Plant Risk Evaluator -- PRE™
Evaluation Report

Caesalpinia spinosa -- California

2022 Western IPM Grant Project

PRE Score: 10 -- Low Potential Risk
Confidence: 72 / 100
Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Private
Status: Submitted

Evaluation Date: September 5, 2022

This PDF was created on June 06, 2025

This project was funded in part by the USDA National Institute of Food and Agriculture through the Western Integrated Pest Management Center, grant number 2018-70006-28881.

Plant Evaluated

Caesalpinia spinosa

Image by Zoya Akulova

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Caesalpinia spinosa*) 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

Caesalpinia spinosa (Molina) Kuntze, also commonly known as spiny holdback or Tara, is a small to medium tree in the family Fabaceae that has been utilized since ancient times for its versatile seeds. As its name suggests, this plant is armed with spines which lend to its reported usefulness as a natural barrier in agricultural systems. This plant is primarily native to xeric areas of the Andes Mountains in South America, especially in Peru. However, it has since spread to other parts of the world as an ornamental or cultivated crop, and in some locations, such as Southern California, it has escaped captivity. While cultivated Tara can produce copious amounts of seeds through many months of the year, plants in natural areas exhibit a wide degree of variability in both seed production and germination rate depending on local environmental conditions. Balaguer et al. (2011) state Tara can reproduce via root suckers, however essentially all other accounts of this species only mention reproduction via seed. Seeds possess no special morphological adaptations to aid with dispersal, and it is thought seeds are primarily dispersed via endozoochory. Where Tara has escaped, it has previously been designated only as naturalized and not invasive. Based on the results of this evaluation, Caesalpinia has a low chance of becoming invasive in California.

General Information

Status: Submitted
Screener: Scott Heacox
Evaluation Date: September 5, 2022

Plant Information

Plant: *Caesalpinia spinosa*

Regional Information

Region Name: California

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 on an article published by PLOS One, which can be found 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** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Caesalpinia spinosa is native to the Andes mountains of South America, particularly in Peru (Dostert et al. 2013, Cordero et al. 2016). It can also be found in other South American countries including Venezuela, Colombia, Ecuador, Bolivia, and northern Chile. Outside of South America, it has been introduced to northern and eastern Africa, southern Europe including Portugal, Australia, New Zealand, South Asia, the Middle East, and the United States (Escuer & Carles 2012, Dostert et al. 2013, Cordero et al 2016, GBIF 2021, Wojciechowski & McClintock 2022, USDA NRCS). Within the United States, the plant has naturalized in parts of Southern California (Escuer & Carles 2012, GBIF 2021, Calflora 2022).

Reference(s):

- Cordero, I., Jiménez M. D., Delgado J. A., Villegas L., & Balaguer L. (2016). Spatial and demographic structure of tara stands (Caesalpinia spinosa) in Peru: Influence of present and past forest management. Forest Ecology and Management. 377, 71–82.
- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,
- USDA NRCS (0). Plant Profile: Caesalpinia spinosa.
- Calflora (2022). Taxon Report: Caesalpinia spinosa.
- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,
- Escuer, C., & Carles J. (2012). TARA (Caesalpinia spinosa): the sustainable source of tannins for innovative tanning processes. TDX (Tesis Doctorals en Xarxa).

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** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

This species is noted as naturalized in California (Escuer & Carles 2012, GBIF 2021, Calflora 2022) and Portugal (Domingues de Almeida and Freitas 2006). Portugal shares a similar climate to many parts of California where the plant is present.

Reference(s):

- Escuer, C., & Carles J. (2012). TARA (Caesalpinia spinosa): the sustainable source of tannins for innovative tanning processes. TDX (Tesis Doctorals en Xarxa).
- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,
- Calflora (2022). Taxon Report: Caesalpinia spinosa.
- J de Almeida, D., & Freitas H. (2006). Exotic naturalized flora of continental Portugal – A reassessment. Botanica Complutensis. 117-130.

---

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

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

Answer / Justification:

I found no evidence that Caespalinia spinosa is invasive where it occurs outside its native range.

Reference(s):

- Dostert, N., Roque J., Brokamp G., Cano A., La Torre M. I., & Weigend M. (2009). Factsheet Botanical Data: Tara.
- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,
- Calflora (2022). Taxon Report: Caesalpinia spinosa.

