



# **CHALLENGES TO OUR FUTURE TREE SEED SUPPLY**

June 22 – 27, 2022

Vancouver Island &  
Surrey, BC

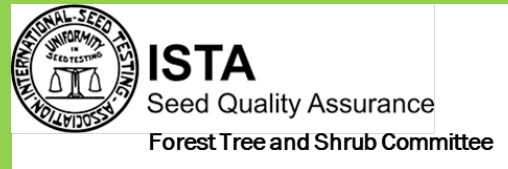
# Welcome to Challenges to our Future Tree Seed Supply

**Dave Kolotelo**

**Don Pigott**

**Melissa Spearing**

**Victoria Lei**



**Vernon Seed  
Orchard Company**



**The sustained availability of high quality and adapted seed**

**PNW CONIFERS**





**Not  
Forgotten**



# What are our Challenges ?

## Facility Closures

- BC: Retirement, death, reduced foreign seed market

## Rapid Succession

- Loss of practical wisdom , expertise, and field knowledge
- Lack of Interest/Motivation??? ***We are always a good news story!***

## Seed Services taken for granted

- Lack of understanding of our role in the reforestation system
- *“Operating behind the scenes, seed services are only noticed when the fail”*

## Lack of Research and Education (linked)

- Emphasis on newest technologies - dig deeper
- Picking the latest, sexiest tools rather than the most appropriate/efficient
- ***no funding, no research, no people, no teaching, no progress***

## Capital Investment

- Large investments required – different times – farm vs. industrial model





# TRILLION TREE CAMPAIGN



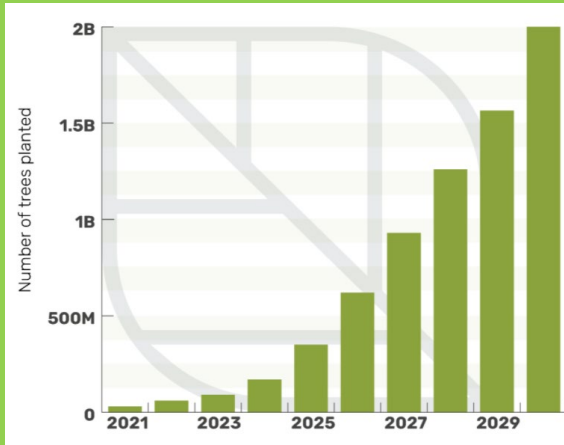
American Forests program  
to plant 100 million trees  
by 2030



THE GLOBAL  
PARTNERSHIP  
ON FOREST AND  
LANDSCAPE  
RESTORATION



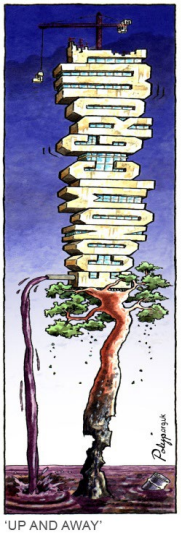
European Green Deal: Climate Neutral by 2050



# BIG PROMISES

Seed is often an afterthought

Do people think seed biology  
is immune to climate change?



