



***Plant Risk Evaluator -- PRE™  
Evaluation Report***

***Ilex cornuta 'Needlepoint' -- Georgia***

***2017 Farm Bill PRE Project***

**PRE Score:** 16 -- Reject (high risk of invasiveness)

**Confidence:** 62 / 100

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

**Privacy:** Public

**Status:** Submitted

**Evaluation Date:** November 8, 2017

*This PDF was created on August 13, 2018*



## Plant Evaluated

*Ilex cornuta* 'Needlepoint'



Image by Magnolia Gardens Nursery



## Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Ilex cornuta* 'Needlepoint') 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 cultivar is a common hedge plant in the South for its ability to withstand higher temperatures. It differs from its parental species in that its leaves are simple and have a single spine at the tip of its leaf (the parental species has rectangular-shaped leaves with three spines at the apex). *Ilex cornuta* is a category 4 on the GA-EPPC invasive species list, an "Exotic plant that is naturalized in Georgia but generally does not pose a problem in Georgia natural areas or a potentially invasive plant in need of additional information to determine its true status". There is little information on the reproductive strategies and impact to native plants/animals for the parental species.

## General Information

**Status:** Submitted

**Screener:** Lila Uzzell

**Evaluation Date:** November 8, 2017

## Plant Information

**Plant:** *Ilex cornuta* 'Needlepoint'

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

This cultivar is similar to its parent species, but differs in leaf shape. Its parent species leaf shape is rectangular with three spines at it's apex. 'Needlepoint' only has one spine at its apex.

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

#### Answer / Justification:

(Parent Species) The Global Compendium of Weeds labels *I. cornuta* as naturalized in the U.S. and GBIF shows its distribution across the southeastern U.S. It is on Georgia's EPPC list as a category 4, "Exotic plant that is naturalized in Georgia but generally does not pose a problem in Georgia natural areas or a potentially invasive plant in need of additional information to determine its true status." It is known as a naturalized species in North Carolina and Alabama.

#### Reference(s):

- Randall, R. Peter (2017). A Global Compendium of Weeds. Third Edition..
  - Georgia Invasive Species Task Force (2017). List of Non-native Invasive Plants in Georgia - Georgia Invasive Species Task Force.
  - Missouri Botanical Garden (0). *Ilex cornuta* - Plant Finder.
  - GBIF (0). *Ilex cornuta* Lindl. & Paxton.
- 

#### 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:**

(Parent Species) The majority of regions where this species is found are in the same climate as Georgia (New Zealand, Uruguay, China, SE U.S.)

**Reference(s):**

- GBIF (0). *Ilex cornuta* Lindl. & Paxton.
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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 **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

(Parent Species) The only area where *Ilex cornuta* is considered invasive is Georgia. It is listed as a category 4, an exotic species that is of least concern, or an "Exotic plant that is naturalized in Georgia but generally does not pose a problem in Georgia natural areas or a potentially invasive plant in need of additional information to determine its true status".

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



**Answer / Justification:**

(Parent Species) The only area where *Ilex cornuta* is considered invasive is Georgia. It is listed as a category 4, an exotic species that is of least concern, or an "Exotic plant that is naturalized in Georgia but generally does not pose a problem in Georgia natural areas or a potentially invasive plant in need of additional information to determine its true status".

**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: **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:**

Japanese holly (*Ilex crenata*) is also invasive to Georgia. English holly (*Ilex aquifolium*) is invasive to California, and found in the areas of California that are similar in climate to Georgia.

**Reference(s):**

- Georgia Invasive Species Task Force (2017). List of Non-native Invasive Plants in Georgia - Georgia Invasive Species Task Force.
  - Swearingen, J., & Barger C. (0). English holly: *Ilex aquifolium* (Celastrales: Aquifoliaceae): Invasive Plant Atlas of the United States.
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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 *screeners* has a **High** confidence in this answer based on the available literature.



**Answer / Justification:**

(Parent species) *Ilex cornuta* is found in similar climate regions of the Southeastern U.S., New Zealand, China, Japan, and Uruguay.

**Reference(s):**

- GBIF (0). *Ilex cornuta* Lindl. & Paxton.
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## 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 *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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### 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:**

No evidence of this.



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

**Answer / Justification:**

There is no evidence of this, but the berries attract birds. The "palatable by grazing animals" and "palatable by browsing animals" section of USDA characteristics for this plant are "low"

**Reference(s):**

- United States Department of Agriculture (2017). Conservation Plant Characteristics \ USDA PLANTS.
  - Missouri Botanical Garden (0). *Ilex cornuta* - Plant Finder.
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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 *screeener* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

There is no evidence of this, but this species description suggests that it has the potential to. Note that this plant is often used as a hedge, and "A dense rounded silhouette develops without clipping making it well suited for planting along a foundation. It is often used as a mass planting on commercial properties to form a low shrub mass..." This plant also contains spines at the tips of its leaves.



**Reference(s):**

- Fowler's Nursery and Greenhouses (2017). *Ilex cornuta* 'Needlepoint' Needlepoint Holly from Fowler's Nursery.
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## 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 **High** confidence in this answer based on the available literature.

**Answer / Justification:**

(Parent Species) This plant can be propagated by bare root and from cuttings.

**Reference(s):**

- United States Department of Agriculture (2017). Conservation Plant Characteristics \ USDA PLANTS.
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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 *screeener* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

There is no evidence of this.

**Reference(s):**

- [Anonymous] .



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

**Answer / Justification:**

Left blank.

**Reference(s):**

- [Anonymous] .
- 

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

- 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:**

(Parent species) this plant produces many berries, and produces 31,000 seeds per pound.

**Reference(s):**

- United States Department of Agriculture (2017). Conservation Plant Characteristics \ USDA PLANTS.
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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 / Justification:**

Left blank.



**Reference(s):**

- [Anonymous] .
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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: **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:**

(parent species) fruit are produced in the fall and persist through winter.

**Reference(s):**

- Missouri Botanical Garden (0). *Ilex cornuta* - Plant Finder.
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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: **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:

(Parent species) *I. cornuta* attracts birds.

#### Reference(s):

- United States Department of Agriculture (2017). Conservation Plant Characteristics \ USDA PLANTS.
  - Missouri Botanical Garden (0). *Ilex cornuta* - Plant Finder.
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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 *screeners* has a **Medium** confidence in this answer based on the available literature.

#### Answer / Justification:

No evidence of this.

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

**Answer / Justification:**

No evidence of this.

**Reference(s):**

- [Anonymous] .
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**Total PRE Score**

**PRE Score:** 16 -- Reject (high 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 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:

- Shelly Matthew Prescott January 4, 2018

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](mailto:PlantRight@suscon.org) if additional action is required to resolve open issues.

### Issue ID # 6264

**Date Created:** January 4, 2018 - 7:07am

**Date Updated:** January 25, 2018 - 1:14pm

**Submitted by:** Shelly Matthew Prescott

**Status:** Fixed

**Type:** Suggestion

**Severity:** Minor

**Scope:** Q01. Has the species (or cultivar or variety, if applicable) become naturalized where it is not native?

### Issue Description

Not aware of this plant naturalizing in native Georgia forest

### Issue Resolution (Screener's Response to Issue)

If you check the GA-EPPC source, *Ilex cornuta* is listed as a category 4. Though this is a cultivar- we treat it similarly to the parent species since it only differs in leaf shape.

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## **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.