Plant Risk Evaluator -- PRE™
Evaluation Report

Ligustrum japonicum 'Recurvifolium' -- Georgia

2017 Farm Bill PRE Project

PRE Score: 17 -- Reject (high risk of invasiveness)
Confidence: 68 / 100
Questions answered: 18 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Submitted

Evaluation Date: November 28, 2017

This PDF was created on August 13, 2018

Plant Evaluated

Ligustrum japonicum 'Recurvifolium'

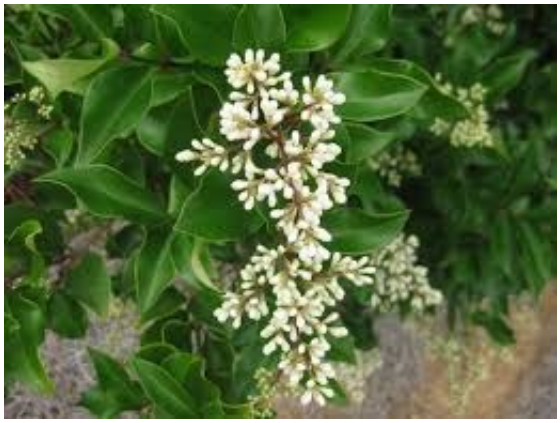

Image by keywordsuggest.com

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Ligustrum japonicum 'Recurvifolium'*) 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

Japanese privet (Ligustrum japonicum) is a highly invasive shrub in the southern United States. This cultivar 'Recurvifolium' is noted to be different in leaf shape. Many of the questions answered in this evaluation were answered based on the parent species, L. japonicum, due to lack of detailed information on the cultivar. This resulted in a high PRE score for this cultivar. Since this cultivar differs by leaf shape, it can be assumed that its reproductive strategies are the same or similar to the parent species, but there is not information provided for this.

General Information

Status: Submitted
Screener: Lila Uzzell
Evaluation Date: November 28, 2017

Plant Information

Plant: *Ligustrum japonicum 'Recurvifolium'*

If the plant is a cultivar, how does its behavior differs from its parent's?
The only noted difference in this cultivar from its parent species is that 'Recurvifolium' has wavy, recurved leaves, and may be a little bit more cold tolerant than the species.

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

Answer / Justification:

This species grows readily in zones 7-10. "This adaptable shrub will grow in almost any soil type or sun exposure and withstands heavy pruning. Use it as a specimen or in hedges, foundation plantings, screens, or containers".

Reference(s):

- Learn 2 Grow (0). LIGUSTRUM japonicum 'Recurvifolium'-Learn2Grow.
- OnlinePlantGuide.com (0). Online Plant Guide - Ligustrum japonicum 'Recurvifolium' / Wavyleaf Ligustrum.

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

Answer / Justification:

Cultivar: this plant grows well in zones 7-10 (Georgia contains zones 7-9). Parent species: L. japonicum is found in similar climate regions across the US, South America (Argentina and Uruguay), Europe (France and Austria), China, Japan, New Zealand, and southeastern Australia. It is invasive to Alabama, Georgia, Tennessee, and South Carolina.

Reference(s):

- Swearingen, J., & Bargerin C. (0). Japanese privet: Ligustrum japonicum (Scrophulariales: Oleaceae): Invasive Plant Atlas of the United States.
- Learn 2 Grow (0). LIGUSTRUM japonicum 'Recurvifolium'-Learn2Grow.
- GBIF (0). Ligustrum japonicum Thunb.- GBIF.
- NC State Extension (0). Ligustrum japonicum- NC State.

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

Answer / Justification:

Cultivar: This cultivar is not noted as being invasive itself. It tends to only be slightly different from its parent species in that it has a smaller, slightly twisted leaf shape and a higher cold tolerance. It's reproductive strategies are similar to its parent species, and therefore may have the potential to become invasive. Note that this cultivar " withstands heavy pruning". Parent species: In the US L. japonicum is invasive to Alabama, Georgia, Tennessee, and South Carolina.

Reference(s):

- Swearingen, J., & Bargerin C. (0). Japanese privet: Ligustrum japonicum (Scrophulariales: Oleaceae): Invasive Plant Atlas of the United States.
- Learn 2 Grow (0). LIGUSTRUM japonicum 'Recurvifolium'-Learn2Grow.
- NC State Extension (0). Ligustrum japonicum- NC State.
- OnlinePlantGuide.com (0). Online Plant Guide - Ligustrum japonicum 'Recurvifolium' / Wavyleaf Ligustrum.

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

Answer / Justification:

Cultivar: this plant grows well in zones 7-10 (Georgia contains zones 7-9). This cultivar is not noted as being invasive itself, but the only difference this cultivar has to its parent species is a smaller, slightly twisted leaf shape and a higher cold tolerance. Parent species: L. japonicum is found in similar climate regions across the US, South America (Argentina and Uruguay), Europe (France and Austria), China, Japan, New Zealand, and southeastern Australia. In the US it is invasive to Alabama, Georgia, Tennessee, and South Carolina.

Reference(s):

- Swearingen, J., & Bargerin C. (0). Japanese privet: Ligustrum japonicum (Scrophulariales: Oleaceae): Invasive Plant Atlas of the United States.
- Learn 2 Grow (0). LIGUSTRUM japonicum 'Recurvifolium'-Learn2Grow.
- GBIF (0). Ligustrum japonicum Thunb.- GBIF.
- NC State Extension (0). Ligustrum japonicum- NC State.