---

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** point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

I found no evidence that Caespalinia spinosa is invasive where it occurs outside its native range.

Reference(s):

- [Anonymous] .

---

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

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

A handful of Caesalpinia species are described as weeds (Coetzer and Neser 1999). Erythrostemon gilliesii (previously Caesalpinia gilliesii), native to South America, has become naturalized in areas of the American Southwest (Wojciechowski and McClintock 2012, Calflora 2022), although it is not categorized as invasive. A handful of Caesalpinia species are known to be invasive, prominently among which is C. decapetala. Caesalpinia decapetala is considered invasive across various parts of the world, including parts of West Africa, South Africa, and Hawaii (Coetzer and Neser 1999, Starr et al 2003, Byrne 2011). However, C. decapetala and other members of this genus which are considered invasive are seemingly restricted to tropical or subtropical habitat, which likely will not overlap with California climate (Coetzer and Neser 1999). For instance, in South Africa, a country composed largely of areas with similar climate to California, C. decapetala is restricted to the far-eastern coast where it is presumably wetter and, according to the Climate Match model, is not similar to California.

Reference(s):

- Calflora (2022). Calflora - Caesalpinia gilliesii .
- Byrne, MJ., Witkowski ETF., & Kalibbala FN. (2011). A review of recent efforts at biological control of Caesalpinia decapetala (Roth) Alston (Fabaceae) in South Africa. African Entomology. 19, 247–257.
- Coetzer, W., & Neser S. (1999). Biological control initiatives against the invasive Oriental legume, Caesalpinia decapetala (Roth) Alston (Mauritius thorn). Biological Control of Weeds in South Africa (1990–1998). African Entomology Memoir. 1, 145–152.
- Starr, F., Starr K., & Loope L. (2003). Caesalpinia decapetala.
- Wojciechowski, MF., & McClintock E. (2012). Jepson eFlora: Taxon page for Caesalpinia gilliesii. 2022,

---

6. Is the species (or cultivar or variety) found predominately in a climate matching the region of concern?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

While this species' nonnative range (Australia, Spain, South Africa, etc.) often match the climate of parts of California, the greater part of its range appears to be in South America near its native range of Venezuela to northern Chile (Sangay-Tucto and Duponois 2018) which does not match California's climate based on the GBIF Climate Match map generated for this report. Less than 50% of this plant's occurrence outside of its native range match California's climate.

Reference(s):

- Tucto, S. Sangay -, & Duponnois R. (2018). Ecological characteristics of Tara (Caesalpinia spinosa), a multipurpose legume tree of high ecological and commercial value. Agricultural Research Updates. 189–208.

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** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

I was unable to find any evidence that this species displaces native plants where it has established. Sangay-Tucto and Duponnois (2018) note that this plant is often used in agroforestry because it is usually not a strong competitor with other plants partially due to its sparse crown which allows for adequate light penetration for crop plants growing beneath.

Reference(s):

- Tucto, S. Sangay -, & Duponnois R. (2018). Ecological characteristics of Tara (Caesalpinia spinosa), a multipurpose legume tree of high ecological and commercial value. Agricultural Research Updates. 189–208.

---

8. Is the plant noted as promoting fire and/or changing fire regimes?

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

Answer / Justification:

I was unable to find any evidence that this species changes fire regimes.

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** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

This species is armed with thorns as an adult (Escuer and Carles 2012, Cordero et al 2016, Tucto and Duponnois 2018, Wojciechowski and McClintock 2022), and therefore has the potential to cause injury to humans or other animals. However, I found no evidence that this poses a medically significant risk. I was also unable to find evidence that this species negatively affects grazing systems. In fact, grazing seems to threaten this plant in its native range, as young plants are not armed with thorns and thus at risk for herbivory during this stage (Cordero et al. 2016).

