

California Pest Rating Proposal

Frankliniella schultzei (Trybom): common blossom thrips

Thysanoptera: Thripidae

Current Rating: A

Proposed Rating: B

Comment Period: **09/14/2021 – 10/29/2021**

Initiating Event:

Frankliniella schultzei is currently A-rated. It has been found in the environment in Los Angeles, Orange, and San Diego counties and is established in the state. Therefore, the pest rating needs to be re-assessed.

History & Status:

Background: *Frankliniella schultzei* is a polyphagous thrips that is reported to feed on many crop and ornamental plants, including cotton, eggplant, beans, squash, cucumber, lettuce, melon, peanut, soybean, rose, tobacco, tomato, watermelon, sweet potato, coffee, onion, and sunflower. It is also reported to be predaceous (Amin et al., 1981; Hill, 1975; Kachave et al., 2020; Kakkar et al., 2012; Monteiro et al., 1999). It is considered a pest. In peanut, feeding is reported to cause light green to white scars on leaves, which can become distorted, and the plant can become stunted. Little additional information was found attributing specific damage to this thrips species, likely because thrips pests often occur as assemblages of multiple species. *Frankliniella schultzei* is reported to vector tomato spotted wilt virus (Amin et al., 1981; Sakurai, 2004).

Worldwide Distribution: The geographic origin of *F. schultzei* is not known. It is widespread in tropical and temperate areas in Asia, the Caribbean, Europe, North America (including California,

Colorado and Florida in the United States), Oceania, and South America (Kachave et al., 2020; Sakurai, 2004).

Official Control: *Frankliniella schultzei* is considered an A 1 pest in Kazakhstan and the Eurasian Economic Union (EPPO Global Database) (August 26, 2021).

California Distribution: *Frankliniella schultzei* was found at residences in Los Angeles County in April 2013, Orange County in August 2021, and San Diego County in April 2018 (CDFA).

California Interceptions: *Frankliniella schultzei* has been found at nurseries in Los Angeles, Orange, and Riverside counties and on plants and flowers from Hawaii and the southern United States (CDFA).

The risk *Frankliniella schultzei* poses to California is evaluated below.

Consequences of Introduction:

- 1) **Climate/Host Interaction:** *Frankliniella schultzei* is polyphagous and host plants are probably present over most of California. This thrips occurs in areas with diverse climates. This species could likely establish over most of California. Therefore, *F. schultzei* receives a **High (3)** 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:** *Frankliniella schultzei* 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:** *Frankliniella schultzei* can presumably fly. 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.** *Frankliniella schultzei* is reported to be a pest on many crops grown in California. It vectors tomato spotted wilt virus, which affects tomatoes in California and can result in decreased yield. Therefore, it receives a **High (3)** in this category.

Economic Impact: A, B, E

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.** *Frankliniella schultzei* is known to infest ornamental plants, including roses, and anecdotal evidence suggests that damage has occurred in residential areas due to this species. Damage resulting from infestations could trigger treatments. Therefore, *F. schultzei* 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 *Frankliniella schultzei*: High (14)

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:** *Frankliniella schultzei* is established in Los Angeles, Orange, and San Diego counties. It receives a **Low (-1)** 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:

Frankliniella schultzei could be established in additional counties in California. Thrips are small and often require slide mounting for identification. It has been found in California nurseries, so it has likely had many opportunities to become established in various places in the state.

Conclusion and Rating Justification:

Frankliniella schultzei is a pest thrips that is now known to be established in at least three counties in southern California. For these reasons, a “B” rating is justified.

References:

Amin, P. W. and Palmer, J. M. 1985. Identification of groundnut Thysanoptera. *Tropical Pest Management* 31:268-291.

Amin, P. W., Reddy, D. V. R., Ghanekar, A. M., and Reddy, M. S. 1981. Transmission of tomato spotted wilt virus, the causal agent of bud necrosis of peanut by *Scirtothrips dorsalis* and *Frankliniella schultzei*. *Plant Disease* 65:663-665.

California Department of Food and Agriculture. Pest and damage record database. Accessed August 6, 2021:

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

EPPO Global Database. Accessed August 26, 2021:

<https://gd.eppo.int/taxon/FRANSC>

Hill, D. S. 1975. Agricultural insect pests of the tropics and their control. Cambridge University Press, London.

Kachave, D. R., Sonkamble, M. M., and Patil, S. K. 2020. Population dynamics of major insect pests infesting to tomato, *Lycopersicon esculentum* (Miller). Journal of Pharmacognosy and Phytochemistry 9:344-348.

Kakkar, G., Seal, D. R., Stansly, P. A., Liburd, O. E., and Kumar, V. 2012. Abundance of *Frankliniella schultzei* (Thysanoptera: Thripidae) in flowers on major vegetable crops of south Florida. Florida Entomologist 95:468-475.

Monteiro, R. C., Mound, L. A., and Zucchi, R. A. 1999. Thrips (Thysanoptera) as pests of plant production in Brazil. Revista Brasileira de Entomologia 43:163-171.

Sakurai, T. 2004. Transmission of Tomato spotted wilt virus by the dark form of *Frankliniella schultzei* (Thysanoptera: Thripidae) originating in tomato fields in Paraguay. Applied Entomology and Zoology 39:189-194.

Responsible Party:

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***Comment Period: 09/14/2021 – 10/29/2021**

***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.

Proposed Pest Rating: B