

Historical Genetic and Tree Improvement Trials: An Untapped Resource That is Quickly Disappearing

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Federal, state, and tribal governments spent millions of dollars during the mid-late 20th-century to install and maintain thousands of genetic and tree improvement trials, including seed orchards, throughout the eastern U.S. Many of these plantings were established to study the genetic and phenotypic variation for hardwood and conifer tree species. As time progressed, many of these plantings have been abandoned or forgotten due to the retirement of key scientists, lack of funding, a shift in priority, the degradation or loss of plantings, or the loss of data. Though some plantings have been removed, many still exist along with accompanying data. This untapped resource is in demand by 21st-century scientists to help overcome challenges like the lack of seed availability, and decimation of forests due to pests and to address key questions about assisted migration of forests. Locating these plantings and their data is essential to restore the services that these studies were established to provide.

We were able to verify the existence of a list of historical plantings, by contacting affiliated scientists, using Google Earth Pro™, and visiting several universities and facilities to collect physical data. Across 18 states, we verified the existence of 1,172 plantings. Of this total, 466 plantings were verified to be alive, 261 had been removed, 5 were verified to be abandoned but alive, and 440 have been confirmed to be alive but without location information to verify. Out of the 1,172 plantings that have been confirmed, only 416 have accompanying datasets. To prevent data from becoming destroyed or lost, we plead for researchers to keep updated records, update successors on these historic plantings, and retain these datasets for future use. We also encourage researchers to standardize and share information for newer plantings to ensure the data can be used in the future.