

Forestry Corporation of NSW Blowering Nursery

Location:	9 km west of Tumut on the Snowy Mountains Highway, bordering the Tumut River
Altitude:	282 m above sea level
Climate:	Cool to cold winters, mean minimum temperature 2.5°C, frosts common to -3°C Warm to hot, usually dry summers, humidity < 25%, mean maximum temperature of 31°C Annual rainfall is 970 mm, which falls predominantly in winter to early spring
Nursery Area:	4 ha has been developed to accommodate the container growing facility
Aspect:	Gently sloping towards the NNE

Forestry Corporation's Blowering Nursery was constructed in 1996, with the first crop harvested in 1997. The nursery was originally used to produce in-ground, bare-root seedlings and cuttings, with a capacity crop of 10 million per year. The in-ground seedling production was phased out to make way for the new container facility. Growing *Pinus radiata* seedlings in containers enhances seedling survival rates at planting, provides a greater return of seedlings against seed sown, promotes seedling uniformity, provides a constant and uniform growing environment across the crop and allows greater flexibility in planting and transport.

The first container-grown seedlings at the Blowering Nursery were grown for the 2008 age class and all current production is *Pinus radiata* container-grown seedlings. The nursery can hold 8.6 million container-grown seedlings.

Forestry Corporation is the largest producer of plantation-grown radiata pine in Australia, which is converted into essential structural lumber for the Australian housing industry and a range of other products. Forestry Corporation manages ten per cent of Australia's plantation forests and sells enough timber to construct about one quarter of the houses built in Australia each year. Seedlings produced at Blowering Nursery are dispatched around the State each year to establish and reestablish plantations.



Container-grown seedlings

About 350kg of *Pinus radiata* seed comprised of various seedlots is sown annually.

A seedlot is a group of seed collected from a given location at a given time. For example, a seed orchard harvest from parent trees with a known genetic value.

We use Hiko 93cc and Transplant Systems TS45 111cc seedling trays.

The growing media is a special blend formulated by Forestry Corporation NSW Nurseries and exclusively manufactured under strict quality and hygiene controls.

More than 900 cubic metres of growing media is used each year into which slow release fertilizer is incorporated prior to sowing.

During September, batches of seed commence pre-stratification soaking to remove any germination inhibitors and imbibe the seed with moisture in preparation for sowing.

After soaking for 48 hours (with a water change at 24 hours), the seed is slowly dried to remove moisture from the seed's surface and ensure mould doesn't develop on the seed. It is critical at this stage not to dry the seed to an extent that may lead to dehydration.

Post-drying, the seed is placed into suitable air tight and sterile storage containers and kept in a cold room chilled to around two degrees celsius for a minimum of 10 days. This process is known as stratification.

Sowing commences in October. The nursery uses a Williamses soil filler and sowing line, which pre-fills the trays to be sown, compacts and levels the growing media to the desired density, provides a dibble depression for the seed and places the seed in the required sowing pattern using a vacuum seed drum.

After sowing, the seed continues through the line where it is covered with vermiculite and is watered in. It is then ready to be transferred to the growing area where it will remain until it is dispatched. Various nutrients and chemicals will be applied to the foliage to ensure the required growth specifications are achieved and to control any fungal, insect or weeds that may affect on seedling growth.

In February, the topping of the seedlings will begin. This is the mechanical removal of the top of the seedling to a pre-determined height to obtain seedling growth uniformity, larger stem diameter and hardness. This may be a one-off treatment or may be repeated during the growing season depending on the seedling's growth and the scheduled planting date.

When topping is complete, the grading and culling of the seedlings will commence to ensure seedlings meet the required specifications and are ready for dispatch in mid-May.



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