

Plant Risk Evaluator -- PRE Evaluation Report

Lathyrus nissolia -- California

2022 Western IPM Grant Project

PRE Score: 9 -- Low Potential Risk

Confidence: 72 / 100

Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Private **Status:** Completed

Evaluation Date: August 22, 2022

This PDF was created on June 11, 2025

This project was funded in part by the USDA National Institute of Food and Agriculture through the Western Integrated Pest Management Center, grant number 2018-70006-28881.

Plant Evaluated

Lathyrus nissolia



Image by Jutta Burger

Evaluation Overview

A PRE $^{\text{TM}}$ screener conducted a literature review for this plant (*Lathyrus nissolia*) in an effort to understand the invasive history, reproductive strategies, and the impact, if any, on the region's native plants and animals. This research reflects the data available at the time this evaluation was conducted.

Summary

Lathyrus nissolia (grass vetchling, grass pea) is an annual herb in the pea family that is native to parts of Europe, North Africa, and the Mideast. It grows in disturbed, moist environments and meadows and has an unusual appearance as a pea, with narrow, flattened, grasslike leaves, no tendrils, and showy, pink flowers. Lathyrus nissolia has been characterized as potentially invasive in Victoria, Australia. In North America, it has been reported from Oregon and Washington and California. In California it was found for the first time outside of cultivation in 2013 in a meadow restoration site near Willets, Mendicino County. Its identity was confirmed in 2021 and it is now established across several acres. This plant is fast growing and can overtop other meadow vegetation, reaching a maximum height of up 0.4 - 0.9m by late spring. In California, Lathyrus nissolia may be threatening one or more sensitive wet meadow plant species, including North coast semaphoregrass, Pleuropogon hooverianus. Seeds are known to be toxic to livestock when ingested. There is good evidence to suspect that Lathyrus nissolia has expanded its distribution parts of Europe where it was previously not reported. Nonetheless, this evaluation classifies L. nissolia as a low risk for California, primarily because concrete evidence for its invasiveness in similar climates and its mode of dispersal are lacking.

General Information

Status: Completed **Screener:** Jutta Burger

Evaluation Date: August 22, 2022

Plant Information

Plant: Lathyrus nissolia

Regional Information

Region Name: California

Climate Matching Map

To answer four of the PRE questions for a regional evaluation, a climate map with three climate data layers (Precipitation, UN EcoZones, and Plant Hardiness) is needed. These maps were built using a toolkit created in collaboration with GreenInfo Network, USDA, PlantRight, California Invasive Plant Council, and The Information Center for the Environment at UC Davis.

Click <u>here</u> to see the generated climate matching map for this region. This climate match database is hosted by GreenInfo Network and publicly accessible.

Evaluation Questions

These questions are based on an article published by PLOS One, which can be found here: https://doi.org/10.1371/journal.pone.0121053.

Invasive History and Climate Matching (Questions 1 - 6)

- 1. Has the species (or cultivar or variety, if applicable; applies to subsequent "species" questions) become naturalized where it is not native?
 - Answer: Yes, which contributes 1 point(s) to the total PRE score.
 - The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia is native to parts of Europe, northern Africa, and the Near East. It has become naturalized in Victoria (Australia), New Zealand, Tasmania, California and parts of Europe where it is presumed not to be native. CABI (2011) reports it as being introduced in Ireland, Poland, Sweden, and Australia. It has also been recorded in Washington State and Oregon, though its status there is unclear. A population previously reported as naturalized in Oregon appears to no longer exist (Giblin 2018), however it was recently reported from a new location in the state (iNaturalist). The earliest known record in California is from 2003 from a garden in Santa Rosa, Sonoma County. This record is discounted as an isolated garden escape. In 2013, L. nissolia was found in a restoration site near Willits (Mendocino Co., CA; Geri Hulse-Stephens, pers. comm.) where a population has been persisting and expanding locally since then. Its taxonomic identity was confirmed in 2021 by multiple herbaria (UC Davis, Berkeley, CDFA).

