

Taxon: <i>Layia platyglossa</i>	Family: Asteraceae
Common Name(s): tidy tips	Synonym(s): <i>Callichroa platyglossa</i> Fisch. & C. A.

Assessor: Assessor	Status: Assessor Approved	End Date: 8 Oct 2014
WRA Score: 4.0	Designation: L	Rating: Low Risk

Keywords: Annual, Wildflower, Self-incompatible, Bee-Pollinated, Wind-dispersed

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
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)	Intermediate
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	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		
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)	n
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	y=1, n=0	n
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		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y

Qsn #	Question	Answer Option	Answer
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		
604	Self-compatible or apomictic	y=1, n=-1	n
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)		
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant		
704	Propagules adapted to wind dispersal	y=1, n=-1	y
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	y
708	Propagules survive passage through the gut		
801	Prolific seed production (>1000/m2)		
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?	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed]	No evidence

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2014. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2014. Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	Intermediate
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 7 Oct 2014]	[Marginally subtropical] "Native: NORTHERN AMERICA Southwestern U.S.A.: United States - California [w.] Northern Mexico: Mexico - Baja Norte"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 7 Oct 2014]	

Qsn #	Question	Answer
203	Broad climate suitability (environmental versatility)	y
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 8 Oct 2014]	[Elevation range exceeds 1000 m, demonstrating environmental versatility] "Many habitats; < 2000 m. s North Coast, s Inner North Coast Ranges, Great Central Valley, Central Western California, Southwestern California, w edge Mojave Desert; southwestern Oregon, Baja California."
	Wildflower Information.org. 2006. Tidy Tips - <i>Layia platyglossa</i> . http://www.wildflowerinformation.org/Wildflower.asp?ID=54 . [Accessed 7 Oct 2014]	[Grows in >5 hardiness zones] "Zones: 3-10 Best West of the Mississippi"

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 7 Oct 2014]	[Marginally subtropical climate] "Native: NORTHERN AMERICA Southwestern U.S.A.: United States - California [w.] Northern Mexico: Mexico - Baja Norte""
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	New England Wild Flower Society. 2014. Go Botany [2.2]. https://gobotany.newenglandwild.org/ . [Accessed 8 Oct 2014]	"Coastal tidytips is native to California and Baja Mexico. Its seeds must have germinated in a dump in Massachusetts."
	Lemke, C. 2012. Cal's Plant of the Week - <i>Layia platyglossa</i> . http://www.plantoftheweek.org/week543.shtml . [Accessed 8 Oct 2014]	"This is one of the flowers we introduced into the greenhouse this year. They are fun to grow and we will be growing them again in the future. The plant has few requirements and is hardy outside in California, but can be grown elsewhere if started early, before the last frost."
	WRA Specialist. 2014. Personal Communication	Available in wildflower seed mixes, so probably widely introduced outside native range.

301	Naturalized beyond native range	
	Source(s)	Notes
	New England Wild Flower Society. 2014. Go Botany [2.2]. https://gobotany.newenglandwild.org/ . [Accessed 7 Oct 2014]	"Coastal tidytips is native to California and Baja Mexico. Its seeds must have germinated in a dump in Massachusetts. The seeds of this plant were an important staple food for the Cahuilla, Costanoan and Mendocino tribes of California. " "Habitat: Anthropogenic (man-made or disturbed habitats)"

Qsn #	Question	Answer
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

305	Congeneric weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[U - Casual Alien] "Layia chrysanthemoides (DC.) A.Gray Fabaceae - Papilionaceae Cultivated 314-U"

Qsn #	Question	Answer
401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	[No evidence] "Plant 3–70 cm, decumbent to erect, glandular, not strongly scented. Stem: generally not purple streaked. Leaf: 4–100 (120) mm, linear to lanceolate or oblanceolate, proximal lobed ± 1/2 to midvein. Inflorescence: peduncle < 13 cm; involucre 4–15+ mm diam, hemispheric; phyllaries –18 mm, tip often > (sometimes <) folded base, basal margins interlocked by cottony hairs. Ray flower: 5–18; ray 3–21 mm, yellow throughout or distally white. Disk flower: 6–120+; corolla 3. –6 mm; anthers generally ± dark purple, sometimes yellow to ± brown in Southwestern California. Fruit: ray fruit glabrous or sparsely hairy, dull; disk pappus of (0 or 11)14–32 bristles or bristle-like scales, 1–6 mm, ± equal, white to ± brown, generally scabrous throughout, generally not plumose and not adaxially woolly, sometimes short-plumose proximally and woolly adaxially in Southwestern California."

