

Taxon: <i>Stellaria media</i>	Family: Caryophyllaceae
Common Name(s): chickweed common chickweed satin-flower starwort stitchwort	Synonym(s): Alsine media L.

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 11 Sep 2015
WRA Score: 15.0	Designation: H(HPWRA)	Rating: High Risk

Keywords: Slender Herb, Widely Naturalized, Agricultural Weed, Prolific Seeder, Self-Compatible

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	y = 1*multiplier (see Appendix 2), n= question 205	y
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	y
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	y
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	y=1, n=-1	n
405	Toxic to animals		
406	Host for recognized pests and pathogens	y=1, n=0	y
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n

Qsn #	Question	Answer Option	Answer
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	y
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		
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	y
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	y
702	Propagules dispersed intentionally by people	y=1, n=-1	n
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	y
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	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	y
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	y
803	Well controlled by herbicides	y=-1, n=1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	n
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
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu	No evidence of domestication

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA

Qsn #	Question	Answer
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
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"It is found widely on every continent, from Spitzbergen at 79'N (Hult6n 1970) to the Subantarctic islands at 60'5 (Walton 1975). While it is generally absent only from the most arctic regions and very dry areas, it is common in the tropics only at high elevations, e.g. 1300m in Kenya."
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 10 Sep 2015]	"Native: AFRICA Northern Africa: Algeria; Egypt; Morocco; Tunisia ASIA-TEMPERATE Western Asia: Afghanistan; Cyprus; Iran; Iraq; Israel; Jordan; Lebanon; Syria; Turkey Caucasus: Armenia; Azerbaijan; Georgia Siberia: Russian Federation - Eastern Siberia, Western Siberia Middle Asia: Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan Mongolia: Mongolia China: China Eastern Asia: Japan; Korea ASIA-TROPICAL Indian Subcontinent: Bhutan; India; Nepal; Pakistan EUROPE Northern Europe: Denmark; Finland; Iceland; Ireland; Norway; Sweden; United Kingdom Middle Europe: Austria; Czech Republic; Germany; Hungary; Poland; Slovakia; Switzerland East Europe: Belarus; Estonia; Latvia; Lithuania; Moldova; Russian Federation - European part; Ukraine [incl. Krym] Southeastern Europe: Albania; Bosnia and Herzegovina; Bulgaria; Croatia; Greece [incl. Crete]; Italy [incl. Sardinia, Sicily]; Macedonia; Montenegro; Romania; Serbia; Slovenia Southwestern Europe: France [incl. Corsica]; Portugal; Spain"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed]	

203	Broad climate suitability (environmental versatility)	y
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Elevation range exceeds 3000 m, demonstrating environmental versatility] "in Hawai'i naturalized primarily in mesic sites, 50-3,950 m"

Qsn #	Question	Answer
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu	Wide distribution on 6 continents.

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. <i>Manual of the flowering plants of Hawaii</i> . Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to Eurasia, widely naturalized; in Hawai'i naturalized primarily in mesic sites, 50-3,950 m, on Kure Atoll, Kauai, Oahu, Lanai, Maui, and Hawai'i. First collected on Lanai in 1930 (Munro 488, BISH)."

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). <i>The biology of Canadian weeds: 42. Stellaria media (L.) Vill.</i> Canadian Journal of Plant Science, 60(3): 981-992	"found widely on every continent"

301	Naturalized beyond native range	y
	Source(s)	Notes
	Oppenheimer, H.. 2010. <i>New Hawaiian plant records from Maui County for 2008</i> . Bishop Museum Occasional Papers 107: 33-40	"A weedy herb documented from Kure Atoll, Kaua'i, o'ahu, Lāna'i, Maui, and Hawai'i (Wagner et al. 1999: 528), and more recently from Midway Atoll (Starr et al. 2003: 26), this chickweed was recently found on Moloka'i. Material examined. MOLOKA'I: Waihānau Stream, locally common in disturbed <i>Metrosideros/Dicranopteris</i> forest, in shady intermittent stream bed, among rocks with other weeds such as <i>Psidium</i> , <i>Fraxinus</i> , <i>Rubus</i> , <i>Solanum</i> , <i>Erigeron</i> , 915 m, 25 Sep 2008, Oppenheimer H90813."
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. <i>Manual of the flowering plants of Hawaii</i> . Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to Eurasia, widely naturalized; in Hawai'i naturalized primarily in mesic sites, 50-3,950 m, on Kure Atoll, Kauai, Oahu, Lanai, Maui, and Hawai'i. First collected on Lanai in 1930 (Munro 488, BISH)."

