

Family: *Solanaceae*

Taxon: *Solanum aethiopicum*

Synonym:	<i>Solanum gilo</i> Raddi	Common Name:	Pumpkin on a Stick
	<i>Solanum integrifolium</i> Poir.		Chinese scarlet eggplant
	<i>Solanum naumannii</i> Engl.		tomato-fruit eggplant
	<i>Solanum pierreanum</i> Pailleux & Bois		gilo
	<i>Solanum sudanense</i> Hammerstein		kumba
	<i>Solanum zuccagnianum</i> Dunal		

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: L
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 4
101	Is the species highly domesticated?	y=-3, n=0	y	
102	Has the species become naturalized where grown?	y=1, n=-1	y	
103	Does the species have weedy races?	y=1, n=-1	n	
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High	
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High	
203	Broad climate suitability (environmental versatility)	y=1, n=0	n	
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y	
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	y	
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	y	
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	n	
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n	
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n	
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	y	
401	Produces spines, thorns or burrs	y=1, n=0	y	
402	Allelopathic	y=1, n=0	n	
403	Parasitic	y=1, n=0	n	
404	Unpalatable to grazing animals	y=1, n=-1		
405	Toxic to animals	y=1, n=0	n	
406	Host for recognized pests and pathogens	y=1, n=0		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n	
408	Creates a fire hazard in natural ecosystems	y=1, n=0	n	

409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	y
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	1
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	y
706	Propagules bird dispersed	y=1, n=-1	y
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m ²)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	y

Designation: L

WRA Score 4

Supporting Data:

101	1986. D'Arcy, W.G.. Solanaceae, biology and systematics. Columbia University Press, New York, NY	[Is the species highly domesticated? Yes] "Biosystematic studies have shown that all the African taxa of Solanum section Oliganthes series Aethiopica, namely Solanum gilo (including S. olivare), Solanum zuccagnianum (= S. aethiopicum L. sensu Bitter), Solanum aethiopicum L., and Solanum aethiopicum var. aculeatum (= S. integrifolium auct. Non Poir.), comprise a single species. These crop plants form a continuum of interfertile populations; human preferences have selected nodes on non-Linnaean names under Solanum aethiopicum..."
101	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Is the species highly domesticated? Yes] "Solanum aethiopicum was domesticated from the wild Solanum anguivi Lam., via the semi-domesticated Solanum distichum Schumach. & Thonn."
102	2007. eFloras. Madagascar Catalogue - Solanum aethiopicum L.. http://www.efloras.org/florataxon.aspx?flora_id=12&taxon_id=200020574	[Has the species become naturalized where grown? Yes] "Distribution: Naturalized in Madagascar"
102	2009. Conservatoire et Jardin botaniques & South African National Biodiversity Institute. African Plant Database - Solanum aethiopicum L.. http://www.ville-ge.ch/musinfo/bd/cjb/africa/details.php?langue=an&id=119860	[Has the species become naturalized where grown? Yes] "Shrub; Humid, Subhumid; uncertain; 1000 1499 m; distribution: Naturalised in Madagascar." [syn. =Solanum integrifolium auct.]
103	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Does the species have weedy races?? No evidence]
201	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Species suited to tropical or subtropical climate(s) 2-high] "Solanum aethiopicum is grown throughout tropical Africa and South America (mainly Brazil) and occasionally elsewhere, e.g. in southernmost France and Italy."
202	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Quality of climate match data 2-high] "Solanum aethiopicum is grown throughout tropical Africa and South America (mainly Brazil) and occasionally elsewhere, e.g. in southernmost France and Italy."
203	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Broad climate suitability (environmental versatility)? No] "None of these cultivar-groups survive cold or very wet conditions. Waterlogging is not tolerated. Some tolerance of irrigation-induced salinity is reported from Senegal."
203	2009. Achigan-Dako et al. (eds.). Traditional vegetables in Benin: Diversity, distribution, ecology, agronomy, and utilization. Darwin Initiative & International Foundation for Science, London, UK & Stockholm, Sweden	[Broad climate suitability (environmental versatility)? No] "Solanum aethiopicum is a tropical crop with optimum daytime temperature of 25-30°C and night temperatures of 20-27°C."
204	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Solanum aethiopicum is grown throughout tropical Africa and South America (mainly Brazil) and occasionally elsewhere, e.g. in southernmost France and Italy."
205	1986. D'Arcy, W.G.. Solanaceae, biology and systematics. Columbia University Press, New York, NY	[Does the species have a history of repeated introductions outside its natural range? Yes] "Solanum aethiopicum is widely cultivated in Africa for its glabrous leaves, which are cooked like spinach, and it has small fruits. Solanum gilo has hairy and sometimes prickly leaves but is commonly grown in Africa and also South America for its large fruits, which are cooked or eaten raw."
205	1992. D'Arcy, W.G.. Solanaceae of Madagascar: Form and Geography. Annals of the Missouri Botanical Garden. 79(1): 29-45.	[Does the species have a history of repeated introductions outside its natural range? Yes] "These plants were domesticated in west Africa (Lester & Niakan, 1986), and many forms and related wild "species" exist across the African continent, including the ribbed-fruited forms seen on Madagascar. As there appears to be no series of wild associates in Madagascar, these species are presumed to have been introduced from Africa, where many similar forms are found. Both species are used medicinally and sometimes as food. In Africa, fruits and leaves are eaten, and many wild stocks are used for medicines."
205	1994. Zhi-yun, Z./An-ming, L./D'Arcy, W.G.. Flora of China Vol. 17 - Solanaceae. Missouri Botanical Garden and Harvard University Herbaria, Beijing & St. Louis http://flora.huh.harvard.edu/china/mss/volume17/Solanaceae.published.pdf	[Does the species have a history of repeated introductions outside its natural range? Yes] "Cultivated in Henan (Song Xian) and Yunnan (Kunming Shi and Xishuangbanna)" [China]