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. 2014. Personal Communication	Unknown

403	Parasitic	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	[Asteraceae. No evidence] "Plant 3–70 cm, decumbent to erect, glandular, not strongly scented."

404	Unpalatable to grazing animals	
	Source(s)	Notes
	The Watershed Nursery. 2012. <i>Layia platyglossa</i> . http://www.watershednursery.com/nursery/plant-finder/layia-platyglossa/ . [Accessed 8 Oct 2014]	[Possibly Yes] "Deer Resistant"

405	Toxic to animals	n
	Source(s)	Notes
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence
	Cornell University. 2014. Plants Poisonous to Livestock and other Animals. http://www.ansci.cornell.edu/plants/index.html . [Accessed 8 Oct 2014]	No evidence

406	Host for recognized pests and pathogens	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Smith, M. 2012. Gardening: The Complete Guide. Creative Homeowner, Upper Saddle Rive, NJ	"Pests and Diseases: Largely trouble-free, although it will contract root rots in soggy soil."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes
	Global Species. 2014. <i>Layia platyglossa</i> (coastal tidy tips). http://www.globalspecies.org/ntaxa/2185084#cite_1 . [Accessed 8 Oct 2014]	"Allergen Potential [1] Medium-Low"
	Plants for a Future. 2014. <i>Layia platyglossa</i> . http://www.pfaf.org/user/Plant.aspx?LatinName=Layia+platyglossa . [Accessed 7 Oct 2014]	"Known Hazards: None known"
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Santa Monica Mountains Fire Safe Alliance. 2010. A Road Map to Fire Safety. How to Create Defensible Space in the Santa Monica Mountains. County of Los Angeles, CA	"These California natives are good options for a fire-safe landscape." ... [<i>Layia platyglossa</i> included in list of recommended plants]
	Lorenson, L. & Callahan, K. 2010. Firewise Plants for Western Nevada County. Fire Safe Council of Nevada County, Grass Valley, CA	[No evidence, and included in this list of recommended plants for fire prone areas.] "The purpose of this plant list is to help you select firewise plants for different growing conditions."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	Smith, M. 2012. Gardening: The Complete Guide. Creative Homeowner, Upper Saddle Rive, NJ	"Exposure Requirements: Full Sun"
	Ellis, B.W. 1999, Taylor's Guide to Annuals: How to Select and Grow More Than 400 Annuals, Biennials, and Tender Perennials. Houghton Mifflin Harcourt, New York, NY	"Full sun or light shade"
	Wildflower Information.org. 2006. Tidy Tips - <i>Layia platyglossa</i> . http://www.wildflowerinformation.org/Wildflower.asp?ID=54 . [Accessed 7 Oct 2014]	"Sun/Shade: Needs full sun. "

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Wildflower Information.org. 2006. Tidy Tips - <i>Layia platyglossa</i> . http://www.wildflowerinformation.org/Wildflower.asp?ID=54 . [Accessed 7 Oct 2014]	"Soil preference: Adaptable, but prefers dry conditions."

Qsn #	Question	Answer
411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	"Plant 3–70 cm, decumbent to erect, glandular, not strongly scented."