Reference(s):

- Cordero, I., Jiménez M. D., Delgado J. A., Villegas L., & Balaguer L. (2016). Spatial and demographic structure of tara stands (Caesalpinia spinosa) in Peru: Influence of present and past forest management. Forest Ecology and Management. 377, 71–82.
- Tucto, S. Sangay -, & Duponnois R. (2018). Ecological characteristics of Tara (Caesalpinia spinosa), a multipurpose legume tree of high ecological and commercial value. Agricultural Research Updates. 189–208.
- Escuer, C., & Carles J. (2012). TARA (Caesalpinia spinosa): the sustainable source of tannins for innovative tanning processes. TDX (Tesis Doctorals en Xarxa).
- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,

---

10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

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

Answer / Justification:

I was unable to find good evidence that this plant has the capacity to grow in a density that would impede human and animal movement. However, there is some mention that it may occasionally be used as a "living fence" in agricultural systems (Dostert et al. 2013, Sangay-Tucto and Duponnois 2018).

Reference(s):

- Tucto, S. Sangay -, & Duponnois R. (2018). Ecological characteristics of Tara (Caesalpinia spinosa), a multipurpose legume tree of high ecological and commercial value. Agricultural Research Updates. 189–208.

Reproductive Strategies (Questions 11 - 17)

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

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Balaguer et al. (2011) note that this species is able to resprout via root sucker. However, the New Zealand Plant Conservation Network states that the plant reproduces exclusively through seeds.

Reference(s):

- Network, N. Zealand Pl (0). Caesalpinia spinosa.
- Balaguer, L., Arroyo-Garcia R., Jiménez P., Jiménez M. Dolores, Villegas L., Cordero I., et al. (2011). Forest restoration in a fog oasis: evidence indicates need for cultural awareness in constructing the reference. PloS one. 6, e23004.

---

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** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

This species appears to reproduce primarily by seed. The New Zealand Plant Conservation Network states that this species reproduces exclusively through seeds. Most other sources only note propagation via seeds (Dostert et al. 2013, Cordero et al. 2016).

Reference(s):

- Network, N. Zealand Pl (0). Caesalpinia spinosa.
- Cordero, I., Jiménez M. D., Delgado J. A., Villegas L., & Balaguer L. (2016). Spatial and demographic structure of tara stands (Caesalpinia spinosa) in Peru: Influence of present and past forest management. Forest Ecology and Management. 377, 71–82.
- Dostert, N., Roque J., Brokamp G., & others (2013). Seven vascular plants species used in Peru: Factsheet botanical. Arnaldoa. 20, 359–432.

---

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

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Dorstet et al. (2013) note "The fresh seeds have a high germination capacity (> 90%), even without treatment."

Reference(s):

- Dostert, N., Roque J., Brokamp G., & others (2013). Seven vascular plants species used in Peru: Factsheet botanical. Arnaldoa. 20, 359–432.

---

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

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

This plant produces approximately 3000 to 4500 seeds per kilogram of fruit, and an average yield is between 20-40kg of fruit two times per year (De la Cruz Lapa 2004, Dorstet et al. 2013, Tucto-Sangay and Duponnois 2018). Thus, this plant has the potential to produce upwards of 120000 seeds per year under favorable conditions. However, it is noted that this plant's yield varies considerably depending on location and growing conditions, with some wild and isolated plants producing approximately 10kg yield per harvest (De la Cruz Lapa 2004).

Reference(s):

- Tucto, S. Sangay -, & Duponnois R. (2018). Ecological characteristics of Tara (Caesalpinia spinosa), a multipurpose legume tree of high ecological and commercial value. Agricultural Research Updates. 189–208.
- Dostert, N., Roque J., Brokamp G., & others (2013). Seven vascular plants species used in Peru: Factsheet botanical. Arnaldoa. 20, 359–432.
- P Lapa, D. la Cruz (2004). Aprovechamiento integral y racional de la tara Caesalpinia spinosa - Caesalpinia tinctoria. Revista del Instituto de investigación de la Facultad de minas, metalurgia y ciencias geográficas. 7, 64–73.

---

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** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Dostert et al. (2013) note that fresh seeds from this species can have a germination rate greater than 90%, even without pretreatment. However, this is likely an observation based on nursery seedlings, and not natural recruitment. Varying levels of recruitment are noted in the wild due to factors such as deforestation, pressure from cattle grazing, and potential introduction into unique habitats via human dispersal (Balaguer et al. 2011, Cordero et al. 2016, Cordero et al. 2017) which likely alter recruitment rates. I was unable to find a reliable estimate of natural seedling germination rate, however it appears clear that this plant has the potential for significant germination rates and there are no notable barriers or requirements for successful germination.

