

# TE BOI

**Arana n kabuta:** Portulaca oleracea (Portulacaceae)

**Kinaakin te boi:** E rang kai kinaaki te aroka ae te boi bwa bon te aroka ae kawakawanako iaon tano ma mwangana ae kuri ura ao n maranran, baana ae kiriin man maraurau ao n ranran ngkana ko konna ao ai ueena ae babobo. Te aroka ae kai maiu man aki kainanoa te bwai n aoraki (fertilizer) ao e kona naba n maiu n tain te mwautakataka ma te tarika. N aroia naba aroka ake a kona n maiu n taabo ake e karako iai te ran, e bon kaokoro aron karaoan kanana (photosynthetic strategy): engae ngke e kakabongana "C4" n karaoa iai kanana, ma ngkana e roko te mwautakataka ao e manga bita tein aron karekean kanana ma maiuna: crasulacean acid metabolism (CAM). N tain te mwautakataka ao baan te boi e rawea te carbon dioxide n te bong, ao n bitia nakon te malic acid, ao n te ngaina ao e bita te malic acid nakon te glucose ke te tioka. Ngaia are te boi ake a kinikaki n moantaai n te moaningabong n tain te mwautakataka a mangiingi/kabae ngkai e korakora iai te malic acid inanoia.

**Bonganana:** Baan te boi a kangkang man bongana nakon te rabwata. Te boi e kona n kanaki n kukanaki ao e kona naba n oraaki (salad). E kona n baniaki ao n kabuaneaki. E rang kakabonganaaki riki ibukin te bwai n aoraki. E rang mwaiti inanona te omega-3 fatty acids are rang bongana ibukin rikiraken te rabata, kateimatoaan te marurung ao kauarerekean te aoraki. A karaoaki naba mai iai tenaan phyto-compounds n aron te polyphenols, sterols, anthocyanins, carotenoids ake a kabonganaaki ibukin karaoan bwaai n aoraki. Bwaai n aoraki aikai ake a buoka totokoan te tioka, te kaentia, aorakin te buro, inflammation, te kabuebue, te stress, te rietata n rara, alzheimers disease, aorakin te ato, kawaekoaan karekean te ran ni mmamma ao a mwaiti riki. Engae n anne, te ara ae Portulaca e kaikonakaki ma "uouotan te miriki".

**E maiu iaa te boi:** E katautauaki bwa e moa n mwananga te boi mai India. E kai maiu nakon te aba teuana ma teuana ma e ti aki maiu n aaba ake a rang mwaitorotoro. E a rang mwaiti ngkai i aban Kiribati ma Tuvalu ni maiu n aki unikaki n aaba ake a aki kabonangaki



**Kabwebweana ao unikana:** E kona n kabwebweaki man te kora/ati ao man te mwanga naba. Te kaina te aroka e kona n karekea e nakon te kuata n mirion te ati/kora ao e kona n tiku n maiu inanon 40 te ririki. Ngkana e maiu n te tabo teuana ao e kona n tiku n maiu iai inanon te tai ae maan ngkana ko katikua bwa ena uee ao man karekea atina. E bebete aron moan kamaiuana bwa ko a ti tebokianako naba n te ran teutana. E rang kai maiu n te tabo ae riringa.

Kaaki te koraa n baim, kabururu nako te koraa iaon tano irarikin are kabwebweaki inanon te tano n te aro ba e na kona n reke riki irouna otan taai ibukin bwebwena. Kaaki mwangana iaon tano ao tebokia.

