

## California Pest Rating Proposal

### *Singhiella simplex* (Sing): Ficus whitefly

Hemiptera: Aleyrodidae

Current Rating: B

Proposed Rating: C

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Comment Period: **10/12/2022 – 11/26/2022**

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#### Initiating Event:

*Singhiella simplex* is now established in six counties in California, from San Luis Obispo County to San Diego County. It is currently B-rated and found frequently in nurseries. A new pest rating proposal is needed.

#### History & Status:

**Background:** *Singhiella simplex* is a whitefly that is reported to feed only on *Ficus* species, including *F. benjamina*, *F. nitida*, *F. macrocarpa nitida*, *F. macrophylla*, *F. binnendijkii*, and *F. microcarpa* (Avery et al., 2011; CDFA). It is not known to feed on edible fig (*F. carica*). *Singhiella simplex* has multiple generations per year (Legaspi et al., 2011). It is reported to cause defoliation of *F. microcarpa* in Brazil and *F. benjamina* in Florida (Avery et al., 2011; de Medeiros Vichiato et al., 2013). Infested leaves are reported to become yellow in color and fall (Laudani et al., 2019). This whitefly does not appear to be having significant impacts to *Ficus* in Los Angeles County, possibly because of parasitism (G. Arakelian, pers. comm.).

**Worldwide Distribution:** *Singhiella simplex* is native to India. It is reported from **Asia:** China, India, and Taiwan; **Europe:** Cyprus and Italy; **North America:** Mexico, United States (California and Florida); **South America:** Brazil, Colombia, and Venezuela (Avery et al., 2011; California Department of Food

and Agriculture; Compton et al., 2020; Ko et al, 2015; Kondo and Evans, 2013; Laudani et al., 2019; Legaspi et al., 2011; de Medeiros Vichiato et al., 2013; Myaretseva et al., 2013; Ramos et al., 2015; Vimala et al., 2016).

**Official Control:** *Singhiella simplex* is a quarantine pest in Morocco and is on the A1 list in Jordan (EPPO Global Database).

**California Distribution:** *Singhiella simplex* has been found in the environment in California in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and San Luis Obispo counties (California Department of Food and Agriculture).

**California Interceptions:** *Singhiella simplex* is frequently found in California nurseries in Los Angeles, Santa Barbara, and other counties (California Department of Food and Agriculture).

The risk *Singhiella simplex* poses to California is evaluated below.

### **Consequences of Introduction:**

- 1) **Climate/Host Interaction:** This whitefly is found in areas with climates ranging from tropical to Mediterranean. Some of its host plants are widely-grown ornamentals in southern and coastal California. Therefore, it receives a **Medium (2)** in this category.
  - Low (1) Not likely to establish in California; or likely to establish in very limited areas.
  - **Medium (2) may be able to establish in a larger but limited part of California.**
  - High (3) likely to establish a widespread distribution in California.
- 2) **Known Pest Host Range:** *Singhiella simplex* is only known to feed on *Ficus* species. Therefore, it receives a **Low (1)** in this category.

– **Low (1) has a very limited host range.**

– Medium (2) has a moderate host range.

– High (3) has a wide host range.

3) **Pest Reproductive and Dispersal Potential:** *Singhiella simplex* has multiple generations per year.

The adults can fly, and the immature stages could be moved on fallen or pruned foliage.

Therefore, it receives a **High (3)** in this category.

– Low (1) does not have high reproductive or dispersal potential.

– Medium (2) has either high reproductive or dispersal potential.

– **High (3) has both high reproduction and dispersal potential.**

4) **Economic Impact:** *Singhiella simplex* is reported to cause significant damage including defoliation

to ornamental *Ficus* species. It could likely increase production costs of *Ficus* in nurseries.

Therefore, it receives a **Low (1)** in this category.

