CORE CONCEPT

Seed Production, Testing and Certification Course: Seed Multiplication and Lot Quality

17 – 21 May 2027
London - Central London four-star

Seed Production, Testing and Certification Course: Seed Multiplication and Lot Quality

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Introduction:

Seed production, testing and certification, covering seed multiplication and lot quality, is a 1-week course for seed company production units, research station seed units, seed laboratories and certification services, ending with a Seed Lot Quality Assurance and Certification Plan for a case seed enterprise. Seed lots are rejected when generation records break, isolation fails, conditioning damages seed or test results arrive too late. Nominees already supervise seed crops, conditioning lines or laboratory analysis, and teaching is by inspection walkthrough of seed fields, conditioning plants and laboratories. CoreConcept Training Center delivers this seed production, testing and certification course.

Course Objectives:

- Plan seed multiplication from breeder seed through pre-basic, basic and certified generations while protecting varietal identity and genetic purity
- Inspect seed crops for isolation, off-types, volunteer plants and weed contamination, and record field decisions that support certification
- Set conditioning, drying, treatment and storage parameters that hold germination and vigour from harvest to dispatch
- Draw representative seed lot samples and run purity, germination, moisture, tetrazolium, vigour and seed health tests under the ISTA International Rules for Seed Testing
- Operate varietal certification under the OECD Seed Schemes, including post-control plots, official labels, sealing and seed lot traceability
- Prepare a Seed Lot Quality Assurance and Certification Plan that links field, plant and laboratory controls for a case seed enterprise

Target Audience:

- Seed production managers responsible for contract growers, multiplication fields and seed yield targets
- Quality assurance leads responsible for seed lot release, customer complaints and quality records
- Research station seed units responsible for variety maintenance and early generation seed stocks
- Seed laboratory heads responsible for testing methods, analyst competence and result reporting
- Certification service supervisors responsible for field inspection, sampling, labelling and sealing of seed lots
- Conditioning plant and seed store managers responsible for cleaning lines, seed treatment and storage conditions

Course Outline:

Day 1: Seed Systems, Variety Maintenance and Generation Control

- Formal and Informal Seed System Roles and Value Chain
- DUS Characteristics and Variety Description for Maintenance Breeding
- Breeder, Pre-Basic, Basic and Certified Seed Generation Map
- Seed Multiplication Ratio and Generation Planning Worksheet
- Seed Enterprise Quality Baseline Using Lot Rejection Records

Day 2: ISTA Rules, OECD Seed Schemes and Quality Standards

- ISTA International Rules for Seed Testing Structure and Use
- ISTA Laboratory Accreditation and International Seed Analysis Certificates
- OECD Seed Schemes Crop Groups and Seed Categories
- OECD Field Standards for Isolation, Off-Types and Varietal Purity
- Quality Declared Seed as a Lighter Assurance Route

Day 3: Seed Crop Inspection, Conditioning and Seed Lot Sampling

- Seed Crop Field Inspection Counts and Off-Type Scoring
- Rogueing Schedule for Off-Types, Volunteers and Noxious Weeds
- Air-Screen Cleaner, Indent Cylinder and Gravity Table Settings
- Seed Drying Curves, Treatment Coating and Storage Moisture Targets
- ISTA Seed Lot Sampling Intensity and Composite Sample Reduction

Day 4: Laboratory Testing, Lot Failures and Traceability Controls

- Purity Analysis Separating Pure Seed, Other Seeds and Inert Matter
- Germination Test Substrates, Counts and Abnormal Seedling Evaluation
- Tetrazolium Viability, Vigour and Seed Moisture Test Interpretation
- Seed Health Testing for Seed-Borne Pathogens and Treatment Checks
- Post-Control Plots, Official Labels and Lot Traceability Records

Day 5: Inspection Walkthrough and the Seed Lot Quality Assurance Plan

- Case Seed Field Walkthrough With Isolation and Rogueing Records
- Case Conditioning Plant Walkthrough With Damage and Loss Checks
- Case Laboratory Bench Review of Germination and Purity Results
- Case Lot Release Decision With Label and Certificate Review
- Seed Lot Quality Assurance and Certification Plan Completion

Skills You Will Gain:

- Generation Scheme Planning
- Seed Crop Inspection
- Off-Type Identification
- Seed Conditioning Control
- Seed Lot Sampling
- Germination and Vigour Evaluation
- Seed Health Assessment
- Lot Traceability Management

Why Attend This Course:

- Deliver a Seed Lot Quality Assurance and Certification Plan to the seed operations director, the quality manager and the certification lead
- Decide whether a seed crop, a conditioned lot or a laboratory result supports release, reconditioning, downgrading or rejection
- Avoid rejected lots, lost generations, customer germination complaints and storage losses caused by weak field and plant controls
- Coach field inspectors, plant operators and analysts on rogueing records, sampling intensity and germination evaluation

Conclusion:

Back at work, the participant presents the Seed Lot Quality Assurance and Certification Plan to the seed operations director, the quality manager and the certification lead. They use it to approve the generation scheme, set field inspection and rogueing routines, fix conditioning and storage parameters and agree which laboratory results release a lot for sale. After the first season under the plan, the unit should compare field rejections, conditioning losses, germination results and complaints with the plan targets and revise the weakest control.

Frequently Asked Questions FAQ:

What should participants know before a seed production, testing and certification course?

Participants should already supervise seed crops, conditioning lines, seed stores or laboratory testing and understand basic crop agronomy. Bringing anonymised field inspection sheets, lot test reports or generation records helps them apply the walkthroughs and the final plan to their own seed operation.

How does seed production, testing and certification differ from a tree nursery or plant quarantine course?

It concentrates on producing crop seed lots of known variety and quality: generations, field inspection, conditioning, laboratory testing and varietal certification. Nursery courses raise seedlings for planting, and quarantine courses inspect consignments for regulated pests at borders.

Why does seed production, testing and certification depend on generation control?

Generation control keeps each lot traceable to its breeder seed, so varietal identity and purity can be proven. Without it, off-types and mixtures build up with each multiplication cycle and no laboratory test can restore the lost genetic purity.

What do participants take back from the seed production, testing and certification course?

Participants take back a Seed Lot Quality Assurance and Certification Plan for a case seed enterprise, with a generation map, field inspection checklist, conditioning parameters, sampling plan, test schedule and lot release rules they can adapt to their own work.