Plant Risk Evaluator -- PRE™
Evaluation Report

Caesalpinia spinosa -- California

2022 Western IPM Grant Project

PRE Score: 11 -- Low Potential Risk
Confidence: 75 / 100
Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Completed

Evaluation Date: October 10, 2022

This PDF was created on May 23, 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: Completed
Screener: Melanie Davis
Evaluation Date: October 10, 2022

Plant Information

Plant: *Caesalpinia spinosa*

If the plant is a cultivar, how does its behavior differs from its parent's?
This plant is not a cultivar.

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, and is distributed in arid zones of the Peruvian coast and shrubby habitats in the Andes up to 3000m (De la Cruz Lapa 2004) and was introduced for horticulture and landscaping and has become naturalized in southern coastal regions of California and can be found outside its range in northern and eastern Africa, southern Europe including Portugal, Australia, New Zealand, South Asia, the Middle East, and the United States at lower densities (Wojciechowski & McClintock 2012, GBIF 2022, USDA 2022).

Reference(s):

- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,
- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,
- USDA NRCS (0). Plant Profile: Caesalpinia spinosa.

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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: **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:

Although only a small portion of the C. spinosa native range is similar in climate to California, the range within Argentina, most of the regions that this species has become naturalized are more similar to California, such as Portugal (De la Cruz Lapa 2004, de Almeida 2006, GBIF 2022)

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.
- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,
- J de Almeida, D., & Freitas H. (2006). Exotic naturalized flora of continental Portugal – A reassessment. Botanica Complutensis. 117-130.

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

Answer / Justification:

I could not find information on it being invasive, however it's highest rate of occupancy outside of its native range is California, where it is considered naturalized, meaning that it is not invasive where the occupancy outside of it's native range is highest (Wojciechowski & McClintock 2012, GBIF 2022, USDA 2022).

Reference(s):

- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,
- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,
- USDA NRCS (0). Plant Profile: Caesalpinia spinosa.

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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** 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. (Wojciechowski & McClintock 2012, GBIF 2022, USDA 2022).

Reference(s):

- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,
- Wojciechowski, MF., & McClintock E. (2012). Jepson eFlora: Taxon page for Caesalpinia gilliesii. 2022,
- USDA NRCS (0). Plant Profile: Caesalpinia spinosa.

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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 **1** point(s) to the total PRE score.
- The *screener* has a **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):

- Wojciechowski, MF., & McClintock E. (2012). Jepson eFlora: Taxon page for Caesalpinia gilliesii. 2022,
- 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.
- 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.
- Starr, F., Starr K., & Loope L. (2003). Caesalpinia decapetala.
- Calflora (2022). Taxon Report: Caesalpinia spinosa.

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

Answer / Justification:

Caesalpinia spinosa is found predominately within its native range, which, for the most part, differs in climate from the region of concern. Only a small portion of the C. spinosa native range in Argentina is similar in climate to California, most of the regions that this species has become naturalized are more similar to California (de Almeida 2006, Wojciechowski & McClintock 2012, GBIF 2022). Areas that Caesalpinia spinosa are found include South Africa*, Eastern Spain*, North Africa*, Southeastern Australia*, Madagascar, New Zealand, Eastern South America, and it's native range of Argentina*, Peru, Ecuador, and Colombia. Regions with and '*' indicate a similar habitat to California. Although most of the regions that Caesalpinia spinosa is found and non-native are similar to California, it occurs in pretty low density worldwide, with the greatest density in its native range and unlike the climate of California.

Reference(s):

- J de Almeida, D., & Freitas H. (2006). Exotic naturalized flora of continental Portugal – A reassessment. Botanica Complutensis. 117-130.
- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,
- GBIF (2021). Caesalpinia spinosa (Molina) Kuntze in GBIF Secretariat. 2022,

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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** 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 empirical information on this. Caesalpinia spinosa crowns can reach up to 6 meters in width, however the crown is sparse and the species is commonly used in agriculture because it exerts very little competition with other agricultural crops and the sparse crown cover allows other crop plants to germinate (Tucto & Duponnois 2018). While C. spinosa can occur in small forests, it generally is more often found as isolated individuals (Escuer 2012).

