



## **Bush tomato production**

### **Introduction**

The fruit of the Bush Tomato (*Solanum centrale*), also known as the desert raisin and Akudjurra, are round, 10 to 20 mm in diameter, and turn from green to yellow when ripe. Unripe fruits contain the toxin solanine (the same as that present in green potatoes) and must be fully ripened before consumption. After ripening the fruits remain on the plant and dry to resemble a raisin.

Fruit is used whole or dried and coarse-ground into a granular form, and has an intense, earthy-tomato flavour of great piquancy and pungency. It is added sparingly as a condiment to spice up sauces, marinades, chutneys, soups, stews, casseroles and salads.

The fruit grows on a small rounded, prickly shrub (250 to 500 mm high and wide) that occurs naturally in central Australia (SA, WA & NT) in areas of 150 to 300 mm of rainfall, generally on red sandy soils, but also on heavier textured soils in some locations. It has grey-green to green leaves, usually covered with fine silvery or rust coloured hairs and produces pink to purple tomato-shaped flowers through spring, summer and autumn.



**Fig 1. Bush tomato flowers, fresh and dried fruit and ground product**

There are many other *Solanum* species that resemble *Solanum centrale*, only some of which produce edible fruit.

### **Production and use**

The Bush Tomato is sought after by the native foods industry for use in a range of products. Historically, the industry has utilised wild-harvested fruit from central Australia, supplies of which vary greatly from year to year, according to seasonal and economic conditions.

The demand for the product and the variability of wild harvest has led to cultivation under irrigation in several areas, including the Yorke Peninsula and Riverland areas of South Australia, as well as stimulating interest in cultivation in central Australia. Production has also been tried in the cooler Southern Vales area of South Australia with less success. Since the crop requires dry, sunny and warm conditions for plant health and to ripen and dry fruit, it is unlikely to be suitable for cooler or wetter areas, unless adapted cultivars become available.

Under the right conditions, which include lighter-textured well draining soils, the bush tomato is a hardy, fast-growing species. Planted as a seedling in spring at a spacing of around 0.5m x 0.5m, the plant usually produces a small crop for harvest the following Autumn. Harvest is ideally timed as late as possible, but before the first rains of the season. Following frost, the above-ground parts of the plant die back to ground level, with vigorous new growth arising from the rootstock at the commencement of the next growing season.



**Fig 2. Two year old planting of bush tomatoes**

The second and subsequent season should see plant growth increase, interplant areas be filled in by suckers and rising yields. It is unclear how many years an individual plant will continue to regenerate from the rootstock, or how long a planting will remain economically viable. However, experience to date suggests around 3 to 4 years.

As the fruit sticks fast to the bush it is possible to harvest the entire season's crop in one pass at the end of the season and success with mechanical harvesting has been achieved, using modified cereal headers. Further drying and grading of the fruit occurs postharvest.

Current production problems facing this crop include the genetic diversity of available open-pollinated seedling planting material, unproductive flowering under some as yet undetermined conditions, and a die-off problem that could be related to root disease, irrigation or nutrition. The plant and fruit is also occasionally attacked by insects, including the pumpkin beetle and a relative of the Rutherglen bug.



**Fig 3. Mechanical harvesting of bush tomatoes**

### **Potential returns**

Recent prices paid for wild sourced bush tomato fruit range from \$15 to \$25 per kg, while cultivated fruit sold for \$22.50 per kg in 2001. However, prices can be expected to vary with supply and demand in future years, and fall if increased supplies become available from cultivated sources.

While an average yield of 0.15 kg per bush (4.5 tonnes/ha @ 30,000 plants/ha) in the first season and 0.25 kg (7.5 tonnes/ha) in subsequent seasons has previously been suggested for estimating purposes, recent results from cultivated plantings suggest figures of 0.5 to 1.0 tonnes/ha is currently likely from 2-3 year old plantings.

### **Further information**

Further information on native crops is contained in the other publications in this series:

*Australian Native Citrus – Wild Species, Cultivars and Hybrids*

*Bush Tomato Production*

*Miscellaneous Native Food Crops – Davidson and Illawarra Plums*

*Miscellaneous Native Food Crops – East Coast Tree Species with Potential in SA*

*Miscellaneous Native Food Crops – Herbs and Vegetables with Potential in SA*  
*Mountain Pepper Production*  
*Muntries Production*  
*Native Food Background Notes*  
*Native Food Crops – Frequently Asked Questions*  
*Native Food Crops – Sources of Information*  
*Quandong Production*  
*Sunrise Lime Dieback*  
*The Native Food Industry in SA*  
*Wattleseed Production*

These fact sheets are also available for download from the Australian Native Produce Industries website at [www.anpi.com.au](http://www.anpi.com.au)

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