Taxon: Citrus 'Meyer' **Family:** Rutaceae

Common Name(s): Chinese dwarf lemon
dwarf lemon
Meyer lemon

Synonym(s): Citrus × meyerii Yu. Tanaka
Citrus meyeri Yu (sensu Hodgson;

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 14 Apr 2017

WRA Score: -10.5 **Designation:** L **Rating:** Low Risk

Keywords: Temperate, Tree, Unarmed, Edible, Few-Seeded

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	y
102	Has the species become naturalized where grown?		
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)	Low
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	y
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	n
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	n
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	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
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		

Qsn #	Question	Answer Option	Answer
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		
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally		
604	Self-compatible or apomictic		
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	>3
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	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut		
801	Prolific seed production (>1000/m2)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	**Is the species highly domesticated?**	**y**
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Meyer lemon is named after USDA plant explorer Frank Meyer who discovered the plant growing as a dooryard tree in Beijing, China in 1908. Its history prior to that is unknown. Its parentage is unknown, but it is considered either an orange-lemon or a mandarin-lemon hybrid or lemon-orange- mandarin hybrid."

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

103	**Does the species have weedy races?**	**n**
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

201	**Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"**	**Low**
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 13 Apr 2017]	Cultivated: Asia-Temperate China: China

202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 13 Apr 2017]	

203	**Broad climate suitability (environmental versatility)**	**y**
	Source(s)	**Notes**
	Floridata. 2017. Citrus meyeri. http://floridata.com/Plants/Rutaceae/Citrus%20meyeri/1067. [Accessed 13 Apr 2017]	"Hardiness: USDA Zones 8B - 10. Meyer lemon is the hardiest of the lemons. It has withstood winter temperatures below 23 F (-5 C) here in North Florida. On the other hand, Meyer lemon is not well suited to cultivation in tropical climates."

Qsn #	Question	Answer
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Meyer lemon is robust, vigorous and cold and heat hardy. It grows well in warm climates. It grows well in standard citrus producing climates, but also grows in cooler areas, and areas that receive brief freezes. It is fairly cold hardy, surviving temperatures down to−3°C. Its optimum temperature for growth is 25–30°C and growth is halted at >40°C. It needs protection against severe frosts, strong and cold winds."

204	Native or naturalized in regions with tropical or subtropical climates	n
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 13 Apr 2017]	"Cultivated: Asia-Temperate China: China"
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Meyer lemon is named after USDA plant explorer Frank Meyer who discovered the plant growing as a dooryard tree in Beijing, China in 1908. Its history prior to that is unknown. Its parentage is unknown, but it is considered either an orange-lemon or a mandarin-lemon hybrid or lemon-orange- mandarin hybrid."
	Floridata. 2017. Citrus meyeri. http://floridata.com/Plants/Rutaceae/Citrus%20meyeri/1067. [Accessed 13 Apr 2017]	[Grown in, but not native to, subtropical regions] "Meyer lemon is not well suited to cultivation in tropical climates." ... "Regardless of it origin, the Meyer lemon is grown today in much of the semitropics (mild, dry winters as in Florida and the Gulf Coast), and subtropics (mild, wet winters as in California and the Mediterranean). Meyer lemons are grown commercially (albeit on a small scale) in California."

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	**Notes**
	Floridata. 2017. Citrus meyeri. http://floridata.com/Plants/Rutaceae/Citrus%20meyeri/1067. [Accessed 13 Apr 2017]	"Regardless of it origin, the Meyer lemon is grown today in much of the semitropics (mild, dry winters as in Florida and the Gulf Coast), and subtropics (mild, wet winters as in California and the Mediterranean). Meyer lemons are grown commercially (albeit on a small scale) in California."

