

TE SAITANI

Botanical name: *Moringa oleifera* (Moringaceae)

Location specific common names: te turam (Kiribati), saitani (Tuvalu), moringa, saijan, horseradish tree, mulangay

Te fakamatalaga ote 'saitani': Se lakau e lasi, kae mafai o oko tena maluga kite 4-6 mita io me maluga atu, kae mafai o velevele ke nofo ite maluga lei, ke faigofie o tau ona lau. E mafai foki o tokitoki mo fai te pui ote fale. Te igoa kote 'drumstick' ne mafua mai te loa kae olo o makaikai kite mata o fuataga, kae tautau mai maga foliki ote lakau tenei kote 'saitani'.

Fakaaogaaga: A lau ote saitani e tau o fakaaoga foki loa mai te taimi ne tau mai te lakau. A lau e mafai o fakaaoga mo fai se salati, mafai koa oti ne fulu fakalei ki vai maa. Te malosi ote sua ote saitani e mafai tai fai fakaatea ki niisi tino, tela ka galo mafai e fakaaoga I sua, kale mo suupu. Pela foki mo loam o niisi lau-vesiapolo e mafai o gali kae fakalei atu ate kuukaga mafai e faopoopo kie ne lolo io mene sinu niu. E se gata ite gali ite kai kae tafasili atu te aoga ite fakamaumea I (bioavailability of fat-soluble carotenoids), pela foki te fakaleiga ote - bioconversion of b-carotene (pro-vitamin A) to vitamin A. Mafai e seai ne lolo io mene sinu niu e mafai o fakaaoga a sinu mai paamu mo pinati.

Tenei te lesipi tafasili ite gali kae aoga mote kaiga: fulu e 6 lima fonu I lau (lau koi tama io me foliki). Tapale te lau foliki mai kau ote lau, faopoopo e 1 te lita ote suupu ika kae fakamanogi ki lau e lua ote laimi (lime) koa oti ne solo ke foliki, io mene lau o (lemon grass), faopoopo ne masim, pepa mo polofeu, fakavela ke tai pun ate vai ite 1 minute. E mafai o lava te kuuka tenei mo se 4 o tino. Te saitani e mafai o fagai kie a puaka mo moa, taki, fai a pui o fale (te pui tela e ola), manafa, fatoaga, kaiao pela foki mote fakamaaga o vai (e fakaaoga fuaga ote saitani).

Vailalkau mo Masaki: E lauiloa a lau ote saitani fakapaupau ki niisi lau-vesiapolo ite maluga te levolo ote niutulisini mote fakalei o masaki. I tuu mo faifaiga I fenua ko India, Pakistan and Sri Lanka a lau ote lakau tenei e masani o fakaaoga mo fakalei kiatolo, agai atu ki manu o masaki kae fakalei foki vaega o kenisa (cancer). E lasi foki te mautino tonu me fesoasoani kite fakaleiga ote suka ite toto, sinu kola e fakamafua ne latou te toto-maluga. Te vaega tenei e tauga tonu mo fenua ote pasefika pena foki mo Ausitalia ki matuu me maluga a masaki konei I fenua kona. Te sua aoga ote saitani e fesoasoani ke suaa uu o faillele ite tausiga olotou pepe.

Te mafai o maua: Te lakau tenei e mauagofie I Fiiti, kae timomo I fenua ote pasefika pela foki mo Ausitalia ki matuu. A fuaga ne ave ki Kiribati mo Tuvalu mai Fiiti ite 1992/93. Te ALD koga fakaola lakau (nursery) e fonu I maga o saitani pela foki mo fuaga e uke ite ALD's Tanaea, Tarawa ki saute uluofisa.

Te fakaolaaga: Te fakaolaga ote lakau tenei e mafai o fakaaoga maga io me ko fuaga. Fuaga e masani o tai tuai te ola pela foki te taimi e mafai iei o fakaaoga. Te lei ote vaega lakau e toki mai fuaga e malosi olotou aka mafai e ola. Ko kaatiga maga kola ko matua, e tau o 200 to 600 mm te loa, kae fakagalo e tasi vae tolu (1/3) ki lalo ote laukele mafai ko toki au lakau.

E toki pefea: E faigofie te fakaolaga, kae kafai ko lasi te saitani ko mafai neia o teke atu ki taulaa, masima mai te pisi tai pela foki mo matagi, kae e ola lei foki I laukele se maumea, kae ola lei foki I koga e lasi te laa iei. A lakau lasi e manakogina ke velevele, ke moa e too maluga, kae faigofie foki o tau a lau. Mafai e tau a lau ote saitani ke oko kite tafito, ate ola e mafai o foki ki tena tulaga



mua mafai e fakasiusu ate tafito ki vai. Mafai ate koga e ola iei te saitani e se lei, ate ola ote lakau ka pokotia tela ka fui gasolo kae ko lau foki ka foliki kae kote manogi o tena sua ko maluga foki. Mai te 1 kite 2 tausaga e manakogina ke pulou ate tafito ote lakau ki kaiao/pulu kote mea ke siusu te laukele ite tafito ote lakau, kae ke seai foki ne mouku mo niisi lakau ake e ola pili atu.