205	2001. Hanelt, P. (ed.). Mansfeld's encyclopedia of agricultural and horticultural crops: (except ornamentals).. Angiospermae - monocotyledones: orchidaceae - pandanaceae, Volume 5. Springer-Verlag, Berlin, Heidelberg, New York	[Does the species have a history of repeated introductions outside its natural range? Yes] "Vegetables cultivated very commonly throughout tropical Africa, introduced to Brazil with the slave trade, and also found rarely in Spain, Italy, Georgia and India."
301	2004. Mito, T./Uesugi, T.. Invasive Alien Species in Japan: The Status Quo and the New Regulation for Prevention of their Adverse Effects. Global Environmental Research. 8(2): 171-191.	[Naturalized beyond native range? Possibly Japan] "Table 1 Alien species recognized to be established in Japan or found in the Japanese wild (as of October 27, 2004)" [includes <i>S. integrifolium</i>]
301	2007. eFloras. Madagascar Catalogue - <i>Solanum aethiopicum</i> L.. http://www.efloras.org/florataxon.aspx?flora_id=12&taxon_id=200020574	[Naturalized beyond native range? Yes] "Distribution: Naturalized in Madagascar"
301	2009. Conservatoire et Jardin botaniques & South African National Biodiversity Institute. African Plant Database - <i>Solanum aethiopicum</i> L.. http://www.ville-ge.ch/musinfo/bd/cjb/africa/details.php?langue=an&id=119860	[Naturalized beyond native range? Yes] "Shrub; Humid, Subhumid; uncertain; 1000 1499 m; distribution: Naturalised in Madagascar." [syn. = <i>Solanum integrifolium</i> auct.]
302	2007. Randall, R.P.. Global Compendium of Weeds - <i>Solanum integrifolium</i> [Online Database]. http://www.hear.org/gcw/species/solanum_integrifolium/	[Garden/amenity/disturbance weed? No] No evidence
303	2007. Randall, R.P.. Global Compendium of Weeds - <i>Solanum integrifolium</i> [Online Database]. http://www.hear.org/gcw/species/solanum_integrifolium/	[Agricultural/forestry/horticultural weed? No] No evidence
304	2007. Randall, R.P.. Global Compendium of Weeds - <i>Solanum integrifolium</i> [Online Database]. http://www.hear.org/gcw/species/solanum_integrifolium/	[Environmental weed? No] No evidence
305	2002. Cuda, J.P./Parker, P.E./Coon, B.R. et al.. Evaluation of exotic <i>Solanum</i> spp. (Solanales: Solanaceae) in Florida as host plants for the leaf beetles <i>Leptinotarsa defecta</i> & <i>L. texana</i> (Coleoptera: Chrysomelidae). Florida Entomologist. 85(4): 599-610.	[Congeneric weed? Yes] "Tropical soda apple, wetland nightshade and turkey berry are currently recognized as three of Florida's most invasive nonnative plant species (FLDACS 1999, FLEPPC 1999, Langeland 2001). Although it is unclear why these exotic solanaceous plants have become weeds, the lack of host specific natural enemies in Florida (the introduced range) may have afforded these plants a competitive advantage over native species (Cuda et al. 2002)."
305	2006. USDA Natural Resources Conservation Service. Federal noxious weed list. http://plants.usda.gov/java/noxious?rptType=Federal	[Congeneric weed? Yes] " <i>Solanum tampicense</i> and <i>Solanum viarum</i> listed as Federal noxious weeds"
401	1994. Zhi-yun, Z./An-ming, L./D'Arcy, W.G.. Flora of China Vol. 17 - Solanaceae. Missouri Botanical Garden and Harvard University Herbaria, Beijing & St. Louis http://flora.huh.harvard.edu/china/mss/volume17/Solanaceae.published.pdf	[Produces spines, thorns or burrs? Yes. In some cases prickly] "Stem and branches prickly; prickles 2–5 mm, 1–2 mm broad at base, straight or slightly curved."
401	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Produces spines, thorns or burrs? Yes] "Shrub to perennial or annual herb, up to 200 cm tall, often much-branched; root system extending both vertically and laterally; branches and leaves with or without prickles and stellate hairs." [Possibly with prickles, but no spines, thorns or burrs]
401	2011. Dave's Gardern. PlantFiles: PlantFiles: Scarlet Eggplant, Mock Tomato Mini Pumpkins, Japanese Golden Eggs - <i>Solanum aethiopicum</i> . http://davesgarden.com/guides/pf/go/73389/	Produces spines, thorns or burrs? Yes] "Plant has spines or sharp edges; use extreme caution when handling"
402	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Allelopathic? No] "Seed is sometimes broadcast together with amaranths (<i>Amaranthus</i> spp.) and spider plant (<i>Cleome gynandra</i> L.), where the latter two crops are harvested early by uprooting and the plants of <i>Solanum aethiopicum</i> Shum Group remain." [No evidence, despite widespread cultivation]

