Plant Risk Evaluator -- PRE™
Evaluation Report

Lonicera tatarica 'Honeyrose' -- Minnesota

2017 Farm Bill PRE Project

PRE Score: 16 -- Reject (high risk of invasiveness)
Confidence: 84 / 100
Questions answered: 19 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Submitted

Evaluation Date: August 17, 2017

This PDF was created on June 15, 2018

Plant Evaluated

Lonicera tataricum 'Honeyrose'

Image by Cornell Plantations

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Lonicera tataricum 'Honeyrose'*) 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

Lonicera 'Honeyrose' differs from the parent species in flower color only. Therefore, given that the reproductive behavior of 'Honeyrose' is the same as the parent, it stands to reason that any characteristic or designation of the parent plant would extend to the cultivar. L tatarica is a known invasive plant throughout North America and is noted as being particularly invasive in Wisconsin, which has a climate similar to Minnesota. Continued development, sales, and planting of this and other Lonicera cultivars may very well contribute to the overall invasive tendency of the species and genus as a whole.

General Information

Status: Submitted
Screener: Mike Monterusso
Evaluation Date: August 17, 2017

Plant Information

Plant: *Lonicera tataricum 'Honeyrose'*

If the plant is a cultivar, how does its behavior differs from its parent's?
No behavioral difference. Flowers are ruby-red with yellow anthers. Fruits are bright red.

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

Answer / Justification:

Lonicera tatarica has naturalized in numerous US states.

Reference(s):

- United States Department of Agriculture (2017). Plants Profile for Lonicera tatarica (Tatarian honeysuckle).

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

Answer / Justification:

L. tatarica has naturalized in Wisconsin, Michigan, and Minnesota.

Reference(s):

- United States Department of Agriculture (2017). Plants Profile for Lonicera tatarica (Tatarian honeysuckle).

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

Answer / Justification:

"Unfortunately, some invasive exotic honeysuckles, especially the Tatarian honeysuckle cultivars ‘Arnold Red’ and ‘Zabelii’, as well as Freedom and Honeyrose honeysuckles, are still sold due to their ornamental characteristics and form, but should be considered invasive and should not be planted."

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.

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

Answer / Justification:

L. tatarica is noted to be invasive in Wisconsin.

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.

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

Answer / Justification:

Japanese honeysuckle vine (L. japonica), is highly invasive and readily grows in native areas, especially woodlands. This honeysuckle has fragrant, white flowers that turn yellow with age, and produces black fruit. This species is very invasive in the southern Midwest and throughout the eastern U.S.

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.

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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:

Most occurrences of L. tatarica appear in Eastern Europe.

Reference(s):

- GBIF (2016). Lonicera tatarica L..

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

Answer / Justification:

"Invasive exotic honeysuckles are responsible for crowding and shading out many native trees, shrubs, groundcovers, and spring wildflowers. In addition, they may compete for pollinators, reducing fruit formation and seed set of native species."

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.

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

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .

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

Answer / Justification:

"Although information is sparse, in some cases bush honeysuckle frugivory may be harmful to birds. Casual observations indicate that Tatarian honeysuckle fruit can be toxic to birds [15], but this is not confirmed. "

Reference(s):

- Munger, G. T. (2005). Lonicera spp. In: Fire Effects Information System.

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

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

Answer / Justification:

"Invasive exotic honeysuckles can rapidly form dense shrub layers in the forest understory." "It can spread rapidly due to birds and mammals dispersing the seeds and can form an extremely dense understory thicket which can restrict native plant growth and tree seedling establishment."

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.
- The University of Georgia - Center for Invasive Species and Ecosystem Health (2017). Tatarian honeysuckle, Lonicera tatarica N/A Dipsacales: Caprifoliaceae.

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

Answer / Justification:

"they also spread vegetatively by producing suckers and sprouts at the base of the plant, especially after severe pruning. Because of this, invasive exotic honeysuckles tend to persist in an area once they have become established and can not be easily removed by cutting alone.

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.

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

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .

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

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

Answer / Justification:

"Bush honeysuckles regenerate from seeds, as well as vegetatively following disturbance."

Reference(s):

- University of Wisconsin Extension (2009). Invasive Exotic Shrub - Honeysuckles.
- Munger, G. T. (2005). Lonicera spp. In: Fire Effects Information System.

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

- 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:

"... it is apparent that some bush honeysuckles are capable of producing substantial numbers of seeds. ...Numbers of seeds/fruit, sampled from several shrubs...averaged 5 to 7, indicating that a "typical" plant may produce >20,000 seeds annually."

Reference(s):

- Munger, G. T. (2005). Lonicera spp. In: Fire Effects Information System.

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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: **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:

"Stratification (90 days at 41 to 50 ?F (5-10 ?C) prior to feeding to birds) resulted in substantial improvement in germination, regardless of whether seeds had passed through bird guts (95% for bird ingested seeds, 92% for stratified controls).

Reference(s):

- Munger, G. T. (2005). Lonicera spp. In: Fire Effects Information System.

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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:

Left blank.

Reference(s):

- [Anonymous] .

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

Answer / Justification:

"Flowers develop in pairs in the axils of the leaves in May to June... The abundant paired berries are 0.25 in. (0.6 cm) in diameter, ripen to an orange to red color and often persist throughout winter."

Reference(s):

- The University of Georgia - Center for Invasive Species and Ecosystem Health (2017). Tatarian honeysuckle, Lonicera tatarica N/A Dipsacales: Caprifoliaceae.

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

Answer / Justification:

"... bush honeysuckle seeds are dispersed primarily by frugivorous birds... White-tailed deer may also consume and disperse viable seeds of Tatarian honeysuckle, Morrow's honeysuckle, showy fly honeysuckle, and Amur honeysuckle." "Bush honeysuckle fruits are eaten at least occasionally by songbirds, and avian frugivory is thought to be an important bush honeysuckle seed dispersal mechanism."

Reference(s):

- Munger, G. T. (2005). Lonicera spp. In: Fire Effects Information System.

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

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .

Total PRE Score

PRE Score: 16 -- Reject (high risk of invasiveness)
Confidence: 84 / 100
Questions answered: 19 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:

• Laura Van Riper	November 27, 2017
• Tom Buechel	August 29, 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.

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.