Qsn #	Question	Answer
	<p>USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 10 Sep 2015]</p>	<p>"Naturalized: AFRICA Macaronesia: Portugal - Azores, Madeira Islands; Spain - Canary Islands Northeast Tropical Africa: Eritrea; Ethiopia East Tropical Africa: Kenya; Tanzania West-Central Tropical Africa: Cameroon; Equatorial Guinea - Bioko West Tropical Africa: Guinea South Tropical Africa: Angola; Zimbabwe Southern Africa: Lesotho; South Africa Western Indian Ocean: Mauritius; Reunion ASIA-TEMPERATE Arabian Peninsula: Kuwait; Oman; Saudi Arabia; Yemen ASIA-TROPICAL Malesia: Indonesia; Papua New Guinea; Philippines AUSTRALASIA Australia: Australia New Zealand: New Zealand NORTHERN AMERICA Subarctic America: Greenland Canada Mexico United States SOUTHERN AMERICA Caribbean: Cuba; Guadeloupe; Hispaniola; Jamaica; Martinique Mesoamerica: Guatemala Northern South America: Venezuela Brazil: Brazil Western South America: Bolivia; Ecuador; Peru Southern South America: Argentina; Chile; Uruguay"</p>

302	Garden/amenity/disturbance weed	y
	Source(s)	Notes
	<p>Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992</p>	<p>"Chickweed is a weed of grain fields, young pastures, lawns, and gardens..."</p>

Qsn #	Question	Answer
303	Agricultural/forestry/horticultural weed	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"In Canada, <i>S. media</i> is a weed of grain fields and other cultivated areas and pastures. It can be a major contaminant among some crops; e.g. on Westham Island in the Fraser Delta, it has > 15% cover among raspberry and strawberry crops, and from 80 to 100% cover in barley and potato crops. Comparable data are not available for elsewhere in Canada. <i>S. media</i> competes with crop plants by shading and smothering young seedlings with its mat-like growth (Fryer and Makepeace 1917). Mann and Barnes (1950) reported a 66-80% loss in a barley crop due to chickweed competition for root space."
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu	"This species is reported to be a weed in more than 20 crops in 50 countries."

304	Environmental weed	n
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Chickweed is a weed of grain fields, young pastures, lawns, and gardens, and can be controlled by the use of several common herbicides."
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	[Crop weed] " <i>S. media</i> was considered by Allard (1965) to be one of the 12 most successful colonizing species among non-cultivated plants, and has been reported as a weed in over 50 countries worldwide. It is regularly reported as a weed of annual (cereals, oilseeds, pulses and sugarbeet) and perennial (pastures, orchards, plantations) crops."

305	Congeneric weed	y
	Source(s)	Notes
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu	<i>Stellaria aquatica</i> and <i>Stellaria uliginosa</i> are considered serious agricultural weeds in several countries.

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[No evidence] "Slender annual or perennial herbs; stems trailing, matted, or weakly ascending, 1-8 dm long, pubescent in lines. Leaves ovate to elliptic, (0.5-)1-3(-4) cm long, (0.3-) 0.8-1.5(-2) cm wide, base rounded to cuneate, petioles 0-2 cm long, often ciliate."

402	Allelopathic	
	Source(s)	Notes

Qsn #	Question	Answer
	Inderjit, & Dakshini, K. M. M. (1998). Allelopathic interference of chickweed, <i>Stellaria media</i> with seedling growth of wheat (<i>Triticum aestivum</i>). Canadian Journal of Botany, 76(7): 1317-1321	[Potentially Yes] "Abstract: The question whether or not annual weeds are allelopathic under field conditions is important in assessing the interference potential of annual weed species. Research was conducted to investigate the probable involvement of allelopathy in the interference potential of chickweed, <i>Stellaria media</i> , a polycarpic winter annual weed. Chickweed maintains heterogeneous populations represented by different age-classes under natural conditions. Results indicate that both young and mature growth stages of chickweed contribute water-soluble phenolics to the soil. Soil amended with matured chickweed had a higher phenolic content than weed-infested soils. Both weed-infested and weed-amended soil affect the seedling growth of wheat. Chickweed could be allelopathic also to a crop of the current season under natural conditions, as it contributes water-soluble compounds to its associated soil."