301	Naturalized beyond native range	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	Wagner, W.L., Herbst, D.R.& Lorence, D.H. 2017. Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. http://botany.si.edu/. [Accessed 13 Apr 2017]	No evidence to date

302	Garden/amenity/disturbance weed	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

304	Environmental weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

305	Congeneric weed	y
	Source(s)	**Notes**
	Tye, A. 2001. Invasive plant problems and requirements for weed risk assessment in the Galapagos Islands. Pp. 153 -175 in Groves, R.H. et al. (eds.) Weed risk assessment. Csiro Publishing, Collingwood, Australia	"Even before permanent settlement, Floreana contained large areas dominated by introduced plants such as Citrus spp. (Slevin 1959; Hamann 1984)." "Group 5, including Ochroma, Cordia, Persea, comprises trees which are invading slowly; they are either in the early stages of invasion (Ochroma, Cordia) or have heavy seeds and therefore naturally spread more slowly (Persea, the Citrus spp.). Most have not yet caused serious ecological damage, but any tree of their size will probably have dramatic effects on the lower growing native vegetation that it is invading, especially those species (Citrus, Persea) which tend to form dense monospecific stands."

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Citrus × meyeri trees are unarmed (thornless), short (2–3 m) high at maturity, though they can be pruned smaller, with a compact to weeping habit. Their leaves are large, elliptic-ovate, glossy green, with acute apex and obtuse base and crenulate margin and borne on short, glabrous, wingless petioles"

402	Allelopathic	
	Source(s)	**Notes**
	WRA Specialist. 2017. Personal Communication	Unknown. No evidence found.

Qsn #	Question	Answer
403	**Parasitic**	**n**
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Citrus × meyeri trees are unarmed (thornless), short (2–3 m) high at maturity, though they can be pruned smaller, with a compact to weeping habit." [No evidence]

404	Unpalatable to grazing animals	
	Source(s)	**Notes**
	WRA Specialist. 2017. Personal Communication	Unknown. Oils in plant may deter browsing.

405	Toxic to animals	n
	Source(s)	**Notes**
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**
	Missouri Botanical Garden. 2017. Citrus × meyeri. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=d391. [Accessed 13 Apr 2017]	"No serious insect or disease problems. Susceptible to anthracnose, scab, sooty mold, greasy spot, canker and gummosis. Potential insect pests include aphids, thrips, cutworms, leafrollers, mealybugs, scales and whiteflys. Watch for mites."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	**Notes**
	Plants for a Future. 2017. Citrus x meyeri. http://www.pfaf.org/User/Plant.aspx?LatinName=Citrus+x+meyeri. [Accessed 13 Apr 2017]	"Bergapten is sometimes added to tanning preparations since it promotes pigmentation in the skin, though it can cause dermatitis or allergic responses in some people[238]."
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"The edible uses in food, juices, lemonade and in confectionary are as described for lemons."
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

Qsn #	Question	Answer
408	**Creates a fire hazard in natural ecosystems**	**n**
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	[Not known to increase fire hazard. A cultivated tree] "Meyer lemon is named after USDA plant explorer Frank Meyer who discovered the plant growing as a dooryard tree in Beijing, China in 1908. Its history prior to that is unknown. Its parentage is unknown, but it is considered either an orange-lemon or a mandarin-lemon hybrid or lemon-orange- mandarin hybrid."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	**Notes**
	Plants for a Future. 2017. Citrus x meyeri. http://www.pfaf.org/User/Plant.aspx?LatinName=Citrus+x+meyeri. [Accessed]	"Prefers a moderately heavy loam with a generous amount of compost and sand added and a very sunny position"
	Missouri Botanical Garden. 2017. Citrus × meyeri. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=d391. [Accessed 13 Apr 2017]	"Winter hardy to USDA Zones 9-11 where this small citrus tree will grow well in sandy, neutral, well drained soils in full sun to light shade. It has the best winter hardiness of any of the lemon-type fruits. Best performance occurs in full sun."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	**Notes**
	Plants for a Future. 2017. Citrus x meyeri. http://www.pfaf.org/User/Plant.aspx?LatinName=Citrus+x+meyeri. [Accessed 13 Apr 2017]	"Prefers a pH between 5 and 6[200]. Tolerates a pH in the range 4.8 to 8.3. Plants are intolerant of water logging"
	Missouri Botanical Garden. 2017. Citrus × meyeri. http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=d391. [Accessed 13 Apr 2017]	"Winter hardy to USDA Zones 9-11 where this small citrus tree will grow well in sandy, neutral, well-drained soils in full sun to light shade." ... "Avoid wet poorly drained soils."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Citrus × meyeri trees are unarmed (thornless), short (2–3 m) high at maturity, though they can be pruned smaller, with a compact to weeping habit."

