ETE & OFENGA

FACTSHEET no: 4

• *Mature Ete shrubs on Tawa'ahi Island, Solomon Islands*

• *Ofenga leaves, Solomon Islands*

Botanical names:
Ete: *Polyscias verticillata, P. scutellaria, P. macgillivrayi, P. fruticosa* (Araliaceae)

Ofenga: *Pseuderanthemum whartonianum* (Acanthaceae)

Location specific common names: *Ete:* Aralia, bebero, geke, paa, bebenu, kobikobi, momotu
Ofenga: Pure, burape, wasina, aidua, sungu

Plant characteristics: Ete is a tall shrub, growing 3 - 6 m high and 2 - 3 m wide, often planted as a hedge. Leaves vary in shape from large, round and shiny to narrow and fernlike.

Ofenga is a tall shrub, growing up to 6m high, similar in appearance to the large-leaved varieties of Ete, but the leaves are less shiny, have prominent veins and are oval-shaped, narrowing to a point at both ends. The flowers of ofenga are purple and white.

Uses: The young leaves of both ete and ofenga have the best taste and can be eaten fresh, but mature leaves are usually cooked in stews and soups, ideally with coconut cream to increase carotenoid availability and conversion to vitamin A.

Medicinally ete has been traditionally used to increase milk production in nursing women. It also has anti-inflammatory effects. Ofenga is used (particularly in Vietnam) to treat high blood pressure, diarrhoea, wounds, diabetes and tumours.

Availability: These plants can be grown all year in the tropics. Ete is widespread in the Pacific, common in coastal areas, especially on high pH coralline soils. Ofenga is common in Solomon Islands (particularly Malaita) and Vanuatu, near the coast and in rainforest.

Propagation methods: Both are usually grown from stem cuttings around 40 cm long, but can also be grown from seed. The area around the cuttings should be mulched to help keep soil moist and the area free from weeds

How to grow: Ete in particular prefers high pH soils, i.e. 7.6-8.6, and will grow well on coralline soils with low available iron and phosphorus, while other crops such as cassava grow poorly and appear chlorotic when grown on these soils. Ofenga commonly grows in coastal and forest locations. Both ete and ofenga can be grown as a hedge.

Threats: Pink wax scale (*Ceroplastes rubens*) and passion vine mealybug (*Planococcus pacificus*) can cause problems. Healthy planting material and good growing conditions can help reduce the occurrence and impact of these pests.

Harvesting: Young and older leaves can be harvested on a daily basis, ideally in the cooler part of the day to prevent wilting. Leaves for food can be collected at the same time as a hedge is trimmed, which helps to keep the hedge tidy.

Post harvest and storage: As for most leaves, ete and ofenga should be washed with clean water and stored in a cool, shady place. Ideally, leaves should be eaten within a day of picking, but the large-leafed forms of ete, which are quite fibrous, can remain fresh for up to 3 days.

• *Cutting of Ete ready for planting*

• *Another form of Ete*

• *Ete leaves, Marau, Solomon Islands*

Project findings/nutritional value: Samples were collected in Solomon Islands (Guadalcanal and Santa Ysabel). Ete was among the best of the leaf samples for accumulation of zinc (even higher than leaves of cassava, a renowned zinc accumulator), and was also high in calcium and magnesium compared to most leafy vegetables.

Ofenga was one of our highest samples for magnesium and was also high in calcium and carotenoids, especially lutein.

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

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

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

This table compares selected mineral nutrients and carotenoids in leaves of ete (average of three varieties) and cassava (average of two varieties) grown together on high pH soil on Tawa'ahi Island, Marau, with ofenga (average of three samples collected at Burns Creek, Honiara and Legalawa Village, Marau) on 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	B	Cu	Zn	Ca	Mg	K	N %	lutein	alpha carotene	beta carotene
Ete	31	45	7	92	27000	6800	18000	2.6	250	30	74
Cassava	35	85	7	67	20100	6200	11400	3.6	310	1	175
Ofenga	55	31	13	43	25400	18400	34000	3.4	557	67	167
Cabbage	40	12	2	20	5700	1450	29000	2.8	5	0	2

Fe: iron; B: boron; Cu: copper; Zn: zinc; Ca: calcium; Mg: magnesium; K: potassium; N: nitrogen
Analyses conducted by Waite Analytical Services and the Mares Laboratory, University of Adelaide, South Australia

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**