



***Plant Risk Evaluator -- PRETM
Evaluation Report***

Photinia x fraseri -- Texas

2017 Farm Bill PRE Project

PRE Score: 13 -- Evaluate this plant further

Confidence: 67 / 100

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

Privacy: Public

Status: Completed

Evaluation Date: September 29, 2017

This PDF was created on August 13, 2018



Plant Evaluated

Photinia x fraseri



Image by Wouter Hagens



Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Photinia x fraseri*) 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

Photinia x fraseri is a hybrid (*P. glabra* and *P. serrulata*), evergreen shrub which is commonly planted as a hedge in the South. It has naturalized in Texas, and one of its parent species, *P. serratifolia* is naturalized and invasive across the South. There is little evidence of the species dominating native plant communities, but more information is needed on the impact of *P. xfraseri* presence on native plants where it has naturalized. Since this is a non-naturally occurring hybrid, little is known on the biology of the species.

General Information

Status: Completed

Screener: Kim Taylor

Evaluation Date: September 29, 2017

Plant Information

Plant: *Photinia x fraseri*

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

This species is a hybrid cross between *P. glabra* and *P. serratifolia*.

Regional Information

Region Name: Texas



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

Answer / Justification:

Kartesz indicates *Photinia xfraseri* is naturalized in eight counties in Texas.

Reference(s):

- Kartesz, J. T. (2015). The Biota of North America Program (BONAP).
-

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:

Kartesz indicates *Photinia xfraseri* is naturalized in eight counties in Texas.

Reference(s):

- Kartesz, J. T. (2015). The Biota of North America Program (BONAP).
-



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:

The species is listed by TexasInvasives.org. Listed in the Austin Invasive Management pamphlet on Central Texas Invasive Plants.

Reference(s):

- Austin Invasive Management (2013). Central Texas Invasive Plants Volunteer Field Guide.
 - TexasInvasives.org (0). Texas Invasives *Photinia x fraseri*.
-

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

Answer / Justification:

The species is listed by TexasInvasives.org.

Reference(s):

- TexasInvasives.org (0). Texas Invasives *Photinia x fraseri*.
-

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



Answer / Justification:

Both parent species of this hybrid are listed in the Global Compendium of Weeds including *P. serratifolia* which is invasive in the Southeastern U.S., including Texas.

Reference(s):

- Global Compendium of Weeds (0). Global Compendium of Weeds: species index.
 - TexasInvasives.org (0). Texas Invasives *Photinia serratifolia*.
 - Kartesz, J. T. (2015). The Biota of North America Program (BONAP).
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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 *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Less than half of the species range has a similar climate to Texas.

Reference(s):

- GBIF (0). *Photinia xfraseri* Dress gbif.
-

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



Answer / Justification:

"Can escape into shaded woodlands and creek sides." The Austin Invasive Management volunteer field guide indicates the species "Can crowd out native plants."

Reference(s):

- TexasInvasives.org (0). Texas Invasives *Photinia x fraseri*.
-

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:

There is no evidence of this.

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

Answer / Justification:

there is no evidence of this.

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

Answer / Justification:

There is no evidence that the species forms thickets. The lack of vegetative spread supports this.

Reference(s):

- [Anonymous] .
-

Reproductive Strategies (Questions 11 - 17)

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

- 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:

The species does not spread by rhizomes.

Reference(s):

- [Anonymous] .
-



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

Answer / Justification:

There is no evidence of this.

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

Answer / Justification:

"This species is a hybrid and will not breed true from seed. "Spreads by seeds"

Reference(s):

- Austin Invasive Management (2013). Cental Texas Invasive Plants Volunteer Field Guide.
 - Plants For A Future (PFAF) (0). *Photinia x fraseri* Red Tip Photinia, Fraser Photinia PFAF Plant Database.
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14. Does this plant produce copious viable seeds each year (> 1000)?



Answer / Justification:

No information was found on number seeds produced.

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?

- 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:

"Seed - best sown in a cold frame as soon as it is ripe in the autumn. Stored seed will probably require stratification and should be sown as early in the year as possible. Germination is usually good."

Reference(s):

- Plants For A Future (PFAF) (0). *Photinia x fraseri* Red Tip Photinia, Fraser Photinia PFAF Plant Database.
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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:

no information was found on age at flowering. The species is propogated by cuttings, so it is not clear how fast seedlings grow to maturity. "they will reach a mature height of 20 feet in approximately ten years"



Reference(s):

- Corrigan, R. (0). How to Start Photinia Fraseri From Cutting - Homeguides.
 - Watson, E. F. Gilman, & G. D. (2015). *Photinia x fraseri*: Fraser Photinia.
-

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

Answer / Justification:

"Bloom Time: April to May"

Reference(s):

- Missouri Botanical Garden PlantFinder (0). *Photinia × fraseri* - 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: **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 fruit is a red pomme which is ingested by birds.



Reference(s):

- Aslan, C., & Rejmánek M. (2012). Native fruit traits may mediate dispersal competition between native and non-native plants. *NeoBiota*. 12, 1–24.
-

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

Answer / Justification:

Fruits appear to be bird dispersed.

Reference(s):

- Aslan, C., & Rejmánek M. (2012). Native fruit traits may mediate dispersal competition between native and non-native plants. *NeoBiota*. 12, 1–24.
-

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

Answer / Justification:

There is no evidence of this.

Reference(s):

- [Anonymous] .
-



Total PRE Score

PRE Score: 13 -- Evaluate this plant further

Confidence: 67 / 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:

- Charlotte Reemts November 13, 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.