



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

*Hypericum x inodorum 'Kolmapuki' PUMPKIN --  
Illinois*

*2017 Farm Bill PRE Project*

**PRE Score:** 14 -- Evaluate this plant further

**Confidence:** 57 / 100

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

**Privacy:** Public

**Status:** Submitted

**Evaluation Date:** September 16, 2017

*This PDF was created on June 15, 2018*



## Plant Evaluated

*Hypericum x inodorum* 'Kolmapuki' PUMPKIN



Image by Dobbie Garden Centres



## Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Hypericum x inodorum 'Kolmapuki' PUMPKIN*) 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

The attractive fruits of *Hypericum x inodorum* contain copious seeds which germinate easily, and this constitutes the primary risk of invasion in Illinois. There is no evidence of vegetative reproduction. This hybrid is not naturalized or invasive in a climate similar to Illinois and neither are its parent species, *H. androsaemum* and *H. hircinum*. Cold hardiness may be a limiting factor in Illinois. Information on dispersal and impacts are borrowed from the literature on *H. androsaemum* in Australia, where it and *H. x inodorum* are declared noxious weeds. Confidence levels are lowered for those answers, which seem somewhat speculative, but important to consider nonetheless.

## General Information

**Status:** Submitted

**Screener:** Emily Russell

**Evaluation Date:** September 16, 2017

## Plant Information

**Plant:** *Hypericum x inodorum 'Kolmapuki' PUMPKIN*

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

*Hypericum x inodorum* is a hybrid between *H. hircinum* and *H. androsaemum*. The cultivar 'Kolmapuki' is marketed as Pumpkin under the registered trademark First Editions and Magical series. From the patent application (2014): "A new and distinct cultivar of *Hypericum* plant named 'Kolmapuki', characterized by its upright and outwardly spreading plant habit; moderately vigorous growth habit; relatively small dark green-colored leaves; uniform and freely flowering habit; uniform and high density of fruits; orange-colored fruits; and resistance to *Puccinia rust*."



## Regional Information

**Region Name:** Illinois

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

#### Answer / Justification:

*Hypericum x inodorum* is naturalized in Australia, New Zealand, Chile, and the United Kingdom. *Kolmapuki* is a new cultivar, but there is no evidence of reduced fecundity or ability to naturalize.

#### Reference(s):

- Randall, R. Peter (2017). A Global Compendium of Weeds. Third Edition..
- DAISIE (2008). DAISIE European Alien Species Gateway: *Hypericum x inodorum*.
- Ugarte, E., Lira F., Fuentes N., & Klotz S. (2016). Vascular alien flora, Chile. Check List. 7, 365–382.
- Randall, RP. (2007). The introduced flora of Australia and its weed status. 524.

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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: **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:

Australia, New Zealand, Chile, and the United Kingdom are not climate matches for Illinois.



**Reference(s):**

- [Anonymous] .
- 

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

**Answer / Justification:**

*Hypericum x inodorum* is a noxious weed in Australia.

**Reference(s):**

- Randall, RP. (2007). The introduced flora of Australia and its weed status. 524.
- 

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

**Answer / Justification:**

Australia is not a climate match for Illinois.

**Reference(s):**

- [Anonymous] .
-



**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:**

*Hypericum perforatum* is invasive in the Midwest.

**Reference(s):**

- Midwest Invasive Plant Network (2015). Midwest Invasive Plant List.
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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 **Very High** confidence in this answer based on the available literature.

**Answer / Justification:**

*Hypericum x inodorum* seems to thrive and become invasive in climates warmer than Illinois.

**Reference(s):**

- [Anonymous] .
-



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

#### Answer / Justification:

For *H. androsaemum* (a parent of *H. x inodorum* with a similar habit, both are invasive in Australia): "It often form dense stands that smother the ground flora and smaller shrubs in the understorey of native bushland. It competes strongly with native species can invade undisturbed bushland. Whole hillsides may be covered to the exclusion of most other vegetation."

#### Reference(s):

- The State of Queensland Department of Agriculture and Fisheries (2016). *Hypericum androsaemum* Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition.
- 

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

#### Answer / Justification:

Evidence is lacking that *H. x inodorum* changes fire regimes.

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

**Answer / Justification:**

"Tutsan (*Hypericum androsaemum*) encroaches into overgrazed pastures in Victoria. It is also suspected of poisoning cattle in New Zealand, and of causing skin ailments in livestock."

**Reference(s):**

- The State of Queensland Department of Agriculture and Fisheries (2016). *Hypericum androsaemum* Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition.
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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 *screeners* has a **Low** confidence in this answer based on the available literature.

**Answer / Justification:**

*Hypericum androsaemum* is documented as forming dense stands that could block movement.

