



Afforestation and Native Plant Nursery Management Course: Seed Banks, Propagation and Survival



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Introduction:

Afforestation and native plant nursery management, covering seed banks, propagation and survival, is a 5-day course for afforestation, nursery and municipal greening teams that ends with a Nursery Production and Planting Plan for a case organisation. Mass tree planting targets are often missed because seed is collected from the wrong provenance, nurseries produce the wrong stock at the wrong time and seedlings are outplanted unhardened, so survival collapses after planting. Nominees already supervise nursery or planting operations and learn through a nursery and planting site inspection walkthrough. CoreConcept Training Center delivers this afforestation and native plant nursery management course.

Course Objectives:

- Translate an afforestation target into species, provenance, seedling numbers and nursery capacity requirements
- Organise native seed collection, cleaning, storage and germination testing so that every seed lot is traceable and viable
- Plan nursery production schedules, containers, growing media and propagation methods that deliver stock for the planting window
- Harden and grade seedlings against height, root-collar diameter and root form criteria before dispatch
- Coordinate site preparation, seedling transport and planting crews to reduce losses between nursery and field
- Design survival and growth monitoring plots, mortality cause records and a simple carbon stock estimate

Target Audience:

- Programme units responsible for afforestation and urban greening targets
 - Nursery management teams responsible for native seedling production and seed stores
 - Municipal greening units responsible for roadside, park-edge and peri-urban tree planting
 - Environment agency field units responsible for planting supervision and survival reporting
 - Contractor and consultancy teams responsible for delivering and monitoring tree planting contracts
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Course Outline:

Day 1: Afforestation Targets, Native Species and Provenance Assessment

- Afforestation Target Breakdown Into Species, Hectares and Seedling Numbers
- Native Species Selection Matrix by Climate, Soil and Rainfall
- Seed Zone and Provenance Mapping for Local Adaptation
- Mixed-Species Planting Design Versus Monoculture Blocks
- Nursery Capacity Baseline Audit of Beds, Shade and Water

Day 2: Seed Collection, Seed Bank Handling and Germination Methods

- Mother Tree Register and Seed Collection Field Protocol
- Seed Cleaning, Drying and Moisture Content Testing
- Orthodox and Recalcitrant Seed Storage Rules
- Germination and Viability Testing With Tetrazolium and Cut Tests
- Dormancy Breaking by Scarification, Soaking and Stratification

Day 3: Nursery Production Planning, Containers and Propagation

- Nursery Production Schedule Working Back From Planting Window
- Container Type, Volume and Air-Pruning Tray Selection
- Growing Media Mixes, Sowing Density and Pricking Out
- Vegetative Propagation by Cuttings, Grafting and Division
- Hardening Off Regime With Reduced Watering and Full Sun

Day 4: Outplanting Risks, Survival Failures and Carbon Estimation

- Planting Site Preparation by Ripping, Mounding and Planting Pits
- Dispatch Grading by Height, Root-Collar Diameter and Root Form
- Seedling Transport, Field Storage and Planting Crew Logistics
- Survival Plot Monitoring With Mortality Cause Codes
- Tree Biomass Allometry for Simple Carbon Stock Estimation

Day 5: Inspection Walkthrough and the Nursery Production and Planting Plan

- Case Nursery Walkthrough Using a Stock Quality Scoring Sheet
 - Case Seed Lot Records and Germination Results Review
 - Case Production Schedule and Seedling Numbers by Species
 - Case Planting Logistics and Survival Monitoring Design
 - Nursery Production and Planting Plan Completion and Peer Review
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Skills You Will Gain:

- Native Species Selection
- Provenance Planning
- Seed Lot Management
- Germination Testing
- Nursery Production Scheduling
- Seedling Quality Grading
- Planting Logistics Coordination
- Survival Monitoring Design

Why Attend This Course:

- Deliver a Nursery Production and Planting Plan to the afforestation programme manager and the nursery operations lead
- Decide which species, seed sources and stock types to produce for each planting site and season
- Avoid seedling surpluses, wasted seed and first-season planting losses caused by poor timing and unhardened stock
- Share seed lot record sheets, grading checklists and survival plot forms with nursery and field colleagues

Conclusion:

Back at work, the participant gives the afforestation programme manager and the nursery operations lead a Nursery Production and Planting Plan that sets species and provenance choices, seed requirements, sowing and hardening dates, seedling numbers per site, planting logistics and the survival monitoring design. Managers use it to approve nursery budgets, order seed collection, schedule planting crews and agree reporting with funders or partners. After the first planting season, the unit should compare survival plot results, mortality causes and stock grades with the plan and adjust species, stock types and timing.

Frequently Asked Questions FAQ:

What should participants know before the afforestation and native plant nursery management course?

Participants should already work in a nursery, planting programme or greening unit and understand basic plant growth. No forestry degree is expected. Bringing seed records, nursery stock lists or planting reports from their own organisation helps them apply the walkthrough and case work.

How does afforestation and native plant nursery management differ from a land restoration or landscape maintenance course?

It covers producing and planting native trees at scale: seed, nursery stock, hardening, outplanting and survival. Restoration courses address degradation drivers, grazing and dunes, while landscape courses address parks, turf, irrigation contracts and ornamental upkeep.

Why does seedling hardening matter in afforestation and native plant nursery management?

Hardening prepares nursery seedlings for heat, wind and limited water after planting. Gradually reducing watering and shade toughens tissues and slows shoot growth, so hardened stock with a balanced root system survives outplanting far better than soft, fast-grown seedlings.

What do participants take back from the afforestation and native plant nursery management course?

Participants take back a Nursery Production and Planting Plan for a case organisation, with a species and provenance matrix, seed requirements, a production schedule, a grading checklist, planting logistics and a survival monitoring design, ready to adapt to their own programme.