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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:

L. japonicum, the parent species to 'Recurvifolium', is a category 2 invasive in Georgia, an "Exotic plant that is a moderate problem in Georgia natural areas through invading native plant communities and displacing native species, but to a lesser degree than category 1 species." L. sinense, Chinese privet, is a category 1 invasive, an "Exotic plant that is a serious problem in Georgia natural areas by extensively invading native plant communities and displacing native species."

Reference(s):

- Georgia Invasive Species Task Force (2017). List of Non-native Invasive Plants in Georgia - Georgia Invasive Species Task Force.

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

Answer / Justification:

'Recurvifolium' grows well in zones 7-10 (some sources say zones 7-11). It's parent species, Japanese privet, grows in many climate areas similar to Georgia, and is found predominately in climates matching Georgia's region.

Reference(s):

- Swearingen, J., & Bargerin C. (0). Japanese privet: Ligustrum japonicum (Scrophulariales: Oleaceae): Invasive Plant Atlas of the United States.
- GBIF (0). Ligustrum japonicum Thunb.- GBIF.
- Woodies Garden Goods (0). Ligustrum Recurvifolium (Privet)- Garden Goods.

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

Answer / Justification:

Parent Species: "Ligustrum japonicum commonly forms dense thickets in fields or forest understories. It shades and out-competes many native species, and once established is very difficult to remove" Cultivar: "This fast growing, upright shrub has dark green, wavy, recurved leaves. Can be used in foundation plantings, as a hedge, in groups and as a container plant."

Reference(s):

- Swearingen, J., & Bargerin C. (0). Japanese privet: Ligustrum japonicum (Scrophulariales: Oleaceae): Invasive Plant Atlas of the United States.
- OnlinePlantGuide.com (0). Online Plant Guide - Ligustrum japonicum 'Recurvifolium' / Wavyleaf Ligustrum.

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

Answer / Justification:

there is no evidence of this.

Reference(s):

- Munger, G. T. (2003). Ligustrum spp. In: Fire Effects Information System.

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

Answer / Justification:

Parent species: The leaves and berries of this species may be harmful to humans, causing "Abdominal pain, nausea, vomiting, diarrhea, headache, weakness, low blood pressure, cold and clammy skin possibly lasting 48 to 72 hours" if ingested. L. japonicum is often eaten by a variety of birds, but no notes on it's impact to grazing systems could be found.

Reference(s):

- NC State Extension (0). Ligustrum japonicum- NC State.

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

Answer / Justification:

Parent species: Japanese privet produces impenetrable thickets, however it is not noted to block movement of animals. "Japanese privet escapes into natural areas in southern North America where it can form "dense, impenetrable thickets" and displace native species [31]. One example is in natural areas around Austin, Texas, where Japanese privet has invaded intermittent stream bed and mesic woodland habitats."

Reference(s):

- Munger, G. T. (2003). Ligustrum spp. In: Fire Effects Information System.

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

Answer / Justification:

Parent species: "Privets reproduce from root or stump sprouts" and L. japonicum can be propagated by cuttings. It seems as though Chinese privet is more well-known to spread by root or stump, and there is little information on vegetative spreading by Japanese privet. No information could be found on the cultivar spreading vegetatively.

Reference(s):

- Watson, E. F. Gilman (1993). Ligustrum japonicum.
- Munger, G. T. (2003). Ligustrum spp. In: Fire Effects Information System.

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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:

This does not appear to be a common method of reproduction for the cultivar or the parent species.

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

Answer / Justification:

Parent species: plants can self-seed in optimum conditions.

Reference(s):

- Missouri Botanical Garden (0). Ligustrum japonicum - Plant Finder.

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

Answer / Justification:

lack of information

Reference(s):

- [Anonymous] .

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

Answer / Justification:

Parent species: Privet may have better germination rates after seeds have been ingested by animals... and "Nearly all germination occurs during the 1st growing season following dispersal". more information may be needed to properly answer this question.

Reference(s):

- Munger, G. T. (2003). Ligustrum 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:

Lack of information.

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

Answer / Justification:

'Recurvifolium' is not a repeat bloomer. It flowers in late spring/early summer but not much is known about its fruiting. Fruiting of the parent species "lasts through winter" but this information is not enough to answer this question.

Reference(s):

- Learn 2 Grow (0). LIGUSTRUM japonicum 'Recurvifolium'-Learn2Grow.
- Missouri Botanical Garden (0). Ligustrum japonicum - Plant Finder.
- NC State Extension (0). Ligustrum japonicum- NC State.

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:

'Recurvifolium' "attracts birds", and all Ligustrum species typically disperse their seeds by birds. "Wildlife, especially birds, disperse privet seeds".

Reference(s):

- Munger, G. T. (2003). Ligustrum spp. In: Fire Effects Information System.
- Learn 2 Grow (0). LIGUSTRUM japonicum 'Recurvifolium'-Learn2Grow.

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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:

lack of evidence, Ligustrum species typically disperse their seeds by birds.

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:

Lack of evidence, Ligustrum species typically disperse their seeds by birds.

Reference(s):

- [Anonymous] .

Total PRE Score

PRE Score: 17 -- Reject (high risk of invasiveness)
Confidence: 68 / 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:

This evaluation does not have any reviewers.

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.