**Reference(s):**

- The State of Queensland Department of Agriculture and Fisheries (2016). *Hypericum androsaemum* Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition.
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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 **Low** confidence in this answer based on the available literature.

#### Answer / Justification:

Reproduces mainly by seed. Evidence is lacking for vegetative reproduction, though it is easily propagated from cuttings.

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

#### Answer / Justification:

No evidence of reproducing from fragments.

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



**Reference(s):**

- [Anonymous] .
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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 *screeener* has a **High** confidence in this answer based on the available literature.

**Answer / Justification:**

Seed quantity per fruit was not listed on the patent for 'Kolmapuki', but 12 other cultivars from this series of *H. x inodorum* developed by Kolster BV all listed more than 100 seeds per fruit on the patent (see 'Kolmred' as an example below).

**Reference(s):**

- de Jong, J. (2003). *Hypericum* plant named 'Kolmred'.
  - de Jong, J. (2014). *Hypericum* plant named 'Kolmapuki'.
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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 *screeener* has a **Medium** confidence in this answer based on the available literature.

**Answer / Justification:**

"*Hypericum inodorum* seeds will usually germinate in 30-90 days" For *Hypericum* in general:  
"Germination will probably take place before the onset of winter, or in the following early spring."



**Reference(s):**

- Gardenseeker.com (2017). *Hypericum* - St John's Wort and Rose of Sharon..
  - B & T World Seeds (0). *Hypericum inodorum* x.
- 

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

**Answer / Justification:**

For *H. androsaemum*, plants flower when they are 18 months to 2 years old.

**Reference(s):**

- Parsons, W.T., & Cuthbertson E.G.. (2001). *Noxious Weeds of Australia*.
- 

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

**Answer / Justification:**

"Plants flower continuously from mid-June to mid-August in The Netherlands."

**Reference(s):**

- de Jong, J. (2014). *Hypericum* plant named 'Kolmapuki'.
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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 *screeener* has a **Medium** confidence in this answer based on the available literature.

#### Answer / Justification:

The fruits are consumed by birds. For *H. androsaemum*: "these seeds may be dispersed by vehicles, machinery and water, but are most commonly spread by birds and other animals that eat the fruit. They may also be spread in mud, contaminated agricultural produce and dumped garden waste."

#### Reference(s):

- The State of Queensland Department of Agriculture and Fisheries (2016). *Hypericum androsaemum* Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition.
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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 **Low** confidence in this answer based on the available literature.

#### Answer / Justification:

For *H. androsaemum*: "these seeds may be dispersed by vehicles, machinery and water, but are most commonly spread by birds and other animals that eat the fruit. They may also be spread in mud, contaminated agricultural produce and dumped garden waste."

#### Reference(s):

- The State of Queensland Department of Agriculture and Fisheries (2016). *Hypericum androsaemum* Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition.



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

**Answer / Justification:**

For *H. androsaemum*: "these seeds may be dispersed by vehicles, machinery and water, but are most commonly spread by birds and other animals that eat the fruit. They may also be spread in mud, contaminated agricultural produce and dumped garden waste."

**Reference(s):**

- The State of Queensland Department of Agriculture and Fisheries (2016). *Hypericum androsaemum* Fact Sheet from Environmental Weeds of Australia for Biosecurity Queensland Edition.
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**Total PRE Score**

**PRE Score:** 14 -- Evaluate this plant further

**Confidence:** 57 / 100

**Questions answered:** 20 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:

- |                     |                    |
|---------------------|--------------------|
| • Steve Worth       | December 22, 2017  |
| • Shannon McEnerney | December 14, 2017  |
| • Richard Hawke     | October 30, 2017   |
| • John Taft         | September 26, 2017 |

This evaluation has a total of 4 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 # 6190

**Date Created:** December 21, 2017 - 12:47pm

**Date Updated:** February 19, 2018 - 7:39pm

**Submitted by:** Shannon McEnerney

**Status:** Fixed

**Type:** Comment

**Severity:** Minor

**Scope:** Evaluation Notes

### Issue Description

Hypericum Pumpkin is listed as Zone 6, and has shown to be marginally hardy in Northern IL (zone 5b).

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

Added to the evaluation summary: "cold hardiness may be a limiting factor in Illinois."

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### Issue ID # 5076

**Date Created:** September 26, 2017 - 2:06pm

**Date Updated:** December 10, 2017 - 1:34pm

**Submitted by:** John Taft

**Status:** Fixed

**Type:** Suggestion

**Severity:**



Minor

**Scope:** Evaluation as a whole

**Issue Description**

I think technically the fruits are capsules rather than berries.

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

Duly noted. I changed the word "berries" to "fruits" in two places.

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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.