Reference(s):

- Griese, D. (1989). Occurrence and phytosociological behaviour of the grass-vetchling Lathyrus nissolia L. in the town area of Wolfsburg (Southeastern Lower Saxony). Brauschw. Naturkdl. Schr.. 3, 355-360.
- GBIF Secretariat (2022). GBIF Backbone Taxonomy. Checklist dataset for Lathyrus nissolia accessed via GBIF.org on 2022-12-03.
- USDA Plants Database (2022). Search Results for Lathyrus nissolia, accessed 12/3/2022.
- State of Victoria(Agriculture Victoria) (2020). Victoria Resources Online Grass Vetchling (Lathyrus nissolia).
- Calflora (2022). Lathyrus nissolia search results.
- Giblin, D.E. et al. (2018). Lathyrus L.. Flora of the Pacific Northwest: An Illustrated Manual. . 164-167.
- iNaturalist (2022). Search results for Lathyrus nissolia in California, accessed 3 Dec 2022.

2. Is the species (or cultivar or variety) noted as being naturalized in the US or world in a similar climate?

- Answer: **Yes**, which contributes **2** point(s) to the total PRE score.
- The screener has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia has become naturalized and is spreading locally in California (Calflora 2022; Hulse-Stephens et al., personal communication). It is apparently also naturalized in Tazmania, where climate matches that of California. In Victoria, Australia, L. nissolia has been identified as a locally problematic invasive plant, though the exact climate where it occurs does not match that of California. In California, Lathyrus nissolia is known to have two self-sustaining populations: one near Willits (Mendocino Co.) at a restoration site and one near Healdsburg (Sonoma Co.) at a trailhead. In Oregon, where climate matches, L. nissolia was previously naturalized. Currently, L. nissolia is not listed in the Jepson Manual for California.

Reference(s):

- GBIF Secretariat (2022). GBIF Backbone Taxonomy. Checklist dataset for Lathyrus nissolia accessed via GBIF.org on 2022-12-03.
- State of Victoria(Agriculture Victoria) (2020). Victoria Resources Online Grass Vetchling (Lathyrus nissolia).
- Calflora (2022). Lathyrus nissolia search results.
- iNaturalist (2022). Search results for Lathyrus nissolia in California, accessed 3 Dec 2022.
- Giblin, D.E. et al. (2018). Lathyrus L.. Flora of the Pacific Northwest: An Illustrated Manual. . 164-167.
- CABI Data Mining (2011). Invasive Species Databases: Lathyrus nissolia. Accessed 22 Feb 2023.

3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia has been introduced into several parts of the world, but it has not yet been listed as a highly problematic species in any of them. The Province of Victoria, Australia, has assessed and listed L. nissolia as an invasive plant on its website, primarily due to its poisonous seeds that present potential threat to rangelands. The population recently confirmed in Mendocino County, California appears to be threatening local native meadow species (Hulse-Stephens et al., pers. comm.). A "B" rating has recently been proposed by the California Department of Food and Agriculture for Lathyrus nissolia, based on its potential impacts to rangeland and the listed North coast semaphoregrass (Pleuropogon hooverianus), however this rating refers to risk, not actual invasiveness. It is not currently listed as "invasive" anywhere in the Global Compendium of Weeds (Randall, 2017).

Reference(s):

- California Department of Food and Agriculture (2022). California Pest Rating Proposal for Lathyrus nissolia L. grass vetchling, grass pea. 1-7.
- State of Victoria(Agriculture Victoria) (2020). Victoria Resources Online Grass Vetchling (Lathyrus nissolia).
- Randall, R.P. (2017). A Global Compendium of Weeds. Third Edition..

4. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia is listed as invasive on Agriculture Victoria's (Australia) website of invasive plants due to it's potential to spread based on suitable climate, its poisonous nature to livestock, especially horses, and its apparent lack of other local ecological benefit. However, the area that L. nissolia occurs is slightly beyond the climate match overlay for California. In California, L. nissolia is posing a potential threat to North coast semephoregrass and other wet meadow species (G. Hulse-Stephens). However, data are still being gathered on this relationship. CDFA has proposed a "B" listing for the species, but it is based on future risk and not actual occurrence.