**Economic Impact: B**

A. The pest could lower crop yield.

**B. The pest could lower crop value (includes increasing crop production costs).**

C. The pest could trigger the loss of markets (includes quarantines).

D. The pest could negatively change normal cultural practices.

E. The pest can vector, or is vectored, by another pestiferous organism.

F. The organism is injurious or poisonous to agriculturally important animals.

G. The organism can interfere with the delivery or supply of water for agricultural uses.

**Economic Impact Score: Low**

– **Low (1) causes 0 or 1 of these impacts.**

- Medium (2) causes 2 of these impacts.
- High (3) causes 3 or more of these impacts.

5) **Environmental Impact:** There are no native *Ficus* in California. Infestations of *S. simplex* are known to impact street plantings and could trigger treatments. Therefore, *S. simplex* receives a **High (3)** in this category.

**Environmental Impact: D, E**

- A. The pest could have a significant environmental impact such as lowering biodiversity, disrupting natural communities, or changing ecosystem processes.
- B. The pest could directly affect threatened or endangered species.
- C. The pest could impact threatened or endangered species by disrupting critical habitats.
- D. The pest could trigger additional official or private treatment programs.**
- E. The pest significantly impacts cultural practices, home/urban gardening or ornamental plantings.**

**Environmental Impact Score: High (3)**

- Low (1) causes none of the above to occur.
- Medium (2) causes one of the above to occur.
- **High (3) causes two or more of the above to occur.**

**Consequences of Introduction to California for *Singhiella simplex*: Medium (10)**

Add up the total score and include it here.

- Low = 5-8 points
- Medium = 9-12 points**
- High = 13-15 points

6) **Post Entry Distribution and Survey Information:** *Singhiella simplex* is known to be established in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and San Luis Obispo counties. It receives a **Medium (-2)** in this category.

–Not established (0) Pest never detected in California, or known only from incursions.

–Low (-1) Pest has a localized distribution in California, or is established in one suitable climate/host area (region).

–**Medium (-2) Pest is widespread in California but not fully established in the endangered area, or pest established in two contiguous suitable climate/host areas.**

–High (-3) Pest has fully established in the endangered area, or pest is reported in more than two contiguous or non-contiguous suitable climate/host areas.

#### **Final Score:**

7) The final score is the consequences of introduction score minus the post entry distribution and survey information score: Low (8)

#### **Uncertainty:**

There is low uncertainty regarding potential impact to edible fig; this whitefly is found in multiple areas (including Mediterranean Europe and southern California) with cultivated fig and no reports of this whitefly on edible fig are known. There does not appear to be much uncertainty regarding the potential for increased impacts on ornamental *Ficus* in California, as this whitefly is already present in counties representing the majority of the state that is hospitable to these plants.

#### **Conclusion and Rating Justification:**

*Singhiella simplex* is a whitefly that is known to be a serious pest of ornamental *Ficus*, but not edible fig. It is already well-established in southern California. For these reasons, a “C” rating is justified.

## References:

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### **Responsible Party:**

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**\*Comment Period: 10/12/2022 – 11/26/2022**

### **\*NOTE:**

You must be registered and logged in to post a comment. If you have registered and have not received the registration confirmation, please contact us at [permits\[@\]cdfa.ca.gov](mailto:permits[@]cdfa.ca.gov).

### **Comment Format:**

- ❖ Comments should refer to the appropriate California Pest Rating Proposal Form subsection(s) being commented on, as shown below.

### **Example Comment:**

Consequences of Introduction: 1. Climate/Host Interaction: [Your comment that relates to “Climate/Host Interaction” here.]

- ❖ Posted comments will not be able to be viewed immediately.

- ❖ Comments may not be posted if they:

Contain inappropriate language which is not germane to the pest rating proposal;

Contains defamatory, false, inaccurate, abusive, obscene, pornographic, sexually oriented, threatening, racially offensive, discriminatory or illegal material;

Violates agency regulations prohibiting sexual harassment or other forms of discrimination;

Violates agency regulations prohibiting workplace violence, including threats.

- ❖ Comments may be edited prior to posting to ensure they are entirely germane.

- ❖ Posted comments shall be those which have been approved in content and posted to the website to be viewed, not just submitted.

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**Proposed Pest Rating: C**