



***Plant Risk Evaluator -- PRE<sup>TM</sup>  
Evaluation Report***

***Arum italicum -- Washington***

*Pacific Northwest Invasive Plant Council*

**PRE Score:** 17 -- High Potential Risk

**Confidence:** 79 / 100

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

**Privacy:** Public

**Status:** Completed

**Evaluation Date:** June 15, 2021

*This PDF was created on April 29, 2022*

*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

*Arum italicum*



Image by J. Parker's



## Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Arum italicum*) 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

*Arum italicum* is an introduced Eurasian species that is widely naturalized in North America, including Washington state. While *A. italicum* occurs in climatic zones similar to western Washington, it is found in a number of other climate zones as well. *A. italicum* is capable of aggressive spread both through seed production and vegetative bulbils and in favorable conditions has formed dense patches that exclude desirable vegetation. All parts of the plant are toxic to humans, wildlife, and livestock, who avoid grazing on *A. italicum* due to irritation of skin and mouth. The species produces viable seed in its naturalized habitats and seed is spread primarily by birds consuming fruits, but bulbils in riparian areas may be spread by water as well.

## General Information

**Status:** Completed

**Screener:** Jim Evans

**Evaluation Date:** June 15, 2021

## Plant Information

**Plant:** *Arum italicum*

## Regional Information

**Region Name:** Washington



## **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 [here](#) 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 *screeners* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

Yes. Multiple escaped populations are reported from both public and private lands in San Juan County (San Juan and Lopez Islands) and King County (Kirkland, Seattle, Vashon Island), Washington.

#### Reference(s):

- Washington State Noxious Weed Control Board (2014). Written findings of the Washington State Noxious Weed Control Board: *Arum italicum*.
- 

#### 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 *screeners* has a **High** confidence in this answer based on the available literature.

#### Answer / Justification:

Plantright's climate match tool compared to GBIF distribution map shows coincidence in coastal Oregon and British Columbia and in Appalachian chain in eastern US.

<http://websites.greeninfo.org/plantright/finder/> ; Climate Matching Results, ARIT.pdf



**Reference(s):**

- [Anonymous] .
- 

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

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

**Answer / Justification:**

Yes. In Washington, Oregon, and California on the West Coast, and in 11 states in the eastern and southern US: New York, Maryland, Virginia, West Virginia, Indiana, Illinois, Missouri, North Carolina, Tennessee, Georgia, and Alabama.

**Reference(s):**

- Swearingen, J., & Barger C. (2015). Italian arum: Invasive Plant Atlas of the United States.
- 

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

- Answer: **Yes**, which contributes **3** point(s) to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

Invasive range in Oregon, California, New York, and southern Appalachians match climate of western Washington. <http://websites.greeninfo.org/plantrightfinder/> ; Climate Matching Results, ARIT.pdf

**Reference(s):**

- Swearingen, J., & Barger C. (2015). Italian arum: Invasive Plant Atlas of the United States.
-



## 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 *screeners* has a **High** confidence in this answer based on the available literature.

### Answer / Justification:

The USDA Plants database does not report *Arum maculatum*, a closely related species, as invasive, or even introduced, anywhere in North America. However, GBIF records *A. maculatum* as invasive in Sweden and Denmark, both countries having areas of similar climate to Washington according to Plantright's PRE-combined climate match tool.

### Reference(s):

- USDA NRCS (2015). PLANTS Database.
  - GBIF (0). Global Biodiversity Information Facility (GBIF).
  - [Anonymous] (0). PlantRight.
- 

## 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 *screeners* has a **High** confidence in this answer based on the available literature.

### Answer / Justification:

A comparison of GBIF world distribution with Plantright's PRE-combined climate match tool shows more than half of *Arum italicum*'s distribution is found beyond the climate match region for Washington.

### Reference(s):

- GBIF (0). Global Biodiversity Information Facility (GBIF).
  - [Anonymous] (0). PlantRight.
-



## 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 *screeners* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

Accounts and photographs describe & show smothering infestations in San Juan and King Counties, Washington.

