

# The Morning Star

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## Project grows forests' future

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MORNING STAR STAFF

Can a tree native to coastal British Columbia, given climate change, flourish in Fort Nelson?

Can a tree native to the Interior live prosperously on Vancouver Island?

Those are questions Greg O'Neill hopes to find answers for.

O'Neill is a geneticist with Vernon's Kalamalka Forestry Centre, and is overseeing forestry's biggest climate change research trial in North America.

Called the Assisted Migration Adaptation Trial, the long-term research

project aims to better understand the climatic tolerance of all of B.C.'s tree species, then take that information to better refine the province's reforestation strategies as it relates to climate change.

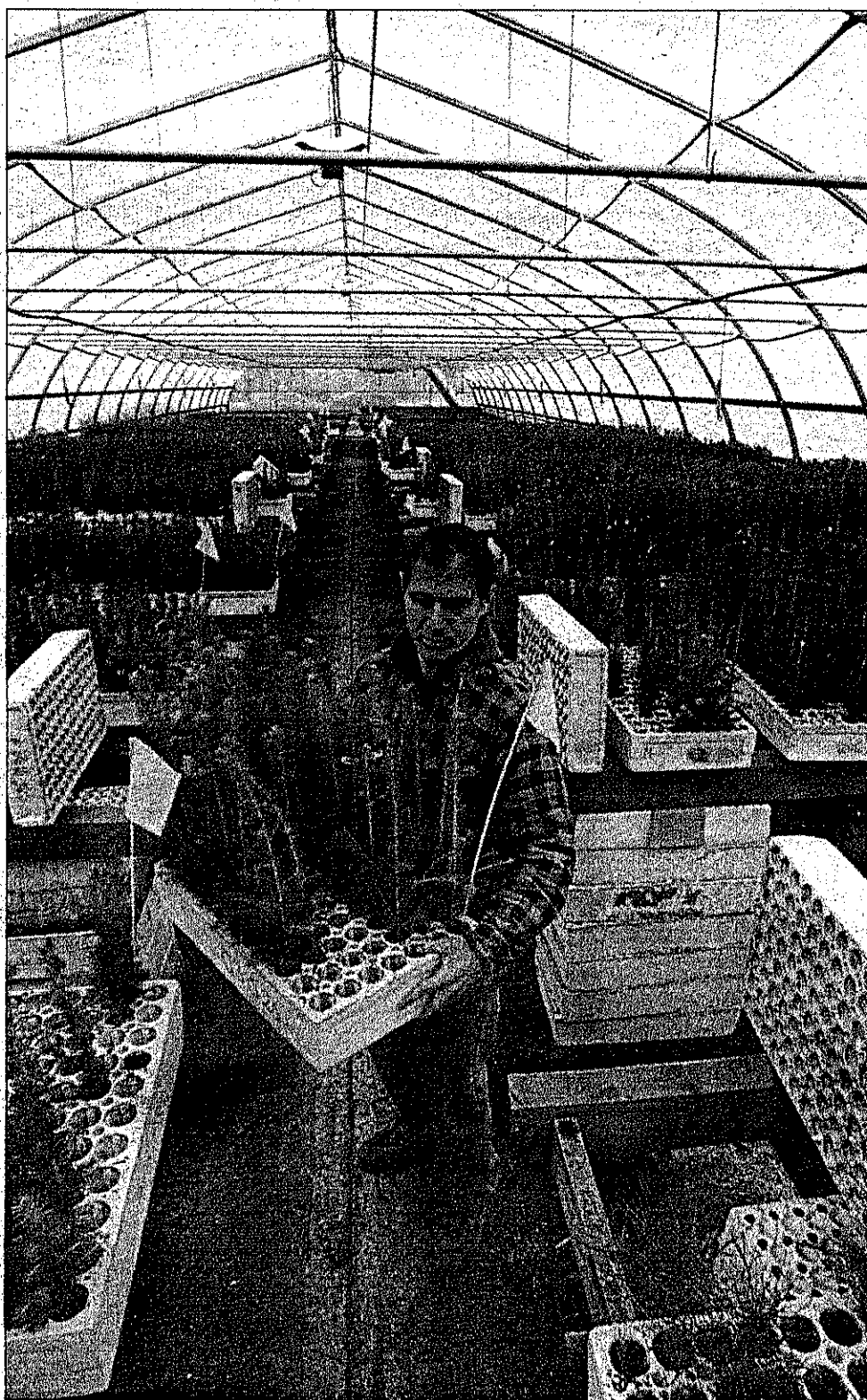
"If we can better understand the climatic tolerances of our species, we can deploy or plant tree species that are better adapted to current and future climate," said O'Neill, standing inside one of two greenhouses at Vernon's Landing Nursery filled with seedlings being used for the project.

The seedlings at Landing Nursery, from 16 B.C. tree species, have been growing on the Okanagan Landing Road site for one year. O'Neill, helped out in the project by the likes of colleagues Michael Carlson, Nick Ukrainetz and Vicky Berger, and his team are now packaging the seedlings and preparing to box them and store them for the winter.

In the spring, the trees will begin to be planted at 12 different locations across B.C. and the northern United States. Overall, seedlings will be planted in 48 different locations, 12 a year for the next four years. A total

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CORY BIALECKI/MORNING STAR

GREG O'NEILL, a research scientist with the Ministry of Forests, carries a box of Sitka Spruce seedlings while at the Landing Nursery Friday as crews package up the 16 different tree species being grown in the nursery and prepare them for winter storage. The trees will be planted next spring/summer as part of the largest climate change research trial in North America.

of 3,200 trees will be planted at all 48 sites, meaning 153,600 trees will be added to B.C.'s forests.

"We'll grow the trees at these 48 reforestation trials for upwards of 20

years and collect data every five years," said O'Neill.

"Hopefully, when the trees reach 10 or 15 years, we'll be able to come up with some information to refine refor-

estation strategies.

"We're very excited by this project. It will guide forest management practices for decades to come. It's really a project that is the centrepiece of the Ministry of Forest's climate change response strategy."

B.C. plants nearly 250 million trees a year, and O'Neill said it's important that the ministry puts the right species of the right seedlot of each species in each plantation.

"If we do that, we stand to have much more robust, resilient forests and trees, forests that will withstand future climates," said O'Neill.

"It's our best defence against disease and insects if we plant trees that are adapted to the right climate."

The project has presented a challenge to Landing Nursery owner Dave Enns, who drew plenty of praise from O'Neill's team for giving the seedlings the "very, very close attention" that is needed.

"Normally, in standard propagation, you try to separate out the species. Here, you have bits of varieties of species from various areas, and we're trying to grow them together," said Enns.

"We want them to have similar cultural environments so you get proper comparisons.

"That's a bit of a challenge in itself. You have to adjust your growing techniques so you don't get something that's too tall or too short."

After the trees have been planted, O'Neill said they will be pushed to their limits. Research scientists actually want to kill some trees, or push them outside of their comfort zones, so they can better understand when they start to lose their productivity or get sick.

"If you only plant them when they're happy, you'll never understand how far they can be pushed," he said.

The adaptation trial will generate additional research projects, with this one being opened up to researchers around the world who want to collaborate with O'Neill's team.

The project will cost about \$200,000 a year for four years, with funding for the project provided by the B.C. Forests Genetics Council and the B.C. Forests Science Program.