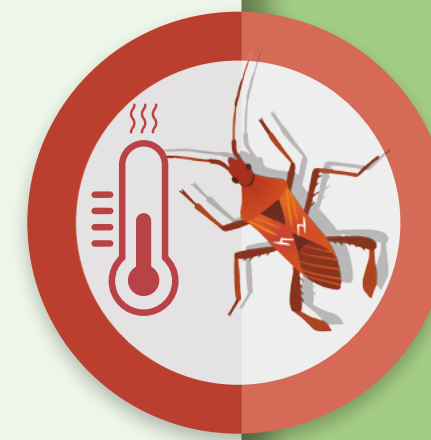


Key considerations in establishing and using clonal and seed orchards for forest reproductive materials

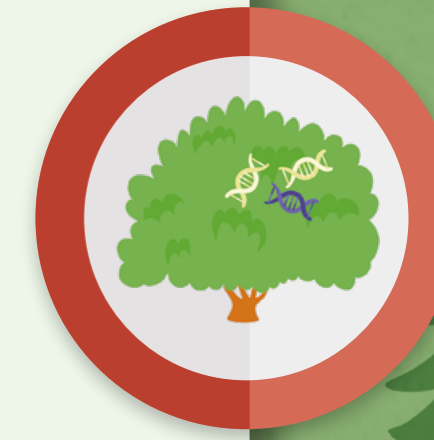
01 USE A BROAD GENETIC BASE TO PREPARE FOR CLIMATIC SHIFTS AND UNCERTAINTIES

Strong selection enhances desirable traits but reduces adaptive potential of seed orchard crops.



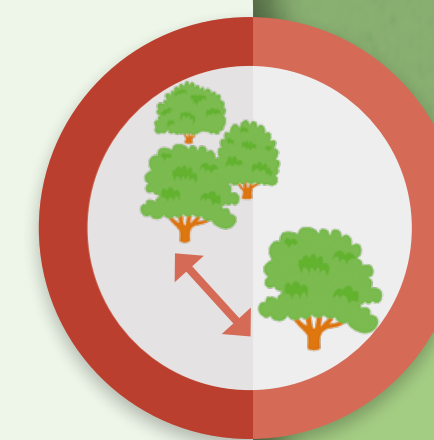
02 ENSURE BOTH GENETIC GAIN AND GENETIC DIVERSITY IN THE SEED ORCHARD

Keep the census population size between **50** to **100** genotypes.



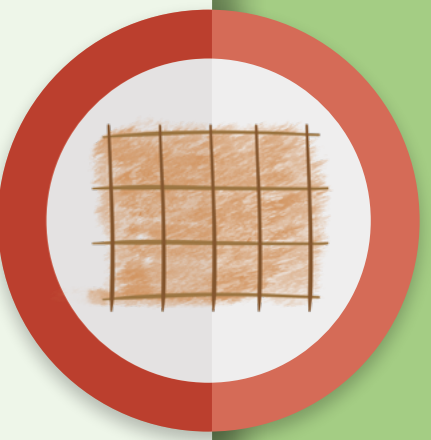
03 ISOLATE THE SEED ORCHARD FROM STANDS OR SEED ORCHARDS OF THE SAME SPECIES

Outside pollen can contaminate seed orchard crops.



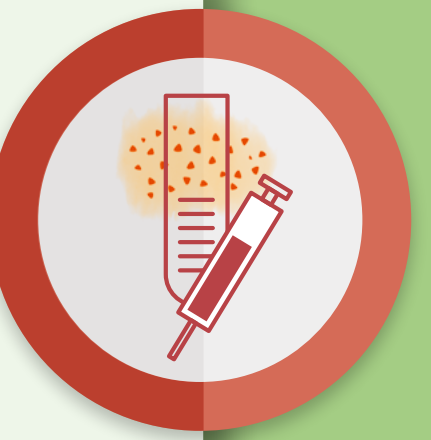
04 ARRANGE THE SEED ORCHARD CLONES IN A PATTERN

Avoid placing related clones close to each other to encourage outcrossing, increase viable seed yield, and reduce inbreeding.



05 USE INDUCTION TREATMENTS TO FAVOUR RANDOM MATING

Increases the number of flowering genotypes and thus the number of contributors to the seed lot.



06 DON'T ONLY HARVEST SEEDS FROM THE MOST PRODUCTIVE TREES

They are likely to belong to a limited number of genotypes.



07 MATCH THE ROTATION PERIOD OF THE TREE CROP

Longer rotation periods of the tree crop need more diversity in the seed crop to allow for adaptation to changing environments.



Conserve genetic diversity in clonal seed orchards by maintaining the proportion of clones and ramets per clone.