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.
- Escuer, C., & Carles J. (2012). TARA (Caesalpinia spinosa): the sustainable source of tannins for innovative tanning processes. TDX (Tesis Doctorals en Xarxa).

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

Answer / Justification:

Caesalpinia spinosa has thorns (Wojciechowski & McClintock 2012, Tucto & Duponnois 2018) however they are not extremely long nor appear capable of causing serious harm. Young trees do not have spines and grazing reduces density of C. spinosa forests, showing the opposite, that grazing systems impact native stands of this species (Cordero et al 2016). Although there is some speculation on whether the high tannin content of Caesalpinia spinosa may be lethal if the pods are consumed in large quantities (Orwa et al 2009), I was unable to find further data to support this.

Reference(s):

- C, O., A M., R K., R J., & A S. (2009). Agroforestree Database:a tree reference and selection guide version 4.0 .
- 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.
- Wojciechowski, MF., & McClintock E. (2012). Jepson eFlora: Taxon page for Caesalpinia gilliesii. 2022,
- 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.

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

Answer / Justification:

While Caesalpinia spinosa can grow in small forests and individuals can grow up to 15 meters (Wojciechowski & McClintock 2012, Escuer 2012, Tucto & Duponnois 2018), and C. spinosa has been grown as a 'live fence' for agricultural reasons (seperating areas, yield fruit, and encouraging bees), it does not appear that this species will naturally create impenetrable thickets (Cordero et al 2016, Tucto & Duponnois 2018)

Reference(s):

- Dostert, N., Roque J., Brokamp G., & others (2013). Seven vascular plants species used in Peru: Factsheet botanical. Arnaldoa. 20, 359–432.
- Wojciechowski, M. F., & McClintock E. (0). Caesalpinia spinosa. Jepson eFlora. 2022,
- 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.
- 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.

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:

This species can re-sprout from damaged portion of the tree or from root suckers (Balagur 2011), although the primary recognized reproduction strategy is by seed (Dorstert 2013).

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.

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

Answer / Justification:

The only means of asexual reproduction I was able to find on Caesalpinia spinosa are from regrowth from damaged parts of the plant and root suckers (Balagur 2011). The primary method of reproduction is by seed and it is not documented that this species can reproduce new plants via detached fragments (Dostert 2013, Tucto & 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.
- 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.

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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:

Fresh seeds with no treatment and older seeds that have been scarified have a >90% germination rate in a controlled setting (Dorstert 2013).

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:

In agriculture, trees can produce an average of 20-40kg of pods twice per year, the number of seeds per kg fluctuates between 3000-4500 (De la Cruz Lapa 2004, Tucto & Duponnois 2018). Although agricultural trees are pruned to encourage higher seed pod production (Tucto & Duponnois 2018), seed yield is still extremely high, with trees producing at least 120,000 seeds twice a year.

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.
- 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:

Conditions for recruitment are particular based on environmental conditions (Balaguer 2011, Tucto & Duponnois 2018), but I was unable to find any information on actual germination rates without altered environmental conditions and Dostert (2019) reports extremely high germination rates, however these numbers are from seeds grown for agriculture in a controlled setting.

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.
- 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.

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

Answer / Justification:

Trees begin to reproduce after 4-5 years (Escuer 2012), in some agricultural settings it is possible to harvest in the third year and in natural states harvest is possible at the fourth year (Tucto & 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.
- Escuer, C., & Carles J. (2012). TARA (Caesalpinia spinosa): the sustainable source of tannins for innovative tanning processes. TDX (Tesis Doctorals en Xarxa).