- California Department of Food and Agriculture (2022). California Pest Rating Proposal for Lathyrus nissolia L. grass vetchling, grass pea. 1-7.
- State of Victoria(Agriculture Victoria) (2020). Victoria Resources Online Grass Vetchling (Lathyrus nissolia).

5. Are other species of the same genus (or closely related genera) invasive in a similar climate?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus latifolius is listed as noxious in Oregon, which largely overlaps California in climate. There, it has been reported as becoming very dense and often "completely covering all other low-growing vegetation." It is also listed as invasive in Queensland, sections of which overlap in climate.

Reference(s):

- Oregon Dept of Agriculture (0). Oregon Department of Agriculture "B" Rated Weeds: Perennial peavine.
- Invasive Plant Atlas of the United States (0). Everlasting peavine: Lathyrus latifolia: Invasive Plant Atlas of the United States.
- Queensland Government (0). Lathyrus latifolius Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition. .

6. Is the species (or cultivar or variety) found predominately in a climate matching the region of concern?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Although Lathyrus nissolia's native and introduced range overlaps with that of California, it is common across a large section of western Europe as well as in parts of southern Russia where climate does not match (see Climate Match map).

Reference(s):

• GBIF Secretariat (2022). GBIF Backbone Taxonomy. Checklist dataset for Lathyrus nissolia accessed via GBIF.org on 2022-12-03.

Impact on Native Plants and Animals (Questions 7 - 10)

- 7. Does this plant displace native plants and dominate (overtop or smother) the plant community in areas where it has established?
 - Answer: Yes, which contributes 1 point(s) to the total PRE score.
 - The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Observations by G. Hulse-Stephens, Mendocino Co. botanist, and by the author support the capacity for this plant to smother and overtop other wet meadow species. Hulse-Stephens counted 180 plants in a quarter 1m2 area, covering 85% of the area. Most plants were of a single stem, however others were found in the area to have multiple stems (counts up to six branches) with some evidence even of second season regrowth. Plants grew to to a height that overtopped other plants early in the season. The tall growth form of this plant and other reports of its aggressive nature further support a "yes" for this answer (Griese 1989, Gilpin 2018, Lauber et al. 2018).

Reference(s):

- Lauber, K., Wagner G., & Gygax A. (2018). Flora Helvetica Illustrierte Flora der Schweiz.
- Griese, D. (1989). Occurrence and phytosociological behaviour of the grass-vetchling Lathyrus nissolia L. in the town area of Wolfsburg (Southeastern Lower Saxony). Brauschw. Naturkdl. Schr.. 3, 355-360.
- Giblin, D.E. et al. (2018). Lathyrus L.. Flora of the Pacific Northwest: An Illustrated Manual. . 164-167.

8. Is the plant noted as promoting fire and/or changing fire regimes?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

The growth habit and and ecological preference for moist meadow habitat make it unlikely that Lathyrus nissolia would contribute positively or negatively to fire frequency. The fine, linear structure of this plant (with few, narrow, grasslike leaves) further provide little fuel for any wildfire.

Reference(s):

- Lauber, K., Wagner G., & Gygax A. (2018). Flora Helvetica Illustrierte Flora der Schweiz.
- Griese, D. (1989). Occurrence and phytosociological behaviour of the grass-vetchling Lathyrus nissolia L. in the town area of Wolfsburg (Southeastern Lower Saxony). Brauschw. Naturkdl. Schr.. 3, 355-360.

9. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

The seeds of Lathyrus nissolia are poisonous to mammals, including livestock, according to USDA GRIN.

Reference(s):

• USDA, Agricultural Research Service, National Plant Germplasm System (0). Germplasm Resources Information Network (GRIN Taxonomy) for Lathyrus nissolia accessed 3 Dec 2022.

