

PECAN: THE QUEEN OF NUTS

Published in The Nimbin Good Times. January 2005.

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David McMinn

Pecan trees are among the best, multi-purpose trees that can be grown in the Northern Rivers, providing a valuable commercial nut crop, an excellent long-term investment and great landscaping potential for the home gardener. The nuts are among the most delicious of all the nuts, as most people will agree after eating a scrumptious pecan pie or licking pecan ice cream. Pecan tree (*Carya illinoensis*) was originally from the south east of the USA, but is now grown throughout the world in suitable climates.

In home gardens, they provide excellent shade in summer and have the added advantage of being out of leaf for about 5 months - May to September. This allows highly desirable winter sun to penetrate into the garden and house throughout the colder months. To maximise this effect, plant the pecan tree on the north or west side of your home. However, the trees will need some protection from strong winds, as they are prone to limb breakage. In farm paddocks, pecan trees make an excellent shade tree and grass will grow up to the base of the young trees.

Pecan trees are far more adaptable to our region than other temperate nut trees. Spanish Chestnut is prone to root rots and should only be tried on deep well drained soils. We planted five in good volcanic soils 20 years ago and now only have one left. English Walnut suffers from fungal leaf diseases in our hot, humid weather, while Pistachios only grow well in dry temperate climates.

Siting Your Plants

For optimum nut production and growth, trees must be sited to their best advantage.

Location: Being from a temperate climate, pecan trees need winter chill to grow well and set a good crop of nuts. Thus, in the Northern Rivers, trees do best in low areas where cold frosty air can settle to maximise the chill factor. Even so, the trees are quite adaptable and can be tried in upland areas.

Soils. Pecan trees are found on creek and river flats in their native USA, which indicates the environment they find most suitable. Deep alluvial soils with a constant water table 2m to 3m below the surface would be ideal. Frosty creek flats in the Nimbin Valley would be excellent to provide winter cold, deep soils and abundant water. Even so they can cope with drought if necessary. Our trees produced a good crop of nuts through the 2003 drought, which was amazing as they were not fertilised or irrigated. In hilly areas, pecan trees can still be grown but only on deep, well drained soils and with good moisture hold capacity. Sandy loams are better than clay loams. Deep soils are a must to allow the roots to penetrate and tap into sub-surface moisture.

Pests and Diseases.

The main pest is the fruitspotting bug, which causes the nuts to fall prematurely. A native ring barking insect can also present problems and it should be monitored and eliminated if necessary. Occasionally, some of the native mistletoes will grow on the trees and should be removed to prevent them from becoming compromised. Otherwise, pecans are free of pests and diseases in Australia.

Pecan scab is a serious pest overseas but fortunately is not present in Australia. Even so, it could easily enter into the country at some stage. Thus, it would be better to plant varieties that are resistant to this fungal disease, especially considering that the trees will live for over 100 years. Unfortunately, nearly all varieties now available are highly or moderately susceptible to pecan scab. Candy is the only resistant variety in the following list of recommended varieties. Why place yourself or subsequent generations in the position of having to spray, when, with a little foresight, the problem could be avoided by proper variety selection. The tree will ultimately grow to 20m and it will be difficult to spray for fungal diseases, especially for home gardeners.

Selecting Varieties

For good tree growth and nut production, it is essential that you make a good selection of the varieties most suited to our region.

You may chose to plant a seedling tree, which are much cheaper than grafted named varieties but here are no guarantees as to growth or nut quality/quantity. There also is the added problem of the first nut production being delayed up to 12 years. It hardly seems worth the bother. You may save some money initially, but grafted varieties are

more desirable over the long term. When selecting a named variety chose those that are suitable for the humid south-east USA. These adapt much better to our moist sub tropical climate, than varieties recommended for the drier regions of the USA.

Pecan trees have male and female flowers on the same tree. Varieties can produce pollen flowers first (protandrous) or nutlet first (protogynous). When one tree is yielding pollen, the other tree's nutlets are receptive to fertilisation and vice versa. This prevents self pollination and inbreeding within the species. You need a variety of both early and late pollen bearing trees to allow good pollination and a full nut crop. For the home gardener, some varieties are self pollinating and thus only one tree will be required.