Reference(s):

- Balaguer, L., Arroyo-Garcia R., Jiménez P., Jiménez M. Dolores, Villegas L., Cordero I., et al. (2011). Forest restoration in a fog oasis: evidence indicates need for cultural awareness in constructing the reference. PloS one. 6, e23004.
- Dostert, N., Roque J., Brokamp G., & others (2013). Seven vascular plants species used in Peru: Factsheet botanical. Arnaldoa. 20, 359–432.
- Cordero, I., Jiménez M. D., Delgado J. A., Villegas L., & Balaguer L. (2016). Spatial and demographic structure of tara stands (Caesalpinia spinosa) in Peru: Influence of present and past forest management. Forest Ecology and Management. 377, 71–82.

---

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** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

There seems to be conflicting information on time to fruit. De la Cruz Lapa (2004) and Dostert et al. (2009) state that fruit production begins at approximately six years of age. However, Sangay-Tucto and Duponnois (2018) report that harvest typically happens no earlier than 4 years in natural systems, with some plants harvested after two years. Regardless, the plant appears to have the ability to produce viable seed around five years after germination.

Reference(s):

- Tucto, S. Sangay -, & Duponnois R. (2018). Ecological characteristics of Tara (Caesalpinia spinosa), a multipurpose legume tree of high ecological and commercial value. Agricultural Research Updates. 189–208.
- Dostert, N., Roque J., Brokamp G., Cano A., La Torre M. I., & Weigend M. (2009). Factsheet Botanical Data: Tara.
- P Lapa, D. la Cruz (2004). Aprovechamiento integral y racional de la tara Caesalpinia spinosa - Caesalpinia tinctoria. Revista del Instituto de investigación de la Facultad de minas, metalurgia y ciencias geográficas. 7, 64–73.

---

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** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Seed production timing varies by location, but it appears to usually last at least a few months, and harvests can occasionally occur twice per year. This plant also has the potential to produce year-round under cultivated and ornamental conditions (De la Cruz Lapa 2004)

Reference(s):

- P Lapa, D. la Cruz (2004). Aprovechamiento integral y racional de la tara Caesalpinia spinosa - Caesalpinia tinctoria. Revista del Instituto de investigación de la Facultad de minas, metalurgia y ciencias geográficas. 7, 64–73.

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** point(s) to the total PRE score.
- The *screener* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

This plant is primarily dispersed by animals via ingestion of seeds. It has been observed that domesticated animals such as cows and goats can effectively disperse this plant's seeds long-distance, presumably greater than 100m.

Reference(s):

- Cordero, I., Jiménez M. D., Delgado J. A., Villegas L., & Balaguer L. (2016). Spatial and demographic structure of tara stands (Caesalpinia spinosa) in Peru: Influence of present and past forest management. Forest Ecology and Management. 377, 71–82.

19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

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

Answer / Justification:

I found no evidence that this plant disperses via 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** point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

I found no evidence that this plant is dispersed via contaminated seed, equipment, vehicles, boats, or clothing/shoes.

Reference(s):

- [Anonymous] .

Evaluation Notes

Question 11: I only found one source (Balaguer et al. 2011) that stated this plant can reproduce vegetatively. Most other sources only discuss propagation via seeds, however they don't specify whether other methods are possible. I found conflicting information on the New Zealand Plant Conservation Network that states this plant only reproduces via seed.

Question 16: Information on age of first fruit is vague. This is a plant mostly known for the commercial value of its seeds, so much of the information on time to fruit is likely based on optimal growing conditions provided in nursery and agricultural systems. The best information I could find on time to fruit in wild systems is from De la Cruz Lapa (2004), who states the plants generally take around 6 years until first fruit, but this can be lowered with optimized growing conditions.

Total PRE Score

PRE Score: 10 -- Low Potential Risk
Confidence: 72 / 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 : Low Potential Risk
13 - 15 : Moderate Potential Risk
> 15 : High Potential Risk

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: 2022 Western IPM Grant Project
Content Privacy: Private

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:

• Jutta Burger	November 12, 2022
• Lynn Sweet	November 10, 2022

This evaluation has a total of 2 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 info@plantright.org if additional action is required to resolve open issues.