10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Due to the linear and vertical growth habit of Lathyrus nissolia and its annual nature, there is little reason to think that it could create impenetrable thickets, especially in the moist areas where it grows.

Reference(s):

• Lauber, K., Wagner G., & Gygax A. (2018). Flora Helvetica - Illustrierte Flora der Schweiz.

Reproductive Strategies (Questions 11 - 17)

11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia is described by multiple sources as an annual plant, which then by definition would not reproduce vegetatively. There is some evidence from Mendocino populations that this species occasionally grows as a short-lived perennial or biennial (Hulse-Stephen and Burger, personal observations).

Reference(s):

- Lauber, K., Wagner G., & Gygax A. (2018). Flora Helvetica Illustrierte Flora der Schweiz.
- USDA, Agricultural Research Service, National Plant Germplasm System (0). Germplasm Resources Information Network (GRIN Taxonomy) for Lathyrus nissolia accessed 3 Dec 2022.
- State of Victoria(Agriculture Victoria) (2020). Victoria Resources Online Grass Vetchling (Lathyrus nissolia).

12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia is generally an annual plant that does not spread vegetatively.

Reference(s):

- Lauber, K., Wagner G., & Gygax A. (2018). Flora Helvetica Illustrierte Flora der Schweiz.
- USDA, Agricultural Research Service, National Plant Germplasm System (0). Germplasm Resources Information Network (GRIN Taxonomy) for Lathyrus nissolia accessed 3 Dec 2022.
- State of Victoria(Agriculture Victoria) (2020). Victoria Resources Online Grass Vetchling (Lathyrus nissolia).

13. Does the species (or cultivar or variety) commonly produce viable seed?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

Multiple taxonomic references describe the flowers, pods, and seed that this species produces.

Reference(s):

- Lauber, K., Wagner G., & Gygax A. (2018). Flora Helvetica Illustrierte Flora der Schweiz.
- Cannon, J.F.M. (1964). Infraspecific variation in Lathyrus nissolia L.. Watsonia. 6, 28-35.
- USDA, Agricultural Research Service, National Plant Germplasm System (0). Germplasm Resources Information Network (GRIN Taxonomy) for Lathyrus nissolia accessed 3 Dec 2022.

14. Does this plant produce copious viable seeds each year (> 1000)?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Sources differ in their estimates of seed production. Bramin et al., (2001) reports an average of 9.3 seeds per pod with few flowers per plant and further reports that flowers are entirely self-compatible. Hulse-Stephens counted seeds from multiple pods from the Mendocino Co. population and estimated between 13 - 17 seeds / pod with some plants containing 10 or more flowers. Regardless of the exact count, seed number is clearly well below 1000 even for the more prolifically seeding plant. Plants also had a 100g seed weight of this species is 7.55g according to Kew.

Reference(s):

- Van Assche, J.A., Debucquoy K.L.A., & Rommens W.A.F. (2003). Seasonal cycles in the germination capacity of buried seeds of some Leguminosae (Fabaceae). New Phytologist. 158, 315-323.
- Ben Brahim, N., Combes D., & Marrakchi M. (2001). Autogamy and allogamy in genus Lathyrus. Lathyrus Lathyrism Newsletter. 2, 21-26.

15. Is there significant germination (>25%) of seeds the next growing season, with no requirement of an infrequent environmental condition for seeds to germinate (i.e. fire) or long dormancy period?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

Lathyrus nissolia appears to have significant dormancy. Van Assche (2003) reported germination of less than 5% for seeds kept at 10C and no germination for seeds left at room temperature. Seeds germinated at up to 20% after burial for nearly two years and fluctuating cold temperatures. Alternatively, seeds germinate readily with scarification (Griese 1989). Van Assche et al. (2003) provided additional evidence that low germination was not due to low seed viability: 88% of seed buried for six months remained viable.

- Griese, D. (1989). Occurrence and phytosociological behaviour of the grass-vetchling Lathyrus nissolia L. in the town area of Wolfsburg (Southeastern Lower Saxony). Brauschw. Naturkdl. Schr.. 3, 355-360.
- Van Assche, J.A., Debucquoy K.L.A., & Rommens W.A.F. (2003). Seasonal cycles in the germination capacity of buried seeds of some Leguminosae (Fabaceae). New Phytologist. 158, 315-323.