Pokotiaga: Te saitani se lasi te pokotia ne manu o lakau kae mafai fua o aka o pala mafai e ola I koga fonufonu.

Te tauga o lau: Ona la ate saitani e ola vave, tela te tauga o lau e mafai o uke ite taimi e tasi. Te tauga tenei e tau o fai ite taimi mokomoko ote aso, te taeao mote afiafi.

Te tauga o lau mote tausiga: A lau katoa kola koi tama mo olotou kau e tau o fulu ki vai io mene suatai maa. A lau e mafai o fakapoloka ke mafai o fakaoga ise taimi tai leva. Kae e mafai foki o fakaputu fakatasi ko ufi ei pepa siusu ko tasi ei ise koga mokomoko mo seaso e tasi. A lau e mafai foki o tasi kise leva e tasi te vaiaso, mafai e tasi I loto ise palasitiki io mese fagu kae seai se eea iei kae tuku ite aisa io me ise potu moko. Mafai a lau e maloo, a lau foliki ka tatela mai te kau ote lau, ka foliki foki te aoga o lau kona.

Fakamatalaga ne maua mai te sukesukega/Niutulisini: A lau ne fait e sukesukega kiei ne fakamaua mai Kiribati, Tuvalu, fenua foliki o Ausitalia ki matuu - Torres Strait Islands, Solomona mo Samoa. E lua lima fonu (100 grams) I lau ote saitani mose meakai ate tino tokotasi, e pena foki te levolo ote niutulisini ite aofaki o lau kona ne fakaoga. A lau ote saitani e lauiloa ite maluga te levolo o minelolo, vitamini (A, B, C), polotini, carotenoids mo niisi phytochemicals, e aofia iei anticancer compounds glucosinolates and isothiocyanates.

Polotini (Protein): E taua ite faitega mote tausiga o kano (muscle), pela foki mo uufi o sela (cell membranes), sua ote foitino, vaega ote toto, manu teke o masaki, DNA and RNA. Ne maua aka ite sukesukega tenei a lau ote saitani ne fakaoga e maluga te levolo ote polotini e tusa mote 22%, tela se aofaki e maluga kae tai pau mote lasiga o lekiumu (legumes) kola ne nitrogen-fixers.

Carotenoids: Ko lau ne fakamaua mai ite fenua ko e maluga katoa mail au ne fakamaua mai niisi fenua ne aofia ite sukesukega tenei. E maua me e maluga ite beta-carotene (pro-vitamin A), e pela foki mote lutein tela e aoga mote tausiga o mata.

Fiti: E taua ite fakaleiga ote toto pela foki mote enetisr (energy) ite foitino.

Solufa (Sulphur): Te minelolo tenei e manakogina ite faitega ote (hormone insulin) tela e fuafua neia te levolo ote suka ite foitino. Te solufa (Sulphur) e manakogina foki mote (protein keratin) e taua mo ivi (cartilage and tendons). Ate lakau kote seitani kae ko ona lau e 3-4 taimi te maluga ite solufa (Sulphur) fakapau ki niisi o lakau e ola fakatasi ite laukele e tasi.

Seleniamu (Selenium): E taua I (antioxidant enzymes) mo tupu ote kato pela foki mo galuega ote faiai pela foki vaega taua kote (antiviral and anticancer effects). A lau ote saitani e masani o 10-12 taimi te maluga I seleniamu fakatusa ki niisi o lakau e ola fakatasi ite laukele e tasi.

This table compares selected mineral nutrients and carotenoids in leaves of drumstick tree and bele (aibika) grown together at Burns Creek, Honiara, 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). Bele data: average of 3 varieties.

	Fe	Cu	Zn	Ca	Mg	S	N %	Se	lutein	alpha carotene	beta carotene
Drumstick	82	7	31	20000	3700	12300	5.1	2.0	773	0	427
Bele	73	8	44	23600	7100	4500	4.9	0.17	1006	31	358
Cabbage	40	2	20	5700	1450	3750	2.8	na	5	0	2

Fe: iron; Cu: copper; Zn: zinc; Ca: calcium; Mg: magnesium; S: sulphur; N: nitrogen; Se: selenium na: not analysed

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

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