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Certified Tree Seeds and Seedlings

Extension Circular 1050

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Why match the seedling source to the site?

Forest research and observations confirm that naturally established trees are, by their very existence in the area, adapted to their environment. Their genotypes have favorable survival and growth characteristics for that environment. The local trees leave the most viable offspring; thus, adapted characteristics are perpetuated.

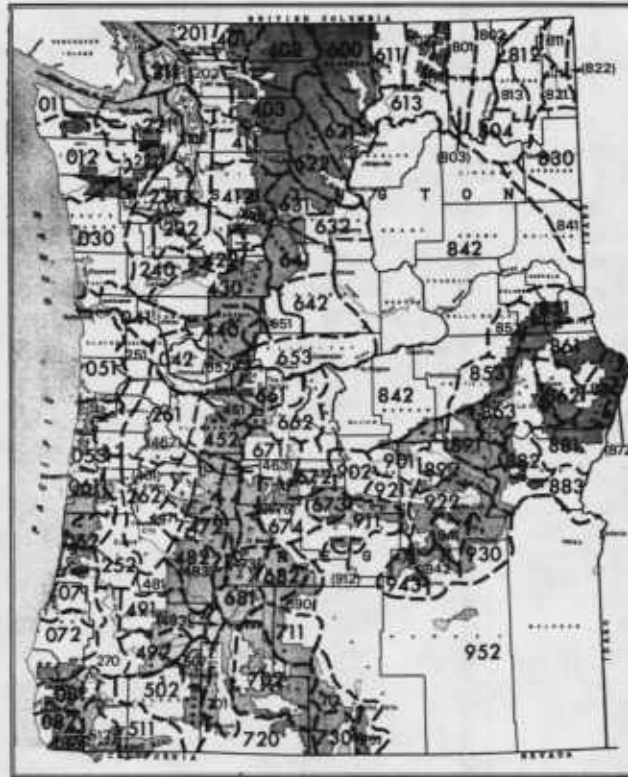
The seed source with the best general adaptations to a site is from the immediate vicinity of the area to be reforested. This "immediate vicinity" depends on the geographic location. Seed sources north or south of the planting area are sometimes considered "local," but it is still a risky business to use seed collected far from the intended growing location. Local seed source usually implies same drainage, same elevation, and in some cases the same aspect—sunny or shaded, windy or sheltered, level or steep slope. The more environmental conditions vary with distance, elevation, and aspect, the more restricted the meaning of local source.

Using seed or seedlings from a non-local source can lead to initial failure of seedlings to survive, plantation loss later in the rotation, or establishment of a less valuable crop. Off-site seedling stock may introduce genetically undesirable material through pollination of native trees by the off-site trees and establishment of reproduction from off-site parents. Forest land managers should insist on knowing the origin or source of the seed or seedlings they use in silvicultural operations.



Cones in storage should be labelled carefully. This is the first step in the identification chain for certified seedlings.

Tree Seed Zone Map



Western Forest Tree Seed Council

Why are seedlings certified?

Certified seedlings are grown from seed that has been harvested, extracted, stored, and sold in compliance with the Official Certification Standards of the legally appointed state certification agencies. In Oregon this is the Oregon State University Seed Certification Service. Production of source-identified class tree seedlings follows procedures carefully developed to assure that seed is of known geographic origin and elevation.

Certified seed is identified for origin by the Tree Seed Zone map illustrated. The zone boundaries separate areas of different physiographic and climatic conditions. Within each zone elevational bands of 500 feet are designated.

Why certify seedlings?

Forest tree seedling certification maintains the identity of the tree seed from the cone on the tree to

the plant in the ground. The certification agency follows these steps:

- With application for certification of seedlings, the agency will receive an identification of the lots of seed and the nursery location.
- Checks seed source for proper identification.
- Checks stratification procedures and maintenance of proper seed identification.
- Checks sowing procedures. Beds must be clearly marked and separated, with 3 feet between seed lots.
- Checks the nursery record system to assure an "unbroken chain" of identification. After seedlings are up, a "green tree count" or rough germination check will be performed.
- When the lot of trees is lifted, verifies that seals are affixed to the packages of trees for identification of the proper certification class.

How can you recognize certified seedlings?

All certified seedlings from Oregon or Washington, or those seedlings grown out of Oregon and Washington under certification standards, must be officially tagged and sealed with an official label stating in which class these seedlings are certified. All documentation should reflect this same certification identification.



Precision seeding entails many essentials, but none is more important than proper identification of each lot.



Continued identification through lifting operations is important. No one likes mixed lots or gambling at outplanting time.

Which level of assurance?

The certification program provides correct source identification by "levels of assurance." Six levels are designated, with the first three for special, genetically improved or selected seed. Most Northwest seedlings are sold by the following assurance levels:

- *Source Identification*—Each seed or seedling container is sealed and labeled by the certifying agency. The label is yellow, serially numbered, and clearly marked as to which certification class or sub-



Bags of source-identified seedlings awaiting outplanting. Certification assures you that what the label specifies is what you get.

class the material represents. Two source-identified classes are recognized:

- *Sub-class A*—Seedlings grown from seed that was collected under personally supervised conditions. This is the best choice for correct source identification.

- *Sub-class B*—Seedlings grown from seed collected under procedurally supervised conditions. This is a satisfactory class of source identification.

- *Audit*—Seedlings grown from seed for which the procedures, inventory, and sales records of the seed producer have been audited and found satisfactory. This means that the source identity of the seed corresponds with the inventory records when sold.

Prepared by Scott Wolff, seed certification assistant, Oregon State University Extension Service. Photos courtesy U.S. Forest Service, Bend Nursery.

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