16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Cannon (1964) has reported that Lathyrus nissolia will grow from seed to maturity in four months.

Reference(s):

• Cannon, J.F.M. (1964). Infraspecific variation in Lathyrus nissolia L.. Watsonia. 6, 28-35.

17. Does this plant continuously produce seed for >3 months each year or does seed production occur more than once a year?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Flowering appears to occur in late spring, after which plants senesce. The reported bloom period in Calflora is April - June.

• Calflora (2022). Lathyrus nissolia search results.

Dispersal (Questions 18 - 20)

18. Are the plant's propagules frequently dispersed long distance (>100 m) by mammals or birds or via domestic animals?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

I could find no evidence supporting long distance dispersal by mammals or birds.

Reference(s):

• [Anonymous].

19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

Nothing about the distribution or seed structure of Lathyrus nissolia suggests that it could be dispersed by wind or water: seeds are slightly flattened and approximately 3mm diameter with out any structures to aid with floatation.

• USDA, Agricultural Research Service, National Plant Germplasm System (0). Germplasm Resources Information Network (GRIN Taxonomy) for Lathyrus nissolia accessed 3 Dec 2022.

20. Are the plant's propagules frequently dispersed via contaminated seed (agriculture or wildflower packets), equipment, vehicles, boats or clothing/shoes?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The screener has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

The only likely means by which this species moved to new sites is through contaminated seed or equipment, but I could not find any documentation of movement. Seeds are 3mm in diameter, rounded, and flattened and could easily lodge into equipment or be carried with soil.

Reference(s):

• USDA, Agricultural Research Service, National Plant Germplasm System (0). Germplasm Resources Information Network (GRIN Taxonomy) for Lathyrus nissolia accessed 3 Dec 2022.

Evaluation Notes

Evaluator's note: This evaluation was difficult to conduct because of the general lack of information available on the species. Lathyrus nissolia may eventually be re-evaluated as a high risk once its impacts are better known.

Total PRE Score

PRE Score: 9 -- Low Potential Risk

Confidence: 72 / 100

Questions answered: 20 of 20 -- Valid (80% or more questions answered)

PRE Score Legend

The PRE Score is calculated by adding the point totals for each (answered) question.

< 13 : Low Potential Risk

13 - 15 : Moderate Potential Risk

> 15 : High Potential Risk

Questions Answered Legend

It is important to answer at least 16 questions to consider a PRE Score as "valid".

>= 16 : valid (80% or more questions answered)

<= 15 : invalid (not enough questions answered)

Organization Ownership and Content Privacy

Organization: 2022 Western IPM Grant Project

Content Privacy: Private

Evaluation Reviewers

The PRE approach is to base decisions on science and make decisions by consensus of diverse horticultural stakeholders. The literature review and process of answering PRE's questions are based on science; the decisions of which plants to prioritize are based on consensus. To ensure this process is in place and that PRE is collaborative, volunteer stakeholders are recruited from each region to review evaluations. The following experts in their profession (plant science, conservation, or horticultural trade) have participated as volunteer PRE reviewers for this evaluation:

• Elizabeth D. Brusati	March 1, 2023
• Lynn Sweet	December 23, 2022
 Alex Simmons 	December 21, 2022
• Scott Oneto	December 19, 2022
Marla Knight	December 19, 2022
 Nicole Valentine 	December 16, 2022

This evaluation has a total of 6 reviewer(s).

Evaluation Issues

The following section lists all public issues for this evaluation. Issues provide a way for stakeholder reviewers to communicate any concerns or suggestions they might have with the plant or evaluation. Please email info@plantright.org if additional action is required to resolve open issues.

Issue ID #8647

Date Created: December 23, 2022 - 3:00pm **Date Updated:** January 15, 2023 - 10:01pm

Submitted by: Lynn Sweet

Status: Fixed Type: Comment Severity: Minor

Scope: Q05. Are other species of the same genus invasive in a similar climate?