**Aron maiuana:** ibukina ba te aroka ae aki kainanoa te tabo ae mwaimwai ke ni (maitorotoro) ngaia are e rang kakawaki ba ena tebokaki rai ni karokoa ae butiraoi waakana. E rang maiuraoi riki n tain te riringa

**Ana kangaanga:** Ngkana e unikaki te boi n te tabo ae nunikai ao e kai rotaki n te man (pests) ao te aoraki ngkai e aki rang maiuraoi te boi n te nuu. Maan ma aoraki aikai n aron te aphids ma te fungi a kai kanakoaki n kabonganaan te spray ma te ran ae toobu

**Tauraoina nakon te kanaki:** Baan te boi nikabane a bane n raioiroi nakon te kanaki. Baana ake a ikawai a kona n mao teutana n kabotauaki ma baana ake a uareke.

**Imwain kanakina ao kawakinana:** A riai n tebokaki baana n te ran ae itiaki imwaain ae kanaki. A riai naba n waekoa n kanaki ke n kukanaki teutana te tai imwiin kinikakiaa ngkai a kai rai.

**Kukune man kakatai/Bonganaia:** Te boi bon te kai n amwarake ae kai maiu ao man korakora naba bongana nakon te rabwata. Imwiin tuoan baan te boi ake a anaaki mai Kiribati ao Tuvalu ao e oti bwa e korakora iai te magnesium. Iai 41,000 ppm are kuneaki n baan te boi are anaaki mai Chavalier College i Abemama n 2007 bon te kabanea n bubura n mwaitin te magnesium ae tia n kuneaki ni baan te boi. Uoua baim ae onrake n te boi e rang tau ibukin kanan temanna n aomata ibukin teuana te bong. Aikai tabeua (inano) bwaai aika a bongana aika a kuneaki inanon te boi;

**Magnesium:** E bongana ibukin te rii, karekean te korakora, ao ai ibukin mwakurin rai te namakin ma te mwaitireti. Irarikina naba ao bon iai naba ana ibuobuoki nakon te anti-inflammatory effects, ao aki taun te magnesium bon ngaia naba ae kona n karekea te aoraki ae te marikarika, metabolic syndrome ao te tioka.

**Zinc:** E bongana ibukin totokoan te aoraki, te kaikawairake, carbohydrate metabolism, ao karikan te DNA ma te protein. Inanon rabwatan te aomata ao iai e kaan 600 te naan Zn-containing enzymes/proteins aika a kakaokoro.

**Iron:** E kakawaki ibukin kateimatoan reken te rara ae tamaroa ma karekean te korakora.

**Carotenoids:** Baan te boi, e reke iai te pro-vitamin A: Kamatebwai tabeua ao a kunea te mwaiti ae nakon 1320 inter-national units/100g baan te boi ae menai. Te mwaiti aei e rang bongana ibukin te taratara, totokoan te aoraki ao ai marurungin te ri.

N te taibora ae inano ao e kaoti bwaai tabeua ake a bongana ibukin te rabwara ake a mena inanon baan te boi. Te boi aikai ake a maiu n ana o n aroka teuana te auti ae mena i nukan te town I Funafuti, Tuvalu n August 2014. Iai naba aroka aika a maiu irarikina n aron te Engriti kabiti (baan aroka aika tabeua, (n te taibora) a uotaki man te makete I Honiara, Toromon ao Tonga n 2012) (concentration in mg/kg dry weight, except N: % dry weight).

	Fe	Mn	B	Cu	Zn	Ca	Mg	K	N
Purslane	<b>70</b>	5	50	14	<b>103</b>	16900	<b>22000</b>	<b>31000</b>	3.3
Ceylon spinach	31	9	33	11	<b>92</b>	<b>21000</b>	14800	<b>36000</b>	3.5
Ofenga	33	19	26	14	<b>61</b>	<b>23000</b>	<b>17700</b>	7000	3.4
Hedge panax	33	56	38	6	<b>71</b>	<b>25000</b>	6700	12000	2.7
Chaya	<b>76</b>	19	19	9	42	16100	5500	16400	<b>5.1</b>
Cabbage	40	23	12	2	20	5700	1450	<b>29000</b>	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".  
Compiled by G. Lyons, G. Dean, R. Kiata. Graphics by S. Tukidia.