403	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Parasitic? No] "Shrub to perennial or annual herb, up to 200 cm tall, often much-branched; root system extending both vertically and laterally..." [Solanaceae. Not parasitic]
404	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Unpalatable to grazing animals? Unknown] "branches and leaves with or without prickles and stellate hairs." [Although foliage is palatable to humans, presence of prickles may deter browsing from animals]
405	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Toxic to animals? No evidence]
405	2010. Plants For A Future Database. Solanum aethiopicum. http://www.pfaf.org/user/Plant.aspx?LatinName=Solanum+aethiopicum	[Toxic to animals? No evidence] "Although no specific mention of toxicity has been seen for this species, it belongs to a genus where many if not all the members have poisonous leaves and sometimes also the unripe fruits."
406	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Host for recognized pests and pathogens? Potentially] "Solanum aethiopicum is susceptible to several diseases and pests, although much less than eggplant. The most serious soil-borne diseases are wilt caused by <i>Ralstonia solanacearum</i> , collar rot and wilting caused by <i>Sclerotinia rolfsii</i> and <i>Verticillium dahliae</i> , and root-knot nematodes..."
407	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Causes allergies or is otherwise toxic to humans? No] "It is one of the leading vegetables of tropical Africa. In the humid zone of west Africa it is mainly grown for its immature fruits (garden egg), in the savanna area frequently for both its leaves and immature fruits...and in East Africa, especially Uganda, mainly as a leaf vegetable...The leaves contain oxalate and alkaloids, e.g. solasodine, which has glyocorticoid effects. Their concentration is reduced by cooking." [No evidence despite widespread use as a food]
408	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Creates a fire hazard in natural ecosystems? No evidence]
409	2010. Plants For A Future Database. Solanum aethiopicum. http://www.pfaf.org/user/Plant.aspx?LatinName=Solanum+aethiopicum	[Is a shade tolerant plant at some stage of its life cycle? Possibly no] "It cannot grow in the shade."
409	2011. Learn 2 Grow. Solanum integrifolium. http://www.learn2grow.com/plants/solanum-integrifolium/	[Is a shade tolerant plant at some stage of its life cycle? Possibly] "Sun Exposure: Full Sun, Partial Sun"
409	2011. The Gardener's Network. How to Grow Pumpkin on a Stick or Ornamental Eggplant. http://www.gardenersnet.com/vegetable/ornamentaleggplant.htm	[Is a shade tolerant plant at some stage of its life cycle? Partial shade] "It likes full sun, but will tolerate partial shade."
410	2008. Peter, K.V. (e.d.). Underutilized and underexploited horticultural crops, Volume 4. New India Publishing, New Delhi, India	[Tolerates a wide range of soil conditions? Yes] "It grows on a wide range of well-drained soils. The optimum pH of the soil is between 5.5 and 6.8..."
411	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Climbing or smothering growth habit? No] "Shrub to perennial or annual herb, up to 200 cm tall, often much-branched; root system extending both vertically and laterally..."
412	1992. D'Arcy, W.G.. Solanaceae of Madagascar: Form and Geography. Annals of the Missouri Botanical Garden. 79(1): 29-45.	[Forms dense thickets? No evidence]
412	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Forms dense thickets? No evidence]
501	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Aquatic? No] "Shrub to perennial or annual herb, up to 200 cm tall, often much-branched; " [Terrestrial]
502	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Grass? No] Solanaceae
503	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Nitrogen fixing woody plant? No] Solanaceae
504	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Shrub to perennial or annual herb, up to 200 cm tall, often much-branched; root system extending both vertically and laterally;"

