellite and sensor data that let managers observe cover, moisture and biomass field by field. Farms that plan practice changes carefully can build drought resilience, protect yields and open new revenue, while poorly evidenced claims lose buyer trust. Where AI models drive measurement, the course draws on the NIST AI Risk Management Framework NIST AI RMF and ISO/IEC 42001, the AI management system standard, to keep model outputs traceable.

Who Gains Most from Regenerative Agriculture and Soil-Carbon Strategy

- Farm operations leaders who choose tillage, rotation, grazing and cover-crop practices across holdings
- Agronomy leads who interpret soil sampling, yield maps and field trial results
- Sustainability officers who report Scope 3 farm emissions to buyers and investors
- Agribusiness managers who weigh the economics of practice change and carbon revenue
- Data and agritech specialists who run remote sensing and farm data platforms

Agribusiness groups gain most when operations, agronomy and sustainability colleagues attend together, because a soil-carbon plan only holds when field practice, sampling design and reporting share one baseline.

Regenerative Agriculture and Soil-Carbon Strategy Capabilities

Participants leave able to link field practice, soil chemistry and satellite evidence into one credible carbon case.

- Assess soil organic carbon baselines from sampling and remote sensing — the decision on which fields to enrol
- Design a regenerative practice mix per field zone — agronomy and operations leaders
- Weigh yield risk against carbon and resilience gains during transition — finance and farm owners
- Specify a monitoring, reporting and verification approach — buyers and carbon registries

- Test AI crop and biomass models for bias and drift — data owners and auditors
- Communicate the soil-carbon business case — boards, lenders and food buyers

Key Regenerative Agriculture and Soil-Carbon Strategy Terms

- Soil organic carbon — carbon held in decomposed plant and microbial matter in soil, measured as a percentage or stock per hectare.
- Regenerative agriculture — farming practices that rebuild soil structure, biodiversity and water retention, such as cover crops and reduced tillage.
- Carbon sequestration — the transfer of atmospheric carbon dioxide into long-lived soil or plant stores through photosynthesis and root growth.
- MRV — monitoring, reporting and verification, the evidence chain that proves claimed carbon changes to a buyer or registry.
- Additionality — the test that a carbon gain would not have happened without the funded practice change.
- NDVI — normalised difference vegetation index, a satellite measure of green plant cover used to track crop vigour and cover.

Regenerative Agriculture and Soil-Carbon Strategy Day by Day

Day 1: Soil Carbon and Market Forces

- Soil Carbon Cycle Fundamentals — Why Practice Change Moves Carbon Stocks
- Supply-Chain Emission Targets — Buyer Demands on Growers and Processors
- Carbon Credit and Insetting Models — Choosing a Revenue Route
- Climate Resilience and Water Retention — Drought Exposure Across Holdings
- Stakeholder Mapping for Farm Transition — Owners, Lenders, Buyers and Workers

Day 2: Measuring Soil Organic Carbon

- Stratified Soil Sampling Design — Sample Density and Field Zoning
- Bulk Density and Carbon Stock Calculation — Converting Lab Results to Tonnes
- Baseline Setting and Permanence — Defining the Starting Point
- Laboratory and Spectroscopy Methods — Cost Against Precision
- Uncertainty Ranges in Carbon Estimates — What Buyers Will Accept

Day 3: AI-Assisted Remote Sensing and Yield Data

- Satellite Imagery and NDVI Time Series — Tracking Cover and Biomass
- Machine Learning Soil Carbon Models — Scaling Samples to Whole Farms
- Yield Map and Machinery Data Cleaning — Linking Practice to Output
- NIST AI RMF Model Risk Checks — Bias, Drift and Traceability
- Farm Data Platforms and Ownership — Access Rights for Shared Datasets

Day 4: Regenerative Practice Planning

- Cover Crop and Rotation Design — Matching Species to Soil and Climate
- Reduced Tillage and Residue Retention — Machinery and Timing Choices
- Adaptive Grazing and Livestock Integration — Stocking Rates and Recovery
- Transition Economics and Yield Dip Modelling — Cash Flow Across Seasons
- Biodiversity and Water Co-Benefits — Building a Wider Value Case

Day 5: Practising the Soil-Carbon Strategy

- Field Zoning and Enrolment Choice — Applying Day 2 Sampling Results
- Remote Sensing Evidence Pack — Applying Day 3 Imagery and Models
- Practice Change Schedule by Season — Applying Day 4 Planning Choices
- MRV Protocol and Verification Steps — Readiness for Buyer Audit
- Soil-Carbon Strategy and Monitoring Plan — Final Plan for Leadership Sign-Off

Applying Regenerative Agriculture and Soil-Carbon Strategy After the Course

- Lead a stratified sampling round on two pilot fields to set a soil organic carbon baseline with stated uncertainty.
- Run an NDVI time-series review of cover crop performance and present enrolment choices for the next season.

Regenerative Agriculture and Soil-Carbon Strategy Questions FAQ

What is regenerative agriculture and soil-carbon strategy, and why does it matter now?

It is the planned use of soil-building practices with measured carbon outcomes. It matters now because food buyers and carbon markets reward verified soil gains, and satellite and AI tools make measuring them across whole farms practical and affordable.

Which roles gain most from regenerative agriculture and soil-carbon strategy?

Farm operations leaders, agronomy leads, sustainability officers and agribusiness managers gain most. Each owns part of the chain from field practice to verified claim, so shared methods keep sampling, reporting and investment decisions consistent.

How does regenerative agriculture and soil-carbon strategy differ from a general carbon accounting course?

It focuses on the farm field rather than corporate emissions inventories. You work with sampling designs, remote sensing models and practice economics, while a general carbon accounting course centres on company-wide emission factors and disclosure.

What do you bring back from regenerative agriculture and soil-carbon strategy training?

You bring back a field-zoned plan linking practice changes, carbon baselines and verification steps. It gives leadership a clear basis for enrolling fields, budgeting the transition and answering buyer evidence requests.

Regenerative Agriculture and Soil-Carbon Strategy: The Way Forward

The soil-carbon strategy and monitoring plan first informs which fields enter the transition and in what order. Operations leaders use it to schedule practices, sustainability officers to answer buyers, and finance teams to budget the yield dip. After the first sampling season, revisit the uncertainty ranges and model accuracy, since better baselines can change both enrolment choices and the carbon revenue route.