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FIREWOOD PLANTATIONS

In a time of carbon awareness, it makes sense to use a renewable energy source such as wood from trees for home heating rather than energy obtained from fossil fuels. The carbon absorbed from the atmosphere as the tree grows balances the carbon released during combustion. It also means that you can become self-sufficient in firewood by planting up a small corner of the back paddock, saving yourself a good deal of money!

The growth of firewood plantations is ideally done on a short rotational basis, so that the wood can be cut directly into logs for enclosed wood burners without the need for splitting. Rotation times are principally a factor of species choice, site, and planting density. Trees may be harvested within 5 years on a very good site, and 10 years on poor sites, although 6 to 7 year rotations are more usual.

PLANNING

Decide how many trees you need. You can work on felling 25 trees per year to service a modern log burner. If we assume 7 years to felling then you would need a block of 175 trees to ensure a permanent supply. Round it up to 200 to allow for attrition along the way. Put more trees in if your site is harder.

Decide how much area you need and your growing system. Is it going to be a block, or part of a multi-row shelter system? The spacing between your trees will determine how much area you need for your planting. The spacing you use is determined by the amount of area the tree needs to obtain all the nutrients, moisture and light it needs in order to grow well. This means that on a dry site with shallow soils and no supplementary nutrients or water, you need to space at 3 to 4m between trees. Conversely, under fertile, well-watered conditions, you should use 2 to 3m spacing. Two hundred trees at 2, 3 and 4m spacing equates to blocks of 800, 1800 and 3200m^2 respectively. If you go or the multi-row shelter system, plant different species in different rows for ease of extraction and to manage risk; ensure you choose wind-hardy species.

Decide on your species. You require a tree that puts on wood volume fast on your site and will burn hot and well. Some trees will re-grow from the stump after felling, so saving you the bother of re-establishing your trees (a nurseryman's nightmare!) – this is called coppicing. The re-growth is faster than the first cycle of growth because the tree's root system is already established. Your first priority though, is that the tree is suited to your site. The most common choices of tree for firewood plantations are eucalyptus (gums) and acacia (wattles). Other options or kanuka, manuka, alder, elm, oaks and ashes. Ask for advice from the nursery if you are unsure.

Now order your trees from Southern Woods. If you order one of our Firewood Packs, you get a mix of trees at the 100-rate planting, plus free **Grotabs**.

SITE PREPARATION

This is the key to fast establishment. The main thing to understand is that eucalyptus and acacia have fine, shallow roots that like to travel through loose soil, and can't stand competition from weeds for 2 years or more. Prepare the site by removing all weed competition – spray 1.25m x 1.25m squares with a knockdown, non-residual herbicide (ie Glyphosate/Roundup, Buster, Organic Fatty Acid), followed by deep ripping of the soil and rotary hoeing. Ensure the area is securely fenced and stock is kept away from the trees.

PLANTING

On frosty sites, plant into a warm, moist soil in spring after the worst of the frost. On milder sites, an autumn plant would be better. Dig a generous hole, plant 25mm of the stem under the ground, put a **Grotab** down the hole beside the root plug, and water in if possible. Apply **Liquid Shotgun** rabbit repellent immediately after planting if you haven't already arranged for this to be applied at the nursery. You could also use an inexpensive plastic sleeve with a bamboo stake to act as a physical barrier against pests and sprays.

POST PLANTING

For the following 2 seasons, continue to protect against pests. Water and release from weeds as required. A combination spray of **Versatil** and **Gallant** may be sprayed over Eucalyptus species (NOT Acacia!) to kill most weeds but won't harm the tree at all. Replace any failures ASAP. Eucalyptus species attract many insects that they are well-adapted to cope with. They will generally cause just superficial and temporary damage to the foliage if the tree is growing strongly. Stressed trees will suffer more so keep the weeds away. Grazing sheep under the trees is possible after 3 or 4 years.

HARVESTING

At the other end when it comes time to fell, eliminate competition around the tree in early spring prior to felling so coppice growth can emerge unimpeded. Strong sap flow in spring will ensure maximum re-growth, and minimize the risk of cold damage to the newly emerged coppice shoots. Leave a low 20cm stump with a clean angled cut. Avoid leaving damaged bark. Leaving the felled tree in place, with foliage on, for 6 months before cutting up will speed the drying of the firewood as the moisture in the trunk is drawn out through the dying leaves. A tradeoff here is that logs left to dry will be harder to saw. Thin to leave the best 2 coppice shoots the following spring.