



Growing Desert Limes

General information:

Bush or desert limes - *eremocitrus glauca* - are a different but related tree to finger limes - *microcitrus*. The desert lime is an inland tree adapted to harsh conditions, the other a coastal rainforest tree, not tolerant of frosts. The fruit is different also - desert limes are small and round about the size of a grape with a very distinctive piquant lime flavour. Our trees are grafted on to a citrainge rootstock because the straight natives propagated from seed take about 10 years to bear fruit, the grafted trees 4 to 5 years with first fruiting at 3 years. We use cuttings from a few of the very best bearing wild trees selected from many hundreds over years of wild harvesting.

Information on Growing the trees:

weather conditions: desert limes tolerate frost, summer rainfall patterns suit, heat does not worry, insects not a problem, this is one tough tree.

soil types: generally prefers alkaline soils (clay based soil with Ph. @ 7.5 or higher preferred), but is OK on loams, very salt tolerant as a native, the grafted trees may be less so.

watering: trickle irrigation along tree lines works well, applied on a needs basis.

planting details: 5 metre row width X 5 metre tree spacing is a good spacing but could reduce this to a minimum of 4 metres X 4 metres.

fruiting details: annual - flowers in August, fruit ripe in November - the fastest citrus in the world, typical desert adaptation characteristic. Big native trees yield up to 30kgs of fruit, irrigated /grafted are expected to equal this but this is only if the canopy is allowed to keep growing to 7 metres. A realistic yield is more like 5 kgs at 6 years of age and 10 kgs at 8 years. The picking cost will increase if the trees are allowed to become tall.

Information on desert limes is scarce because the selection, grafting and commercialisation has only recently begun. "Normal" citrus agronomy does not apply particularly well. We started planting these in 1998 and learned much as we progressed.

Here are some answers to 'frequently asked' questions:

Growth rates, fertiliser or nutritional requirements, labour requirements?

- The trees start fruiting at 3 years and are around 2 metres in height then.
- They like fertiliser - N, P, and K being the main requirement with an emphasis on K (potassium) post flowering. We do leaf analysis and soil samples and apply fertiliser and trace elements of copper zinc molybdenum on advice from horticultural specialists in Bundaberg where we send the leaf/soil samples.
- The trees are quite palatable to grazing animals and nutritious - so need protection from stock, rabbits, kangaroos.
- Grafted trees can be expected to eventually grow to 5 metres in height and have a canopy diameter of 5 metres. Any bigger and picking/management costs become an issue
- We can plant 1000 grafted trees in 1 litre punnets down ripped lines in two days with 4 people using garden trowels.
- We pick by hand. A good picker can pick 15kgs of limes in an hour.

Pruning if required and when, shape of tree to enhance even ripening if required?

We are only pruning low hanging branches so they clear the ground. The leaves are small so pruning and shaping for light as with orange trees is not an issue. The fruiting is quick and even.



Here are some answers to 'frequently asked' questions: (cont'd)

How to box for transport?

We clean grade, pack into plastic bags or punnets depending on the market, then box into food grade silver foil cartons, shifted on pallets. The fruit freezes well and will store frozen at minus 18 degrees. This is colder than household deep freezes where freezer burn and deterioration can occur after 12 months. Frozen fruit holds its characteristics of colour and taste well when thawed.

Where existing and expected markets might be? If there is a co-operative or a marketing body for the fruit?

Sydney, Melbourne fruit & veg markets, Farmers' Markets, some specialist manufacturers. We are moving to value-add our desert limes and developing a range of products: jams, chutney, sauces, drinks etc. We are also looking at export markets for fruit and looking for additional reliable supply sources apart from our own to fill these orders. The longer term aim is to establish a brand name under which other suppliers such as you can market but we must all meet set quality standards for the brand. Our central company/brand name would either purchase fruit from suppliers or charge a commission. A co-operative is an option also. The intention is to start a small industry which is widely based geographically and to avoid the pitfalls that some previous start-ups experienced, such as with aloe vera and ostriches. Our hope is that the people growing desert limes from our material will promote and market innovatively themselves also so this distinctive native fruit is much more widely known and available.

What sorts of recipes or uses in food preparation exists?

Check the ADL website. We have developed many and are still finding new uses. (Have the benefit of a family member who is highly skilled). Some leading chefs have recipes and bushfoods info sources hold some.

Advantages over other limes or citrus?

Distinctive intense moreish flavour (what got us into them really)

Ease of use - no peeling, slicing, just use them whole at 1/4 the equivalent weight of Tahitian limes.

Interest - an Australian native fruit from a desert-adapted tree - environmentally sensible.

Production - desert lime trees are heavy bearers under favourable conditions and the selection process we have should ensure this trait continues. Irrigation, nutrition and a vigorous rootstock should fully realise yield potential regularly.

Diseases?

Nothing has shown up yet. Fungal attack is a normal citrus problem on poorly drained ground but this has not been seen in desert limes. Borers can attack trees at times; orange citrus caterpillars defoliate a few trees occasionally. Spined citrus bugs may sting some fruit.

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So there you have it. There is a degree of risk in both the growing of these, and in the marketing, plus plenty of work. It is exciting though to be a pioneer in this field and it could be fun to share that.

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