



Redwoods ~ an update



New Zealand redwood

There has been a strong interest in planting redwoods in recent years, with Bill Libby's enthusiasm and initiative bringing the Kuser collection to New Zealand. Bill encouraged people to trial redwoods using good establishment practices and on sites where conventional wisdom says they would not succeed.

American interest in large-scale redwood plantings in New Zealand has really caught the tree grower's attention.

Good quality tree stocks, weed-free establishment and sufficient nutrition are all important for successful establishment and early growth. Redwoods are extremely intolerant of grass and weed competition; 2m herbicide spots or total weed control gives the best results.

Severe exposure, strong winds and insect attack will result in apical bud damage. Caterpillar damage has resulted in the temporary loss of leaders in some trials, but with little damage the following season. Most older redwoods in New Zealand have good form and volume production, so this insect attack may only occur in young plantations.

We have supplied redwood trees from Invercargill to Kaitaia and most places in between. Nelson seedlot seedlings have above average growth and form when compared with other seedling lines. Bill Libby advised us on our clone selections from California and is confident that we will further improve on the spectacular results that current clones produce. Testing the wood properties of these clones has begun, with comparative trials being planted this winter.

In 2005 we suffered wind throw in a stand of pruned 20-year-old *Pinus radiata*, it continued to 'fall over' and had to be felled. In winter 2006 we planted the 40 hectares with redwoods including a full Kuser trial. Adjacent Golden Downs Forest grows excellent douglas fir, so we interplanted the non-Kuser area with 800 Douglas fir per hectare, matching the 800 redwoods. This spreads the risk on this north facing Moutere clay soil at 400 metres above sea level, subject to occasional snowfalls.

Total weed control was achieved in late October 2006 by helicopter-applied herbicides. Fertiliser will be applied this spring subject to soil tests. This will be an interesting trial on a site harsher than most recent redwood plantings.



Nelson redwoods 57 years old



17 months on sunny, dry hillside



Helicopter-applied herbicides over redwoods





Nelson redwoods 57 years old



Clonal redwood planted 2005



Gary Drummond

Redwood planted 2005



Fort Bragg douglas fir planted 2005

REDWOODS IN NELSON

Nelson is fortunate to have groups of trees that produce viable seed on a regular basis. Imported Californian seed from San Francisco and Santa Cruz seed zones has also been grown in recent years.

In the last five years significant numbers of redwoods have been planted in commercial plantations. Some of the growth rates have been spectacular, highlighting the need for well grown plants with active mycorrhizal inoculation, excellent weed control for at least the first two years and correct siting with adequate soil moisture and fertility.

We have successfully grown one-year seedlings, topped at 35cm, similar in specification to a 1/0 radiata. Our traditional planting stock has been a two year old 1/1 transplant producing an advanced root system and heavy calliper stem diameter, and 50-75cm in height.

Clone selections from California are currently being bulked up for cutting propagation and will be available from 2008 onwards.

GARY & VERNA DRUMMOND

In the winter of 2005 local farm forestry members Gary & Verna Drummond replanted two sites which had suffered wind throw. The 20 year old radiata were harvested and a digger windrowed the slash. A preplant herbicide was not applied due to time constraints, and trees were planted during a very wet August.

Gary's site is rolling to steep in contour, Moutere clay gravel soils, rather infertile but growing brushweeds to perfection. Gary was keen to plant a Douglas fir and redwood mix, with their inherently more stable root systems. A mixture of clones were planted at a final spacing of 5.5 x 5.5m, 331 stems per hectare with either a seedling redwood or Douglas fir in between. Gary's attention to detail allowed us to plant the site as a large replicated trial of different clones and seedlots; the Douglas fir were Fort Bragg ex Golden Downs seed stand.

Gary applied one dazle capful of Nitrophoska blue extra fertiliser, dibbled in with a spade cut on the topside, 20cm from the stem. Gardoprim and Versatil was sprayed carefully either side of the trees stem using a T-jet nozzle, giving a generous 2m diameter spot. This was followed up with a second application to control any remaining weeds.

Our recent visit with Bill Libby in late February of 2007, 17 months after planting was most encouraging. Generally tree survival and early growth has been rather spectacular over all trees, but it's the clones that have out-performed everything else. Increased fertility has resulted in dark green healthy foliage and rapid height growth, as much as three metres in two summers. The wind protection offered by the surrounding radiata and broom stands has resulted in very little damage.

