# FRST302: Forest Genetics

Lecture 4.1 - Accelerating Tree Improvement I

# Welcome to Module 4!

### Housekeeping

- Module test will be a mix of multiple choice and short answer questions
- The test questions will test your understanding of concepts and ask you to apply it
- Terminology will be covered on lecture slides
- Concepts will be covered in lectures
- If you are lost with the concepts or terminology make use of office hours, the Canvas Discussion board and ask questions in class!

#### Recap

 $\begin{tabular}{ll} \textbf{Module 1} Genes, Genomes and Sequencing \\ \end{tabular}$ 

Module 2 Population Genetics and Local Adaptation

Module 3 Quantitative Genetics and 20th Century Breeding

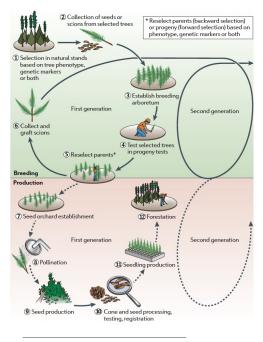
#### Recap

Module 1 Genes, Genomes and Sequencing

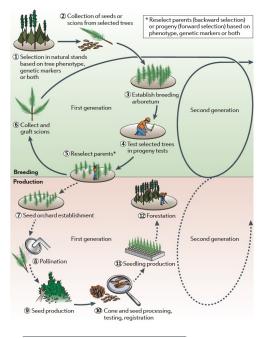
Module 2 Population Genetics and Local Adaptation

Module 3 Quantitative Genetics and 20th Century Breeding

Module 4 Advancing Forest Genetics with Recent Technology



# Conventional Tree Breeding

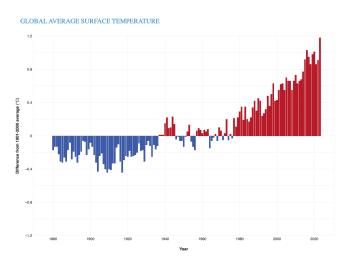


## Conventional Tree Breeding Each cycle takes from

20-30 years!

Image from Neale and Kremer 2011

### Can We Afford to Take That Long?



https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature - Hopefully the webpage still exists...

How could you advance tree breeding with what you learned in the last three modules?