



*Plant Risk Evaluator -- PRETM
Evaluation Report*

***Lamium maculatum* 'Beacon Silver' -- Minnesota**

2017 Farm Bill PRE Project

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

Confidence: 71 / 100

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

Privacy: Public

Status: Submitted

Evaluation Date: August 28, 2017

This PDF was created on June 15, 2018



Plant Evaluated

Lamium maculatum 'Beacon Silver'



Image by Santa Rosa Gardens



Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Lamium maculatum* 'Beacon Silver') 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

This evaluation was conducted largely based on the parent species *Lamium maculatum*. This is due to the potential for any given cultivar to revert back to the parent type as it grows and/or hybridize with itself or neighboring varieties to produce hybrid seed, some of which is likely to very closely resemble the parent plant. *Lamium maculatum* can be aggressive in garden beds. It has escaped cultivation to a relatively small degree, but seems to be limited to disturbed sites, i.e. it may not have the capacity to compete successfully with native plants in natural areas in Minnesota. As a nettle, and a member of the mint family, it can spread aggressively via vegetative propagation. Information regarding seed viability is very limited. *Lamium maculatum* is not poisonous and is not dispersed by wind, water, or animals.

General Information

Status: Submitted

Screener: Mike Monterusso

Evaluation Date: August 28, 2017

Plant Information

Plant: *Lamium maculatum* 'Beacon Silver'

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

'Beacon Silver' is different from the parent plant only in leaf color. It may also be somewhat more compact and dense in growth compared to the parent.

Regional Information

Region Name: Minnesota



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:

The parent plant, *Lamium maculatum*, has naturalized in many states and provinces in North America.

Reference(s):

- United States Department of Agriculture (2017). Plants Profile for *Lamium maculatum* (spotted henbit).
-

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

Answer / Justification:

Lamium maculatum has naturalized in Wisconsin.

Reference(s):

- United States Department of Agriculture (2017). Plants Profile for *Lamium maculatum* (spotted henbit).



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

- 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:

Lamium maculatum was noted as being invasive in Antietam National Battlefield (Maryland).

Reference(s):

- Swearingen, J., & Barger C. (2015). spotted deadnettle: *Lamium maculatum* (Lamiales: Lamiaceae): 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 **Medium** confidence in this answer based on the available literature.

Answer / Justification:

While a few occurrences of *Lamium maculatum* have been noted worldwide (via GBIF) in a similar climate, it is difficult to determine if these occurrences are formally invasive or basic site observations. There is no evidence of *Lamium maculatum* as a listed or restricted plant.

Reference(s):

- [Anonymous] .
-



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

Answer / Justification:

Hemp nettle (*Galeopsis tetrahit*) is invasive in Wisconsin.

Reference(s):

- Wisconsin Department of Natural Resources (2010). Regulated Terrestrial Invasive Plants in WI.
-

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

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

Answer / Justification:

When comparing the climate matching tool to the GBIF species occurrences map, *Lamium maculatum* are concentrated in areas with climates different from Minnesota.

Reference(s):

- [Anonymous] .
-



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

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
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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 *screeener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

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



Answer / Justification:

No evidence found.

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 **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

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:

"Hollow trailing stems rooting as they spread to form a dense mat."



Reference(s):

- Mahr, S. (2017). Spotted deadnettle, *Lamium maculatum*.
-

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

Answer / Justification:

Stems will root into the ground where they touch

Reference(s):

- Washington State University Extension (2015). C101-Propagating-Perennials-15a.pdf.
 - United States Department of Agriculture (2017). Plants Profile for *Lamium maculatum* (spotted henbit).
-

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:

"Each fruit is comprised of four nutlets, or one-seeded sections."

Reference(s):

- Mahr, S. (2017). Spotted deadnettle, *Lamium maculatum*.
-



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

Reference(s):

- [Anonymous] .
-

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?

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

Answer / Justification:

Lamium maculatum is a fast-growing herbaceous perennial that is capable of producing seed within three years (likely less) of germination (personal observation).

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 **Medium** confidence in this answer based on the available literature.

Answer / Justification:

"Flowering heavily in May and June and sporadically thereafter, sometimes with a minor flush in early Autumn."

Reference(s):

- The Ohio State University (2017). *Lamium maculatum*.
-

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 **Medium** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.,

Reference(s):

- [Anonymous] .
-



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

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

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
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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 *screeener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
-

Total PRE Score

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

Confidence: 71 / 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:

- Tom Buechel

November 10, 2017

This evaluation has a total of 1 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.

There are currently no issues associated with this evaluation.



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.