

KATULI

Botanical name: *Portulaca oleracea* (Portulacaceae)

Location specific common names: te boi (Kiribati), Katuli (Tuvalu), pigweed, little hogweed, duckweed, parsley, red root, verdolaga. *P. lutea* has rounder, fleshier leaves and *P. australis*, te mtea (Kiribati) or pigface, has longer, fleshier leaves than the others. All three species are edible.

Fakamatalaga ote katuli: Ate kaatuli e maniania, tai kula, kote lasiga o kau e moe katoa kite laukele, e lau launiu kako lau e malulu kae sega ona pula. Se lakau e vave gasolo kae ola i tausaga takitasi, kae faigofie o fakaola, kae mafai foki o teke atu ki taulaa mote masima mai te pisi tai. Pela foki mo niisi (xerophytes) – lakau kola e mafai o ola i koga maloo kae laagina, a lakau konei e lasi te fakaoga te (“C4” photosynthetic pathway) mafai ko pokoi te taula, ko fuli kite sua pathway (crasulacean acid metabolism (CAM)). Mafai ko fakaoga te pathway tenei, a lau ote kaatuli ka taofi kae puke ne latou ate (carbon dioxide) ite po kae fuli kite (malic acid), kae ite ao te (malic acid) ko fuli kite (glucose) kote suka. Tela la a lau e tau ite taeao e 10 te uke ote (malic acid) iei fakapau ki lau e tau ite afiafi. Te manogi o lau ite taeao ka malosi atu i lau ite afiafi.

Fakaaogaaga: A lau ote kaatuli e gali ite kai kae maluga foki te niutulisini. E isi ne (oxalate) i lau kae ka fakafoliki te aofaki mafai e saka. Te kaatuli e tai pau mote spinach (se lau-vesiapolu) e mafai o kai mata i salati. E mafai o saka malie kae falai foki ki sinu.

Vailakau Masaki: Te kaatuli e tasi o lakau e lauiloa i tena aoga mo fai a vaivao. E maluga te aofaki o (desirable omega-3 fatty acids) i lakau ne aofia ite sukesukega (for example, 0.01 mg/g of eicosapentaenoic acid, EPA). A vaega konei e taaua ite gasolo mote tuputupu lei ote foitino, te tausiiga ote mafai nete foitino o teke atu ki masaki, kae fakafoliki te pokotia i masaki. E uke foki a niisi niutulieni (nutrients) ite kaatuli, e aoga kite foitino – (phyto-compounds - including polyphenols, sterols, anthocyanins, carotenoids) e fakaoga i fenua e uke mo faite a vailakau ite tausiga ote ola lei o tino. E aofia foki ite fakaleiga ote suka, kenisa (cancer), masaki ote fatu, kiatolo, fever, te vaivai ote foitino (low density lipoprotein cholesterol), toto maluga, Alzheimer’s disease, bipolar syndrome, colitis, microbial pathogens, liver toxins, and it can stimulate lactation. E iloa atu foki me ite igoa kote (*Portulaca*) tena uiga “ke ave a susu” io me “ke tauave a susu”.

Te mafai o maua: Ate kaatuli e fakatautau pela me ne mafua mai te fenua ko India. Se lakau e faigofie o fakaola kae ola lei foki i sose koga, kae ko lausa foki te ola ote lakau tenei ite lalolagi naa fua ko fenua moko. Se lakau e ola vale i fenua foliki (atolls) pela mo Kiribati mo Tuvalu, e masani o ola i laukele se fakaoga ne tino.

Te fakaolaaga: E mafai o fakaola mai fuaga io me mai katiga ote foitino ote lakau. Te lakau e tasi e mafai o faite neia e ¼ miliona fuaga kola e mafai o lei ise leva e 40 tausaga. Mafai ko ola ise kogaa laukele, ka ola i tausaga katoa kae e sei se gatamaiga mafai e tuku ke pulu kae fai foki a fuaga ite laukele tena.



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Mafai e toki ki lima, lakulaku fua a fuaga kite koga tela e manako koe ke ola iei kae sa tanutanu ki one, tuku saau loa kite laa me manakogina te laa ke ola a fuaga kona. Mafai e fakaoga a kaatiga, tukutuku fakalei a kaatiga ite laukele ko fakasusu ei ki vai ke oko kite taimi e ola a aka.