Issue Description

Remember to include the relevant information from the listing, since weeds can be listed as noxious with no known impacts in the area of interest. A quick check of the Oregon site yielded adequate info, "Oregon... large areas are smothered and native plant cover are reduced." -- Lynn Sweet

Issue Resolution (Screener's Response to Issue)

Added a note about growth becoming very dense often completely covering all other low-growing vegetation from Oregon listing.

Issue ID # 8646

Date Created: December 23, 2022 - 2:58pm **Date Updated:** January 15, 2023 - 8:11am

Submitted by: Lynn Sweet

Status: Fixed **Type:** Suggestion **Severity:** Major

Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar

climate?

Issue Description

My disagreement with a yes on Q3 extends to Q4. Not enough of a statement about invasiveness. -Lynn Sweet

Issue Resolution (Screener's Response to Issue)

I have changed the answer to this question to "no" with "low" confidence and rephrased the answer slightly.

Issue ID #8645

Date Created: December 23, 2022 - 2:57pm **Date Updated:** January 15, 2023 - 8:08am

Submitted by: Lynn Sweet

Status: Fixed **Type:** Suggestion **Severity:** Major

Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

I agree with Alex's comment. The listing and other evidence ("potential", "threatening") is not quite enough here. I'm afraid it's a "no" for me, I'd say confidence is "Low" because the sources are more general (and even then they lack decisive statements either way), and the one more detailed source (comment about meadows) is unfortunately also not giving support for really a yes or no answer. So in sum, no good source states that it is or is not invasive. --Lynn Sweet

Issue Resolution (Screener's Response to Issue)

I have changed the answer to "no" with "low" confidence and rephrased the answer slightly.

Issue ID #8623

Date Created: December 20, 2022 - 4:33pm **Date Updated:** December 21, 2022 - 5:36pm

Submitted by: Alex Simmons

Status: Fixed Type: Comment Severity: Minor

Scope: Q13. Does the species (or cultivar or variety) commonly produce viable seed?

Issue Description

Was there any data on viability specifically? More details are not critical, but could help provide a hardier justification. -Alex Simmons

Issue Resolution (Screener's Response to Issue)

I have added information from a paper about high seed viability after burial to bolster this justification.

Issue ID #8622

Date Created: December 20, 2022 - 4:31pm **Date Updated:** December 21, 2022 - 5:42pm

Submitted by: Alex Simmons

Status: Fixed Type: Comment Severity: Minor

Scope: Q11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

Issue Description

I think you can raise confidence level to Medium here. -Alex Simmons

Issue Resolution (Screener's Response to Issue)

Good catch. I think I missed adjusting confidence for this question. I actually moved confidence to "very high" because this is generally an annual with plenty of references to support that characterization.

Issue ID #8621

Date Created: December 20, 2022 - 4:26pm **Date Updated:** January 15, 2023 - 9:52pm

Submitted by: Alex Simmons

Status: Fixed **Type:** Suggestion **Severity:** Major

Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar

climate?

Issue Description

Same as Q3. Not enough evidence to warrant a yes.

If there is no evidence for this anywhere in the world, then the answer is no. It may be considered widespread; however, if there is no evidence that it causes damage, then the answer is still no. Being on a state or federal noxious weed list may not be enough to warrant a yes answer, since this <u>does not</u> necessarily mean the plant has established or been introduced to this area.

-Alex Simmons

Issue Resolution (Screener's Response to Issue)

Answer changed to "no" with "low" confidence.

Issue ID #8620

Date Created: December 20, 2022 - 4:26pm **Date Updated:** January 15, 2023 - 8:08am

Submitted by: Alex Simmons

Status: Fixed **Type:** Suggestion **Severity:** Major

Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

I agree with other reviewer that evidence may not be strong enough to warrant a "yes" answer here. Per Help section:

If there is no evidence for this anywhere in the world, then the answer is no. It may be considered widespread; however, if there is no evidence that it causes damage, then the answer is still no. Being on a state or federal noxious weed list may not be enough to warrant a yes answer, since this <u>does not</u> necessarily mean the plant has established or been introduced to this area.

