

SWEETLEAF



• Buds and flower bracts on a branch



• Harvested tips

Botanical name: *Sauropus androgynus* (Euphorbiaceae)

Location specific common names: Sweetleaf, boneo, katuk, star gooseberry.

Plant characteristics: Sweetleaf is a perennial shrub, with small red flowers, usually growing to 2 m. Regular pruning is needed to prevent the plant becoming top-heavy and collapsing.

Uses: Young tips, young leaves, flowers and fruit can be eaten raw, and the leaves are well known for palatability. Raw leaves combine well with tomato, cucumber, onions, etc. Older leaves are best cooked (steamed, boiled or baked) and are a tasty, nutritious addition to stews and soups. Fruits can be used to make jam. Medicinally sweetleaf is traditionally considered to be effective in reducing undesirable blood fats, gastrointestinal disorders, obesity, osteoporosis, heart disease and cancer. In common with several other leaves, sweetleaf apparently stimulates lactation.

Availability: Sweetleaf is common in the Pacific and Northern Australia.

Propagation methods: Sweetleaf can be grown from seed and planted out at a height of 30 cm preferably at the start of the wet season. However, hardwood cuttings, around 30 cm in length, produce stronger plants. Cuttings can be struck in pots in a simple shade house at any time of the year.

How to grow: Sweetleaf grows on a wide range of soils and is known for high yield. It prefers well drained soils with high levels of organic matter. Like aibika (bele, pele) it can be grown as a hedge. Regular pruning encourages new growth and keeps the plants compact.

Threats: Plants may suffer from leaf eating insects like grasshoppers, especially under dry conditions. Spraying is not usually needed as the problem insects can be easily removed.

Harvesting: Sweetleaf usually grows fast and young leaves can be picked after four months. Leaves should be harvested in the cooler part of the day to prevent wilting. Year-round production is expected if plants are growing vigorously. Plants are best kept trimmed to 1 - 2 m for leaf production and harvesting.

Post harvest and storage: Leaves or tips can be picked as needed. Loosely bundled cut branches, wrapped in moist paper and placed in a cool location, can be stored for a day or two.

Project findings/nutritional value: Samples were collected from Solomon Islands and the Torres Strait Islands. Sweetleaf ranks with ete (*Polyscias* spp., bebero, momotu) as the best zinc accumulators that we analysed, and is a very good nutritional all-rounder, usually high in iron, manganese, calcium, magnesium, sulphur, protein and carotenoids. It is also high in vitamins B and C.

Zinc: Important for immunity, growth, carbohydrate metabolism, and DNA and protein formation. Humans have around 600 different Zn-containing enzymes/proteins.

Iron: Important for healthy blood and energy.

Manganese: Enzymes containing manganese are important in the metabolism of carbohydrates, protein and fats, and in enhancing immunity.



• Tips and leaves ready for harvesting



• Mature plant on Thursday Island, Torres Strait Islands, Australia



• Mature plants in a hedge row

Magnesium: This mineral is important in bone formation, energy production, and nerve and muscle function.

Calcium: The most important mineral for the growth and maintenance of bones and teeth. Calcium is important for cellular physiology.

Sulphur: Sulphur is needed for production of the hormone insulin, which controls blood sugar level. Sulphur is also needed for the protein keratin, important for bone, cartilage and tendons.

Protein: This is important in forming muscle, cell membranes, enzymes, blood components antibodies, DNA and RNA. The nitrogen analysis here indicates a protein content of around 19%.

Carotenoids: Lutein is important for eye health (e.g. reducing risk of cataracts) and beta-carotene (pro-vitamin A) is important for vision, immunity and bone health.

This table compares selected mineral nutrients and carotenoids in leaves of sweetleaf and sweetpotato (average of two varieties) grown together at Porokokore Village, Marau, Guadalcanal, Solomon Islands in 2012 and English cabbage (average of samples bought from Honiara market, Solomon Islands and Nukualofa market, Tonga in 2012) (concentration in mg/kg dry weight, except N: % dry weight).

	Fe	Mn	Zn	Ca	Mg	K	S	N %	lutein	alpha carotene	beta carotene
Sweetleaf	71	2300	174	18900	12600	13800	5400	4.4	653	30	272
Sw.potato leaf	56	146	34	3700	3700	28000	3000	4.2	534	3	173
Cabbage	40	23	20	5700	1450	29000	3750	2.8	5	0	2

Fe: iron; Mn: manganese; Zn: zinc; Ca: calcium; Mg: magnesium; K: potassium; S: sulphur; N: nitrogen

Analyses conducted by Waite Analytical Services and the Mares Laboratory, University of Adelaide, South Australia

In the 1990s there were several cases of lung disease in Taiwan associated with excessive consumption of uncooked sweetleaf juice. The alkaloid papaverine may have been responsible; it occurs at higher levels in older leaves and is reduced by cooking. However, sweetleaf has been consumed throughout SE Asia and the Pacific for a long time without causing toxicity. Nevertheless, as with all foods, sweetleaf should be consumed in moderation.



Australian Government

Australian Centre for International Agricultural Research

This fact sheet is one of a series produced for the Australian Centre for International Agricultural Research (ACIAR) funded activity "Feasibility study on increasing the consumption of nutritionally-rich leafy vegetables by indigenous communities in Samoa, Solomon Islands and Northern Australia. PC/2010/063"

The factsheets are intended to provide information on some of the most nutritious leafy green vegetables suitable for growing in tropical areas.

COMPILED BY R. GOEBEL, M. TAYLOR & G. LYONS