403	Parasitic	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Slender annual or perennial herbs" [Caryophyllaceae. No evidence]

404	Unpalatable to grazing animals	n
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"It is a source of food for animals, the plant being eaten by hogs and rabbits (Spencer 1940) and the seeds by birds (Hatfield 1970). Man sometimes uses the plant for salads (Grieve 1959)."

405	Toxic to animals	
	Source(s)	Notes
	Sobey, D.G. 1981. <i>Stellaria Media</i> (L.) Vill. Journal of Ecology, 69(1): 311-335	"Biochemical data. <i>Stellaria media</i> is reported to contain poisonous colloidal glycosides; these saponins apparently retain their toxicity after drying and storage (Forsyth 1968). However, Gibbs (1974) has reported negative results in saponin tests on leaf material of <i>S. media</i> ."
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	[Possibly Yes] " <i>S. media</i> is capable of accumulating nitrates to potentially toxic levels (Case 1957), and grazing of the weed may cause digestive disorders in sheep and goats (Carruthers 1903)." BUT "It is a source of food for animals, the plant being eaten by hogs and rabbits (Spencer 1940) and the seeds by birds (Hatfield 1970)."

406	Host for recognized pests and pathogens	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"It harbors viruses and fungi which overwinter between crop plantings (Converse and Stace-Smith 1971), as well as aphids and nematodes which transmit viruses to crop plants (Fryer and Evans 1968)."

Qsn #	Question	Answer
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	" <i>S. media</i> is also an alternative host for a number of economically important pathogens that attack a range of crop plants. A large number of nematode species which carry viral diseases are associated with <i>S. media</i> : these include the strawberry nematode (<i>Aphelenchoides fragariae</i>) (Yamada and Takakura, 1987), <i>Meloidogyne ardenensis</i> (Thomas and Brown, 1981), <i>Heterodera schachtii</i> (Gleiss and Bachthaler, 1988), <i>Ditylenchus dispaci</i> , <i>Longidorus elongatus</i> , <i>Meloidogyne hapla</i> , <i>Pratylenchus penetrans</i> , <i>Trichodorus pachydermus</i> and <i>T. primitivus</i> (Sobey, 1981). A wide range of viruses has also been isolated, including Oat blue dwarf virus (Vacke, 1998), Beet western yellows virus (Chod et al., 1997), Tomato spotted wilt virus (Bitterlich and MacDonald, 1993), Carnation ringspot virus (Rudel et al., 1977), Cucumber mosaic virus, Lettuce mosaic virus, Raspberry ringspot virus and Strawberry latent ringspot virus (Sobey, 1981)."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	[No evidence] "Man sometimes uses the plant for salads (Grieve 1959)."
	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
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Slender annual or perennial herbs" [Unlikely to contribute significantly to fuel loads]
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	No evidence

409	Is a shade tolerant plant at some stage of its life cycle	y
	Source(s)	Notes
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu	"The plant prefers shady, moist places under trees and shrubs"

Qsn #	Question	Answer
	Sobey, D.G. 1981. <i>Stellaria Media</i> (L.) Vill. <i>Journal of Ecology</i> , 69(1): 311-335	"The response of <i>S. media</i> to reduced light flux was tested by Sinha (1965) in a glasshouse experiment with artificial shades of terylene netting; he found a unit leaf rate of 12*7 mg cm ⁻² week ⁻¹ at 80% of 'normal' light conditions, 11.6 at 60% and 8.6 at 450 -all of which were higher than the corresponding values for <i>S. neglecta</i> and <i>S. pallida</i> under the same conditions. He noted that <i>S. media</i> produced flowers and fruits at all three light fluxes and attributed the wide distribution of the species to this balanced morphogenesis. Hitzer (1934), in fact, observed flowering and fruiting in <i>S. media</i> at 1/67 of normal daylight; the flowers were all cleistogamous. Rademacher (1939) also reported strong shade-tolerance."
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> , 60(3): 981-992	"Under suitable conditions partial shade, rich, damp, disturbed soil - the stems of <i>S. media</i> will root at the nodes (Frankton and Mulligan 1970)"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> , 60(3): 981-992	"Chickweed grows on most types of soil (Salisbury 1974) but does best on moist, heavy (King 1966), high nitrogen soils (Roberts 1962) such as found in chicken coops and cow barns (King 1966) and on the guano rocks of the Scilly Isles (Lousley 1971) . It prefers a pH of 5 .2-8.2 (Lefevre 1956) but has been found on soils with a pH of 4.8. At these levels growth is reduced,,often due to aluminum toxicity (Buchanan et al. 1975). Aluminum concentrations greater than 2 ppm cause toxicity symptoms (Gilbert and Pember 1935)."
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu	" <i>S. media</i> will grow on a very wide range of soils"

