



***Plant Risk Evaluator -- PRE<sup>TM</sup>  
Evaluation Report***

***Lagerstroemia indica -- Texas***

***2017 Farm Bill PRE Project***

**PRE Score:** 10 -- Accept (low risk of invasiveness)

**Confidence:** 62 / 100

**Questions answered:** 17 of 20 -- Valid (80% or more questions answered)

**Privacy:** Public

**Status:** Completed

**Evaluation Date:** September 24, 2017

*This PDF was created on August 13, 2018*



## Plant Evaluated

*Lagerstroemia indica*



Image by Atudu, Wikipedia user



## Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Lagerstroemia indica*) 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

*Lagerstroemia indica* is widely planted in the southern U.S. where it has escaped and naturalized. The species is invasive in South Africa, Belize, Cuba, Puerto Rico and the Virgin Islands. The species spreads by wind dispersed seeds. More information is needed on seed germination requirements, number of seeds produced, and age of reproductive maturity.

## General Information

**Status:** Completed

**Screener:** Kim Taylor

**Evaluation Date:** September 24, 2017

## Plant Information

**Plant:** *Lagerstroemia indica*

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

This evaluation is for the species, not a particular cultivar.

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

#### Answer / Justification:

Kartesz indicates *L. indica* is naturalized across the Southeastern and portions of the Midwestern U.S. from Maryland south to Florida, and west to Texas. It is also naturalized in Puerto Rico.

#### Reference(s):

- Kartesz, J. T. (2015). The Biota of North America Program (BONAP).
  - USDA, & NRCS (2017). The Plants Database.
- 

#### 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:

Kartesz indicates *L. indica* is naturalized across the Southeastern and portions of the Midwestern U.S. from Maryland south to Florida, and west to Texas. States within this range that share a similar climate to Texas include Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma and Texas.



**Reference(s):**

- Kartesz, J. T. (2015). The Biota of North America Program (BONAP).
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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 *screeners* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

*Lagerstroemia indica* is listed by the Global Compendium of Weeds as a "cultivation escape, environmental weed, naturalised, weed". EDD Maps does not report the species as invasive but it is listed invasive by the Mid-Atlantic Exotic Pest Plant Council and Reichard (1994). "L. indica has a very aggressive and dense root system and is listed as invasive in South Africa, Belize, Cuba, Puerto Rico and the Virgin Islands."

**Reference(s):**

- Invasive Plant Atlas of the United States (0). crapemyrtle: *Lagerstroemia indica* (Myrtales: Lythraceae): Invasive Plant Atlas of the United States.
  - CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).
  - Global Compendium of Weeds (GCW) (0). *Lagerstroemia indica* information from the Global Compendium of Weeds (GCW).
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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: **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 that *Lagerstroemia indica* is invasive in areas with a similar climate to Texas.



**Reference(s):**

- [Anonymous] .
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**5. Are other species of the same genus (or closely related genera) invasive in a similar climate?**

- 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:**

*Lagerstroemia speciosa* is listed by the Global Compendium of Weeds as a "cultivation escape, naturalised, weed" but it does not occur in a similar climate to Texas.

**Reference(s):**

- GBIF (0). *Lagerstroemia speciosa* (L.) Pers. (gbif).
  - Global Compendium of Weeds (GCW) (0). *Lagerstroemia speciosa* information from the Global Compendium of Weeds (GCW).
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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). *Lagerstroemia indica* L. (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 *screeener* has a **Medium** confidence in this answer based on the available literature.

#### Answer / Justification:

*Lagerstroemia indica* is reported as a pest or invasive in several natural systems, including natural forests, grasslands, riverbanks, and scrub/shrublands. " It has a very aggressive and dense root system with the potential to outcompete native species for water and nutrients. Many cultivars resistant to drought, fire, and cold conditions have been created, increasing the potential of this species to colonize new habitats, displacing and smothering native vegetation." "Reduced native biodiversity" and "threat to/loss of native species" due to "competition - shading" and "competition - smothering".

#### Reference(s):

- CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).
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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 **Very Low** confidence in this answer based on the available literature.

#### Answer / Justification:

No information was 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 *screeners* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

The plant is not known to be toxic.

**Reference(s):**

- Plants For A Future (PFAF) (0). *Lagerstroemia indica* Crepe Myrtle, Crepeflower PFAF Plant Database.
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**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 *screeners* has a **Low** confidence in this answer based on the available literature.

**Answer / Justification:**

there is no evidence that *Lagerstroemia indica* forms thickets.

**Reference(s):**

- [Anonymous] .
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## 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:

Plants can resprout from the roots but it does not appear to spread vegetatively.

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



**Answer / Justification:**

Seed is viable.

**Reference(s):**

- CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).
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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 / Justification:**

"sow 2m @ 39°F, move to 70°F for germ." Not enough information was found to answer this question.

**Reference(s):**

- Clothier, T. (0). Tree/Shrub Seed Germination - Quick Reference.
- 

**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.

**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: **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:**

"Bloom Time: July to September." "Fl. Jun-Sep, fr. Sep-Nov." " Flowering is frequent from June to September, although within its native distribution range flowers and fruits may be found throughout the year."

**Reference(s):**

- CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).
  - Missouri Botanical Garden PlantFinder (0). *Lagerstroemia indica* - Plant Finder.
  - efloras.org (0). *Lagerstroemia indica* in Flora of China @ efloras.org.
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**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 *screeener* has a **High** confidence in this answer based on the available literature.



**Answer / Justification:**

Seeds are wind dispersed. There is no evidence of dispersal by animals.

**Reference(s):**

- CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).
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**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 *screeener* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

Seeds are wind dispersed.

**Reference(s):**

- CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).
- 

**20. Are the plant's propagules frequently dispersed via contaminated seed (agriculture or wildflower packets), equipment, vehicles, boats or clothing/shoes?**

- 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:**

Local and long distance dispersal is attributed in part to "Debris and waste associated with human activities"

**Reference(s):**

- CABI (0). *Lagerstroemia indica* (Indian crape myrtle) (cabi).



## Total PRE Score

**PRE Score:** 10 -- Accept (low risk of invasiveness)

**Confidence:** 62 / 100

**Questions answered:** 17 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 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](mailto: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](mailto: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.