Overview

Desert lime is one of several Australian natives that are true citrus, and is also known as bush lime, wild lime and native cumquat.

It is endemic to the semi-arid regions of south west Queensland, western New South Wales and South Australia.

The fruit is small, round and green, about the size of a small grape, with a very distinctive piquant lime flavour.

Desert lime is one of the foods traditionally collected by Indigenous Australians.

The explorer Ludwig Leichhardt wrote about the trees and eating the fruit in 1844 during his journey through Central Queensland and the Northern Territory.

British colonists in New South Wales made jams, tarts, jellies and preserves, as well as an agreeable beverage. Native lime recipes were published in cookbooks as early as 1898.

Desert lime has high levels of vitamin C, folic acid and antioxidants.

The natural distribution of desert lime is in the semi-arid regions in eastern Australia. This extends from Rockhampton to Winton in Queensland, south to Dubbo in central New South Wales, and west to Quorn in the Flinders ranges of South Australia.

It grows naturally in inland woodlands and brigalow scrubs in a range of soil types and is tolerant of heat, frost, drought and salinity. Desert lime can withstand extreme temperature conditions from minus 4 °C to 45 °C.

Until recently, most native citrus supplies have come from wild harvest, which has constrained industry expansion as annual yields are highly variable.

A commercial industry based on desert lime was established in the early 1990s, reducing the need to collect limes from the wild, improving the reliability of supply and minimising any detrimental impact on wild populations.

In 2011, the desert lime harvest was estimated at 10 tonnes plantation grown, with severe and widespread drought having a significant impact on wild harvest.

Desert lime is over supplied for the small boutique markets the industry has agreed to supply. However, new contracts are expected to see the industry double annual production to meet the increased demand.

Growing conditions

Desert lime is currently being grown commercially in Townsville and from Winton through to Roma in Queensland, in western New South Wales, Victoria and into Port Augusta in South Australia.

Commercially, grafting is the best way to grow desert limes, as maturity to fruiting age of wild trees is around 10 years. Grafted trees begin bearing fruit within three years.

Plantation-grown trees have been shown to respond well to both irrigation and fertiliser.
**Harvesting**

Desert lime flower-to-fruitering time is the shortest of any citrus species, taking only 10-12 weeks. It flowers mainly in spring and fruits ripen in early summer.

The fruit is ripe when the colour changes from green to yellow, although it can be picked when still green.

Harvest is carried out by hand but there is potential for mechanical harvesting of manufacturing product, which is most of the industry’s output.

**Storage**

Desert lime can be consumed immediately after the fruit has been picked, and if not should be refrigerated almost immediately. It can be stored in the fridge for 3-4 days.

The fruit is well suited for freezing as it retains form and flavour very well when thawed and can be stored frozen for long periods.

Premium grades are sold in a frozen whole form. Medium and large blemish-free fruit is sold to chefs and restaurants, who use them whole, sometimes preserved in syrup. Small and second quality desert limes usually processed into puree.

Desert lime can also be stored as a dried powder.

**Food uses**

Desert lime has a distinct lime flavour but with that unique difference found in native foods, and can be used in any product or process where ‘normal’ limes are used. This includes traditional jams and preserves, cordial and cider. Desert lime powder is gaining a place as an attractive additive in herb and spice mixes and as a coating for nuts such as macadamias.

It has a very thin rind which is virtually tasteless, is often seedless and can be used whole in cooking, making it an extremely versatile and excellent processing and culinary fruit.

The industry is on the cusp of transition from niche to commercial production, with the future appearing to lie in the provision of reasonably priced puree for use in gourmet manufactured products.

Intensely flavoured desert limes require only a fraction of the volume of other limes. Consequently manufacturers can afford to pay a premium for the cachet of a native, ‘desert’ fruit.

**Health benefits**

Desert lime is a very rich source of calcium and contains high levels of Vitamin C, folate (Vitamin B9), Vitamin E and lutein (a compound that plays an important role in eye health and wellbeing).

It also has a high potassium:sodium ratio, which may help to reduce blood pressure.

**Other uses**

In more recent years the desert lime has been incorporated into cosmetic uses such as hand lotion.

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**Nutritional Information**

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<thead>
<tr>
<th>(per 100g frozen puree)</th>
<th>(per 100 grams dry weight)</th>
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<tbody>
<tr>
<td>Energy 198 Kj</td>
<td>Zinc (Zn) 1.060 mg</td>
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<tr>
<td>H2O -</td>
<td>Magnesium (Mg) 94.5 mg</td>
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<tr>
<td>Protein 0.1 g</td>
<td>Calcium (Ca) 384.2 mg</td>
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<td>Total fat 2.7 g</td>
<td>Iron (Fe) 4.74 mg</td>
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<tr>
<td>Total saturated fatty acids 10 g</td>
<td>Selenium (Se) 0.0</td>
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<tr>
<td>Carbohydrates 4.0 g</td>
<td>Phosphorus (P) 1278 mg</td>
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<tr>
<td>Sugar (total) 4.0 g</td>
<td>Sodium (Na) 2.24 mg</td>
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<tr>
<td>Fibre -</td>
<td>Potassium (K) 12878 mg</td>
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<td>Manganese (Mn) 0.8775 mg</td>
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<td>Copper (Cu) 0.641 mg</td>
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<td></td>
<td>Molybdenum (Mo) 177 µg</td>
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<td>K : Na 574.9</td>
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</tbody>
</table>

**Flavour Profile**

“...A brown lime citrus aroma with some pickled notes, stewed fruits and cut grass...

Distinctive piquant lime flavour and refreshing taste...
For more information

This fact sheet is one of a series summarising Native Foods R&D from 2007 to 2012. In a partnership between government and industry, the Rural Industries Research and Development Corporation (RIRDC) and Australian Native Food Industry Limited (ANFIL) are working towards an innovative, profitable and sustainable Native Foods industry.

Australian Native Food Industry Limited (ANFIL) was formed in 2006 and is the peak national body which represents all interests in the rapidly growing Australian native food industry. ANFIL has taken the lead in working with industry, governments and other organisations to determine and prioritise research and market development strategies to progress the industry.

web: www.anfil.org.au
email: info@anfil.org.au

Australian Native Food Industry Ltd
3866 Channel Highway
Woodbridge Tasmania 7162
Australia

The Rural Industries Research & Development Corporation (RIRDC) is a statutory authority established to work with industry to invest in research and development for a more profitable, sustainable and dynamic rural sector.

Rural Industries Research & Development Corporation
Phone: 02 6271 4100
e-mail: rirdc@rirdc.gov.au
web: www.rirdc.gov.au

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