# Is it possible to hug 145 million trees?

Appletons Tree Nursery in Wakefield, NZ

**It is fair to say that the Appletons love trees. All 145 million of them.**

Robert Appleton estimates that since 1968 Appletons Tree Nursery in Wakefield, New Zealand, has grown in excess of 35 million ornamental trees and more than 110 million forest trees.

Last year alone they sold around 3 million Radiata pine and 1 million ornamentals. In peak years they've reached 5-6 million pines.

And they have put their heart and soul into every one of them.

It should be noted that these trees have been grown on the same piece of ground for 39 years. And that's been in most part possible by an annual application of composted pine bark over the 45 hectares of forest trees growing land.

Appletons creates the compost using pine bark from a nearby sawmill with calcium ammonium nitrate added to the mix. They also make use of extensive rye grass leys to rest the ground between cropping cycles.

"You must put nutrients back into the land, keep it in good health," says Eric Appleton.

## Best nutrients for best health

Appletons have used Scotts Agroblen fertiliser for a number of years after having tried quite a few competitor products.

Agroblen is specially designed as a base fertiliser for soil grown crops and consists of NPK granules, coated with a permeable layer. Agroblen delivers nutrients directly to the plant's root system and also supplies magnesium for good leaf colour and some calcium.

"We use Agroblen with quite a range of deciduous hardwoods," explains Eric.

"Agroblen works extremely well when we are sowing seed at the end of the autumn in the open ground and the seedlings come up in the spring. It carries over very well.

"The benefit is that it doesn't release as much nutrients in the cooler weather."

## More trees vs. more barriers

The Appletons' care for the land extends to the greater environment, but they feel it's a hard battle.

"The government is most unhelpful to forestry, I'm afraid," laments Eric. "It's all just replanting harvested forests rather than planting new trees to help the environment.

"In regards to the accord on carbon, we should be planting trees like mad."

Robert Appleton is facing similar government intervention in the operation of his nursery's arboretum, developed by him 13 years ago as a future seed source.

The arboretum contains local and imported seeds, currently 5,000 trees from 1,000 species from all parts of the world including Australia. They were able to get imported seeds prior to the New Zealand government introducing restrictions.

"It's becoming increasingly difficult to import seeds as the government has introduced all kind of restrictions," explains Eric. "We can't even import Australia's new wollemi pine.

"You can only bring in a species new to New Zealand if ERMA approves an Environmental Impact Report, and that starts at around $30,000 per species.

"So nobody's importing anything – there's no incentive at all."

## Planning the next 145 million trees

Appletons is recognised as a leader in the use of fixed seedbed management.

Their composting methods, fertilising programs and land management result in healthy, friable soils that grow quality trees year after year.

They love to grow trees and will probably continue for another 39 years.

# Tips from an expert

## Improving root development

Eric has a good tip to maximise root development in natives.

"Because of our high rainfall and problems with pests, such as rabbits and introduced Australian possums, we have to plant out something that is quite a bit more rugged and larger – so it has to stay in the cell a bit longer.

"Being in the cell longer, there's a greater chance of roots going round and round. Then five or six years after the tree is planted, those roots grow thicker and actually strangle the plant under the ground.

"We solved this root problem by using a Swedish BCC system of side-split cells. The cell design guides the roots to the side slits, which helps the plant to form the best possible root system."

## Making healthy roots

The process of undercutting the seedling taproot has been standard practice in forestry nurseries for many years, especially for Radiata pine.

Timely cutting of the dominant taproot between 5 to 10 centimetres causes the root system to branch and develop a well-structured lateral root system.

This is particularly important with species such as *Quercus coccinea*, which tend to naturally develop a hockey stick/bent root system.

If the roots are cut relatively early, you are cutting a thin fleshy root rather than a thicker, hardened root, and the growth of the tree is not checked much at all.

With the advantages of much greater root biomass in proportion to above ground growth, greater survival and stronger subsequent growth occurs in following seasons.