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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** 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 has a bloom period of 4 months, May through August (Calflora 2022) and trees yield enough pods for two harvests per year, although some wild populations may not reliable have two harvests per year, while agricultural plants will likely be receiving optimal growing conditions and will produce more (Tucto & 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.
- Calflora (2022). Taxon Report: Caesalpinia spinosa.

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

Answer / Justification:

Distribution of Caesalpinia spinosa trees and high germination after scarification confirm large herbivore based dispersal (Dostert 2013, Balaguer 2011, Cordero 2016), and domestic herbivores (cows and goats) have been proven to be effective dispersal mechanisms for C. spinosa >100m (Cordero 2016).

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.

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:

The size of the seeds eliminate wind dispersal (Wojciechowski & McClintock 2012), and New Zealand Plant Conservation Network lists that dispersal is likely by water, but this source does not have any citations and does not give evidence. This source is likely also just referring to dispersal within New Zealand. Dispersal by water cannot be confirmed by any other sources.

Reference(s):

- Network, N. Zealand Pl (0). Caesalpinia spinosa.
- Wojciechowski, MF., & McClintock E. (2012). Jepson eFlora: Taxon page for Caesalpinia gilliesii. 2022,

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 could not find any information on accidental dispersal or dispersal through contaminated seed.

Reference(s):

- [Anonymous] .

Total PRE Score

PRE Score: 11 -- Low Potential Risk
Confidence: 75 / 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: 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:

• Ron Vanderhoff	February 26, 2023
• Tom Reyes	February 20, 2023
• Elizabeth D. Brusati	February 10, 2023
• Nicole Valentine	January 5, 2023
• Jutta Burger	November 13, 2022
• Lynn Sweet	November 7, 2022

This evaluation has a total of 6 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 # 8910

Date Created: February 26, 2023 - 9:27am
Date Updated: March 3, 2023 - 8:05am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q08. Is the plant noted as promoting fire and/or changing fire regimes?

Issue Description

I don't believe an absence of information would warrant a score. Perhaps this should be left unanswered. - Ron

Note: This particular question should not be left blank (only "yes" or "no" is allowed). Refer to "Help" for guidance. - Jutta

As Jutta noted, the question cannot be left blank, confidence for a No answer is Low.-Melanie

Issue Resolution (Screener's Response to Issue) As Jutta noted, the question cannot be left blank, confidence for a No answer is Low.-Melanie

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Issue ID # 8698

Date Created: January 3, 2023 - 3:56pm
Date Updated: February 22, 2023 - 4:38pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: General Information

Issue Description

Evaluation Summary: A minor point that is more operational-- I would eliminate the last sentence explaining the score, "...Caesalpinia has a low chance of becoming invasive in California." I completely understand why a normal summary would include the conclusion (synthesis of results), but in this case, the plants overall score could change based on reviews and comments, so it's best to leave this out of the summary just in case the score changes so that the evaluator doesn't have to rewrite it. Focus on the other items as you did, summarizing the information you found without tallying the score, - Lynn Sweet

-- Because several other evaluators have included scores in their summaries, I would propose that the evaluator can keep the summary as it stands for now. - Jutta Burger

Issue Resolution
No resolution has been entered for this issue.

Issue ID # 8559

Date Created: December 15, 2022 - 6:40pm
Date Updated: December 16, 2022 - 8:10pm

Submitted by: Scott Heacox

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q17. Does this plant continuously produce seed for >3 months each year or does seed production occur more than once a year?

Issue Description

It might be nice to add a disclaimer that production is influenced by growing conditions. Some wild populations may not have two harvests per year, while agricultural plants will likely be receiving optimal growing conditions and will produce more, maybe even year-round.

Issue Resolution (Screener's Response to Issue) used suggestion for disclaimer - melanie

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Issue ID # 8558

Date Created: December 15, 2022 - 6:33pm
Date Updated: December 16, 2022 - 8:09pm

Submitted by: Scott Heacox

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

What "particular" conditions for recruitment are you referring to? Change "higher" to "high" and maybe add "however" in front of "these numbers are from seeds grown for..."