Issue ID # 8360

Date Created: November 12, 2022 - 7:23pm
Date Updated: November 27, 2022 - 5:18pm

Submitted by: Jutta Burger

Status: Fixed
Type: Comment
Severity: Minor
Scope: Regional Information

Issue Description

Use the "Share Link" button on the Climate Match tool to also share the weblink to the Climate Match map in your
Evaluation. https://weedmap.cal-ipc.org/climatematch/?areaType=states&areaList=06&mapView=2%2C-93.50000%2C37.99508&datalayer=PRE+Combined&datalayeropacity=60&gbif_taxonkey=5354727&gbif_search=Caesalpinia+spinosa

-Jutta Burger

Issue Resolution (Screener's Response to Issue) Added link to Climate Match model to the evaluation.

Issue ID # 8359

Date Created: November 12, 2022 - 7:18pm
Date Updated: November 27, 2022 - 5:18pm

Submitted by: Jutta Burger

Status: Fixed
Type: Comment
Severity: Minor
Scope: Evaluation Notes

Issue Description

Nice use of the Evaluation Notes section! - Jutta Burger

Issue Resolution (Screener's Response to Issue) Thank you! Glad it was helpful.

Issue ID # 8358

Date Created: November 12, 2022 - 7:16pm
Date Updated: November 27, 2022 - 5:17pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?

Issue Description

If you provide a confidence, make sure that you provide an answer (either yes or no), since confidence is otherwise not related to anything. Choose whichever (yes or no) you feel is most likely. The score will end up being the same. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Changed answer to "yes" with "medium" confidence. Clarified in the answer that while the cited time to production of viable fruit is not neatly shown to be less than or greater than five years, it falls close and therefore the answer should be "yes".

Issue ID # 8357

Date Created: November 12, 2022 - 7:03pm
Date Updated: November 27, 2022 - 4:47pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q15. 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?

Issue Description

Based on the evidence you provide (Dorstet et al., 2013), this answer can be "yes" with at least a "medium" confidence. The question refers to potential germination, not actual. - Jutta Burger

Issue Resolution (Screener's Response to Issue) Changed answer to "yes" with "medium" confidence. I added to the answer to clarify that the plant has a potential for a high germination rate.

Issue ID # 8356

Date Created: November 12, 2022 - 5:48pm
Date Updated: November 27, 2022 - 4:45pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q09. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

Issue Description

The mere presence of thorns on a plant is not enough to warrant a "yes" for this question. It would need to

be documented to be seriously injuring humans or wildlife / ag. animals. The note about grazing actually impacting Tara also suggests that the answer should rather be "no". - Jutta Burger

Issue Resolution (Screener's Response to Issue)

I changed the answer to this question to a "no". I also added an explanation that, while this plant does indeed have sharp thorns, I could not find any information suggesting that it causes a significant medical risk.

Issue ID # 8355

Date Created: November 12, 2022 - 5:43pm
Date Updated: November 27, 2022 - 5:03pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q06. Is the species found predominately in a climate matching the region of concern?

Issue Description

Adding to Lynn's suggestion regarding this question: be clear about how overlap was deduced and that it was deduced in a manner consistent with PRE instructions for this questions. If the answer is no (which it certainly seems to be based on the map) then state that more than half of its worldwide distribution does not match that of California's climate based on Climate Match tool results. Confidence for this can also be higher since you have data that you are basing this answer on (so, medium seems reasonable rather than very low). - Jutta Burger

Issue Resolution (Screener's Response to Issue) Added a clarification to the answer indicating that less than 50% of the plant's non-native range is in a climate similar to California. Changed confidence to "medium".

Issue ID # 8354

Date Created: November 12, 2022 - 5:35pm
Date Updated: November 27, 2022 - 4:51pm

Submitted by: Jutta Burger

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q03. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

Issue Description

For completeness, consider adding at least a sampling of the references that you checked in the references section both here and in Question 4. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Added three references that discuss the plants worldwide range (but do not mention invasiveness).