412	Forms dense thickets	n
	Source(s)	Notes
	Hobbs, R. J., & Mooney, H. A. 1985. Community and population dynamics of serpentine grassland annuals in relation to gopher disturbance. <i>Oecologia</i> , 67(3), 342-351	[No evidence from this study] "Table 1. Frequency of occurrence and mean percentage cover of all species found within 36 50 x 50 quadrats placed randomly within study area in April 1983" [<i>Layia platyglossa</i> - % cover = 1.0]
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 8 Oct 2014]	[No evidence] "Common. Many habitats; < 2000 m"

501	Aquatic	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	[Terrestrial] "Common. Many habitats; < 2000 m."

502	Grass	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	Asteraceae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	Asteraceae

Qsn #	Question	Answer
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	"Annual 2–6(13) dm."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	[No evidence] "Common. Many habitats; < 2000 m. s North Coast, s Inner North Coast Ranges, Great Central Valley, Central Western California, Southwestern California, w edge Mojave Desert; southwestern Oregon, Baja California."

602	Produces viable seed	y
	Source(s)	Notes
	Wildflower Information.org. 2006. Tidy Tips - <i>Layia platyglossa</i> . http://www.wildflowerinformation.org/Wildflower.asp?ID=54 . [Accessed 7 Oct 2014]	"It's an annual, and with the right conditions, is very easy to grow from seed."

603	Hybridizes naturally	
	Source(s)	Notes
	Clausen, J., Keck, D. D., & Hiesey, W. M. 1947. Heredity of geographically and ecologically isolated races. <i>American Naturalist</i> , 81(797): 114-133	"It is almost impossible to cross <i>platyglossa</i> and <i>chrysanthemoides</i> with each other, and their rare hybrids are completely sterile. Their differences are therefore those of very distinct species and are evolutionarily of a much higher order than the superficially more spectacular differences between the completely interfertile coastal and inland races of each species."
	Grant, V. 1978. <i>Genetics of Flowering Plants</i> . Columbia University Press, West Sussex, UK	[Unknown if hybrids occur naturally] " <i>Layia platyglossa</i> x <i>Madia elegans</i> (Compositae) have pappus bristles on the achenes unlike either parent (Clausen and Hiesey, 1958)."

Qsn #	Question	Answer
604	Self-compatible or apomictic	n
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	[Genus] "Generally self-sterile (except <i>Layia carnosa</i> , <i>Layia hieracioides</i> , sometimes <i>Layia chrysanthemoides</i>). "
	Baldwin, B. G. 2006. Contrasting patterns and processes of evolutionary change in the tarweed–silversword lineage: Revisiting Clausen, Keck, and Hiesey's findings. <i>Annals of the Missouri Botanical Garden</i> , 93(1): 64-93	[Self-compatibility only documented in two species] "Self-compatibility in <i>L. carnosa</i> and <i>L. hieracioides</i> (Clausen, 1951)—otherwise unknown in <i>Layia</i> —is associated with some conspicuous morphological differences from other members of the <i>L. gaillardiioides</i> clade (e.g., reduced sizes of ray corollas and heads)."

605	Requires specialist pollinators	n
	Source(s)	Notes
	The Xerces Society. 2014. Pollinator Plants California. http://www.xerces.org/wp-content/uploads/2014/09/CaliforniaPlantList_web.pdf . [Accessed 8 Oct 2014]	" <i>Layia platyglossa</i> " ... "Notes: Sunny yellow and white flowers are very attractive to butterflies and native bees..."
	Lady Bird Johnson Wildflower Center. 2014. Native Plant Database - <i>Layia platyglossa</i> . http://www.wildflower.org/plants/result.php?id_plant=LAPL . [Accessed 8 Oct 2014]	"Special Value to Native Bees (Recognized by pollination ecologists as attracting large numbers of native bees.)"
	S&S Seeds. 2014. Xerces Pollinator Mix for Central Coast & Southern California. http://www.sseeds.com/product/Xerces-Central-Coast-S_CA-Pollinator-Mix.aspx . [Accessed 8 Oct 2014]	"The annual and perennial native wildflowers in this native seed mix provide high quality foraging and nesting resources for a diversity of pollinators. It is appropriate for habitat restoration in California's Central Coast and Southern regions." [Includes <i>Layia platyglossa</i> (tidy tips)]