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. <i>Manual of the flowering plants of Hawaii</i> . Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Slender annual or perennial herbs; stems trailing, matted, or weakly ascending, 1-8 dm long, pubescent in lines."

412	Forms dense thickets	n
	Source(s)	Notes
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu	"forms thick, succulent mats"
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> , 60(3): 981-992	" <i>S. media</i> competes with crop plants by shading and smothering young seedlings with its mat-like growth (Fryer and Makepeace 19'17)." [Herbaceous]

501	Aquatic	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Terrestrial] "Slender annual or perennial herbs"

502	Grass	n
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 10 Sep 2015]	"Family: Caryophyllaceae subfamily: Alsinoideae tribe: Alsineae"

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Slender annual or perennial herbs" [Caryophyllaceae. Herbaceous]

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Slender annual or perennial herbs; stems trailing, matted, or weakly ascending, 1-8 dm long, pubescent in lines."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Sobey, D.G. 1981. <i>Stellaria Media</i> (L.) Vill. <i>Journal of Ecology</i> , 69(1): 311-335	[No evidence] " <i>Stellaria media</i> is widespread throughout the British Isles (Fig. 1), and throughout Europe except for the extreme north of Scandinavia and Russia, where it is largely restricted to the coast or river valleys (Atl. N.W. Eur.). Presumably Eurasian in origin, it has been spread throughout the world by man to become one of the most completely cosmopolitan of species (Coquillat 1951). It extends from the tropical regions of Africa, South America and Asia (Disp. P1.; Good 1974) to Arctic and sub-Antarctic islands (Polunin 1954; Walton 1975)."

Qsn #	Question	Answer
602	Produces viable seed	y
	Source(s)	Notes
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"Seed production is prolific."
	Sobey, D.G. 1981. <i>Stellaria Media</i> (L.) Vill. <i>Journal of Ecology</i> , 69(1): 311-335	"Short-term vegetative reproduction by fragmentation can occur (see Sect. VI(a)). However, seed is the chief means of reproduction."

603	Hybridizes naturally	
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> , 60(3): 981-992	[Possibly] "Stace (1975) reported a hybrid between <i>S. media</i> and <i>S. neglecta</i> in Britain, but this has yet to be verified. Whitehead and Sinha (1967) pointed out that the incidence of crosses within different entities in the <i>Stellaria media</i> complex has led to taxonomic problems. Peterson (1933, 1936) reported artificial intra- and interspecific crosses within the <i>Stellaria media</i> complex. The intraspecific crosses had a very low rate of fertility."

604	Self-compatible or apomictic	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> , 60(3): 981-992	" <i>S. media</i> is cleistogamous and almost homogamous (Salisbury 1974), self-pollinated (Mulligan and Kevan 1973) and self-fertilized (Mulligan and Findlay 1970)."
	Sobey, D.G. 1981. <i>Stellaria Media</i> (L.) Vill. <i>Journal of Ecology</i> , 69(1): 311-335	"The flowers of <i>S. media</i> are usually automatically self-pollinated. They are ephemeral, generally opening and closing once within a few hours on a single day, although some spring flowers, in which the stamens may not have matured, are reported to open and close on several successive days (Peterson 1936)."