## 2BILLION TREES

Planting today  
for a better tomorrow

#2BillionTrees

# afr100

TRILLION  
TREES









## Challenges to the Reforestation Pipeline in the United States

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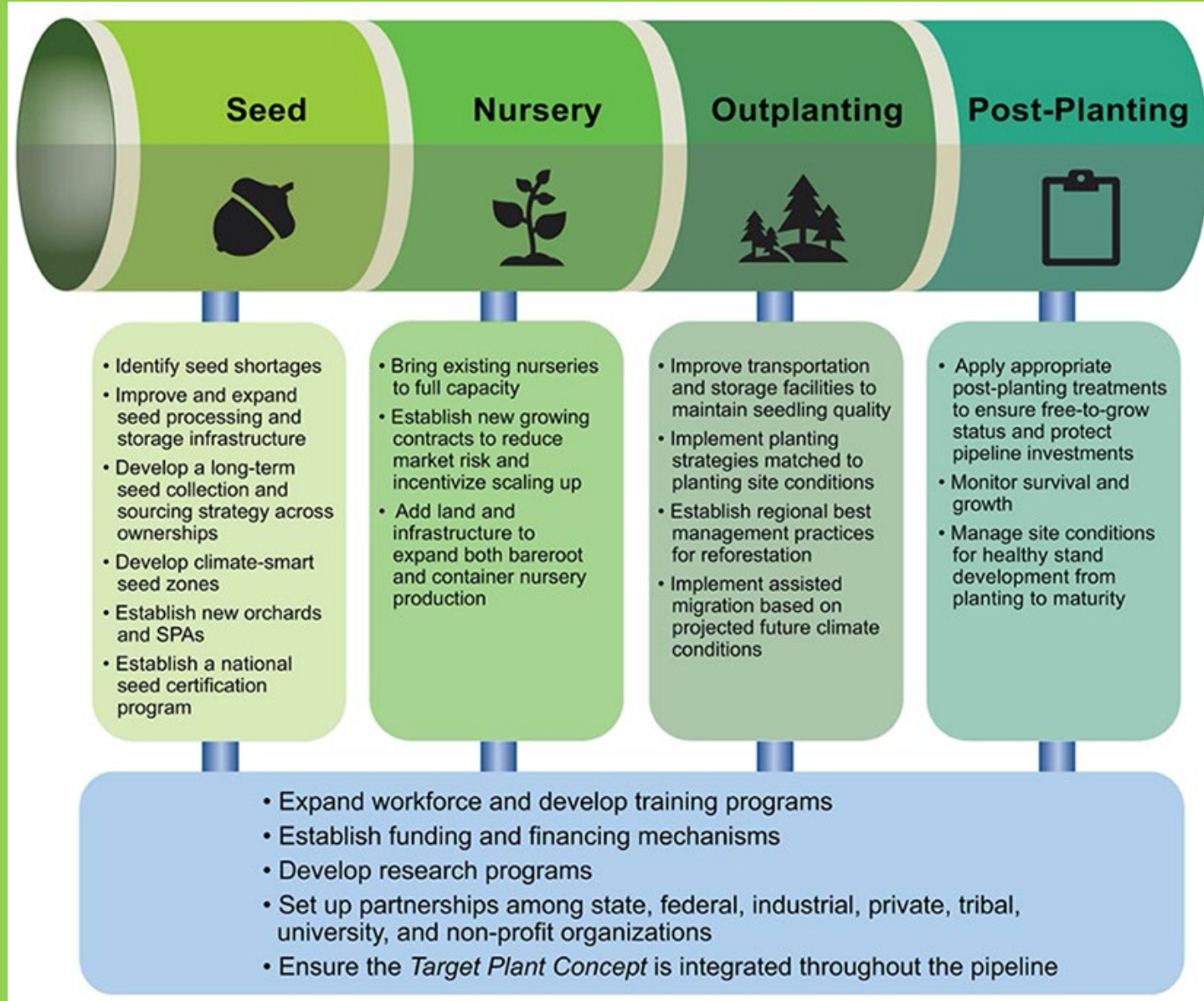
Fargione J, Haase DL, Burney OT,  
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Large-scale global reforestation goals have been proposed to help mitigate climate change and provide other ecosystem services. To explore reforestation potential in the United States, we used GIS analyses, surveys of nursery managers and foresters, and literature synthesis to assess the opportunities and challenges associated with meeting proposed reforestation goals. We considered a scenario where 26 million hectares (64 million acres) of natural and agricultural lands are reforested by 2040 with 30 billion trees at an estimated cost of \$33 (\$24–\$53) billion USD. Cost per hectare will vary by region, site conditions, and other factors. This scenario would require increasing the number of tree seedlings produced each year by 1.7 billion, a 2.3-fold increase over current nursery production levels. Additional investment (not included in the reforestation cost estimate) will be needed to expand capacity for seed collection, seedling production, workforce development, and improvements in pre- and post-planting practices. Achieving this scenario will require public support for investing in these activities and incentives for landowners.