#### Reference(s):

- Washington State Noxious Weed Control Board (2014). Written findings of the Washington State Noxious Weed Control Board: *Arum italicum*.
- 

### 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 *screeners* has a **Low** confidence in this answer based on the available literature.

#### Answer / Justification:

No suggestion of fire influence in any of the literature reviewed.

#### Reference(s):

- [Anonymous] .
-





**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 *screeners* has a **Low** confidence in this answer based on the available literature.

**Answer / Justification:**

All parts of the plant are toxic if ingested by humans or animals and is avoided by grazing animals due to contact irritation to skin and mouths.

**Reference(s):**

- Washington State Noxious Weed Control Board (2014). Written findings of the Washington State Noxious Weed Control Board: *Arum italicum*.
  - Victorian Resources Online, Department of Economic Development (2016). Invasiveness Assessment - Italian lily (*Arum italicum*) in Victoria.
- 

**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 *screeners* has a **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

Species is a low-growing forb generally

**Reference(s):**

- Washington State Noxious Weed Control Board (2014). Written findings of the Washington State Noxious Weed Control Board: *Arum italicum*.
  - Jepson Flora Project (2017). Jepson eFlora: *Arum italicum*.
-



## Reproductive Strategies (Questions 11 - 17)

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

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

#### Answer / Justification:

The production of bulblets that become independent plants is well known in the species, as described in Mendez (1999) and in Mendez and Obeso (1993). Méndez, M. and J. R. Obeso. 1993. Size-dependent reproductive and vegetative allocation in *Arum italicum* (Araceae). *Canadian Journal of Botany* 71: 309—314.

#### Reference(s):

- Mendez, M. (1999). Effects of Sexual Reproduction on Growth and Vegetative Propagation in the Perennial Geophyte *Arum italicum* (Araceae). *Plant Biology*. 1(1), 115-120.
  - Méndez, M., & Obeso J. R. (1993). Size-dependent reproductive and vegetative allocation in *Arum italicum* (Araceae). *Canadian Journal of Botany*. 71, 309–314.
- 

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

#### Answer / Justification:

Plants routinely produce daughter tubers (bulblets) which break off and form new plants.

#### Reference(s):

- Méndez, M., & Obeso J. R. (1993). Size-dependent reproductive and vegetative allocation in *Arum italicum* (Araceae). *Canadian Journal of Botany*. 71, 309–314.
- Mendez, M. (1999). Effects of Sexual Reproduction on Growth and Vegetative Propagation in the Perennial Geophyte *Arum italicum* (Araceae). *Plant Biology*. 1(1), 115-120.



### 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 *screeners* has a **Very High** confidence in this answer based on the available literature.

#### Answer / Justification:

Mendez and Obeso (1993) and Albre and Gibernau (2008) report that production of viable seed is a common reproductive strategy of this species.

#### Reference(s):

- Méndez, M., & Obeso J. R. (1993). Size-dependent reproductive and vegetative allocation in *Arum italicum* (Araceae). *Canadian Journal of Botany*. 71, 309–314.
  - Albre, J., & Gibernau M. (2008). Reproductive biology of *Arum italicum* (Araceae) in the south of France. *Botanical Journal of the Linnean Society*. 156, 43–49.
- 

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

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

#### Answer / Justification:

One study found an average seed production per inflorescence of 82.8 (Albre, Quilichini and Gibernau (2003). Most plants produce 2-4 inflorescences (Mendez and Diaz 2001); therefore the number of seeds produced is likely to be less than 1000.

#### Reference(s):

- Albre, J., Quilichini A., & Gibernau M. (2003). Pollination ecology of *Arum italicum* (Araceae). *Botanical Journal of the Linnean Society*. 141, 205–214.
  - Méndez, M., & Díaz A. (2001). Flowering dynamics in *Arum italicum* (Araceae): relative role of inflorescence traits, flowering synchrony, and pollination context on fruit initiation. *American Journal of Botany*. 88, 1774–1780.
-



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

**Answer / Justification:**

Diaz et al. (2006) tested germination of selfed and outcrossed seed of *Arum italicum* and found rates between 45-53%.

