



Barriers to Increased Tree Seedling Production in the **Pacific Northwest**



In 2019, Oregon and Washington produced **132.6 million seedlings**. That is enough to plant trees to cover roughly 387,000 acres of land. But it does not come close to meeting the need for seedlings. There are more than 3.2 million acres of land suitable for reforestation in these states, including many where the trees were destroyed by wildfires in 2020.

To better understand this challenge and then develop solutions, American Forests and The Nature Conservancy led a research team that **surveyed and interviewed public, private and tribal nurseries across the country, including 27 in Oregon and Washington, in 2020**. These 27 nurseries represent 50% of the two states' total seedling output. Key findings from the research are summarized in this document.

With investments from the public and private sectors over the next decade, **annual production in the region could nearly double**, to 246 million seedlings. Doing so will take time – four years for a bareroot nursery and up to three years for container nurseries – but will make it possible to plant trees on half of the acres in the region suitable for reforestation by 2040.

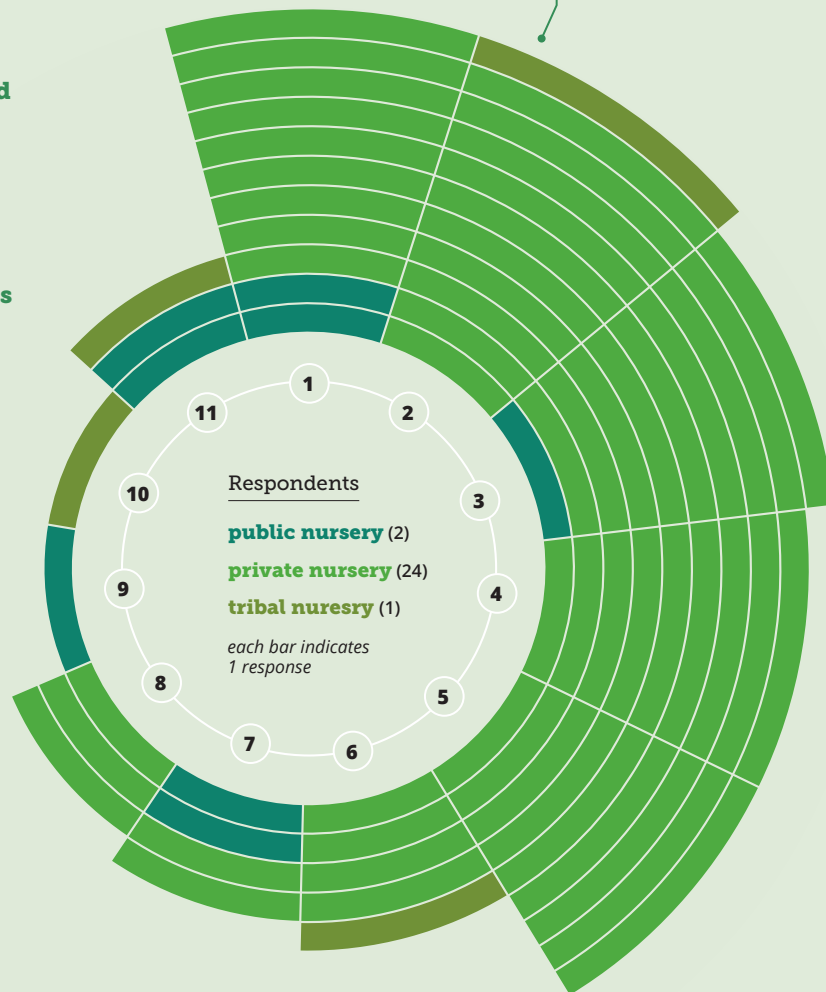




The Barriers

Factors Limiting Expansion of Production

- 1 **infrastructure**
- 2 **labor**
- 3 **lack of desire to expand**
- 4 **market**
- 5 **land**
- 6 **water**
- 7 **financing**
- 8 **transportation logistics to clients**
- 9 **regulations**
- 10 **seed quality**
- 11 **seed availability**



Systemic barriers need to be addressed in order to increase seedling production and reforestation activities.

For **public** and **tribal** nurseries surveyed, top concerns were (in order of importance) availability of funding for expanding production, regulatory compliance, labor regulations and procurement processes (which relate to the infrastructure and labor categories).

Among **private** nurseries surveyed, top concerns were (in order of importance) the need for contracts (and/or demand for seedlings) that are large and long enough to warrant expanded production, labor shortages (partly due to people retiring), access to water rights and land with suitable soils for bareroot seedling production, and lack of desire by current nursery management and/or ownership to expand.



Pacific Northwest

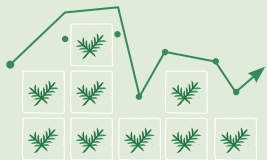
More Regional Context

Pacific Northwest nurseries struggle to provide seedlings for **post-wildfire reforestation.**

Nearly all reforestation needed as a result of the 2020 wildfires is in the West Cascades. From 242,000 to 324,000 acres of non-federal land in western Oregon — and well over 250,000 acres of federal land across both states — may require reforestation by either natural regeneration or planting. This would require significantly increasing regional seedling production over the next few years. Idled capacity at existing nurseries will not be able to fill this gap.

Seedling shortages are now likely for the next several years. Landowners may adapt by planting at lower densities or allowing natural regeneration where feasible.

MARCUS KAUFFMAN / OREGON DEPT. OF FORESTRY



Accurately **forecasting seedling demand** is a challenge.

Nurseries increasingly grow only what is called for in contracts, so as to limit risk. This has periodically resulted in an undersupply of seedlings — mainly affecting private, non-industrial landowners, who generally do not contract nurseries for large seedling orders.

The diversity of seed zones, elevation bands and species presents challenges to pinpointing how many seedlings to grow, especially in a post-wildfire context with public nurseries.



More information is available at americanforests.org/nurseries.

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