Plant Risk Evaluator -- PRE™
Evaluation Report

Rosa oxyodon -- Illinois

2017 Farm Bill PRE Project

PRE Score: 8 -- Accept (low risk of invasiveness)
Confidence: 49 / 100
Questions answered: 18 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Submitted

Evaluation Date: August 2, 2017

This PDF was created on June 15, 2018

Plant Evaluated

Rosa oxyodon

Image by Eva Jorunn

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Rosa oxyodon*) 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

There is little published information on Rosa oxyodon, a species endemic to the Caucasus, resulting in very low confidence levels for this evaluation. Though other species of roses are invasive, there are no reports of this rare plant naturalizing. Risk factors include the ability to produce thorny thickets, spread vegetatively or by seed after a short juvenile period, and disperse potentially long-distance due to animals consumption of the fleshy fruits. After reviewing this evaluation, John Taft of the Illinois Natural History Survey commented: "Given the propensity of Rosa multiflora to spread and become established as a nuissance invasive species and the low confidence levels expressed in the evaluation perhaps more experimetnal evidence is warranted for this R. oxydon prior to faciliating the potential for its spread. I wonder if Rosa multiflora had been evaluated prior to its promotion as a suitable species, how would it have scored in this review?" (see issues) Further research is needed.

General Information

Status: Submitted
Screener: Emily Russell
Evaluation Date: August 2, 2017

Plant Information

Plant: *Rosa oxyodon*

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: **No**, which contributes **0** points to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

Rosa oxyodon is endemic to the Caucasus. There are not reports of it naturalizing where it is not native.

Reference(s):

- [Anonymous] .

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

Answer / Justification:

Rosa oxyodon is endemic to the Caucasus. There are not reports of it naturalizing where it is not native.

Reference(s):

- [Anonymous] .

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3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

Rosa oxyodon is not known to be invasive.

Reference(s):

- [Anonymous] .

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

Answer / Justification:

Rosa oxyodon is not known to be invasive.

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

Answer / Justification:

Rosa multiflora is invasive in Illinois.

Reference(s):

- Midwest Invasive Plant Network (2015). Midwest Invasive Plant List.
- Popay, I. (2013). Rosa multiflora (Multiflora rose).
- Randall, R. (2012). A Global Compendium of Weeds. 2nd Edition..

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

Answer / Justification:

Rosa oxyodon is endemic to the Caucasus, which shares a climate with Illinois.

Reference(s):

- The Euro+Med Plantbase Project (2006). Rosa oxyodon. In: The Euro+Med Plantbase Project.
- Bean's Trees and Shrubs (2017). Rosa pendulina L. In: Trees and Shrubs Online.

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

Answer / Justification:

There are not reports of Rosa oxyodon dominating plant communities.

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

Answer / Justification:

There are not reports of Rosa oxyodon changing 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: **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:

Rose hips can be consumed by humans and Rosa oxyodon has been cultivated for its hips. There are no reports of grazing impacts.

Reference(s):

- Hanelt, P., Research I. of Plant G., & Plant C. (2001). Mansfeld's Encyclopedia of Agricultural and Horticultural Crops: (Except Ornamentals).

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

Answer / Justification:

Roses, in general, have the ability to form thickets. Rosa oxyodon is "armed with thorns / prickles, bushy, upright, well-branched. Height of 6' 7" to 9' 10" (200 to 300 cm)." The closely related Rosa pendulina is described as "a suckering shrub" and is sometimes described as thornless, or almost.

Reference(s):

- Harkness, P. (2003). The Rose: An Illustrated History.
- Bean's Trees and Shrubs (2017). Rosa pendulina L. In: Trees and Shrubs Online.

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

Answer / Justification:

Roses, in general, can reproduce via root suckers and layering. The closely related Rosa pendulina is said to "often spread by suckering."

Reference(s):

- Harkness, P. (2003). The Rose: An Illustrated History.
- Bean's Trees and Shrubs (2017). Rosa pendulina L. In: Trees and Shrubs Online.

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

Answer / Justification:

There are not reports of Rosa oxyodon spreading via 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 *screener* has a **Medium** confidence in this answer based on the available literature.

Reference(s):

- Davudi, N. (2009). Review of the Breeding Systems of Wild Roses (Rosa spp.). Floriculture and Ornamental Biotechnology. 3(Special Issue 1),

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

Answer / Justification:

There are no estimates of the quantity of seeds produced.

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?

Reference(s):

- Plant World Seeds (2017). ROSA PENDULINA SEEDS (Mountain Rose) - Plant World Seeds.

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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: **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:

Roses, in general, produce seed within the first five years after germination.

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:

Rosa oxyodon is not a repeat-blooming rose. It blooms for several months in spring or summer.

Reference(s):

- HelpMeFind (2017). 'Rosa oxyodon Boiss.' In: HelpMeFind.

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

Answer / Justification:

Rose hips are often consumed by birds and mammals, and could be dispersed long distances.

Reference(s):

- [Anonymous] .

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

Answer / Justification:

There are not reports of long distance dispersal by wind or water.

Reference(s):

- [Anonymous] .

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

Answer / Justification:

There is no evidence of accidental dispersal by humans.

Reference(s):

- [Anonymous] .

Total PRE Score

PRE Score: 8 -- Accept (low risk of invasiveness)
Confidence: 49 / 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:

- John Taft September 28, 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.

Issue ID # 5083

Date Created: September 28, 2017 - 11:48am
Date Updated: December 10, 2017 - 12:40pm

Submitted by: John Taft

Status: Fixed
Type: Comment
Severity: Major
Scope: Evaluation as a whole

Issue Description

Given the propensity of Rosa multiflora to spread and become established as a nuissance invasive species and the low confidence levels expressed in the evaluation perhaps more experimetnal evidence is warranted for this R. oxydon prior to faciliating the potential for its spread. I wonder if Rosa multiflora had been evaluated prior to its promotion as a suitable species, how would it have scored in this review?

Issue Resolution (Screener's Response to Issue)

Added this quotation from John Taft to the Evaluation Summary.

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.