**Reference(s):**

- Diaz, A., Amoin M. Aka, & Gibernau M. (2006). The effectiveness of some mechanisms of reproductive isolation in *Arum maculatum* and *A. italicum* (Araceae). *Biological Journal of the Linnean Society*. 150, 323 - 328.
- 

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

**Answer / Justification:**

Viable seed is produced in 4-5 years according to Boyce (1993), cited in Agriculture Victoria (2020).

**Reference(s):**

- Boyce, P. (1993). The genus *Arum*. A Kew Magazine monograph.. 196.
  - Victorian Resources Online, Department of Economic Development (2016). Invasiveness Assessment - Italian lily (*Arum italicum*) in Victoria.
-



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

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

**Answer / Justification:**

Blooms March-June (Calflora Taxon report 730)

**Reference(s):**

- Calflora (2011). Calflora: *Arum italicum*.
- 

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

**Answer / Justification:**

Mendez and Obeso (1993) observed dispersal of fruits by birds. Washington State Noxious Weed Control Board (2014) also cites Boyce (1993) to this effect.

**Reference(s):**

- Méndez, M., & Obeso J. R. (1993). Size-dependent reproductive and vegetative allocation in *Arum italicum* (Araceae). *Canadian Journal of Botany*. 71, 309–314.
  - Boyce, P. (1993). The genus *Arum*. A Kew Magazine monograph.. 196.
  - Washington State Noxious Weed Control Board (2014). Written findings of the Washington State Noxious Weed Control Board: *Arum italicum*.
-



**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 *screeners* has a **Low** confidence in this answer based on the available literature.

**Answer / Justification:**

Evidence is lacking. Washington State Noxious Weed Control Board (2014) cited a New Zealand source (<https://www.weedbusters.org.nz/what-are-weeds/weed-list/italian-arum/> , cited as weedbusters.co.nz]) for water dispersal, but neither source provides a primary source for the claim or mention of the frequency of its occurrence.

**Reference(s):**

- Washington State Noxious Weed Control Board (2014). Written findings of the Washington State Noxious Weed Control Board: *Arum italicum*.
- 

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

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

**Answer / Justification:**

None of the literature reviewed suggested this as an important mechanism.

**Reference(s):**

- [Anonymous] .
-



## Total PRE Score

**PRE Score:** 17 -- High Potential Risk

**Confidence:** 79 / 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:** Pacific Northwest Invasive Plant Council

**Content Privacy:** Public



## 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:

- |                     |                  |
|---------------------|------------------|
| • Lizbeth Seebacher | October 17, 2021 |
| • Wendy Descamp     | August 31, 2021  |
| • Jutta Burger      | August 18, 2021  |
| • PRE Data Manager  | July 14, 2021    |

This evaluation has a total of 4 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 [PlantRight@suscon.org](mailto:PlantRight@suscon.org) if additional action is required to resolve open issues.

### Issue ID # 7252

**Date Created:** October 4, 2021 - 4:41pm

**Date Updated:** November 5, 2021 - 2:14pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

### Issue Description

Can you go back to verify the source used by the WA Noxious Weed Control Board? If the source cannot be verified then the confidence should go down, since there are no other corroborating reports. Diaz et al. 2006 do report that the seeds are relatively heavy, so unlikely to float. If you can find a reference (or direct observation) that shows the fruit can dislodge from the spadex and float then this could I think be enough information to support a 'yes' with medium confidence. Even then, the question is about evidence for "frequent dispersal", which seems to be lacking. - Jutta Burger

### Issue Resolution (Screener's Response to Issue)

The New Zealand source was found to be [Weedbusters.org.nz](https://www.weedbusters.org.nz), garbled or changed to [weedbusters.co.nz](https://www.weedbusters.co.nz) in the WA NWCB reference. However, Weedbusters, while stating that seeds are dispersed by birds & water, does not provide a primary source for this information. The question's answer was changed to 'No,'/ Confidence: 'Low,' and the narrative language was changed to "Evidence is lacking. Washington State Noxious Weed Control Board (2014) cited a New Zealand source (<https://www.weedbusters.org.nz/what-are-weeds/weed-list/italian-arum/> cited as [weedbusters.co.nz](https://www.weedbusters.co.nz)) for water dispersal, but neither source provides a primary source for the claim or mention of the frequency of its occurrence." 11/5/2021



## Issue ID # 7251

**Date Created:** October 4, 2021 - 4:34pm

**Date Updated:** November 5, 2021 - 1:42pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Q15. 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?

