

NTIS list of 'Strategic Priorities'										(January 2023)									
Objectives										Organisations Involved									
										Forest Research	Conifer Co-op	Future Trees Trust	Oxford Uni	Kew Gardens	CEH	Seed Suppliers & Nurseries	Other Acedemia	NGOs	Sawmills
<b>1 Make improved seed available from a wide number of conifer and broadleaved species</b>																			
1.1 Continue to advance existing conifer and broadleaf tree breeding programmes										■									
1.2 Develop new breeding programmes for additional conifer and broadleaved species, including hybrids where appropriate										■									
1.3 Ensure supply of improved planting stock (seed orchard or VP) meets demand across the species										■									
1.4 Recommend best seed origins and sources for new emerging species										■									
<b>Purpose: Advance EXISTING breeding programmes and develop NEW ones for emerging species</b>																			
<b>2 Breeding for resilience and anticipated climate change</b>																			
2.1 Promote active resistance breeding programmes for ash and larch.										■									
2.2 Develop new programmes for disease resistance, drought tolerance etc as required										■									
2.3 Investigate, model and advise on the impacts of climate change for the selection of new seed sources										■									
<b>Purpose: Develop NEW breeding programmes in response to CLIMATE CHANGE and new threats.</b>																			
<b>3 Promote the planting of well adapted and improved planting stock</b>																			
3.1 The economic and carbon sequestration justification for planting genetically improved planting stock										■									
3.2 Establishment of 'Realised GainTrials' to demonstrate benefits of selected stock in the field										■									
3.3 Promote the use of improved timber as being fit for purpose										■									
3.4 Develop new 'Yield Models' for improved planting stock										■									
3.5 Up-date silvicultural advice for improved stock as appropriate										■									
3.6 Details of available improved seed for planting										■									
3.7 Report on societal impacts of tree breeding and improved planting stock										■									
<b>Purpose: Provide the economic and climate mitigating rationale for PLANTING IMPROVED STOCK</b>																			
<b>4 Investigate new traits and new approaches to further advance breeding programmes</b>																			
4.1 Develop economically viable tissue culture techniques for appropriate species										■									
4.2 Develop DNA technologies for QA and traceability purposes and to help with breeding of traditional and novel economic traits										■									
4.3 Advancement of flowering age and seed production efficacy in seed orchards										■									
4.4 Improvement of seed storage, germination and testing										■									
4.5 Breeding programmes for biomass, biofuel, cellulose, pulp, chemical components and herbivore pressure (e.g squirrels)										■									
4.6 Develop remote measuring of trees in field trials e.g. drones, LIDAR and other technologies.										■									
<b>Purpose: ACCELERATE the process and efficiency of TREE BREEDING for a variety of novel and traditional traits</b>																			
<b>5 Maintain good adaptation of planting stock and genetic diversity</b>																			
5.1 Develop methodology to measure and monitor genetic diversity of planting stock										■									
5.2 All breeding plans to include measures to retain genetic diversity for the future										■									
5.3 Active members of UK Forest Genetic Resources (UKFGR)										■									
5.4 Understand the use to society of non-commercial species in a non-woodland setting										■									
<b>Purpose: Ensure GENETIC DIVERSITY is retained for the benefit of ecosystems and as a future breeding resource</b>																			
<b>6 Good interactive infrastructure for all species subject to a breeding programme</b>																			
6.1 Web-based GIS-structured databases of all material selected, field trials, clone banks and seed orchards.										■									
6.2 Retain old experiments which may have a new, future value e.g new breeding characteristics, changing climate										■									
<b>Purpose: Ensure that RESEARCH is fully documented and WIDELY AVAILABLE</b>																			
<b>7 Review governance of tree breeding programmes</b>																			
7.1 Encourage partners to share IP as much as possible for the benefit of tree breeding promotion										■									
7.2 Lobby Government and industry to ensure funding is retained for tree breeding										■									
<b>Purpose: Ensure that BREEDING PROGRAMMES remain FUNDED, relevant, and cost effective.</b>																			
<b>8 Good communication of the benefits of tree breeding to public, government and stakeholders</b>																			
8.1 Keep website updated and appropriate use of social media										■									
8.2 Database of tree breeding literature and links to find more										■									
8.3 Contact with national and international professional organisations, NGOs and land-based government departments										■									
8.4 Advice on most suitable use of planting stock according to site										■									
8.5 Lobby government and sector on the benefits of planting genetically selected planting stock										■									
<b>Purpose: Provide RATIONAL for the work of NTIS, the benefits of IMPROVED planting stock and maintenance of GENETIC DIVERSITY</b>																			
<b>Key</b>																			
■										Indicates a particular involvement in this activity									
										All Steering Group members retain some interest across all activities.									