HOW TO CONSERVE CARPOBROTUS

- the edible way

by Glenn du Preez and Karen J. Esler, University of Stellenbosch

There are seven species and two subspecies of the genus *Carpozrotus* (family Mesembryanthemaceae) in South Africa and another five in the rest of the world. Perennial succulents with a mat-forming habit, they prefer disturbed but well-drained soil and occur along the coast of South Africa up to the southern parts of Mozambique. The fruit of *Carpozrotus acinaciformis*, *C. delicatus* and *C. edulis* is tasty and sought after by humans. *C. acinaciformis* is distributed between Saldanha Bay and the Mossel Bay/George districts while *C. delicatus* is found from the area around Bredasdorp and Swellendam to East London. *C. edulis* occurs all the way round the coast from Hondeklip Bay in the west to East London in the east.

A potted biology

The fruits of *Carpozrotus* are berries (many-seeded and fleshy) and are thus atypical of the Mesembryanthemaceae family. *C. acinaciformis* is the only species that is currently marketed for its fruit. As the fruits are seasonal and there are no formal plantations, no formal labour force for harvesting the fruit exists. In the southern Cape between the Gansbaai and Riversdale/Albertinia districts where most of the harvesting takes place, pickers from the immediate area harvest the desiccated fruit which is then sent to the Fresh Produce Market which supplies retail stores.

Fruits of *C. acinaciformis* are used once the desiccated berry assumes a brown and leathery appearance. The fruits of *C. delicatus* and *C. edulis* are eaten fresh, when the pericarp turns yellowish. Fruits taste sour and can be eaten preserved, desiccated or as a jam. They make a first-class syrup and, when eaten raw and slightly warmed by the sun, a powerful laxative!

*C. delicatus* adds an attractive taste to sour milk when pulp is added in a milkshake and the fresh fruit can be added to fruit salad and jelly moulds.

 Crushed *C. edulis* makes an astrigent juice which is used as a gargle for sore throats. It has been used in the treatment of diarrhoea, dysentery and as an application to burns, insect and blue-bottle stings and mild skin conditions. The principal constituents of the juice are tannin and malic and citric acid.

*Carpozrotus* has been cultivated world-wide to control erosion and as a fire-break groundcover and some species have become invasive. (See 'Fire and ice', *Veld & Flora* 80(4), December 1994 and 'All that glisters: iceplants that leave California cold', *Veld & Flora* 81(1), March 1995.) Seeds are distributed by mammals like deer, jack rabbits and ground squirrels in the United States, and locally by bushpig, bushbuck, other antelope, baboons and monkeys. The seeds are eaten by rodents, but not by birds.

Many types of predacious mites that feed on citrus pathogens use *Carpozrotus* pollen to survive in lean times. For this reason *Carpozrotus* is planted next to citrus orchards.

Further reading


About the authors

Both from the University of Stellenbosch, Glenn du Preez is an M.Sc. student currently studying the indigenous plant use of the genus *Carpozrotus* and Dr Karen Esler is a lecturer in plant ecology in the Department of Botany.

SOUR FIG WHOLE FRUIT JAM

1.5 kg desiccated fruit of *C. acinaciformis*, 1.5 kg sugar, 2 l water, 45 ml lemon juice, a few pieces of cinnamon.

Remove floral parts and loose particles. Ends should be cut off flush, not too deep in order for the seeds not to boil out. Soak fruit overnight in a weak brine solution - fruit should be soft. Rinse fruit and peel skin. Bring fruit quickly to the boil in fresh water. Boil other ingredients together until mixture reaches syrup consistency. Add fruit to syrup. Boil mixture until fruit becomes soft but not pulpy. Jam should have an attractive dark colour.

Seal hot jam in sterilized flasks.

(With thanks to V. Heard and L. Faull.)

To make a smooth jam or jelly use above recipe, mince fruit and cook until soft and gelatinous.

(With thanks to B. Rood.)

SOUR FIG AND GHOUNA FIG JAM

500 g fresh fruit of *C. acinaciformis* and *C. edulis*, 500 g sugar, 500 ml water, salt to taste, 12.5 ml lemon juice.

Peel soft skin off fruit and allow to desiccate overnight on a cooling tray. Next morning, boil water and sugar together for 5 minutes. Add fruit, salt and lemon juice and boil together until syrup thickens and fruit is soft, not pulpy.

(With thanks to B. Rood.)

GHAKUM JAM

1 kg fresh fruit of *C. delicatus*, 1 kg sugar.

Peel off skin and boil fruit in water (cover fruit completely) until soft. Remove from heat, strain fruit and catch up strained water. To remove the seeds strain caught up water through muslin.

Add sugar and 500-750 ml of reserved water to fruit. Boil quickly at first, stirring occasionally and testing thickness of syrup. Jam is ready when mixture boils in the middle only and assumes an attractive red colour.

(With thanks to B. Rood.)

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