Issue Resolution (Screener's Response to Issue) clarified and fixed

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Issue ID # 8557

Date Created: December 15, 2022 - 6:31pm
Date Updated: December 16, 2022 - 8:06pm

Submitted by: Scott Heacox

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q13. Does the species (or cultivar or variety) commonly produce viable seed?

Issue Description

The first sentence could be interpreted to imply both fresh and old seeds require scarification to achieve >90% germination. Dorstert actually stated that fresh seeds do not require treatment to reach this germination rate. So maybe revise to "Fresh seeds with no treatment and older seeds that have been scarified have a >90%..."

Issue Resolution (Screener's Response to Issue)

fixed - Melanie

Issue ID # 8556

Date Created: December 15, 2022 - 6:27pm
Date Updated: December 16, 2022 - 8:05pm

Submitted by: Scott Heacox

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

Issue Description

By "damaged trees of the plant" do you mean "regrowth from damaged parts of the plant"?

Issue Resolution (Screener's Response to Issue) clarified - Melanie

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Issue ID # 8555

Date Created: December 15, 2022 - 6:23pm
Date Updated: December 16, 2022 - 8:04pm

Submitted by: Scott Heacox

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

Issue Description

What does "dangerous appearing" mean? Maybe revise or elaborate for clarity. In the second sentence, place the citation inside the ending punctuation.

Issue Resolution (Screener's Response to Issue) fixed and clarified - Melanie

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Issue ID # 8554

Date Created: December 15, 2022 - 6:02pm
Date Updated: December 16, 2022 - 8:02pm

Submitted by: Scott Heacox

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

Issue Description

The answer you have here seems to be the same answer I used in my evaluation, yet I answered "No" while you answer "Yes" here. If using my answer only, it was intended to imply that C. decapetala pretty much only occurs in tropical habitats, so it would not overlap with the climate of California.

Issue Resolution (Screener's Response to Issue) I changed my answer to reflect yours - Melanie

Issue ID # 8553

Date Created: December 15, 2022 - 5:56pm
Date Updated: December 16, 2022 - 7:59pm

Submitted by: Scott Heacox

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

Issue Description

This question asks only about invasiveness of the plant, so discussing it's occupancy in areas where it is naturalized and not known to be invasive does not seem relevant here.

Issue Resolution (Screener's Response to Issue) This is relevant because it means that where occupancy is highest outside of the native range it is not considered invasive, merely naturalized. I clarified this in my answer. - Melanie

Issue ID # 8552

Date Created: December 15, 2022 - 5:47pm
Date Updated: December 16, 2022 - 8:14pm

Submitted by: Scott Heacox

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q02. Is the species (or cultivar or variety) noted as being naturalized elsewhere in the US or world in a similar climate?

Issue Description

I think I got a bit confused reading the first sentence. At first I interpreted it as "of the native range in Argentina, only a small amount is similar to the climate of California". I think it is supposed to mean "of the plant's native range, only a small portion, in Argentina, is of a similar climate to California Perhaps revise for clarity. It would be helpful to add the significance of naturalization in Portugal (it shares a similar climate to California). Maybe "most of the regions that this species has become naturalized are more similar to California, such as Portugal". Also, the listed citations are not all referenced in the answer.

