

---

# Citrus australis

---

## Scientific Name

*Citrus australis* (Mudie) Planch.

---

## Synonyms

*Citrus australis* Planch., *Microcitrus australis* (A. Cunn. ex Mudie) Swingle, *Microcitrus australis* (Planch.) Swingle.

---

## Family

Rutaceae

---

## Common/English Names

Australian Round Lime, Australia Sweet, Dooja, Gympie Lime, Native Lime, Native Orange, Round Lime.

---

## Vernacular Name

*Australia*: Dooja (Aboriginal)

---

## Origin/Distribution

The species is endemic to southeast Queensland.

---

## Agroecology

The species occurs naturally on the fringe of lowland sub-tropical rainforests of southeast Queensland, from Brisbane northwards. It is a hardy plant but slow-growing, needing some protection when young. It thrives in well-drained, organic rich soil in a sheltered position. It values mulching and extra watering during dry periods. It is moderately frost tolerant.

---

## Edible Plant Parts and Uses

The ripe acidic fruit can be eaten raw but is more suitable for making drinks cordials, sauces, jams, marmalades and also as lime flavouring. The thick rind has potential for culinary use, such as grating into spice pastes, or for candied peel and may also have potential for essential oil extraction.

---

## Botany

A compact, dense armed tree growing to 12–20 m high with slender, multiple trunks and trunk diameter of 6–8 mm and with angled, glabrous twigs with slender, 5–10 mm long, axillary thorns. Juvenile leaves linear. Older leaves simple, entire, glabrous, elliptic to obovate or almost rhomboid, 3–4×2–3 cm, emarginate or bluntly pointed at tip, cuneate at the base, gland-dotted; petioles short 6 mm, articulated with the leaf



**Plate 1** Leaves and fruit of Australian round lime (*M. Smith*)



**Plate 2** Rugose fruit with thick rind and yellowish-white pulp (*M. Smith*)

blades (Plates 1 and 2). Flowers white or pinkish-white, fragrant about 1–1.5 cm across; solitary in leaf axils, 4- or 5-merous, with 16–20 stamens with free filaments; fruit globose to subglobose, 3.5–5 cm diam., with dark green to green to yellowish-green, rugose 7 mm thick rind and containing six segments with pale yellowish-white vesicles (Plates 1 and 2). Seeds flattened, monoembryonic.

## Nutritive/Medicinal Properties

The proximate nutrient composition of the fruit was reported to be: energy 91 g, moisture 74.8 g, protein 2.2 g, nitrogen 0.35 g, ash 0.8 g, dietary fibre 6.7 g, carbohydrates 15.5 g, Ca 46 mg, Cu 0.2 mg, Fe 0.5 mg, Mg 24 mg, K 270 mg, Na 4 mg, Zn 0.1 mg, niacin 0.37 mg (Brand Miller et al. 1993).

*C. australis* leaf oil was dominated by  $\alpha$ -pinene (68–79%).

## Other Uses

The species can be used for *Citrus* hybridisation work.

## Comments

Round lime is propagated from fresh seed or cuttings, which are slow to develop roots. It can also be budded onto exotic *Citrus* rootstock.

## References

- Bayer RJ, Mabberley DJ, Morton C, Miller CH, Sharma IK, Pfeil BE, Rich S, Hitchcock R, Sykes S (2009) A molecular phylogeny of the orange subfamily (Rutaceae: Aurantioideae) using nine cpDNA sequences. *Am J Bot* 96:668–685
- Brand Miller J, James KW, Maggiore P (1993) Tables of composition of Australian aboriginal foods. Aboriginal Studies Press, Canberra
- Brophy JJ, Goldsack RJ, Forster PI (2001) The leaf oils of the Australian species of *Citrus* (Rutaceae). *J Essent Oil Res* 13:264–268
- Cottin R (2002) *Citrus of the world: a citrus directory*. Version 2.0. SRA INRA-CIRAD, France
- Mabberley DJ (2004) *Citrus* (Rutaceae): a review of recent advances in etymology, systematics and medical applications. *Blumea* 49:481–498
- Swingle WT, Reece PC (1967) The botany of *Citrus* and its wild relatives. In: Reuther W, Webber HJ, Batchelor LD (eds) *The Citrus industry vol 1: history, world distribution, botany, and varieties*, Revised edn. University of California Press, Berkeley, pp 190–430