E toki pefea: Ate kaatuli ese manako kite siu io me kote moko, fakasusu malie ke oko kite taimi e ola ei a aka o lakau.

Pokotiaga: Te maalu e fai neia te lakau ke see ola kae vave o pokotia ne masaki mo manu pela mo aphids – kola e mafai o tapale io me fakaseai ite fakaoga ote vai soopu mo sana ki luga.

Te tauga: A lau katoa ote kaatuli e mafai o fakaoga mo fai a meakai. A lau maatua ka tai kava atu ilo lau koi tama.

Tauga mote tausiga: A lau e tau o fulu ke maa ki vai ko tausi ite koga malumalu kae mokomoko foki, kae tau loa o fakaaoga ite taimi io me kote aso tena.

Fakamatalaga ne maua mai sukesukega/Niutulisini: Ate kaatuli se lakau foliki, ola vale, mafai o kai kae maluga foki te tulaga ite niutulisini. A lau ne fakaoga ite sukesukega ne fakamau mai i Tuvalu mo Kiribati. Ate kaatuli e lauiloa ite maluga ite minelolo kote makenisiamu (magnesium). Ate levolo (41,000ppm) ne maua i lau o kaatuli mai te Chevalier Colege i Abemama, Kiribati kote toe levolo maluga ote minelolo kote makenisiamu ne maua mai lakau ite sukesukega mai te tausaga 2007. Te lakau tenei e taua ite faitega o siniki (Zinz), e pau mo lau ote tapioka. E fakataauagina foki te maluga i (omega 3 – fatty acid) ate kaatuli. E lua lima fonu i lau (200g) ote kaatuli ko lava se meakai ate tino tokotasi, pela foki te lava te niutulisini ite aofaki tena.

Ate kaatuli e luailoa foki ite maumea i minelolo (minerals) mo niutulisini (nutrients) konei:-

Makenisiamu (Magnesium): E taua ite faitega o ivi, enetise mote galuega o uaua mo kano ote foitino. E taaua foki ite teke atu o manu kiatolo. Kae mafai ko timomo te levolo ote minelolo tenei se tulaga se lei kite putalefe, te suka mote (metabolic syndrome)

Siniki (Zinc): E taua ite puipuiga ote foitino mai masaki, te gasolo mote tuputupu lei, te faitega o mea taaua mai masoa mo meakai (carbohydrate metabolism), (DNA) mote faitega o polotini (protein). E tusa mote 600 a vaega o sua (enzymes) mo polotini (protein) e isi ne siniki iei.

Fiti (Iron): Te fiti e taua mote fakatupuga ote enetise pela foki mote toto.

Carotenoids: A lau ote kaatuli e maumea i (Vitamin A). E isi ne sukesukega ne fai kae maua me e (1320 international units/100gm fresh weight). E tau ate vaega tenei mote mate o mea ne mata, te puipuiga mai masaki mote tausiga o ivi ote foitino.

This table presents selected mineral nutrients in leaves of purslane growing on coralline soil in the front garden of a house in the town centre on Funafuti Atoll, Tuvalu in August 2014. The other plants were growing nearby. 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	B	Cu	Zn	Ca	Mg	K	N
Purslane	70	5	50	14	103	16900	22000	31000	3.3
Ceylon spinach	31	9	33	11	92	21000	14800	36000	3.5
Ofenga	33	19	26	14	61	23000	17700	7000	3.4
Hedge panax	33	56	38	6	71	25000	6700	12000	2.7
Chaya	76	19	19	9	42	16100	5500	16400	5.1
Cabbage	40	23	12	2	20	5700	1450	29000	2.8

Fe: iron; Mn: manganese; B: boron; Cu: copper; Zn: zinc; Ca: calcium; Mg: magnesium; K: potassium; N: nitrogen

Analyses conducted by Waite Analytical Services, University of Adelaide, South Australia

This fact sheet is one of a series produced for the Australian Centre for International Agricultural Research (ACIAR) funded activity “Improving soil health, agricultural productivity and food security on atolls: SMCN2014/089”.

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