Issue ID # 8352

Date Created: November 10, 2022 - 9:30pm
Date Updated: November 27, 2022 - 5:17pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q18. Are the plant’s propagules dispersed long distance (>100 m) by mammals or birds or via domestic animals?

Issue Description

Remember to spell out that these animals can move the seed the required distance in the question. It may seem redundant (since you listed familiar animals) but to be sure, address all aspects of the question in your answer. -Lynn Sweet

Issue Resolution (Screener's Response to Issue)

Clarified in the answer that it is assumed that these animals can move seeds over distances greater than 100m.

Issue ID # 8351

Date Created: November 10, 2022 - 9:29pm
Date Updated: November 27, 2022 - 4:50pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?

Issue Description

Evidence given should be sufficient for a yes with low confidence due to the disagreement. Still, they are within a couple years, some being well within the defined period for a yes, which is within the spirit of the question. -Lynn Sweet

Issue Resolution (Screener's Response to Issue) Changed answer to "yes" with "low" confidence. Clarified in the answer that the plant has the potential to produce viable seeds roughly around 5 years post-germination (give or take a few years).

Issue ID # 8350

Date Created: November 10, 2022 - 9:27pm
Date Updated: November 27, 2022 - 5:12pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q15. 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?

Issue Description

Just a note, similar to what i said to a different evaluator with the same evidence, I believe the question is getting at whether there are significant barriers to germination such as unusual or infrequent conditions required (fire, long dormancy, generally low germination rate). Usually if those were necessary they would be mentioned in e.g. agricultural or nursery guidance. To me, with this evidence I would give it a yes with low or medium confidence. It's a bit of a judgment call. -Lynn Sweet

Issue Resolution (Screener's Response to Issue)

Changed answer to "yes" with "medium" confidence. Added a statement that explains the plant has the potential for significant germination rates and it does not appear to have any serious barriers to germination.

Issue ID # 8349

Date Created: November 10, 2022 - 9:20pm
Date Updated: November 27, 2022 - 5:09pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q07. Does this plant displace native plants and dominate the plant community in areas where it has been established?

Issue Description

There is negative evidence presented from a peer reviewed publication. I think you can increase confidence. If you still feel it's not solid enough, downrade it but I would think at last Medium is appropriate here. -Lynn Sweet

Issue Resolution (Screener's Response to Issue)

Changed confidence to "medium".

Issue ID # 8348

Date Created: November 10, 2022 - 9:18pm
Date Updated: November 27, 2022 - 5:09pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q06. Is the species found predominately in a climate matching the region of concern?

Issue Description

Take care that your use of the term "density" doesn't conflate on the ground plant density with density of observations. Neither are exactly what hte question is getting at, however. It's really getting at the overall extend of where it occurs in the world (native and nonnative) and whether that more matches or doesn't match the region of interest. Nothing exactly wrong here, just make it as plain as possible to reviewers. -Lynn Sweet

Issue Resolution (Screener's Response to Issue) I removed the word "density" and instead referred to the area of the plant's range, to avoid confusion.

Issue ID # 8347

Date Created: November 10, 2022 - 9:15pm
Date Updated: November 27, 2022 - 4:56pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q05. Are other species of the same genus invasive in a similar climate?

Issue Description

Just to be sure- the South Africa range of C. decapetala is not similar to the area of interest? I just wanted to be sure. Sounds like it is a different type of climate based on your description - Lynn Sweet

Issue Resolution (Screener's Response to Issue) Good point, considering much of South Africa is a similar climate to California -- based on the distribution map found in Coetzer and Neser(1999), Caesalpinia decapetala only occurs in the far-eastern margins of South Africa, which appears to be a region dissimilar to California based on the Climate Match model (presumably much wetter). As such, I did not change the answer, but I clarified this distinction in the answer.

About PRE and this Plant Evaluation Report

The Plant Risk Evaluator (PRE) is an online database and platform designed to assess the risk of a plant becoming invasive in a given region.This tool offers many benefits, and we encourage you to visit the PRE website (https://pretool.org) for more information.

If you would like to learn more about PRE, please email us at info@plantright.org, requesting a PRE Account.

PRE beta funding was provided by Sustainable Conservation (https://www.suscon.org/) and a USDA Farm Bill grant. Additional funding has been provided by the Western Integrated Pest Management Center.