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes
	Wildflower Information.org. 2006. Tidy Tips - <i>Layia platyglossa</i> . http://www.wildflowerinformation.org/Wildflower.asp?ID=54 . [Accessed 7 Oct 2014]	[No evidence] "Annual. Lives just one year. Grows quickly, blooms heavily, dies with first frost. Can regrow following spring if seed falls on bare ground. "

607	Minimum generative time (years)	1
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 3 Oct 2014]	"Annual 2–6(13) dm."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
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Qsn #	Question	Answer
	Source(s)	Notes
	New England Wild Flower Society. 2014. Go Botany [2.2]. https://gobotany.newenglandwild.org/ . [Accessed 8 Oct 2014]	[Possibly Yes] "Coastal tidytips is native to California and Baja Mexico. Its seeds must have germinated in a dump in Massachusetts."
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 8 Oct 2014]	[Possibly. Pappus & bristle-like scales may allow for attachment to clothing or equipment] "Fruit: ray fruit glabrous or sparsely hairy, dull; disk pappus of (0 or 11)14–32 bristles or bristle-like scales, 1–6 mm, ± equal, white to ± brown, generally scabrous throughout, generally not plumose and not adaxially woolly, sometimes short-plumose proximally and woolly adaxially in Southwestern California. "

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	GrowOrganic.com. 2014. PV Flowering Pollinator Mix. http://www.groworganic.com/pv-flowering-pollinator-mix-lb.html . [Accessed 7 Oct 2014]	[Tidy Tips = <i>Layia platyglossa</i> . Sold in commercial seed mix] "Annuals and Biennial Open Pollinated. Attracts a wide range of insects and pollinators. Contains: Arroyo Lupine, Golden Lupine, Chinese Houses, Five Spot, California Poppy, Lacey Phacelia, Baby Blue Eyes, Dwarf Sunflower, White Alyssum, Globe Gilia, Tidy Tips, Bird's Eyes, and Primrose. 1/4 lb covers approximately 500 sq ft if broadcast."

703	Propagules likely to disperse as a produce contaminant	
	Source(s)	Notes
	Haines, A. 2011. New England Wild Flower Society's Flora Novae Angliae: A Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England. Yale University Press, Yale, CT	[Possibly. Dispersed in sheep wool waste] " <i>Laylia platyglossa</i> " ... "MA. Wool waste."

704	Propagules adapted to wind dispersal	y
	Source(s)	Notes
	McDonald, M.B. & Kwong, F.Y. 2005. Flower Seeds. Biology and Technology. CABI Publishing, Wallingford, UK	"Wind is a very effective dispersal agent (anemochory) and wind-borne diaspores often have wings (e.g. <i>Briza maxima</i> , <i>Coreopsis lanceolatus</i> L., <i>Dimorphotheca Moench</i> , <i>Gladiolus</i> and <i>Nemesia Vent.</i>), plumes (e.g. <i>Armeria</i> , <i>Asclepias</i> , <i>Centranthus ruber</i> and <i>Epilobium</i>), pappi (e.g. <i>Gaillardia pulchella</i> Foug., <i>Layia platyglossa</i> (Fisch. & C.A. Mey.) A. Gray)..."
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 8 Oct 2014]	[Pappus & bristle-like scales may aid in short distance wind dispersal] "Fruit: ray fruit glabrous or sparsely hairy, dull; disk pappus of (0 or 11)14–32 bristles or bristle-like scales, 1–6 mm, ± equal, white to ± brown, generally scabrous throughout, generally not plumose and not adaxially woolly, sometimes short-plumose proximally and woolly adaxially in Southwestern California. "

705	Propagules water dispersed	n
	Source(s)	Notes

Qsn #	Question	Answer
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 8 Oct 2014]	[Water may secondarily dispersal, but gravity, wind or external attachment are probably the most likely dispersal vectors] "Fruit: ray fruit glabrous or sparsely hairy, dull; disk pappus of (0 or 11)14–32 bristles or bristle-like scales, 1–6 mm, ± equal, white to ± brown, generally scabrous throughout, generally not plumose and not adaxially woolly, sometimes short-plumose proximally and woolly adaxially in Southwestern California. "

