

Ideas for Spring plantings...

Mango: the queen of fruits

by David McMinn

The mango season is always something to look forward to at the beginning of each year. This beautiful, luscious fruit may be eaten raw, in green mango chutneys, in daiquiris, in salads, with meats - in fact anyway you can think of. They are among the most enjoyable all tropical fruits.

The original home of the mango (*Mangifera indica*) was eastern India, where it had been cultivated for at least 4,000 years. The Buddha was given a grove of mangoes so he could meditate peacefully in their shade, while the Mogul Emperor Akbar (1556-1605) was recorded as having planted an orchard of 10,000 mango trees. Amongst Hindus, the tree and its foliage played an important role in religious ceremonies and folklore. From India, the mango has spread to all tropical and subtropical regions worldwide and is enjoyed everywhere for its delicious flavour.

Planting Conditions

The mango is a tropical tree, which will live a long and productive life, ultimately growing up to

20metres. Mangoes cope well with most soil types, so long as they are well drained. If the soil is too rich and over-fertilised, vegetative growth will be stimulated at the expense of flowering and fruiting, resulting in lower crop yields. Mature mango trees are able to take light frost, but temperatures below about -3 °C will damage mature trees and kill small ones.

The ideal climate for mangoes is where there is a pronounced wet season - 4 months of rain followed by a long dry season. In the Northern Rivers, rain can fall over much of the year, although spring is usually dry. This causes problems with fungal diseases, especially if it rains during the spring flowering season. Even so, once the rains have stopped, you can spray the flowers and leaves with antifungal preparations, which should allow a good cropping. It is very important to select varieties that have at least some resistance to the fungal diseases black spot and anthracnose.

Propagation

When propagating from

seed, it is important to know that there are two types of mangoes.

Monoembryonic - only produces one sexual seedling, which may vary considerably from the parent plant in productivity and fruit quality.

Polyembryonic - produces several embryos - one sexual and the others asexual being identical to the parent tree. All these seedlings may be planted and nearly all will be same as the parent tree. Two of the better known polyembryonic varieties are Nam Doc Mai and Bowen, both of which can be propagated from seed and usually come up true to type.

For monoembryonic varieties, grafted plants are available, although they can be quite expensive to buy - over \$20 - but they are well worth the extra cost. Grafted plants may start producing flowers within the first year of planting. However, you must remove all the flowers for the first three years, as fruiting will drain the small plant of vital energy reserves. Daleys Fruit Tree Catalogue (www.daleysfruit.com.au) gives a good listing of the many mango varieties they offer for sale. Select an early, a mid



and a late variety and you should have fruit for three wonderful months. Consider planting those varieties which have good resistance to fungal diseases, to lessen the hassle of spraying.

Top Varieties

Early Season. Glenn is a sweet, strong, juicy flavoured mango, with moderate resistance to Anthracnose and very good resistance to Bacterial Black Spot.

Mid Season. The Bowen

variety (Kensington Pride) is the Australian standard variety, with excellent flavour, very juicy and aromatic. It is an excellent cropper, but it may yield irregularly in wet cold areas. Bowen has moderate susceptibility to Anthracnose and Black Spot.

Late Season. Valencia Pride is believed by some to set the taste standard. The highly coloured fruit is large and beautiful. It is a vigorous and upright tree and consistently productive.

The weed potential of mangoes appears limited. Even so, Daleys did report that there was concern about mangoes becoming a weed in some areas.

The best time to pick the fruit is when the green colour is fading, but the flesh is still firm. However, that assumes that you do not have to compete with the wildlife. Once the bats start eating the fruit, I strip our trees of fruit to get in early. Fortunately, mango fruit can be picked green and it will still ripen well. Any surplus can be frozen for re-use several months later, although it will not taste as good as the fresh fruit.

Alternatively you may choose varieties that produce fruit that may be eaten green (eg: Nam Doc Mai is the only green mango variety on offer from Daleys). The green mangoes are generally sweet without a starchy flavour. They can be grated in salads, pickled, soaked in sugar syrup, dried or salted. Mangoes are very versatile in the kitchen and may be used in a wide range of recipes.

Plant several trees in your garden or house orchard and in a few years you can start enjoying your own delicious fruit directly off your own trees. Enjoy!

Bio-diesel – is this the way to go to town?

by Stuart McConville

Over the last couple of years there has been a lot of talk about bio-diesel and its potential as a replacement for non-renewable fossil fuel derived diesel. In a nutshell, this is not going to happen, at least not on the scale we are using diesel today. There is simply not enough land available to grow the oil on, and still have some left over to grow our food on.

However, as a way of reducing consumption of fossil fuels and replacing a costly product with a more socially, ecologically and economically acceptable alternative, bio-diesel has a definite role to play.

Just briefly, bio-diesel is made from vegetable oil, (any vegetable oil will do) using a process that requires a catalyst (sodium or potassium hydroxide) ethanol and heat, with a fair bit of stirring as well. If you are thinking it sounds like burning oil to make oil, you are right, but probably only as much as is required to make the diesel you put in your tank at the moment. An energy budget for the whole process would be an interesting exercise, any takers?

Considering the energy required to grow the oil crop, transport the harvest, press the harvest and convert the proceeds to bio-diesel, it would be quite a complex task.

Interestingly enough, the infrastructure for such a process exists ready to hand in and around Nimbin, with soy beans growing in Kyogle, technical expertise locally available and at least one person I know able to supply most of the plant. Social infrastructure also exists, with a common desire to beat the multi-nationals at anything we can, propelling us on a collision course for eventual social cohesion.

Fuel Co-op

Of course bureaucracy always throws a spanner in the works, like the fuel excise that anyone producing/selling fuel is expected to pay to the government. A fuel co-op is a

potential way around this.

The next Nimbin Greens meeting at Djanbung Gardens, will discuss the possibility of setting up such a co-op in Nimbin. It's a long way off and it will not be cheap (co-op members will have to subsidize the cost of getting a bio-diesel plant up and running), but anything is better than allowing us to be ripped off at the pump and have our hard earned cash go towards bullets for the next oil war somewhere else on the planet.

Please feel free to come and express your interest at the next Nimbin Greens meeting at 6pm, Weds 13th July, or phone Stuart on 6689 7416 or Sue 6689 1148.

GM industry puts human gene into rice

from Kim Gould

Scientists have begun putting genes from human beings into food crops in a dramatic extension of genetic modification. The move is bound to strengthen accusations that GM technology is creating "Frankenstein foods" and drive the controversy surrounding it to new heights.

Even before this development, many people have opposed the technology on the grounds that it is playing God by creating unnatural combinations of living things.

Opponents say that no one will want to eat the partially human-derived food because it will smack of cannibalism. But supporters say that the controversial new departure

presents no ethical problems and could bring environmental benefits.

In the first modification of its kind, Japanese researchers have inserted a gene from the human liver into rice to enable it to digest pesticides and industrial chemicals. The gene makes an enzyme, code-named CPY2B6, which is particularly good at breaking down harmful chemicals in the body.

Present GM crops are modified with genes from bacteria to make them tolerate herbicides, so that they are not harmed when fields are sprayed to kill weeds. But most of them are only able to deal with a single herbicide, which means that it has to be used over and over again, allowing weeds to build up resistance to it.

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