-Alex Simmons

Issue Resolution (Screener's Response to Issue)

I have changed the answer to "no" with "low" confidence and rephrased the answer slightly.

Issue ID # 8591

Date Created: December 19, 2022 - 5:13pm **Date Updated:** January 15, 2023 - 9:53pm

Submitted by: Scott Oneto

Status: Fixed Type: Comment Severity: Minor

Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar

climate?

Issue Description

Same comment as Q3. Is there sufficient evidence that is has become invasive in any similar climates? The statement "In California, L. nissolia is posing a potential threat to North coast semephoregrass and other wet meadow species" is a bit weak in terms of describing its invasiveness.

Issue Resolution (Screener's Response to Issue)

Answer changed to "no" with "low" confidence.

Issue ID #8590

Date Created: December 19, 2022 - 5:11pm **Date Updated:** January 15, 2023 - 7:43am

Submitted by: Scott Oneto

Status: Fixed Type: Comment Severity: Minor

Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

Is this plant shown to be invasive in the US or world? In reviewing the references that were provided I am unsure if the reference to Dept. of Agriculture and Food, Western Australia warrants a yes answer to this question. It looks like they listed it on the website due to its potential threat. The references provided justify a yes for being naturalized but I don't know if there is currently enough evidence to prove it has been shown to be invasive. Also the statement, "population recently confirmed in Mendocino County, California is also apparently threatening local native meadow species" is a bit unclear to the invasiveness. Thoughts?

Issue Resolution (Screener's Response to Issue)

Based on your and other reviewer comments, I have changed the answer to this question to "no" with "low" confidence.

Issue ID #8562

Date Created: December 16, 2022 - 9:08am **Date Updated:** December 21, 2022 - 5:48pm

Submitted by: Nicole Valentine

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q07. Does this plant displace native plants and dominate the plant community in areas where it

has been established?

Issue Description

Confidence could be High since not an inference. -NV

Issue Resolution (Screener's Response to Issue)

A bit tricky. I feel more comfortable leaving this confidence at "medium" because it is mostly based on perceived risk at this point.

Issue ID # 8561

Date Created: December 16, 2022 - 9:04am **Date Updated:** December 21, 2022 - 5:53pm

Submitted by: Nicole Valentine

Status: Fixed
Type: Comment
Severity: Minor

Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar

climate?

Issue Description

I thought when the answer was yes and confidence was low that the points were not counted toward the

score. Same with Q20. -NV

Issue Resolution (Screener's Response to Issue)

Correct. I intended for the confidence to be low here because there is not enough published evidence of invasiveness or (for Q20) movement via equipment etc.

Issue ID #8560

Date Created: December 16, 2022 - 8:17am **Date Updated:** December 21, 2022 - 5:24pm

Submitted by: Nicole Valentine

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Regional Information

Issue Description

Climate matching link does not include GBIF occurrences. -NV

Issue Resolution (Screener's Response to Issue)

Good catch. Link added.

Issue ID #8541

Date Created: December 14, 2022 - 5:02pm **Date Updated:** December 21, 2022 - 2:16pm

Submitted by: Scott Oneto

Status: Fixed Type: Suggestion Severity: Minor

Scope: Q01. Has the species (or cultivar or variety, if applicable) become naturalized where it is not

native?

Issue Description

Sentence two has a few grammatical errors CA listed twice and California and and

Issue Resolution (Screener's Response to Issue)

Grammatical errors corrected.

About PRE and this Plant Evaluation Report

The Plant Risk Evaluator (PRE) is an online database and platform designed to assess the risk of a plant becoming invasive in a given region. This tool offers many benefits, and we encourage you to visit the PRE website (https://pretool.org) for more information.

If you would like to learn more about PRE, please email us at info@plantright.org, requesting a PRE Account.

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