706	Propagules bird dispersed	n
	Source(s)	Notes
	McDonald, M.B. & Kwong, F.Y. 2005. Flower Seeds. Biology and Technology. CABI Publishing, Wallingford, UK	[Wind-dispersed] "Wind is a very effective dispersal agent (anemochory) and wind-borne diaspores often have wings ... plumes ... pappi (e.g. <i>Gaillardia pulchella</i> Foug., <i>Layia platyglossa</i> (Fisch. & C.A. Mey.) A. Gray)..."

707	Propagules dispersed by other animals (externally)	y
	Source(s)	Notes
	Baldwin, B.G. & Bainbridge, S.J. 2013. <i>Layia</i> , in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=3757 . [Accessed 8 Oct 2014]	[Pappus & bristle-like scales may aid in adherence to fur] "Fruit: ray fruit glabrous or sparsely hairy, dull; disk pappus of (0 or 11)14–32 bristles or bristle-like scales, 1–6 mm, ± equal, white to ± brown, generally scabrous throughout, generally not plumose and not adaxially woolly, sometimes short-plumose proximally and woolly adaxially in Southwestern California."
	Haines, A. 2011. New England Wild Flower Society's Flora Novae Angliae: A Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England. Yale University Press, Yale, CT	[Presumably dispersed in sheep wool] " <i>Laylia platyglossa</i> " ... "MA. Wool waste."

708	Propagules survive passage through the gut	
	Source(s)	Notes
	Lady Bird Johnson Wildflower Center. 2014. Native Plant Database - <i>Layia platyglossa</i> . http://www.wildflower.org/plants/result.php?id_plant=LAPL . [Accessed 8 Oct 2014]	[Birds are seed predators] "At the end of summer, birds are apt to devour all seed unless protected." ... "Use Wildlife: Seeds eagerly consumed by birds. "

801	Prolific seed production (>1000/m2)	
	Source(s)	Notes
	Hobbs, R. J., & Mooney, H. A. 1985. Community and population dynamics of serpentine grassland annuals in relation to gopher disturbance. <i>Oecologia</i> , 67(3), 342-351	[No evidence from this study] "Table 2. Seed production, seed rain and height of inflorescences on serpentine grassland. Production and inflorescence height estimated in April 1983; seed rain represents total numbers of seeds trapped April-November 1983" [<i>Layia platyglossa</i> - Estimated seed production (no. m-2) = 290]

802	Evidence that a persistent propagule bank is formed (>1 yr)	

Qsn #	Question	Answer
	Source(s)	Notes
	Royal Botanic Gardens Kew. 2008. Seed Information Database (SID). Version 7.1. http://data.kew.org/sid/ . [Accessed 8 Oct 2014]	"Storage Behaviour: No data available for species. Of 3 known taxa of genus <i>Layia</i> , 100.00% Orthodox(p/?)"

803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. 2014. Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species, & generally regarded as a desirable plant where grown.

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	WRA Specialist. 2014. Personal Communication	Unknown. An annual plant with a limited life span that relies on seeds for re-establishment

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. 2014. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Elevation range exceeds 1000 m, and can grow in >5 hardiness zones demonstrating environmental versatility
- Possibly naturalized in Massachusetts (or a cultivation escape)
- Tolerates many soil types
- Seeds dispersed by wind, possibly externally on animals & intentionally by people
- Able to reach maturity in <1 year (annual)
- Limited or missing ecological information makes accurate risk prediction difficult

Low Risk Traits

- No documented negative impacts to date
- If able to naturalize, may only pose a threat to higher elevation areas in the tropics
- Unarmed (no spines, thorns or burrs)
- No reports of toxicity or allergens
- Beneficial to bees and other pollinators
- Ornamental
- Not known to form dense stands
- Not reported to spread vegetatively