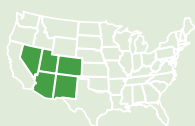




Barriers to Increased Tree Seedling Production in the Southwest



In 2019, states in the Southwest produced **800,000 seedlings**. That is enough to plant trees to cover only 1,500 acres of land. This does not come close to meeting the need for seedlings in a region with some of the greatest reforestation need. There are more than 12.3 million acres of land suitable for reforestation in the region, with hundreds of thousands more added by wildfires every summer.

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 seven in the Southwest, in 2020**. These seven nurseries represent 90% of the region's 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 increase more than five-fold, to at least 5 million seedlings a year in the near term**. Doing so will take time and resources, but it is an essential step to creating healthy and resilient forests in the region for this and future generations.

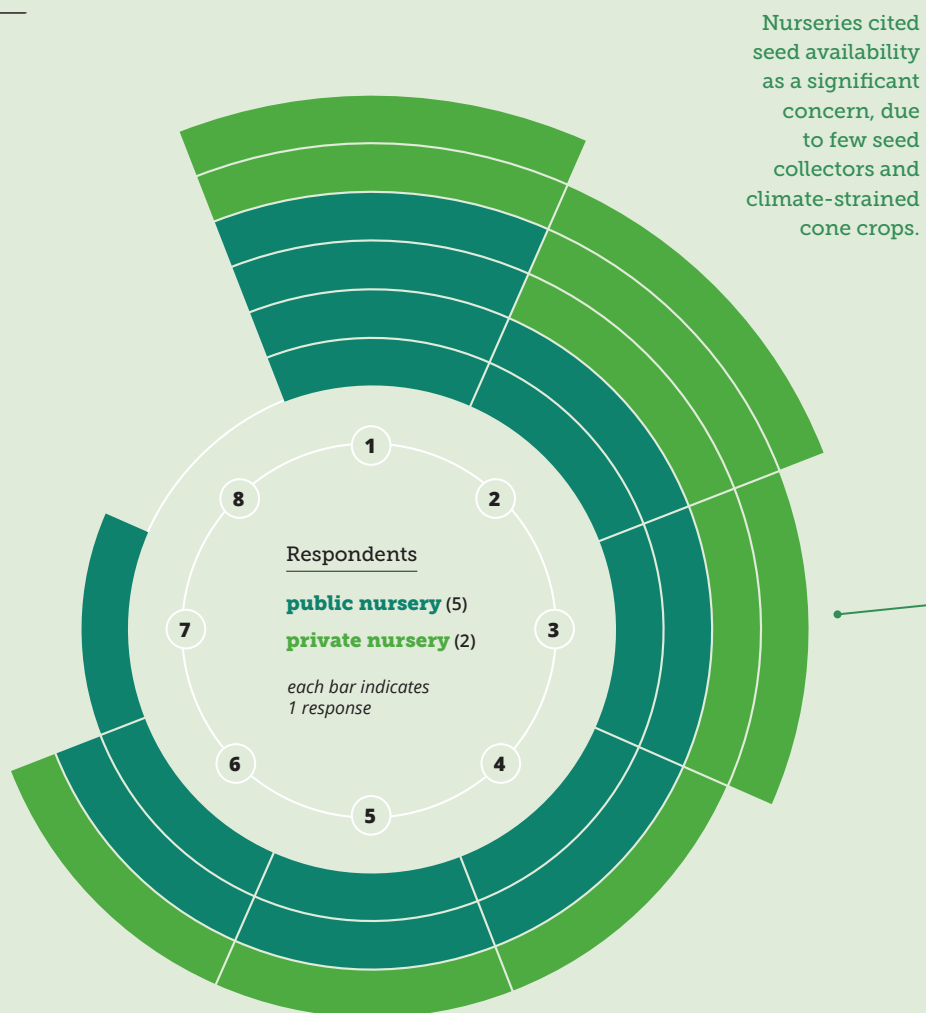




The Barriers

Factors Limiting Expansion of Production

- 1 **labor**
- 2 **market**
- 3 **seed availability**
- 4 **financing**
- 5 **infrastructure**
- 6 **water**
- 7 **land**
- 8 **regulations**



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

For **public** and **private** nurseries surveyed, top concerns were (in order of importance) difficulty securing labor (due to remote nursery locations and low pay relative to educational requirements), lack of consistent demand for seedlings and competition among nurseries.

Workforce issues extend beyond the nursery fence line. The lack of foresters to design and manage reforestation projects translates to a lack of sufficient seedling orders for nurseries. Outside of public lands, reforestation projects in the Southwest rely on a small number of overburdened extension foresters.



Southwest

More Regional Context

A lack of large reforestation projects is preventing nursery expansion.

A large number of nurseries have closed since the 1970s, and many that remain aren't producing at full capacity. Nurseries cannot boost seedling output without additional contract growing opportunities and ways to build a stable, long-term market for seedlings.

Public nurseries have specialized to produce low-cost seedlings for reforestation projects and actively avoid competing with private sector nurseries. Private-sector nurseries have an appetite for entering the market if there is demand, but are aware that public nurseries have economies of scale that would be difficult to match without major investments.



INGRID CURRY / SHUTTERSTOCK

There is an urgent need to **build seedbanks for southwestern tree species**.

Up to 80% of the region's seed currently comes from wild trees. Establishing seed orchards and climate-focused tree breeding programs is a major need.

Wildfires are burning seed collection areas and unique genotypes, and climate change is leading to fewer, smaller cone crops. Private seed collectors have difficulties obtaining permits to collect seed from U.S. Forest Service lands.

U.S. Forest Service seedbanks have ample supplies of seed from higher-elevation timber species, but seedbanks are virtually nonexistent for lower-elevation species and genotypes, and non-federal forests, in general. Non-federal nursery managers are often forced to ignore climate and use whatever seed is available. To expand production, state nursery managers would likely rely on cooperation with the U.S. Forest Service to drive seed collection efforts and save on costs, a promising partnership model that has been successful elsewhere.

There are very few seed collectors in the southwestern states, and most are on the verge of retirement.



More information is available at americanforests.org/nurseries.

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