

Advanced Molecular Breeding and Plant Protection Technologies, SLU, Alnarp | 23–27 June 2025

Aim: Build capacity in innovative breeding & plant protection tools for Breedtech partner institutions.

Key Topics:

- Spray-Induced Gene Silencing (SIGS)
- CRISPR-based genome editing
- Phenomics & stress resilience assessment
- Genomic selection & predictive breeding
- Nanocarrier technologies for RNA delivery

Format:

- 5-day course (lectures + labs + field visit)
- Hands-on experiments & case studies
- Visit to Borgeby Fältdagar innovation fair
- Participants: 12 in-person + online attendees

Training in Action

Activities:

- Labs: SIGS experiments in potato, Nanoparticle encapsulation, CRISPR protoplast transformation & mutant screening, Physiological stress measurements
- Lectures & Discussions: Interactive sessions with experts
- Field Visit: Borgeby Fältdagar – innovation, digital tools & breeding demos
- Networking: Africa–Europe knowledge exchange

Feedback:

- Overall satisfaction: 9.8/10
- Trainers' expertise: 9.9/10
- Relevance to work: 9.5/10

Breedtech training in action



Lessons Learned & Way Forward

Lessons Learned / Issues:

- High value in combining theory + hands-on training
- Networking and peer learning enhanced outcomes
- Demand for more time on practicals (SIGS & CRISPR)
- Need for continued follow-up and local replication

Way Forward:

- Replicate modules at partner universities
- Develop short online modules for wider reach
- Strengthen Africa–Europe research collaborations
- Explore advanced topics: field SIGS, CRISPR crops, nanocarriers