### Issue Description

The study below includes a germination test of selfed and outcrossed seed. Germination rates were between 45-53%, so the answer to this question should be 'yes' with a high level or even very high of confidence given that data come from a published, peer-reviewed study. - Jutta Burger

Diaz, A., Amoin M. Aka, & Gibernau M. (2006). [The effectiveness of some mechanisms of reproductive isolation in \*Arum maculatum\* and \*A. italicum\* \(Araceae\)](#). *Biological Journal of the Linnean Society*. 150, 323 - 328.

### Issue Resolution (Screener's Response to Issue)

Made the revision suggested above, based on the findings of Diaz et al. (2006). As indicated by Jutta Burger, this new information changed the question's answer to Yes with a confidence of Very High.

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## Issue ID # 7250

**Date Created:** October 4, 2021 - 4:20pm

**Date Updated:** November 5, 2021 - 2:17pm

**Submitted by:** Jutta Burger

**Status:** Fixed

**Type:** Suggestion



**Severity:** Minor

**Scope:** Q06. Is the species found predominately in a climate matching the region of concern?

### Issue Description

Because this question uses the threshold of >50% to define "predominantly", specify that more than half of *Arum italicum*'s distribution is found beyond the climate match region for WA, if that is what you found . - Jutta Burger

### Issue Resolution (Screener's Response to Issue)

Revised language for Question 6 now reads "A comparison of GBIF world distribution with Plantright's PRE-combined climate match tool shows more than half of *Arum italicum*'s distribution is found beyond the climate match region for Washington."

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### Issue ID # 6668

**Date Created:** July 12, 2021 - 10:25am

**Date Updated:** July 27, 2021 - 8:40pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q09. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

### Issue Description

I think this evidence would necessitate a Yes answer to this question. All parts of the plant are toxic.  
(Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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### Issue ID # 6667

**Date Created:** July 12, 2021 - 10:24am

**Date Updated:** July 27, 2021 - 8:37pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Q06. Is the species found predominately in a climate matching the region of concern?

### Issue Description

Please list where the species is in notes to expand on the Yes answer; Note that CA reviewers answered "yes" here. (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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### Issue ID # 6666

**Date Created:** July 12, 2021 - 10:23am

**Date Updated:** November 6, 2021 - 3:51pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

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

### Issue Description

The answer should be either yes or no, and should never go unanswered. The Global Compendium of Weeds is a good reference for this question. (Alex Stubblefield)



### Issue Resolution (Screener's Response to Issue)

Answered question 'Yes' based on GBIF reporting *A. maculatum* as invasive in Sweden and Denmark, and both countries having areas of similar climate to Washington according to Plantright's PRE-combined climate match tool.

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### Issue ID # 6665

**Date Created:** July 12, 2021 - 10:22am

**Date Updated:** July 27, 2021 - 8:39pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

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

### Issue Description

Please list where the species is noted as being invasive to expand on the Yes answer. (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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### Issue ID # 6664

**Date Created:** July 12, 2021 - 10:21am

**Date Updated:** July 27, 2021 - 8:41pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed



**Type:** Suggestion

**Severity:** Minor

**Scope:** Q02. Is the species (or cultivar or variety) noted as being naturalized elsewhere in the US or world in a similar climate?