601	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Evidence of substantial reproductive failure in native habitat? No] No evidence
602	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Produces viable seed? Yes] "Fruit a globose to depressed globose, ellipsoid, ovoid or fusiform berry 1-6 cm long, smooth to grooved, red or orange, usually many-seeded. Seeds lenticular to reniform, flattened, 2-5 mm in diameter, pale brown or yellow."
603	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Hybridizes naturally? Potentially] "Plants of these four cultivar-group can be crossed mutually as well as with <i>Solanum anguivi</i> and <i>Solanum distichum</i> to produce fully fertile hybrids, and therefore might be considered as a single biological species."
604	1978. Baksh, S./Iqbal, M./Jamal, A.. Breeding system of <i>Solanum integrifolium</i> Poir. with an emphasis on sex potential and intercrossability. <i>Euphytica</i> . 27: 811-815.	[Self-compatible or apomictic? Yes] "As in other <i>Solanum</i> species, self-pollination was dominant in <i>S. integrifolium</i> , although cross pollination was also not uncommon under favourable conditions."
604	1981. Whalen, M.D./Anderson, G.J.. Distribution of Gametophytic Self-Incompatibility and Infrageneric Classification in <i>Solanum</i> . <i>Taxon</i> 30(4): 761-767. 30(4): 761-767.	[Self-compatible or apomictic? Yes] "Table 1. Taxonomic distribution of compatibility systems in <i>Solanum</i> " [<i>S. integrifolium</i> : SC = self-compatible]
604	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Self-compatible or apomictic? Yes] "...all flowers are functionally bisexual and can set fruit."
605	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Requires specialist pollinators? No] "They are bee-pollinated, mainly by the genera <i>Exomalopsis</i> and <i>Apis</i> ."
606	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Reproduction by vegetative fragmentation? No] "Propagation and planting. Seeds should be taken from fully ripe fruits, washed, and then dried on cloth or paper." [No evidence of spread by vegetative means]
607	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Minimum generative time (years)? 1] "Shrub to perennial or annual herb, up to 200 cm tall...New leaves rapidly increase in size and flowering starts (40-)70-100 days after sowing." [Annual with potential to reach maturity in one year]
701	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit a globose to depressed globose, ellipsoid, ovoid or fusiform berry 1-6 cm long, smooth to grooved, red or orange, usually many-seeded. Seeds lenticular to reniform, flattened, 2-5 mm in diameter, pale brown or yellow." [No evidence, and no means of external attachment]
702	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules dispersed intentionally by people? Yes] " <i>Solanum aethiopicum</i> is sometimes cultivated as an ornamental...one of the most commonly consumed fruit vegetables in tropical Africa, in quantity and value probably the third after tomato and onion, and before okra..."
703	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules likely to disperse as a produce contaminant? No evidence]
704	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules adapted to wind dispersal? No] "Fruit a globose to depressed globose, ellipsoid, ovoid or fusiform berry 1-6 cm long, smooth to grooved, red or orange, usually many-seeded. Seeds lenticular to reniform, flattened, 2-5 mm in diameter, pale brown or yellow."
705	1992. D'Arcy, W.G.. <i>Solanaceae</i> of Madagascar: Form and Geography. <i>Annals of the Missouri Botanical Garden</i> . 79(1): 29-45.	[Propagules water dispersed? No] "Fruits of <i>Solanum aethiopicum</i> will float in sea water (not in fresh water),..."
706	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules bird dispersed? Yes. Potentially] "Fruit a globose to depressed globose, ellipsoid, ovoid or fusiform berry 1-6 cm long, smooth to grooved, red or orange, usually many-seeded. Seeds lenticular to reniform, flattened, 2-5 mm in diameter, pale brown or yellow...The small fruits of Shum Group ripen rapidly, turning red; they are eaten by birds which disperse the seeds" [Fleshy-fruited]
707	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules dispersed by other animals (externally)? No] "Fruit a globose to depressed globose, ellipsoid, ovoid or fusiform berry 1-6 cm long, smooth to grooved, red or orange, usually many-seeded. Seeds lenticular to reniform, flattened, 2-5 mm in diameter, pale brown or yellow." [No evidence, and no means of external attachment]

