

## California Pest Rating Proposal

***Metaleurodicus cardini* (Back): Cardin's whitefly**

**Hemiptera: Aleyrodidae**

**Current Rating: Q**

**Proposed Rating: A**

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**Comment Period: 09/12/2025-10/27/2025**

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### Initiating Event:

This whitefly is occasionally intercepted on plant material in California. It has not been assessed with the pest rating system. Therefore, a pest rating proposal is needed.

### History & Status:

#### Background:

*Metaleurodicus cardini* is a polyphagous whitefly. Its reported hosts include: **Annonaceae:** *Annona cheirimola*; **Apocynaceae:** *Plumeria*; **Arecaceae:** *Paurotis*; **Fabaceae:** *Sophora tomentosa*; **Malpighiaceae:** *Malpighia glabra*, *M. polytricha*, *M. urens*; **Myrtaceae:** *Eugenia*, *Melaleuca*, *Pimenta officinalis*, *Psidium* species, including *P. guajave*; **Punicaceae:** *Punica granatum*; **Rutaceae:** *Citrus sinensis*; **Sapotaceae:** *Dipholis salicifolia*; **Sterculiaceae:** *Guazuma tomentosa*; **Verbenaceae:** *Citharexylum fruticosum*, *C. spinosum*, *Duranta repens*, *D. erecta*; **Zygophyllaceae:** *Guaiacum officinale* (Dooley, 2011; Evans, 2007; Hamon, 2003).

*Metaleurodicus cardini* is reported to be a pest only in certain situations, usually being considered “innocuous” (Hamon, 2003).

**Worldwide Distribution:** *Metaleurodicus cardini* is reported from: **Africa:** Nigeria; **North America:** Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico, United States (Florida); **Oceania:** Hawaii (Dooley, 2011; Hamon, 2003; Hodges and Evans, 2005; Oyelade and Ayansola, 2005).

**Official Control:** *Metaleurodicus cardini* is considered reportable by the USDA (U.S. regulated plant pest table).

**California Distribution:** *Metaleurodicus cardini* is not known to be established in California.

**California Interceptions:** *Metaleurodicus cardini* is occasionally intercepted on plant material, especially guava plants, from Florida. (California Department of Food and Agriculture).

The risk *Metaleurodicus cardini* poses to California is evaluated below.

### **Consequences of Introduction:**

- 1) **Climate/Host Interaction:** *Metaleurodicus cardini* is polyphagous, although it's reported host range is not extensive (see Uncertainty, below). Its known distribution suggests it may be limited to warmer climates. 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:** *Metaleurodicus cardini* is polyphagous. Therefore, it receives a **High (3)** 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:** Adult *M. cardini* can fly and this pest can also be spread with infested plant material. Therefore, it receives a **Medium (2)** 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.** *Metaleurodicus cardini* is plant-feeding and polyphagous. Therefore, even though reports suggest it is rarely a pest, it may have the potential to impact a variety of plants. Considering the relatively limited known distribution of this whitefly, there are likely host plant species in California that have rarely or not been exposed to it, and the significance of this whitefly could be different on such plants. This whitefly is considered reportable by the USDA. Therefore, it receives a **High (3)** in this category.

**Economic Impact: A, B, C**

**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: High**

- 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.** *Metaleurodicus cardini* could (for the reason explained above, under Economic Impact) impact home/garden or ornamental plantings, and it could trigger treatments. Therefore, this whitefly 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 *Metaleurodicus cardini*: High (13)**

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:** *Metaleurodicus cardini* is not known to be established in California. It receives a **Not established (0)** 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: High (13)

### **Uncertainty:**

There is uncertainty regarding the host range of this whitefly. It has a limited distribution. Therefore, it is possible that the potential host range is much broader than what is reported. Reports suggest that this whitefly is rarely a consequential pest. It is possible that the risks associated with its establishment (if indeed establishment of this species in California is possible) have been overestimated. This approach was taken out of an abundance of caution.

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

*Metaleurodicus cardini* is a polyphagous whitefly. It could impact plants, including crops, in California, and it is not known to be present in the state. For these reasons, an “A” rating is justified.

### **References:**

California Department of Food and Agriculture. Pest and damage record database. Accessed August 5, 2025:

<https://pdr.cdfa.ca.gov/PDR/pdrmainmenu.aspx>

Dooley, J. 2011. Whitefly pupae of the world. Accessed August 13, 2025:

<https://keys.lucidcentral.org/keys/v3/whitefly/>

Evans, G. A. 2007. The whiteflies (Hemiptera: Aleyrodidae) of the world and their host plants and natural enemies. Last revised June 11, 2007. Accessed August 21, 2025:  
[https://keys.lucidcentral.org/keys/v3/whitefly/PDF\\_PwP%20ETC/world-whitefly-catalog-Evans.pdf](https://keys.lucidcentral.org/keys/v3/whitefly/PDF_PwP%20ETC/world-whitefly-catalog-Evans.pdf)

Hamon, A. B. 2003 Cardin's whitefly, *Metaleurodicus cardini* (Back) (Insecta: Homoptera: Aleyrodidae: Aleurodicinae). EENY-153. Florida Cooperative Extension Service, University of Florida.

Hodges, G. S., and Evans, G. A. 2005. An identification guide to the whiteflies (Hemiptera: Aleyrodidae) of the southeastern United States. Florida Entomologist 88:518-534.

Oyelade, O. J., and Ayansola, A. A. 2005. Diversity and distribution of whiteflies in southwestern Nigeria. African Crop Science Journal 23:135-149.

U.S. regulated plant pest table. Accessed August 21, 2025:  
<https://www.aphis.usda.gov/plant-imports/regulated-pest-list>

## Responsible Party:

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**\*Comment Period: 09/12/2025-10/27/2025**

### **\*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: A**