Issue Resolution (Screener's Response to Issue) clarified as per suggestion - melanie

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Issue ID # 8368

Date Created: November 13, 2022 - 7:47am
Date Updated: November 21, 2022 - 7:07pm

Submitted by: Jutta Burger

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

Issue Description

Very minor comment here about naming your climate match file. We don't really have a naming convention but do want species and region to be included (and not evaluator). Try using something like ClimateMatch_CAESPI_CA.. - Jutta Burger

Issue Resolution (Screener's Response to Issue) Changed! Thanks - Melanie

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Issue ID # 8366

Date Created: November 13, 2022 - 7:38am
Date Updated: November 21, 2022 - 7:08pm

Submitted by: Jutta Burger

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

Issue Description

Very minor comment here about naming your climate match file. We don't really have a naming convention but do want species and region to be included (and not evaluator). Try using something like ClimateMatch_CAESPI_CA.. - Jutta Burger

Issue Resolution (Screener's Response to Issue) changed! -Melanie

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Issue ID # 8365

Date Created: November 13, 2022 - 7:22am
Date Updated: November 21, 2022 - 6:27pm

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

Because there is good evidence for lack of extensive dormancy / no requirement for scarification and high viability, consider changing this answer to "yes" with a minimum of "medium" confidence (or provide a more thorough explanation for a "no"). Lack of evidence in a more natural setting might be due to external factors such as herbivory etc. - Jutta Burger

Issue Resolution (Screener's Response to Issue) I agree with this and changed my answer to Yes with

Medium conf. While there isn't a ton of research on germination in natural settings, the seeds to appear to have very high and fast germination rates. -Melanie

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Issue ID # 8364

Date Created: November 13, 2022 - 7:13am
Date Updated: November 21, 2022 - 7:01pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q13. Does the species (or cultivar or variety) commonly produce viable seed?

Issue Description

The confidence for this question should be increased from "high" to "very high". Many references refer to its seed production and several refer to its mode of reproduction and you've provided evidence that vegetative reproduction is not its means of propagation out in nature. - Jutta Burger

Issue Resolution (Screener's Response to Issue) Agreed, changed to very high -Melanie

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Issue ID # 8363

Date Created: November 13, 2022 - 6:53am
Date Updated: November 21, 2022 - 7:09pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q02. Is the species (or cultivar or variety) noted as being naturalized elsewhere in the US or world

in a similar climate?

Issue Description

If there is concrete pier-reviewed evidence that this species is naturalized outside of its native range in similar climate then the confidence would be "very high". - Jutta Burger

Issue Resolution (Screener's Response to Issue) Changed to Very high - Melanie

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Issue ID # 8362

Date Created: November 13, 2022 - 6:36am
Date Updated: November 21, 2022 - 7:13pm

Submitted by: Jutta Burger

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

Issue Description

You can add in the direct link to the Climate Match search in PRE by clicking the "Share Link" button next in "Share and Download" once you've selected species and region in the Climate. https://weedmap.cal-ipc.org/climatematch/?areaType=states&areaList=06&mapView=2%2C0.00000%2C0.00000&datalayer=PRE+Combined&datalayeropacity=60&gbif_taxonkey=5354727&gbif_search=Caesalpinia+spinosa - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Thank you for the tip! I added the full link - Melanie

Issue ID # 8330

Date Created: November 7, 2022 - 9:57pm
Date Updated: November 21, 2022 - 7:02pm

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

Best to state for the record that the animals involved would disperse them >100m. It seems minor, but the animals could be caterpillars or earthworms that disperse only short distances, so just to better support the "Yes" just put something in to this effect. --Lynn Sweet

Issue Resolution (Screener's Response to Issue) I changed the wording to clarify - Melanie

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Issue ID # 8329

Date Created: November 7, 2022 - 9:54pm
Date Updated: November 21, 2022 - 6:28pm

Submitted by: Lynn Sweet

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 this information, I would give it a weak "Yes." You are right to be cautious but the reference info you have about needing particular natural environmental conditions is pretty vague, and the agricultural reference info stating they found high germination rates is fairly plain, especially because if they required extensive treatment even in Ag, I think they would say that. The question is really referring

to difficulty germinating seed due to dormancy, need for fire, etc. Those types of seeds aren't usually referred to as having high germination rates. - Lynn Sweet

Issue Resolution (Screener's Response to Issue)

I agree with this and changed my answer to Yes with Medium conf. While there isn't a ton of research on germination in natural settings, the seeds to appear to have very high and fast germination rates. -Melanie