605	Requires specialist pollinators	n
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> , 60(3): 981-992	" <i>S. media</i> is cleistogamous and almost homogamous (Salisbury 1974), self-pollinated (Mulligan and Kevan 1973) and self-fertilized (Mulligan and Findlay 1970). Mulligan and Kevan (1973) reported that no insects visited the flowers in their studies, an expected result in cleistogamy; but in European studies, Proctor and Yeo (1973) reported visits by ichneumon wasps, and Knuth (1908) recorded visits by members of the Diptera, Hymenoptera and Thysanoptera. Gilkey (1957) reported that bees are attracted by the flower fragrance."

606	Reproduction by vegetative fragmentation	y
	Source(s)	Notes
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu	"it spreads by rooting at the nodes"

Qsn #	Question	Answer
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Vegetative reproduction - Under suitable conditions, chickweed will root at the nodes of prostrate stems (Frankton and Mulligan 1970)."

607	Minimum generative time (years)	1
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Slender annual or perennial herbs"
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Under suitable conditions, flowering takes place throughout the year as does maturation and shedding of seed." ... "The mean life span is 5-7 wk with 4-5 of this being required to reach flowering (Sinha and Whitehead 1965)."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Seeds are dispersed in a number of ways: by footwear..."

702	Propagules dispersed intentionally by people	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Widespread weed. No evidence of recent intentional cultivation or introduction in the Hawaiian Islands] "Native to Eurasia, widely naturalized; in Hawai'i naturalized primarily in mesic sites, 50-3,950 m, on Kure Atoll, Kauai, Oahu, Lanai, Maui, and Hawai'i."

703	Propagules likely to disperse as a produce contaminant	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Seeds are dispersed in a number of ways: by footwear ... The seed is also dispersed as a contaminant in pasture mixtures or seeds of other crops."

704	Propagules adapted to wind dispersal	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Seeds are dispersed in a number of ways: by footwear, through the digestive tracts of birds, cattle, horses and pigs (Salisbury 1964), by ants (King 1966) and by wind (Grieve 1959)."

705	Propagules water dispersed	n
	Source(s)	Notes

Qsn #	Question	Answer
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	[No evidence] "Seeds are dispersed in a number of ways: by footwear, through the digestive tracts of birds, cattle, horses and pigs (Salisbury 1964), by ants (King 1966) and by wind (Grieve 1959). The seed is also dispersed as a contaminant in pasture mixtures or seeds of other crops."

706	Propagules bird dispersed	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Seeds are dispersed in a number of ways: by footwear, through the digestive tracts of birds, cattle, horses and pigs (Salisbury 1964) ..."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Seeds small but lack means of external attachment. "Seeds reddish brown, suborbicular, 1-1.1 mm long, papillose."

708	Propagules survive passage through the gut	y
	Source(s)	Notes
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Seeds are dispersed in a number of ways: by footwear, through the digestive tracts of birds, cattle, horses and pigs (Salisbury 1964), by ants (King 1966) and by wind (Grieve 1959). The seed is also dispersed as a contaminant in pasture mixtures or seeds of other crops."

801	Prolific seed production (>1000/m2)	y
	Source(s)	Notes
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu	[1,100 to 1,300 seeds per m2] "estimated production of 11 to 13 million seeds per hectare"
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	[510-1500 seeds/m2] "The numbers of seeds per plant range from 500 (Long 1938) to 2500 (Salisbury 1964), and the number of seeds per hectare ranges from 5.1 million to 15 million (Long 1938; Roberts and Dawkins 1967)."

802	Evidence that a persistent propagule bank is formed (>1 yr)	y
	Source(s)	Notes

Qsn #	Question	Answer
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Fryer and Makepeace (1977) found 95% germination, and Toole and Brown (1946) found 97% viability 1 yr after shedding. Roberts (1964) dry-stored seeds for several months, then planted them, and after 3 yr found that 70.6% emerged, 5% were dormant and 24.4% were not accounted for. Toole and Brown (1946) reported 22% viability after 10 yr and Fryer and Makepeace (1977), claimed that a proportion of seeds will survive more than 60 yr when deeply buried under grass."
	Holm, L.G., Plucknett, D.L., Pancho, J.V. & Herberger, J.P. 1977. The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu	In buried-seed experiments, <i>S. media</i> had 97% germination at 1 year, and 22% germination at 10 years.

