



***Plant Risk Evaluator -- PRE™
Evaluation Report***

Spiraea japonica 'Gold Mound' -- Georgia

2017 Farm Bill PRE Project

PRE Score: 11 -- Accept (low risk of invasiveness)

Confidence: 61 / 100

Questions answered: 18 of 20 -- Valid (80% or more questions answered)

Privacy: Public

Status: Completed

Evaluation Date: November 29, 2017

This PDF was created on August 13, 2018



Plant Evaluated

Spiraea japonica 'Gold Mound'



Image by Monrovia



Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Spiraea japonica* 'Gold Mound') 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

'Gold Mound' differs from its parent species *S. japonica* in leaf color and size. It has many of the same characteristics as its parent species such as flowering, being an "aggressive self-seeder", naturalized in the eastern U.S., and spreading by suckering. For these reasons, 'Gold Mound' may be equally as aggressive as a weed as its parent species. Though this evaluation reflects this cultivar as a "low risk of invasiveness" it should be evaluated further given its similarities to the invasive parent species.

General Information

Status: Completed

Screener: Lila Uzzell

Evaluation Date: November 29, 2017

Plant Information

Plant: *Spiraea japonica* 'Gold Mound'

If the plant is a cultivar, how does its behavior differs from its parent's?

'Gold Mound' is, as the cultivar name suggests, noted for its attractive golden foliage. It is cross between *S. japonica* 'Alpina' and *S. japonica* 'Goldflame' (parents originally described as *S. japonica* var. *alpina* and *S. x bumalda* 'Goldflame'). Leaves emerge golden in spring, but gradually fade to a gold-green as the summer progresses. Fall color may include interesting yellows, oranges and reds. This is a compact mounded cultivar that grows to 42" tall and to 48" wide. Small pink flowers in flattened corymbs (to 3" across) appear in late spring (Source: Missouri Botanical Gardens).

Regional Information

Region Name: Georgia



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 in an original article published at the University of California, Davis, and can be found on the PLOS One website, 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** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

'Gold Mound': " Plants can be aggressive self-seeders, and have escaped gardens and naturalized in many areas of the eastern U.S. Plants will also spread in the garden by suckering."

Reference(s):

- Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
-

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** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

'Gold Mound': "Plants can be aggressive self-seeders, and have escaped gardens and naturalized in many areas of the eastern U.S. Plants will also spread in the garden by suckering." Parent Species: *S. japonica* can be found across the eastern U.S. and is labeled as a category 2 invasive by GA-EPPC.



Reference(s):

- Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
 - United States Department of Agriculture (0). *Spiraea japonica* L. f.- Plants Database.
 - Georgia Invasive Species Task Force (2017). List of Non-native Invasive Plants in Georgia - Georgia Invasive Species Task Force.
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3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

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

Answer / Justification:

'Gold Mound' is only different from its parent species in size and leaf color. The parent species, *S. japonica* is invasive to Georgia, Tennessee, Kentucky, and South Carolina. Since 'Gold Mound' has already naturalized outside of planted areas, it is very possible that it has the ability to be as invasive as its parent species. Because 'Gold Mound' is not specifically listed as invasive, I have answered "No" to this question, but have left my confidence level as "low" since it is not listed as invasive but shares similar invasive qualities as its parent species (flowering, "aggressive self-seeder", naturalized, and spreading by suckering).

Reference(s):

- BEAULIEU, DAVID. (2017). Gold Mound Spirea- the spruce.
 - Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
 - Missouri Botanical Garden (0). *Spiraea japonica* - Plant Finder.
 - United States Department of Agriculture (0). *Spiraea japonica* L. f.- Plants Database.
 - GBIF (0). *Spiraea japonica* L. fil. GBIF.
 - Swearingen, J., & Barger C. (0). Japanese spiraea: *Spiraea japonica* (Rosales: Rosaceae): 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: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

'Gold Mound' is only different from its parent species in size and leaf color. The parent species, *S. japonica* is invasive to Georgia, Tennessee, Kentucky, and South Carolina. Since 'Gold Mound' has already naturalized outside of planted areas, it is very possible that it has the ability to be as invasive as its parent species. Because 'Gold Mound' is not specifically listed as invasive, I have answered "No" to this question, but have left my confidence level as "low" since it shares similar invasive qualities as its parent species (flowering, "aggressive self-seeder", naturalized, and spreading by suckering).

Reference(s):

- Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
 - Missouri Botanical Garden (0). *Spiraea japonica* - Plant Finder.
 - United States Department of Agriculture (0). *Spiraea japonica* L. f.- Plants Database.
 - GBIF (0). *Spiraea japonica* L. fil. GBIF.
 - Duever, L. Conway (2000). *Spiraea japonica* Plant Profile Floridata.
 - Swearingen, J., & Barger C. (0). Japanese spiraea: *Spiraea japonica* (Rosales: Rosaceae): 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** points to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

The parent species, *S. japonica* is the only known invasive to Georgia and similar climates. There are many other *Spiraea* species listed in the Global Compendium of Weeds, but none that are invasive to a similar climate.