It is best to choose those newer varieties that are precocious (producing nuts on a young tree) as this will mean you get yummy nuts very quickly. Some varieties will commence bearing nuts within about 3 to 4 years after planting. In contrast, the old fashioned variety Stuart took up to 10 to 12 years to produce its first crop.

The weed potential of pecan trees is limited. The seeds are not dispersed widely and those seedlings that do come up can be easily eliminated by mowing or cattle grazing. The trees never sucker, only grow moderately and they are unlikely to spread into the local forests.

See the references below for a full coverage of the many pecan varieties available. Abbreviations: A - Early Pollen Bearing Variety. B - Late Pollen Bearing Variety. SP - Self Fertile Variety. For some unknown reason, many of the varieties are named after native American tribes.

Apache - B - Excellent rootstock tree. A vigorous tree with a heavy yield.

Candy - B - Medium-sized nuts with good flavour. Vigorous growth. Bearing in four to five years. Good scab resistance. It tends to bear in alternate years as trees grow older.

Cape Fear - A, SP - A medium sized nut that is easy to shell and has a high kernel percentage. A light coloured nut of excellent quality. Pollinator for Wichita.

Cherokee - A, SP - Prolific production. Medium sized nut. Tendency to alternate bearing.

Cheyenne - A - Medium sized nut. Nuts loose in the shell. Excellent flavour. Small tree.

Desirable - A, SP - Very good quality nut. Prolific and consistent production achieved by year 12.

Kiowa - B - Medium to large nut. Good quality, late maturing. Pollinate with Cherokee.

Mahan - B, SP - Nut may be poorly filled on older trees. A vigorous tree and prolific bearer.

Mohawk - B, SP - Large nuts. Vigorous and hardy tree. Prolific crops. Alternate bearing.

Pawnee - A, Partially SP - Large high quality nut. Precocious & prolific.

Seedling. Will produce in 8 - 12 yrs. Fast Growth. May need pollinating trees.

Shoshoni - B, SP - Precocious & heavy bearing. Good for subtropical areas. A vigorous tree with an upright habit that makes an excellent backyard tree.

Sumner - B - Medium-large good quality nuts. The kernel has a good light colour. Bears within five to six years. Some resistant to pecan scab.

Tejas - B, SP - An outstanding all round variety. Nut of high nut quality, which is very easy to shell.

Planting Out

Plant out trees in Winter or Spring when they are about a metre tall. This gives the small tree, a full growing season prior to the following winter. Purchase good, healthy trees from a valued nursery. The planting hole should be large enough to accommodate the root system. Place the tree at slightly deeper than the depth it was in the container and place good composted soils around the roots. Water trees well immediately after planting and then water weekly during the first year to ensure good growth and rapid establishment. In the second year, only water well only during dry weather (three or more weeks without rain). Mulch well to smother any competing vegetation and help maintain high moisture levels. Do not use dry chemical fertilisers in the first year as the tree will

suffer root burn. The trees need to become established before you apply chemical fertilisers. Alternatively, use organic fertilisers to promote healthy growth and completely avoid the issue of root burn. Pecan trees are prone to zinc deficiency, which results in a yellowing and stunting of the leaves. This can easily be solved by applying zinc trace element to the soil. With pruning, the main aim is to establish an upright trunk of two to three metres before branching. Shortening back of strong growing side arms will be necessary in the first years of a young tree.

Harvesting - The Best Part

The crop matures in autumn, when the husks open and the nuts fall to the ground. Shaking the branches will help displace some of the nuts. Kernel quality can be lowered if the nuts are not collected regularly. The nuts need to be spread out to dry in a well-ventilated shady area for about 2 or 3 weeks. The nutritious kernels are high in kilojoules and rich in oil, protein and carbohydrates. These delicious nuts are one of the main reasons for growing the magnificent pecan tree in your garden or paddock. Overall, pecan trees are highly desirable to grow in terms of landscaping, nuts, summer shade and winter sun.

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References on Pecan Varieties.

<http://extension-horticulture.tamu.edu/carya/pecans/pecalph.htm>
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