803	Well controlled by herbicides	y
	Source(s)	Notes
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"Cereals: <i>S. media</i> was one of the first weeds to increase in importance because of their tolerance of 2,4-D and MCPA. It is, however, susceptible to the closely related mecoprop, and many of the newer herbicides including fluoroglyphosate + glufosinate + triasulfuron and terbuthryn + triasulfuron in barley (Dovydaitis, 1997), ioxynil + prosulfocarb (Thiesson et al., 1996), metosulam + fluroxypyr (Daniau, 1996), isoproturon when applied to winter wheat crops in early May (Soroka et al., 1995) and methabenzthiazuron + isoxaben in winter cereals (Cheer et al., 1988). Sugarbeet: trifluralin + phenmedipham (Toth and Peter, 1997). Perennial crops: in trials in apple orchards, walnuts and vine crops in California and the Pacific Northwest, USA, thiazopyr successfully controlled <i>S. media</i> (Warner and Holmdal, 1995). Oilseed rape: in Sweden, benazolin + clopyralid + cyanazine gave effective control of <i>S. media</i> and a range of other broad-leaved weeds (Roslon, 1991). Pastures: in ryegrass, <i>Phleum pratense</i> and <i>Trifolium repens</i> swards, good control was achieved with autumn applications of a benazolin/2,4-DB/MCPA mixture (Swift et al., 1987), in ryegrass swards, methabenzthiazuron and ethofumesate controlled <i>S. media</i> without damaging <i>L. perenne</i> (Kirkham, 1983). Linuron has also been shown to be effective (Moll, 1981). Mamarot and Rodriguez (1997) provide suggestions for use of herbicides and herbicide mixtures in a wide range of crops in France."
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Chickweed...can be controlled by the use of several common herbicides...The weed is controlled by Fenoprop (1.2 kg/ha), Mecoprop (1.2 kg/ha), Dicamba (0.42 kg/ha), Dicamba + Phenoxo (1:3 at 0.56 kg/ha), Linuron + MCPA (1:2 at 0.84 kg/ha), Pronadime (0.84 kg/ha) and Chloroxuron (5.6 kg/ha)."

804	Tolerates, or benefits from, mutilation, cultivation, or fire	n
	Source(s)	Notes

Qsn #	Question	Answer
	Turkington, R., Kenkel, N. C., & Franko, G. D. (1980). The biology of Canadian weeds: 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science, 60(3): 981-992	"Close mowing controls chickweed (Muenscher 1955) and the population of viable seeds in the soil is greatly reduced after the second year of vegetable cropping (Roberts 196 . Roberts and Dawkins (1967) reported a 56% decrease in numbers of chickweed seeds in areas ploughed four times per year, compared to a 30% decrease in undisturbed plots. A June ploughing will cause a 100% increase in the number of summer seedlings."
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	" <i>S. media</i> has an unprotected growing point, and as such, is susceptible to flame weeding. In Sweden, 100% kill was achieved with a single treatment at the 0-4 leaf stage (Ascard, 1995). This technique was similarly successful in apple orchards in Italy (Ferrero et al., 1994)."

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	CABI, 2015. <i>Stellaria media</i> . In: Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"There is no evidence in the literature of research to establish potential biological control agents for <i>S. media</i> ."
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Unknown] "in Hawaii naturalized primarily in mesic sites, 50-3,950 m, on Kure Atoll, Kauai, Oahu, Lanai, Maui, and Hawaii."

Summary of Risk Traits:

High Risk / Undesirable Traits

- Elevation range exceeds 1000 m, demonstrating environmental versatility
- Broad native and introduced distribution (environmentally versatile)
- Widely naturalized
- Weed of lawns and gardens
- Weed of several crops
- Other *Stellaria* species are invasive
- Potentially allelopathic
- Potentially toxic to animals (through accumulation of nitrates)
- Alternate host of crop pathogens
- Shade tolerant
- Tolerates many soil types
- Reproduces by seeds & vegetatively
- Self-compatible
- Able to reach maturity in under one year
- Can spread by rooting at nodes
- Seeds dispersed stuck to footwear, as a produce contaminant, by wind, birds & through the digestive tract of grazing animals
- Prolific seed production
- Forms a persistent seed bank

Low Risk Traits

- Impacts to natural areas unknown or not documented
- Unarmed (no spines, thorns or burrs)
- Provides fodder for livestock (palatable despite reports of toxicity)
- Herbicides, mowing & fire may provide effective control