708	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Propagules survive passage through the gut? Yes] "Fruit a globose to depressed globose, ellipsoid, ovoid or fusiform berry 1-6 cm long, smooth to grooved, red or orange, usually many-seeded. Seeds lenticular to reniform, flattened, 2-5 mm in diameter, pale brown or yellow." [Fleshy-fruited. Seeds presumably adapted to survive passage through guts of vertebrate dispersers]
801	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Prolific seed production (>1000/m ²)? Unlikely] "Germination takes 5–9 days for Gilo Group and Shum Group, but only 3–5 days for Kumba Group, although the latter may show seed dormancy and tends to have few seeds per fruit."
802	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Evidence that a persistent propagule bank is formed (>1 yr)? Potentially] "Seeds stored dry and cool are viable for years. Seeds also store well inside air-dried fruits, which is the traditional form of seed storage by farmers." [Seed viability in soil unknown]
803	2011. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information found on herbicide efficacy or chemical control of this species
804	2011. WRA Specialist. Personal Communication.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown] Primarily cultivated for fruit, & not frequently cut back
805	2004. Grubben, G.J.H.. Vegetables. Volume 2 of Plant resources of tropical Africa. PROTA, Wageningen, Netherlands	[Effective natural enemies present locally? Yes] "The most serious soil-borne diseases are wilt caused by <i>Ralstonia solanacearum</i> , collar rot and wilting caused by <i>Sclerotinia rolfsii</i> and <i>Verticillium dahliae</i> , and root-knot nematodes..." [Ralstonia solanacearum present in Hawaiian Islands]