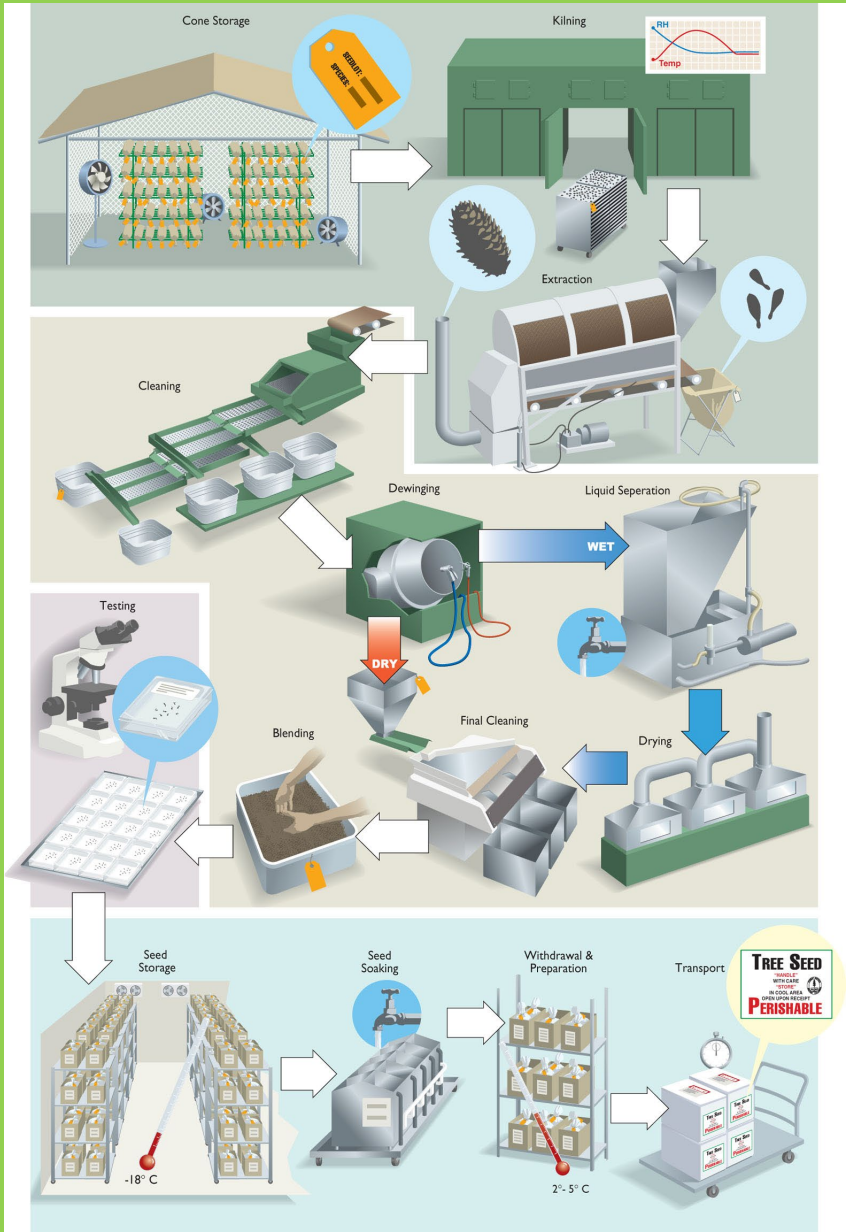
**Keywords:** afforestation, tree planting, nurseries, seedlings, land use

## INTRODUCTION

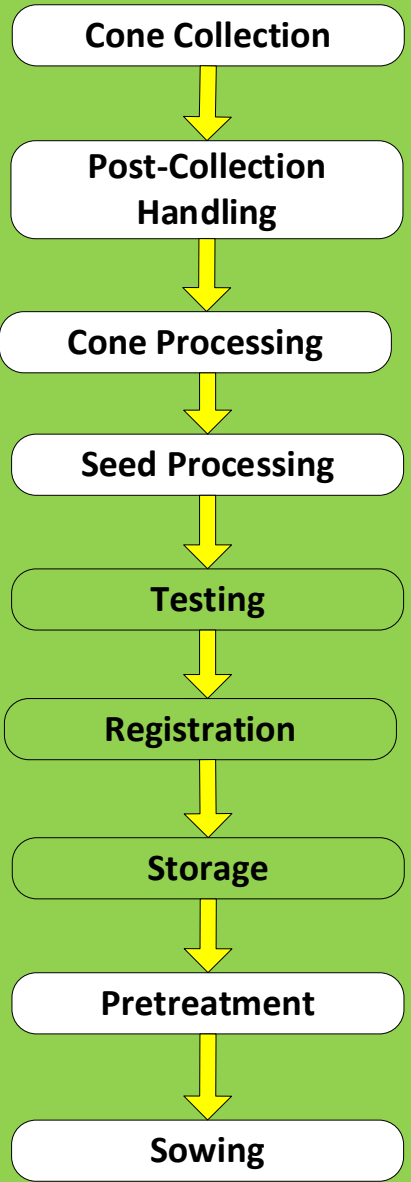
To constrain global warming, reductions in fossil fuels emissions are critical. In addition, we must also invest in strategies that remove carbon dioxide from the atmosphere (Masson-Delmotte et al., 2018). Reforestation is a promising opportunity to capture carbon dioxide while providing key ecosystem services including clean air and water (The White House, 2016; Griscom et al., 2017; Fargione et al., 2018; Domke et al., 2020). Enthusiasm for tree planting is gaining momentum, with multiple ambitious goals set forth to restore forest cover for climate mitigation



# Seed Handling System



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Cone and Seed Processing is a central meeting theme



- Any previous step in the chain of custody can impact your product
- **The 3 “I’s”**
  - Identity
  - Integrity
  - Information



**How do we ensure the sustained availability of high quality and adapted tree seed?**

**What can we do?**

**How can our various groups help each other and develop synergies?**

**Can we somehow sustain the enthusiasm and effort once we all go back to our jobs?**

**How do we expand our scope beyond the “have” nations?**

# *I had a dream*

I'll let you be in my dream if I can be in y

To develop a simple two page white paper that could be easily translated and used to develop better awareness for the importance of tree seed, the lack of investment in the required systems and need for research, education and extension activities on tree seed.

- 1. What is your highest tree seed research priority?**
- 2. What is your biggest concern with tree seeds?**
- 3. What is your biggest tree seed extension/information need?**
- 4. What is your most critical infrastructure need to secure your required tree seed supply?**
- 5. What tree seed information is critical to have in courses dealing with trees/forestry?**