### Issue Description

List specific examples of the occurrences that are in a similar climate and cite the references (e.g. Add GBIF entry as a reference). (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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## Issue ID # 6663

**Date Created:** July 12, 2021 - 10:20am

**Date Updated:** July 27, 2021 - 8:39pm

**Submitted by:** Alexandria Stubblefield

**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

Please list examples of where it has naturalized. Recall, the listing itself does not provide enough information. (Alex Stubblefield)

### Issue Resolution

No resolution has been entered for this issue.

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## Issue ID # 6662

**Date Created:** July 12, 2021 - 10:19am

**Date Updated:** November 5, 2021 - 1:10pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Evaluation as a whole

### Issue Description

Add evaluation summary. (Alex Stubblefield)

### Issue Resolution (Screener's Response to Issue)

Added Summary

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## Issue ID # 6661

**Date Created:** July 12, 2021 - 10:18am

**Date Updated:** November 5, 2021 - 1:10pm

**Submitted by:** Alexandria Stubblefield

**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Evaluation as a whole

### Issue Description

Use reference widget to add citations. (Alex Stubblefield)

### Issue Resolution (Screener's Response to Issue)



Incorporated references via widget throughout.

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## Issue ID # 6612

**Date Created:** July 11, 2021 - 8:19pm

**Date Updated:** July 27, 2021 - 8:41pm

**Submitted by:** Lynn Sweet

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?

## Issue Description

I see that this could support a "yes" however, better to include information that is a little more complete concerning the period of time that seed is dispersing into the environment, if it is borderline as 4 months is here. It's subtle though and I'm not sure your answer is invalid. I say this because other information was found that indicates a "no", at least for France.

-Lynn Sweet

## Issue Resolution

No resolution has been entered for this issue.

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## Issue ID # 6611

**Date Created:** July 11, 2021 - 8:18pm

**Date Updated:** July 27, 2021 - 8:38pm

**Submitted by:** Lynn Sweet





**Status:** Fixed

**Type:** Suggestion

**Severity:** Major

**Scope:** Q12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

### Issue Description

Answer is "yes" because this does include bulblets, as you mention. This refers to the same parts/function as in Q11, only asking about how significant fragmentation and spread is for the species' reproduction.

-Lynn

### Issue Resolution

No resolution has been entered for this issue.

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### Issue ID # 6610

**Date Created:** July 11, 2021 - 8:17pm

**Date Updated:** July 27, 2021 - 8:40pm

**Submitted by:** Lynn Sweet

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

### Issue Description

Please list a source for reference (i.e. botanical or taxonomic page, etc.).

-Lynn Sweet

### Issue Resolution

No resolution has been entered for this issue.



### Issue ID # 6609

**Date Created:** July 11, 2021 - 8:17pm

**Date Updated:** July 27, 2021 - 8:40pm

**Submitted by:** Lynn Sweet

**Status:** Fixed

**Type:** Comment

**Severity:** Minor

**Scope:** Q09. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

### Issue Description

E.g. another reviewer located info concerning poisoning of horses.

-Lynn Sweet

### Issue Resolution

No resolution has been entered for this issue.

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### Issue ID # 6606

**Date Created:** July 11, 2021 - 8:09pm

**Date Updated:** July 27, 2021 - 8:39pm

**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**

Example: "Arum maculatum is a closely related species but there is no evidence that Arum maculatum is invasive. In fact, the 2021 GBIF distribution map of A. maculatum indicates that is not invasive currently."

-Lynn Sweet

### **Issue Resolution**

No resolution has been entered for this issue.



## About PRE and this Plant Evaluation Report

The PlantRight Plant Risk Evaluator -- PRE is an online database and platform enabling those involved in non-native, terrestrial plant production to know before they grow if a plant poses a regional invasive risk. This tool offers many benefits, and we encourage you to visit the PRE website (<https://pre.ice.ucdavis.edu>) for more information.

If you are a nursery trade association, or involved in the research, development or distribution of horticultural plants we invite you to join the PRE community. If you are a plant scientist, affiliated with a horticultural college or botanic garden, and would like to learn more about becoming a PRE Screener, please drop us an email, [PlantRight@suscon.org](mailto:PlantRight@suscon.org), requesting a PRE Account.

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