412	Forms dense thickets	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	[No evidence] "Meyer lemon is named after USDA plant explorer Frank Meyer who discovered the plant growing as a dooryard tree in Beijing, China in 1908. Its history prior to that is unknown. Its parentage is unknown, but it is considered either an orange-lemon or a mandarin-lemon hybrid or lemon-orange- mandarin hybrid."

501	Aquatic	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	[Terrestrial] "Citrus × meyeri trees are unarmed (thornless), short (2–3 m) high at maturity, though they can be pruned smaller, with a compact to weeping habit."

502	Grass	n
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 13 Apr 2017]	Family: Rutaceae Subfamily: Aurantioideae Tribe: Aurantieae Subtribe: Citrinae

503	Nitrogen fixing woody plant	n
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 13 Apr 2017]	Family: Rutaceae Subfamily: Aurantioideae Tribe: Aurantieae Subtribe: Citrinae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Citrus × meyeri trees are unarmed (thornless), short (2–3 m) high at maturity, though they can be pruned smaller, with a compact to weeping habit."

601	Evidence of substantial reproductive failure in native habitat	
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	[Not applicable] "Meyer lemon is named after USDA plant explorer Frank Meyer who discovered the plant growing as a dooryard tree in Beijing, China in 1908. Its history prior to that is unknown. Its parentage is unknown, but it is considered either an orange-lemon or a mandarin-lemon hybrid or lemon-orange- mandarin hybrid."

602	Produces viable seed	y
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten."

603	Hybridizes naturally	

Qsn #	Question	Answer
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Its parentage is unknown, but it is considered either an orange-lemon or a mandarin-lemon hybrid or lemon-orange- mandarin hybrid." [Unknown if natural hybrids occur with this hybrid]

604	Self-compatible or apomictic	
	Source(s)	**Notes**
	Khan, I. A. (editor). 2007. Citrus Genetics, Breeding and Biotechnology. CAB International, Wallingford, UK	[Unspecified for Citrus meyeri] "Almost all pummelos, some mandarins and several natural or artificial hybrids are self-incompatible (Hearn, 1969). Some of the self-incompatible cultivars are seedy because of their female fertility and lack of parthenocarpy requiring cross-pollination to set fruits (Miwa, 1951; Mustard et al., 1956; Krezdorn and Robinson, 1958)."

605	Requires specialist pollinators	n
	Source(s)	**Notes**
	Spiegel-Roy, P. and Goldschmidt, E. E. 1996. The Biology of Citrus. Cambridge University Press, Cambridge, UK	"Citrus flowers are attractive to insects due to abundant pollen, nectar, typical perfume, and the conspicuous corolla. Most citrus species are valuable honey-producing plants. While thrips and mites also abound on flowers, honeybees are the main agent in natural cross pollination."
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Flower buds are ovoid, purplish or white with pale purplish tint (Plates 1 and 2). Calyx is cup shaped with 4–5 very short teeth; petals 4–5 white on the upper side and purple or pale purplish-white on the underside; stamens 20–25, connate in several fascicles, fi laments white with yellow anthers; ovary superior, subglobose to ovoid with a style and capitate yellow stigma."

606	Reproduction by vegetative fragmentation	n
	Source(s)	**Notes**
	Floridata. 2017. Citrus meyeri. http://floridata.com/Plants/Rutaceae/Citrus%20meyeri/1067. [Accessed 13 Apr 2017]	"Propagation: Meyer lemon is easy to start from cuttings and grows rapidly, bearing fruit within a year or two. As with most citrus (even hybrids), the seeds come true. Meyer lemon seedlings can be expected to bear fruit within four years." [No evidence]

607	Minimum generative time (years)	>3
	Source(s)	**Notes**
	Floridata. 2017. Citrus meyeri. http://floridata.com/Plants/Rutaceae/Citrus%20meyeri/1067. [Accessed 13 Apr 2017]	"Meyer lemon seedlings can be expected to bear fruit within four years."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	**Notes**