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Issue ID # 8328

Date Created: November 7, 2022 - 9:37pm
Date Updated: January 3, 2023 - 3:41pm

Submitted by: Lynn Sweet

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

This would seem to default to "no", with High confidence since for me this isn't going to send anyone to the ER. High because there is peer reviewed lit that states that grazing of this species occurs. -- Lynn Sweet

Issue Resolution (Screener's Response to Issue) I agree with this, I changed my answer to 'no' with high confidence and changed my response to reflect appropriately. - Melanie

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Issue ID # 8327

Date Created: November 7, 2022 - 9:35pm
Date Updated: November 27, 2022 - 4:45pm

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

Update confidence to Medium, as this provides some evidence that it is not a good competitor, from the peer- reviewed literature. Technically that would be "high" but since this is a weaker support of a negative statement, I think Medium is what I would vote for. - Lynn Sweet

Issue Resolution (Screener's Response to Issue)

Agreed, I changed the confidence to medium. -Melanie

Issue ID # 8326

Date Created: November 7, 2022 - 9:32pm
Date Updated: November 21, 2022 - 7:23pm

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

Please rephrase the last part since it's a little confusing-- if most of the naturalized regions are similar to CA, this would tend to be a yes answer. I assume you're saying no because the area of Argentina (outside) is greater than the areas that match? I think the best approach to this question is usually to list all places that the species occurs (in general; e.g. by country or parts of continents) and then list which are similar to the region of interest and which are not. - Lynn Sweet

Issue Resolution (Screener's Response to Issue) I clarified my answer and added the countries it is found in worldwide and indicated which ones were similar to California. I struggled with this question

because, although it is found in a lot of regions that are similar to California, it is most dense in regions that are unlike California (it's native range). Therefore I am keeping my answer to a No. Hopefully that's the correct thinking here. -Melanie

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Issue ID # 8325

Date Created: November 7, 2022 - 9:21pm
Date Updated: November 21, 2022 - 6:27pm

Submitted by: Lynn Sweet

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

Issue Description

If the other Caesalpinia is invasive in South Africa where the climate matches, this would be a yes. Perhaps I'm misunderstanding the end of the entry here. Is the locality mentioned in the peer reviewed lit paper dissimilar to California/not a climate match according to the map? Recall it doesn't have to occur in CA (region of interest) either. -- Lynn Sweet

Issue Resolution (Screener's Response to Issue) Caesalpinia decapetala is invasive in South Africa where the climate is similar, however it is primarily invasive in regions with dissimilar climates to California. Because it is found to be invasive in like-regions climatically, I switched my answer to Yes and changed my wording to clarify. -Melanie

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Issue ID # 8324

Date Created: November 7, 2022 - 9:05pm
Date Updated: November 21, 2022 - 6:30pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?

Issue Description

Not to be pedantic but it's best to have each answer stand on its own, without referencing other questions. The reason is that each is associated with a score on its own so its own logic is best held within the question and answer. If the answer text has to be redundant, cut and paste is fine. - Lynn Sweet

Issue Resolution (Screener's Response to Issue) Understood! I removed the statement referring to the previous question and made sure the answer can stand alone. -Melanie

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Issue ID # 8323

Date Created: November 7, 2022 - 9:02pm
Date Updated: November 21, 2022 - 7:12pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q02. Is the species (or cultivar or variety) noted as being naturalized elsewhere in the US or world in a similar climate?

Issue Description

I would put the info about where it is native to in the first question. The second question really is aimed at, where is it "naturalized in the US or world in a similar climate"-- to the *region of interest*, so it's best to reduce confusion by just mentioning the climate match of the region of interest (CA) to other introduced regions. Remember a later question takes the whole range (including native) into account. -Lynn Sweet

Issue Resolution (Screener's Response to Issue) Understood! I put the information about the native range into the first question. -Melanie

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.

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