Reference(s):

- Randall, R. Peter (2017). A Global Compendium of Weeds. Third Edition..
 - Swearingen, J., & Barger C. (0). Japanese spiraea: *Spiraea japonica* (Rosales: Rosaceae): Invasive Plant Atlas of the United States.
-

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

- Answer: **Yes**, which contributes **2** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

'Gold Mound' grows well in zones 4-8, and its parent species is found in many similar climate regions across the southeastern U.S., Europe, New Zealand, Japan, and China.

Reference(s):

- Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
 - United States Department of Agriculture (0). *Spiraea japonica* L. f.- Plants Database.
 - GBIF (0). *Spiraea japonica* L. fil. GBIF.
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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** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.



Answer / Justification:

Parent Species: "Once established, it grows rapidly and forms dense stands that out compete native vegetation."

Reference(s):

- Duever, L. Conway (2000). *Spiraea japonica* Plant Profile Floridata.
-

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

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

Answer / Justification:

Lack of evidence.

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

Answer / Justification:

Lack of information. There is no evidence given that this plant is harmful or impacts grazing.

Reference(s):

- [Anonymous] .



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

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

Lack of evidence.

Reference(s):

- [Anonymous] .
-

Reproductive Strategies (Questions 11 - 17)

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

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

Answer / Justification:

"Plants will also spread in the garden by suckering."

Reference(s):

- Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
-



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** points to the total PRE score.
- The *screeners* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

lack of information.

Reference(s):

- [Anonymous] .
-

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

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

Answer / Justification:

'Gold Mound': "Plants can be aggressive self-seeders, and have escaped gardens and naturalized in many areas of the eastern U.S. " Parent Species: "A single plant can produce hundreds of seeds that remain viable and persist in the soil for many years."

Reference(s):

- Duever, L. Conway (2000). *Spiraea japonica* Plant Profile Floridata.
 - Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
-

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

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



Answer / Justification:

Parent Species: " A single plant can produce hundreds of seeds that remain viable and persist in the soil for many years." Though this plant can produce many viable seeds, it does not produce >1000.

Reference(s):

- Duever, L. Conway (2000). *Spiraea japonica* Plant Profile Floridata.
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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 / Justification:

no information.

Reference(s):

- [Anonymous] .
-

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 / Justification:

no information.

Reference(s):

- [Anonymous] .
-



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** points to the total PRE score.
- The *screeners* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

'Gold Mound': "Tiny pink flowers in flat-topped clusters (corymbs) cover the foliage from late spring to mid-summer, with sparse and intermittent repeat bloom sometimes occurring." Repeat blooms are "sparse and intermittent", but do occur. Since this is a rare occurrence I left the confidence level "low".

Reference(s):

- Missouri Botanical Garden (0). *Spiraea japonica* 'Gold Mound' - Plant Finder.
-

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** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence of mammal/bird dispersal.

Reference(s):

- [Anonymous] .
-



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

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

Answer / Justification:

Parent species: "Typically the seeds are dispersed by water and deposited along stream banks. "

Reference(s):

- Duever, L. Conway (2000). *Spiraea japonica* Plant Profile Floridata.
-

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** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence of human dispersal.

Reference(s):

- [Anonymous] .
-

Total PRE Score

PRE Score: 11 -- Accept (low risk of invasiveness)

Confidence: 61 / 100

Questions answered: 18 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 : accept (low risk of invasiveness)

13 - 15 : evaluate further

> 15 : reject (high risk of invasiveness)

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: 2017 Farm Bill PRE Project

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:

- Shelly Matthew Prescott January 4, 2018
- Eamonn Leonard December 7, 2017

This evaluation has a total of 2 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 if additional action is required to resolve open issues.

Issue ID # 6272

Date Created: January 4, 2018 - 7:19am

Date Updated: February 21, 2018 - 10:26am

Submitted by: Shelly Matthew Prescott

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

only in higher elevations has this plant been seen in the wild

Issue Resolution (Screener's Response to Issue)

Added to evaluation notes

Issue ID # 6084

Date Created: December 7, 2017 - 1:16pm

Date Updated: January 25, 2018 - 7:14am

Submitted by: Eamonn Leonard

Status: Fixed

Type: Comment



Severity: Minor

Scope: General Information

Issue Description

It seems like this species should fit more within the "evaluate further" category if its similarity to parent *S. japonica* is accurate.

Issue Resolution (Screener's Response to Issue)

I agree, but given the way I have to fill out the evaluation, it came out with a score of 11-- it doesn't seem like I can change any answers to reflect that it needs to be evaluated further, but I've added your comment to the end of the 'General Description', and hope to find a way to properly reflect the potential invasiveness of this cultivar.



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, requesting a PRE Account.

PRE beta funding is provided by Sustainable Conservation (<http://www.suscon.org/>) and a USDA Farm Bill grant.