Qsn #	Question	Answer
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten." [Unlikely. Fruits and seeds are relatively large and lack means of external attachment]

702	Propagules dispersed intentionally by people	y
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Meyer lemons are popular as ornamental house plants due to their short stature, compact size, hardiness and productivity. They are highly decorative and suitable for container growing."
	Floridata. 2017. Citrus meyeri. http://floridata.com/Plants/Rutaceae/Citrus%20meyeri/1067. [Accessed 13 Apr 2017]	"Regardless of it origin, the Meyer lemon is grown today in much of the semitropics (mild, dry winters as in Florida and the Gulf Coast), and subtropics (mild, wet winters as in California and the Mediterranean). Meyer lemons are grown commercially (albeit on a small scale) in California. "

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten." [Fruits and seeds are relatively large and unlikely to become an inadvertent contaminant of produce]

704	Propagules adapted to wind dispersal	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten."

705	Propagules water dispersed	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten." [No evidence]

706	Propagules bird dispersed	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten." [No evidence]
	Mabberley, D.J. 2004. Citrus (Rutaceae): a review of recent advances in etymology, systematics and medical applications. Blumea 49: 481–498	"What we need to know is of truly wild populations of citrus in Asia including Malaysia, Indonesia and the Philippines." … "Even then, as far as I know, there are precious few observations on pollination in wild plants, only preliminary observations on germination, beyond those of Leeuwenhoek (e.g. Lim, 2001) and absolutely nothing on what the dispersal agents are or were (such big fruits as pomelos suggest primates, extinct large mammals or perhaps rhinoceros)."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten." [No means of external attachment]

708	Propagules survive passage through the gut	
	Source(s)	**Notes**
	Mabberley, D.J. 2004. Citrus (Rutaceae): a review of recent advances in etymology, systematics and medical applications. Blumea 49: 481–498	[Unknown] "What we need to know is of truly wild populations of citrus in Asia including Malaysia, Indonesia and the Philippines." … "Even then, as far as I know, there are precious few observations on pollination in wild plants, only preliminary observations on germination, beyond those of Leeuwenhoek (e.g. Lim, 2001) and absolutely nothing on what the dispersal agents are or were (such big fruits as pomelos suggest primates, extinct large mammals or perhaps rhinoceros)."

801	Prolific seed production (>1000/m2)	n
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	"Fruit large, subglobose to globose-ovoid, 6.5–7 cm with a small nipple, green (Plate 4) turning to an attractive orangey-yellow or deep yellow on maturity, with a smooth, thin rind (Plates 5 and 6). Segments seven with yellow pulp (Plate 7), juicy subacid (low acid and high sugar levels). Seeds few to ten." [No evidence]

Qsn #	Question	Answer
802	**Evidence that a persistent propagule bank is formed (>1 yr)**	
	Source(s)	**Notes**
	Royal Botanic Gardens Kew. (2017) Seed Information Database (SID). Version 7.1. Available from: http://data.kew.org/sid/. [Accessed]	Unknown. Other species have orthodox and recalcitrant seeds

803	**Well controlled by herbicides**	
	Source(s)	**Notes**
	WRA Specialist. 2017. Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species

804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	
	Source(s)	**Notes**
	Lim, T.K. (2012). Edible Medicinal and Non-Medicinal Plants. Volume 4, Fruits. Springer, New York	[Tolerates some pruning] "Citrus × meyeri trees are unarmed (thornless), short (2–3 m) high at maturity, though they can be pruned smaller"

805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	WRA Specialist. 2017. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits
• Able to grow in subtropical climates
• Some Citrus species are regarded as weeds or invasive
• May host pests and pathogens of other Citrus spp.
• Exposure to oil may cause dermatitis
• Tolerates many soil types
• Reproduces by seeds
• Dispersed intentionally by people

Low Risk Traits
• No reports of invasiveness or naturalization
• Unarmed
• Edible fruit
• Requires full sun
• Few-seeded
• Not reported to spread vegetatively
• Reaches maturity in 4+ years
• Limited seed production reduces risk of inadvertent dispersal